





OUR PROGRAM

Celebrating 20 years of partnership working to restore polluted rivers and streams in the Chesapeake Bay region through cost-effective, innovative and locally led solutions.

In 2019, the National Fish and Wildlife Foundation (NFWF) celebrated 20 years of partnership in supporting local efforts to protect and restore the Chesapeake Bay watershed. Founded on a partnership with the U.S. Environmental Protection Agency and the Chesapeake Bay Program in 1999, NFWF's Chesapeake Bay Stewardship Fund has since grown to encompass funding and support from numerous federal agencies, state conservation programs, and leading corporate partners invested in a vibrant and sustainable future for the region.

These resources and NFWF's public-private funding model allow the Foundation to support local conservation and restoration actions through a combination of competitive grants programs, dedicated capacity-building for watershed partners, and investments that help local partners identify and deliver more effective results for their communities and the natural resources that sustain them.

With its 2019 investments, NFWF's grant-making in the region stands at nearly \$175 million, with nearly \$250 million in additional local matching resources. Together with local partners, NFWF's conservation impact in the region now stands at more than \$425 million.

These impressive results do not mean the work is done. Data continue to demonstrate that the Bay watershed is rebounding after centuries of decline, but additional work is needed to finish the job and sustain collective successes. That's why the Foundation continues to advance next-generation approaches to watershed restoration.

Working together, the public and private sectors can get the job done.



ON THE COVER Oysters

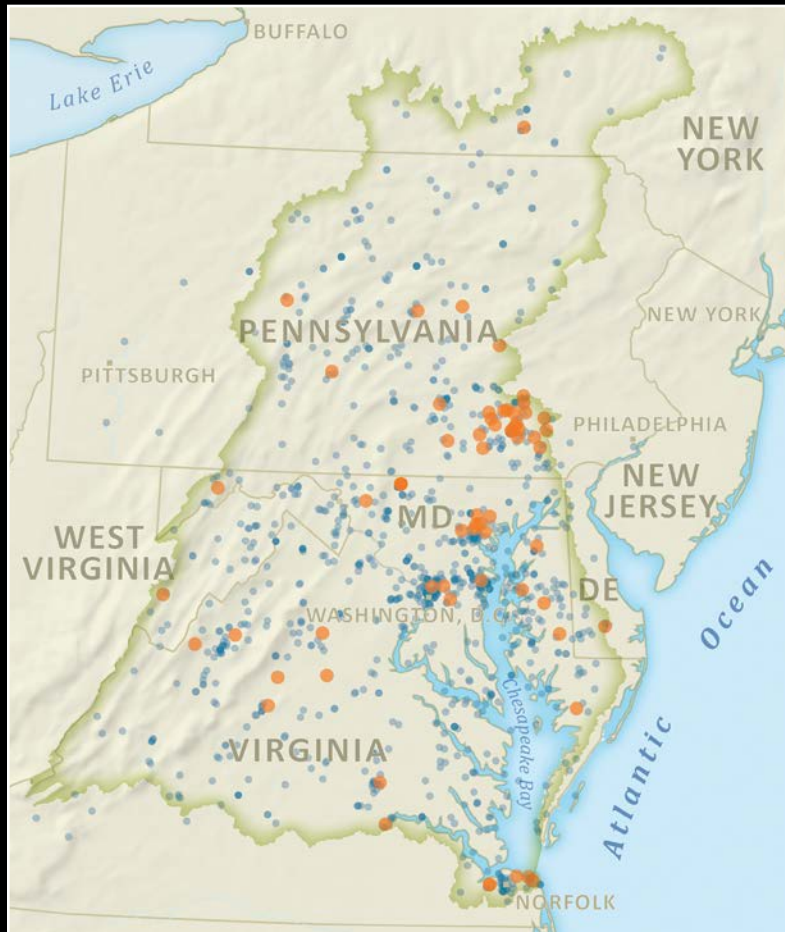
LEFT Farmland along the Susquehanna River in Pennsylvania

