Natural Resources Conservation Service Conservation Innovation Grants (CIG)

New Projects Awarded Fiscal Year (FY) 2017 Funds

Conservation Finance Awards

The Climate Trust (All U.S.)
$900,000
Environmental Price Assurance Facility

The Climate Trust proposes to develop and launch the Environmental Price Assurance Facility to help mitigate risks associated with the future value of environmental credits. The Facility, by serving as a buyer-of-last-resort for credits, will increase certainty for investors and projects developers, helping spur implementation of agriculture and forestry conservation projects. Landowners will see increased income from additional investment by private capital in voluntary conservation projects.

Trout Unlimited (CO, NV, WY)
$1,400,000
Liquid Assets Project: Mobilizing Impact Investment Capital for Agricultural Water Sustainability

Trout Unlimited proposes to develop and pilot a series of impact investment opportunities in the Colorado River Basin, improving agricultural water sustainability and providing financial returns to investors and agricultural producers. The project builds on Liquid Assets, an October 2015 report that analyzed a series of promising impact investment strategies that address water management and agricultural production in the Colorado River Basin.

National Audubon Society (CO, MO, ND, NM, SD, TX, WY)
$1,500,000
Development of Self-Sustaining Markets for Bird-Friendly Beef to Incentivize Grassland Conservation on Private Lands Across the Great Plains

National Audubon Society proposes to fully develop the supply chains of its Audubon Conservation Ranching program to provide ranchers with access to premium beef markets. The project will scale the program from pilot sites to fully functioning, self-sustaining ranch-to-retail markets. By certifying and linking bird-friendly grassland management to consumers whose values include healthy bird populations and thriving rural communities, this project will create the first scalable self-sustaining model for a linked network of ranchers and consumers of bird-friendly beef.

Texas Parks & Wildlife Foundation (TX)
$289,922
The Gulf Coast Conservation Revolving Loan Fund: Harnessing Private Philanthropy to Achieve Transformative Land Conservation on the Texas Gulf Coast

The Texas Parks and Wildlife Foundation proposes to establish the Gulf Coast Conservation Revolving Loan Fund to support

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efforts to maximize Deepwater Horizon oil spill mitigation funding by leveraging private investment for public and working lands conservation along the Texas Gulf Coast. The fund will be capitalized by zero-interest or low-cost Program Related Investments (PRI) to reduce the costs interim financing for approved Deepwater Horizon conservation projects.

The Conservation Fund (GA)
$154,278
Pathways for Producers in Metro Atlanta Region: Unlocking Capital and Resources to Conserve and Transform Local Food Systems

The Conservation Fund proposes to create an Agriculture Conservation Fund (ACF) with an initial target of $5 million in impact capital to accelerate the pace of working lands conservation in 23-county region surrounding Atlanta. This innovative approach will enable a fast and holistic approach to preserve metro Atlanta's working farmlands, while increasing technical and financial resources to support producers and local food production. The ACF can serve as a model for similar efforts in metro areas around the Nation.

The Nature Conservancy (MI)
$328,077
Conservation Drain Finance

The Nature Conservancy proposes to create a novel conservation delivery and funding approach to realize new financial benefits from the adoption of conservation practices through modified drain assessments in the Great Lakes region. Project partners including the Michigan Farm Bureau, the Monroe County Drain Commission, and Saginaw County Public Works Commissioner will create opportunities to better recognize and incentivize the benefits of conservation practices that improve the function or reduce the future maintenance costs of publicly managed drain systems while also improving water quality outcomes.

Maine Organic Farmers and Gardeners Association (ME)
$600,000
Integrated Investment Incentives for Conservation Program

The Maine Organic Farmers and Gardeners Association proposes to promote natural resources protection through the development of specialized loan products which stimulate and reward conservation practices. Both short-term loans and small farm mortgage products will be made available through the Maine Harvest Credit Union. The project will also pilot the use of NRCS's Resource Stewardship Evaluation Tool as an assessment tool for the financial products.

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Delta Institute (WI)
$700,000
Financing Regenerative Agriculture: Innovative Mechanisms

The Delta Institute proposes to create innovative mechanisms to help investors operationalize and scale investments in regenerative agriculture, a system of holistic practices that promote soil health and restore ecosystem services while maintaining yield. The project will engage partners across sources of capital to address barriers to investing, strengthen the business case for investments, develop tools that will improve investor literacy and accelerate deal flow, and demonstrate its innovative approaches in a place-based example in Wisconsin.

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Pay-for-Success Awards

Chesapeake Bay Foundation (PA)
$415,341
PA "Offset Partnerships": Bringing Pay for Success Models to Agricultural Conservation and Stormwater Compliance

The Chesapeake Bay Foundation proposes to demonstrate the feasibility and cost-effectiveness of using a Pay for Success approach to attract new streams of capital to implement conservation practices on agricultural lands in York and Lancaster Counties, Pennsylvania. The project would be the first of its kind attempt to pilot a cost-effective approach for municipalities to meet stormwater requirements while transferring the risks of effective implementation from local governments to impact investors.