RIGHT PHOTO A great egret fishing on the Chesapeake Bay in Maryland

OUR INVESTMENTS

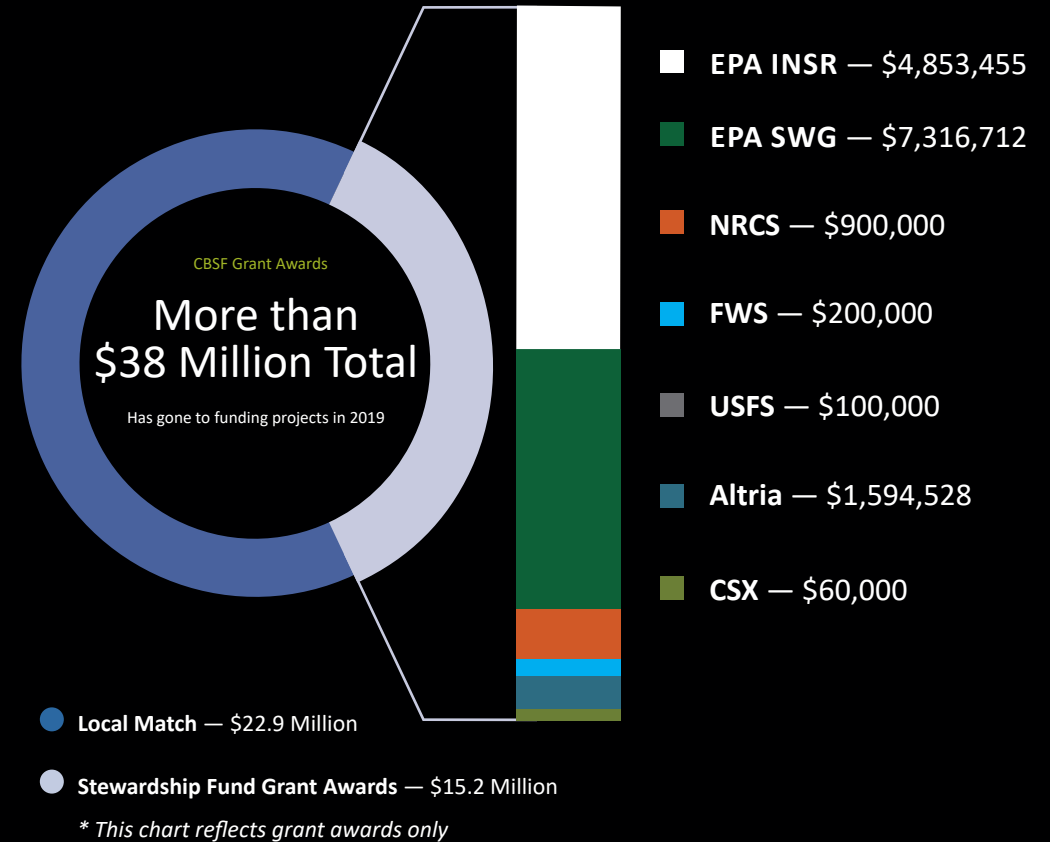
Through a partnership with the U.S. Environmental Protection Agency and the Chesapeake Bay Program, the Stewardship Fund advances cost-effective and creative restoration solutions.

Local Water Quality Investments



- Location of New 2019 Stewardship Fund Grants
- Location of Historic Stewardship Fund Grants

2019 Project Funding Snapshot



OUR IMPACT

Through grants awarded in 2019, the Stewardship Fund will achieve measurable results for a healthier Chesapeake Bay watershed by working to restore local rivers and streams.

2019 Highlights

- Awarded \$497,125 via 10 grants through the Small Watershed Grants – Planning and Technical Assistance Program for work that enhances local capacity for restoration
- Awarded \$12.2 million via 37 grants through the Small Watershed Grants – Implementation and Innovative Nutrient and Sediment Reduction Grants programs to implement restoration projects in the Bay
- Awarded \$2.4 million via 14 grants through the Pennsylvania Local Government Implementation Grants program to implement restoration projects in selected Pennsylvania communities.
- Surveyed leading regional and national experts on collaborative conservation to improve NFWF's strategies for scaling up water quality and habitat improvements
- Launched a comprehensive regional soil health programming strategy, with \$3 million in grants to agricultural agencies, land grant universities, and farm service organizations
- Hosted three Regional Agricultural Networking Forums across Maryland and Virginia, bringing together more than 200 practitioners, local government employees, NGOs, and federal partners to share knowledge and expertise on conservation agriculture best practices

Since 1999

2 Million
Pounds

Of Nitrogen Avoided Annually

4.5 Million
Pounds

Of Phosphorus Avoided Annually

892 Million
Pounds

Of Sediment Avoided Annually

2,076
Miles

Of Riparian Habitat Restored

1.7 Million
Square Feet

Impervious Surface Removed

830,385
Acres

Under BMPs for Nutrient and Sediment Reduction

OUR PROJECTS

Protecting Habitat Where Land Meets Water

The Pamunkey Indian Tribe is helping preserve its past and safeguard its future by addressing coastal hazards and restoring marsh habitat

The 1,200-acre Pamunkey Indian Reservation sits on the shores of the Pamunkey River, a tributary of the York River in King William County, Virginia. Home to the federally recognized Pamunkey Indian Tribe, the reservation is located on a portion of the tribe's ancestral land but is facing modern environmental challenges.

"Anyone who lives on the reservation has known that erosion is an issue, everyone there is concerned about the shoreline, which has been disappearing for some time," said Kathryn MacCormick, a tribal member and biologist. The tribe endeavored to tackle the substantial shoreline erosion with a plan to protect their land, residents, structures, and buried archaeological sites.

The Pamunkey Indian Tribe received a 2017 Small Watersheds Grant award of \$199,544 from NFWF to help address the impacts of coastal hazards, including soil erosion, storms and recreational boat wake. The funding was used to create a management plan for 13 miles of shoreline and construct a living shoreline that will create and reestablish more than 6,000 square feet of marsh habitat. These restoration efforts help reduce sedimentation to the Pamunkey River, which ultimately will reduce sediment loading to the Chesapeake Bay.

Shoreline restoration provides a natural buffer to decrease erosion from high

water and wave action that threatens the reservation, where the terrain is only a maximum of 9 feet above sea level. "Marsh is insurance against flooding, a living buffer" said MacCormick, noting the importance of maintaining and increasing this inter-tidal zone.



Scott Hardaway, marine scientist supervisor at the Virginia Institute of Marine Science, assisted with efforts to construct a rock breakwater to slow down the wave energy hitting the shore by creating a planting terrace. Volunteers helped plant the terrace with freshwater sedges and grasses to help restore and enhance the marsh.

"We're preserving or establishing the marsh fringe which is also good for the fishes and the water quality," said Hardaway said. "Some of the rock will allow shelter for the smaller fish and algae will attach to the hard substrate, functioning like a little reef."

The tribe hopes to continue to implement their management plan to remedy erosion and protect vital habitat along the remaining shoreline surrounding the reservation. These sustained efforts contribute to the Pamunkey Indian Tribe's goal of "inspiring and promoting natural restoration along the Virginia Rivers and leading preservation efforts for the next seven generations."



OUR PROJECTS

Integrated and Innovative Stormwater Solutions

A creative project works to meet the fresh produce needs of the Anacostia community while simultaneously addressing stormwater runoff and providing job training for local residents

Supported by a 2017 Small Watersheds Grant from NFWF, the Low Impact Development (LID) Center, in partnership with the University of the District of Columbia's (UDC) College of Agriculture, Urban Sustainability and Environmental Sciences (CAUSES), spearheaded an innovative effort to integrate green infrastructure best management practices (BMPs) with urban agriculture.