I2 Capital (DE, MD)
$804,672
Brandywine Christina Water Fund Pay for Success Mechanism

I2 Capital proposes to develop a Pay for Success approach to attract private impact capital to fund conservation practices on farms in the Brandywine Christina Watershed in Delaware and Pennsylvania. The approach would support implementation of the Water Fund, a vehicle for private investment in agricultural conservation established by the Nature Conservancy, the William Penn Foundation and the University of Delaware's Water Resources Agency. Upfront investments on the ground will be repaid by downstream beneficiaries (e.g., utilities and municipalities) after achievement of pre-determined environmental outcomes.

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New Projects Awarded Fiscal Year (FY) 2017 Funds

Water Management Awards

Stillaguamish Tribe of Indians (WA)
$1,000,000
Demonstration of an Advanced Distillation and Nutrient Separation Processor for Dairy Wastewater

The Stillaguamish Tribe proposes to demonstrate successful implementation of an emerging animal waste treatment system for dairy farms. The technology, originally developed to address human waste in developing countries, is now being adapted to treat dairy waste. The advanced distillation and nutrient separation processor converts dairy wastewater into clean, distilled reclaim water, with liquid ammonia and nutrient-rich solid material byproducts that can be used for agricultural purposes.

Flint River Soil and Water Conservation District (GA)
$800,000
Integrating Precision Irrigation Technologies to Demonstrate a Farmer-ready Dynamic Variable Rate Irrigation System

The Flint River Soil and Water Conservation District proposes to demonstrate the viability of a comprehensive precision irrigation system in the southeastern coastal plain. The system will merge a number of components to create a holistic, transferable smart irrigation system to maximize agricultural production and minimize off-site impacts to natural resources

MagneGas (FL)
$431,874
Pathogen/Nutrient Abatement in Animal Biosolids Using Innovative Plasma Arc Venturi Technology

The MagneGas Corporation and Lake Branch Dairy Farm proposes to demonstrate a plasma arc system to convert biowaste liquid into sanitized liquid and clean energy gas products. The system will processes liquid waste into sanitized biosolids for agricultural use, with a primary goal of reducing or eliminating the use of lagoon waste collection systems and waste pits under and around animal feeding operations throughout the United States.

Kansas State University (KS)
$672,982
Using Farmer-Based Water Technology Farms to Implement New Irrigation Technologies to Sustain the Rural Economy

Irrigation water management is a critical issue in the Great Plains region—many parts of the High Plains aquifer are being rapidly depleted. Kansas State University proposes to demonstrate and streamline the ability of an agricultural producer to transition from a center pivot irrigation system to a more efficient mobile drip irrigation system. Increasing adoption of mobile drip irrigation systems would reduce historic water use and improve water productivity on farms while maintaining profitability of farming operations.

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Clemson University (GA, SC)
$499,544
Utilizing Deep-rooted Cover Crops to Enhance Water Quality, Soil Health, and Farm Profits While Reducing Soil Compaction in Coastal Plain Region

Clemson University proposes to accelerate the adoption of agricultural producers using deep-rooted cover crops, an innovative approach that, when combined with minimum, or no-till production systems, can improve ground and surface water quality and make more water available for crop production. This approach is relevant to farms of all sizes, but may provide particular benefits to small-scale, limited resource operations.

Auburn University (AL, TN)
$946,684
Increasing adoption of water-smart irrigation practices among Tennessee Valley farmers in Alabama and Tennessee

The adoption of irrigation in Alabama and Tennessee has increased substantially over the past decade, but adoption of water-efficient irrigation practices has not kept pace. Auburn University proposes to demonstrate on-farm technologies such as variable rate irrigation, sensor-based irrigation scheduling, and deficit irrigation as well as the use of climate forecasts to support water withdrawal. Increasing adoption of these practices is critical for boosting crop productivity, reducing water withdrawals and enhancing long-term profitability of producers in the Southeast.

The Nature Conservancy (CA)
$1,869,439
Leveraging Water Markets to Secure Water for Nature and Agriculture

Market-based approaches offer a promising approach to sustainable and responsible management of California's water resources. The California chapter of The Nature Conservancy is pioneering two initiatives that use a novel combination of data analytics and water markets to meet freshwater conservation goals and improve the overall management and drought resiliency of California water resources. The project, carried out in the Central Valley and in western Ventura County, will explore the use of advanced metering infrastructure to facilitate water quantity trades to help meet new groundwater regulations. Another component of the project seeks to deploy private capital to more efficiently apportion water for natural, agricultural, industrial and municipal uses.