The project included the design and implementation of three stormwater control BMPs in planted farming spaces within food deserts the university identified in the District of Columbia. Suzy Cho, landscape architect at the center, believes this is the first time, at least in her design experience, that crops will be used to create a buffer to mitigate runoff into city storm drains. "This garden work in Anacostia may be one of the only such projects that uses food crops for stormwater management," said Cho.

The location of one of the project's BMP installations is the East Capitol Street Urban Farm in Ward 7, one of several urban food hubs created by CAUSES to improve food security and sustainability in the District. Transformed as a result of a major local, federal, public and private collaborative effort, the once vacant lot is now the city's largest urban farm of its type.

The raingarden constructed at the East Capitol Farm as part of the nearly \$200,000

NFWF award will minimize stormwater runoff into the Anacostia River coming from the site. Food crops including kale, lettuce, and chard will replace the typical raingarden planting palette and increase rainwater infiltration on the farm.



The lessons learned from the three pilot sites contribute to the project's comprehensive approach to investigating how urban agriculture and stormwater management can coexist. The center, the university, and other project partners are developing garden templates, trainings, outreach activities, and an Urban Agriculture BMP manual that can be implemented in other cities throughout the Chesapeake Bay region.

Sites of BMP implementation also serve as training locations for local residents participating in the Maya Angelou Public Charter School's workforce development program, Seeds for Success. Adult students in the program receive a mix of classroom and hands-on instruction as they work towards becoming landscapers certified by the National Garden Industry. The experience students gain through the program lays the groundwork for their future pursuits. "It is great to

teach my class how their skills can move to a job in the community for gardening and landscape construction work" said Kerry Harrington, with Seeds for Success.

PHOTO (NEXT PAGE) Seeds for Success students working in the East Capitol Street urban farm



OUR PROJECTS

Diverse Partnerships for Clean Water

A market-driven approach provides innovative incentives for dairy farmers implementing conservation practices

The Turkey Hill Clean Water Partnership is a collaborative effort comprised of private and nonprofit entities working together towards a common goal. It is coordinated by the Alliance for the Chesapeake Bay, in partnership with Turkey Hill and the Maryland and Virginia Milk Producers Cooperative Association, to motivate greater conservation efforts on farms in Lancaster County, Pennsylvania.

The county is one of the most agriculturally productive areas in the country, but agriculture has contributed to the impairment of nearly half of Lancaster's 1,400 miles of streams. The many small dairy operations found in the county have the opportunity to significantly reduce pollutant loads to local waterways and ultimately the Chesapeake Bay. Turkey Hill Dairy is the largest buyer of milk in Lancaster County and sources milk from over 100 Maryland & Virginia Milk Producers Cooperative Association (MDVA) farms within a 50-mile radius of their manufacturing facility in Conestoga, Pennsylvania.

As part of their 2018 contract renewal with MDVA, Turkey Hill has required that all producers have conservation plans in place to reduce nutrient-laden runoff from their farms and will implement on-the-ground practices to be in compliance with their plan. Once MDVA's member farms supplying milk to Turkey Hill Dairy are in compliance, Turkey Hill will pay the farmers a premium for their milk. This economic incentive for implementing practices is critical to achieve conservation goals in the difficult dairy economy.

The \$1 million award to the Alliance for the Chesapeake Bay (ACB) through NFWF's Innovative Nutrient and Sediment Reduction grant program will take the existing Turkey Hill Clean Water partnership to the next level and accelerate conservation planning and best management practice implementation from dairy farmers.