North Dakota State University (ND, SD)
$999,327
Cover crops and no-tillage enhance soil water management in frigid northern Great Plains soils

Adoption of no-till production and other soil health practices has actually decreased in parts of North and South Dakota in recent years. North Dakota State University proposes to establish full-production scale demonstration sites to allow a side-by-

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side comparison of tillage and cover cropping practices available for managing soil water and improving soil health. Water budgets will be quantified under different tillage and cover cropping treatments and across different crop rotations and soil types. Soil health condition will be assessed in response to different tillage and cover cropping treatments, especially with regard to biological activity, infiltration, water holding capacity, and crop productivity. Increased adoption of soil health practices can help mitigate risk for producers in the northern Great Plains as average temperatures warm and precipitation regimes change.

South Dakota State University (SD)
$675,879
Seeding Northern Great Plains Degraded Saline/sodic Soils to Perennial Plants

South Dakota State University proposes to demonstrate the efficacy of reseeding sodium degraded soils to perennial plants, in response to the growing salinity and sodicity challenges in the northern Great Plains. The use of perennial plants to reduce soil erosion on sodic soils will be compared to traditional chemical remediation techniques on three farms. The project aims to develop a viable alternative to these chemical remediation techniques, which in some cases can actually increase the challenges faced by producers with sodic soils.

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New Projects Awarded Fiscal Year (FY) 2017 Funds

Historically Underserved Awards

New South Development and Training, LLC (MS)
$800,000
Smart Microbiology Agricultural Innovations Research Project

New South Development and Training proposes to evaluate the beneficial use of municipal solids for crop farming by historically underserved producers. Sharply escalating production costs have producers looking for alternatives to commercial fertilizers, a demand that could potentially be met by municipal solids.

Oklahoma Black Historical Research Project, Inc. (OK)
$600,000
Enhancing Agricultural Production for Native American and Socially Disadvantaged Farmers and Ranchers

Oklahoma Black Historical Research Project, Inc. proposes to enhance agricultural production and sustainability of Native American and socially-disadvantaged farmers and ranchers in Oklahoma through the dissemination of solar water pump technology. This low-cost, low-input technology is ideal for small, limited resource producers in a state often strained by limited water resources.

National Center for Appropriate Technology (TX)
$785,565
Subtropical Soil Health Initiative

The National Center for Appropriate Technology proposes to address soil erosion challenges in the Lower Rio Grande Valley arising from soils left bare through the summer. The project consists of field demonstrations of ecological soil management on certified organic and transitioning vegetable and row crop farms, focusing on the effectiveness, practicality, and profitability of cover crops and reduced tillage. Technical assistance and knowledge transfer to underserved (predominantly Hispanic) audiences is a key part of the project.

Hualapai Tribe (AZ)
$102,461
Beginning Tribal Ranching Training
The Hualapai Tribe proposes to create and implement a tribal ranching training course that teaches tribal youth and beginning ranchers sustainable grazing and livestock techniques and approaches. The project emphasizes outreach and one-on-one technical training with the Agriculture Program of the Hualapai Department of Natural Resources in collaboration with the University of Arizona Extension office.

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New Projects Awarded Fiscal Year (FY) 2017 Funds

Winston County Self Help Cooperative (MS)
$474,000
Educating Small and Disadvantaged Farmers on the Importance of Soil Health for Sustainable Crop Production

The Winston County Self Help Cooperative (WCSHC) proposes to educate small, limited-resource and disadvantaged farmers and ranchers in six Mississippi counties on how to obtain access to information, hands-on training exercises, mentoring and other outreach activities that will enhance their agricultural enterprises. WCSHC will provide to producers research-based information on soil health and sustainable production practices with an emphasis on economic and ecological performance. Ultimately, this assistance to historically underserved producers is designed to improve the sustainability and profitability of small farm operations.

Dairy Grazing Apprenticeship (IN, MI, MN, NY, OH, PA)
$503,000
Transferring Innovative Managed Grazing Skills to Historically Underserved Dairy Producers in the Great Lakes Region through Formal Apprenticeship

Dairy Grazing Apprenticeship (DGA) proposes to stimulate the adoption of innovative managed grazing systems by historically underserved beginning farmers in the Great Lakes region. DGA is an innovative two- year accredited National Apprenticeship—the first of its kind in the nation—in managed-grazing dairy production. DGA provides a comprehensive structure of support, including on-farm employment, mentorship, financial advising, peer-to-peer discussion groups with local agricultural professionals, and case studies that illustrate models of equity building, milk-share partnerships, investment, and farm transfer.