Grant funding will help the ACB provide farmers with the technical and financial assistance necessary to meet Turkey Hill's commitments for sustainable milk production. This assistance will help increase the rate and magnitude of BMP implementation while leveraging existing cost-share programs to allow for the strategic and timely deployment of assistance to the producers that need it most. The effort to support all of Turkey Hill's farmers within the cooperative will result in large pollutant load reductions once all the planned conservation practices are put in place. Cover crops, forested buffers, animal waste storage systems, barnyard stabilization, and other best management practices will contribute to reducing an estimated 421,000 pounds of nitrogen, 7,000 pounds of phosphorus, and over 2.9 million tons of sediment each year.

This market-driven approach is applicable to many other agricultural sectors, with the potential to yield dramatic acceleration in the rate of conservation practice adoption. The Turkey Hill Clean Water Partnership hopes to serve as a model for this approach to other organizations and businesses across the watershed, resulting in a paradigm shift to attaining voluntary conservation action across the watershed.

PHOTO (NEXT PAGE) A dairy farm in Lancaster Pennsylvania



OUR GRANTS

Delaware

Nanticoke Watershed Alliance

Developing Poultry House Buffer Alternatives in the Nanticoke Watershed (DE)

Test alternatives to mowed grass on poultry grower properties by evaluating several variations of buffer plantings for improved stormwater management. Project will convert mowed grass areas located between chicken houses into a variety of vegetative buffer alternatives to capture and filter stormwater runoff and serve as a demonstration to encourage other farmers to implement similar plantings on their properties.

\$38,629

District of Columbia

Department of Energy and Environment

Applying Soil Amendment Techniques and Subsoiling on Compacted Urban Land (DC)

Implement and monitor the efficacy of a variety of subsoiling and soil amendment techniques on open lands in the District of Columbia. Project will aim to reduce compaction, restore hydraulic functionality, and improve soil health for the purposes of reducing stormwater runoff and pollutants generated from compacted and public lands in the District of Columbia.

\$200,000

Maryland

Anacostia Watershed Society

Treating and Teaching: Outdoor Classrooms in Prince George's County (MD)

Build 12 customized outdoor classrooms in Prince George's County, increasing the capacity of the county to deliver effective stormwater management. Project will engage approximately 80 teachers from 35 public school in professional development about stormwater management, train building supervisors to maintain the practices installed, and educate 1,500 students about stormwater management.

\$197,421

Arundel Rivers Federation

Camp Woodlands Stream and Outfall Restoration (MD)

Retrofit the existing stormwater outfall at Camp Woodlands by restoring an eroding gully and 1,350 feet of stream. Project will provide safe conveyance of storm flows and increase the ecological habitat and functions on the site to improve water quality in Broad Creek.

\$199,587

Blue Water Baltimore

Engaging the People's Community Lutheran Church in Stormwater Best Practices (MD)

Treat 0.71 acres of impervious surface on the People's Community Lutheran Church parking lot. Project will construct a rain garden, install micro-bioretenment, plant trees and native perennials, and build community awareness of stormwater management.

\$188,940

Central Baltimore Partnership

Union Collective Green Infrastructure Master Plan (MD)

Develop a green infrastructure master plan and designs for a series of stormwater best management practices at Union Collective, a 10.5-acre, mostly impervious site with a curated assembly of independently owned, Baltimore-based businesses. Project will lead to stormwater practices that showcase the challenges of urban stormwater runoff and climate-related flooding and how green infrastructure can be used mitigate these challenges.

\$49,595

Church of the Redeemer

Implementing Stormwater Best Management Practices at Church of the Redeemer (MD)

Remove 14,000 square feet of asphalt, install two micro-bioretenment practices and 2,415 square feet of pervious paving, and plant native landscaping at the Church of the Redeemer. Project will treat 0.84 acres of the 1.25-acre parking lot and serve to educate and inspire other communities to participate in stormwater best management practices.

\$169,458

Greater Grace World Outreach

A Comprehensive Green Infrastructure Master Plan for Greater Grace (MD)

Develop a comprehensive green infrastructure master plan and 100 percent designs for the Greater Grace World Outreach campus. Design will move plans forward to reduce stormwater runoff from the 13.6-acre property, of which approximately 84

OUR GRANTS

percent is impervious, and educate the 1,500-member congregation and students about the benefits of reducing runoff.

\$49,289

Gunpowder Valley Conservancy

Clear Creeks: Stormwater Implementation and Engagement in the Loch Raven Reservoir Watershed (MD)

Conduct behavior change strategies to increase implementation of stormwater best management practices in Baltimore County. Project will install 125 rain barrels, 30 rain gardens, 12 micro-bioretenion practices, eight Bayscapes, 24 Bay-Wise certified yards, and 30 stream cleanup events resulting in the protection and improvement of 24 acres.

\$200,000

Lower Shore Land Trust

Identifying Wetland Mitigation Zones for Protection and Restoration on the Eastern Shore (MD)

Identify Wetland Migration Zones in Somerset, Wicomico, Dorchester, and Worcester counties and reach out to landowners and county governments to obtain their cooperation to protect, restore, and manage these areas. Project will aid in the maintenance of important wetland habitat for American black duck and help meet Watershed Implementation Plan goals for the counties.

\$49,830

University of Maryland Environmental Finance Center ***Maryland Black Mayors Advancing Stormwater Management***

Meet with Maryland Black Mayor (MBM) municipality communities, implement best management practices on five homeowner properties per community, and conduct outreach and tours of project sites. Project will coordinate and advance the capacity of MBM municipalities to address stormwater runoff.

\$200,000

Maryland Department of Agriculture

Developing a Healthy Soils Program to Increase Soil Health Practice Adoption and Engagement (MD)

Engage 150 producers through outreach, education, and technical assistance to implement improved conservation tillage, expanded cover crop practices, application of precision nutrient management, and increased prescribed grazing practices. Project will expand Maryland's Healthy Soils Program with an Advisory Committee, establish and measure common baseline soil health metrics for participating producers, and inform the evolving national discussion of appropriate soil health metrics and tools.

\$996,565

National Wildlife Federation

Schoolyard Habitats: Watershed Public Charter School (MD)

Deploy the Schoolyard Habitats program at Watershed Public Charter School to remove 1,500 square feet of impervious surface, implement three micro-bioretenion areas, and install two cisterns. Project will increase management of upland urban runoff

by implementing green stormwater infrastructure practices that improve water quality while also creating native wildlife habitat and fostering outdoor learning experiences for students within Baltimore's Gwynns Falls watershed.

\$181,663

ReBUILD Metro

Growing Community Green Infrastructure Ownership and Urban Tree Canopy in Baltimore Neighborhoods (MD)

Facilitate community-determined green stormwater infrastructure projects to create 2.75 acres of long-term greenspace and improve urban tree canopy in the Olive, Broadway East, and Johnston Square neighborhoods of Baltimore. Project will build community consensus and ownership of stormwater projects and address future project pipelines, starting with lowest to greatest barriers to implementation.

\$199,990

Shorerivers

Creating a Comprehensive Stormwater Plan and Implementation Strategy for Town of Chestertown (MD)

Complete a Comprehensive Stormwater Plan and Implementation Strategy and two-to-three fully engineered stormwater project designs for the Town of Chestertown, Maryland. Project will benefit water quality in the Middle Chester River Watershed, with secondary objectives of creating habitat, outreach, and education to a diverse group of stakeholders.