Rural Action, Inc. (OH, WV)
$83,881
Forest Grown Verification (FGV) For Profitable Production of Forest Herbs

Rural Action, Inc. in partnership with United Plant Savers proposes to establish a regional Forest Grown Verification (FGV) system for commercially significant forest herbs, using a third-party certification structure and species-specific education to build a network of enrolled forest farmers. The project will provide site-based technical assistance to FGV-enrolled and eligible forest farmers to support the growth of regional forest farming operations. This strategy creates an economic incentive for private landowners (especially historically underserved populations) to implement conservation practices that support the abundant and ongoing growth of marketable forest grown products.

The Conservation Fund (FL, GA, NC, SC, SD, WV)
$985,423
Equitable Access for Sustained Productivity

The Conservation Fund proposes address three traditional barriers for historically underserved and veteran farmers and

ranchers—lack of access to capital, agricultural business training and sustainable agriculture methods—to improve the ability of these populations to make a living in agriculture. Among other deliverables, the project will foster a network of Community Development Financial Institutions to provide loans and business assistance to historically underserved producers.

Third Sector New England, Inc. (MA)
$314,026
Conservation Technology Outreach to Historically Underserved and Beginning Producers in Massachusetts through an Incubator Farm Training and Demonstration Model

Third Sector New England proposes to use an incubator farm model to empower 400 historically underserved and beginning farmers to thrive through new educational programs and individual technical assistance. Conservation planning, innovative technology approaches, participation in Federal conservation programs and integration of conservation principles into farm business plans will all be emphasized with participating producers.

New North Florida Cooperative Association (FL)
$493,500
Introducing Innovative Conservation Approaches and Technologies Disadvantaged and Veteran Livestock Producers in Florida

New North Florida Cooperative Association proposes to develop a long-term solution to linking small-scale, underserved farmers with Federal conservation programs and alternative market opportunities. The project introduces innovative conservation technologies, such as a grass-fed beef production systems, to small-scale, limited resource farm operations. Small-scale producers often have trouble accessing premium price markets such as certified grass-fed beef markets. The project uses group training sessions (including lectures, field and hands-on activities) at demonstration training sites in Florida.

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New Projects Awarded Fiscal Year (FY) 2017 Funds

Data Analytics Awards

The Freshwater Trust (CA)
$779,959
Streamlining Regulatory Compliance and Conservation Planning

Over the past decade, The Freshwater Trust (TFT) has been using data analytics applications and methodologies to support strategic conservation project planning, tracking and reporting. Increasing regulation on water use by California's farmers require innovative solutions. Through this project, TFT proposes to develop an integrated planning, tracking, and adaptive management system that agricultural producers and regional coalitions in Solano County can use to cooperatively implement smart, multi-objective programs and demonstrate real progress in improving surface water and groundwater quality and quantity. The completed system would be broadly transferable and will be made publicly available.

White River Irrigation District (AR)
$600,000
Internet of Agriculture (IoAg) Network and Services Platform

White River Irrigation District proposes to develop, test and validate an Internet of Agriculture (IoAg) Network and Service Platform that will provide precision agricultural data to enable farmers to increase crop yield, minimize cost, reduce water usage, and improve conservation of natural resources. The primary work will be carried out in the Grand Prairie Region of Arkansas to leverage a large US Army Corps of Engineers water distribution and water management project that has resulted in extensive investment in automated on-farm data acquisition, data transfer, and control systems. Similar technologies have been tested and implemented in home automation and monitoring, health care, commercial building and energy conservation. This project adopts the methodology and applies it to the agricultural and environment sector.

Texas A&M AgriLife Research (TX)
$728,583
Forage Forecasting/Nutritional Analytics: Decision-Support for Rangeland/Grazingland Ecosystems

Texas A&M proposes to adapt and demonstrate a combination of two innovative grazing tools—the Livestock Early Warning System (LEWS) and the Forage Risk Assessment Management System (FRAMS)—which have been developed and tested over the past two decades across the world but are only in limited use in the United States. These tools can help livestock producers make decisions on livestock and natural resources both before and during drought conditions. Bringing together these forecasting tools in an innovative, collaborative manner and placing them in the hands of those who make conservation decisions on the landscape will demonstrate the transferability of the tools improve sensitive natural resources.

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New Projects Awarded Fiscal Year (FY) 2017 Funds

The Curators of the University of Missouri (MO)
$444,370
PaddockTrac: A Web-based Mobile Application for Managed Grazing

Livestock farmers currently lack a simple, efficient tool to optimize forage allocation and the use of inputs on grazing systems. The University of Missouri proposes to integrate three existing tools and technologies to deploy PaddockTrac, a web-based, mobile application integrated with a sensor-equipped all-terrain vehicle (ATV) and smartphone communication link to directly measure forage. The project includes pilot efforts with farmers to collect and upload pasture growth data to the website—the resulting information can be used to guide forage management decisions

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