\$49,408

OUR GRANTS

Shorerivers

Implementing the Maryland Conservation Drainage Program on the Eastern Shore (MD)

Implement conservation drainage via 20 projects to treat agriculture runoff from approximately 400 acres. Project will support project costs not currently covered by state funding and leverage state funds 1:1 to cover project costs, allowing for greater outreach to educate farmers and state and federal agricultural service providers on the benefits of conservation drainage.
\$197,914

Shorerivers

Residential and Golf Course Best Management Practices in the Prospect Bay Community (MD)

Design and implement 10 residential River Friendly Yard practices and three golf course best management practices in the Prospect Bay Country Club Community. Project will result in direct reductions in nitrogen, phosphorus, and sediment draining from residential yards and the highly-fertilized golf course that will directly support Queen Anne's County Watershed Implementation Plan goals.
\$192,619

Trout Unlimited Home Rivers Initiative

Western Maryland Initiative: Restoring Eastern Brook Trout Habitat and Connectivity (MD)

Restore, reconnect, and enhance aquatic habitat within stronghold patches of eastern brook trout. Project will implement aquatic organism passage (AOP) barrier mitigation and riparian restoration in priority watersheds, deliver an AOP barrier

mitigation plan to county roads department staff, and incorporate community and student volunteers into restoration and monitoring on public and private lands in western Maryland.
\$192,540

Virginia

Alliance for the Shenandoah Valley

Scaling Up Agricultural Best Practices Through the Shenandoah Valley Conservation Collaborative (VA)

Recruit 90 landowners and implement a combined 106 miles of livestock exclusion fencing and 490 acres of riparian buffers focusing restoration efforts on preserved parcels in the Shenandoah Valley. Project will leverage a regional backbone organization, existing partnerships, local government, and enhanced coordination with technical assistance and habitat restoration professionals to strengthen and accelerate the scale of best management practice implementation and aquatic habitat improvements.
\$996,620

Chesapeake Bay Foundation

Eastern Oyster Restoration in the Western Branch of the Lynnhaven River (VA)

Establish 2.5 acres of new oyster reef, engage more than 100 volunteers in the construction and planting of reef balls, and place 5.5 million young oysters in the Western Branch of the Lynnhaven River. Project will be conducted in partnership with Lynnhaven River Now, continuing the re-establishment of Eastern Oyster in the Lynnhaven and building on the

2018 National Fish and Wildlife Foundation-funded restoration in the Eastern Branch.
\$200,000

City of Norfolk

Norfolk Green Infrastructure Plan Implementation (VA)

Expand and increase implementation of the City of Norfolk's Green Infrastructure Plan by supporting community tree planting, adoption of tree and rain barrels for installation on private property, construction of rain gardens in community spaces, and restoring wetland and riparian buffers. Project will support goals of improved water quality, reduced nuisance flooding, expanded wildlife habitat, and increased community volunteer capacity.
\$161,500

Ecosystem Services

Prioritization of Restoration and Partnership in the Rivanna (VA)

Prioritize restoration work along the main stem of the Rivanna River Corridor from the confluence of the North Fork and South Fork to Moores Creek. Project will assess streambank erosion and riparian buffer parameters and rank areas marked high or very high for stabilization to maximize future implementation on the Rivanna, resulting in the largest results for available funding.
\$49,936

PHOTO (NEXT PAGE) Streambank restoration in Lancaster County



OUR GRANTS

Friends of the Rappahannock

Implementing Virginia's Phase III WIP Through the Rappahannock Roundtable (VA)

Install 10 miles of livestock fencing and stream restoration, 30 acres of urban forest/tree canopy, 300 acres of urban nutrient management plans, 5 acres of oyster reef restoration, and 15 living shoreline projects. Project will capitalize on the local and regional partnerships developed across the Rappahannock River Basin to accelerate the implementation of priority best management practices outlined in the Virginia Phase III Watershed Implementation Plan.

\$810,100

Headwaters Soil and Water Conservation District

Increasing Manure Injection Opportunity (VA)

Partner with the most widespread custom manure applicator in Virginia, adding an injector unit into the applicator fleet. Project will increase the adoption of manure injection and provide farmers an individual farm experience with the cost-benefit of utilizing manure injection with minimum disturbance for farms implementing no-till management, resulting in positive nitrogen load and water quality impacts.

\$199,876

James River Association

Improving Drainage in the Lakemont Neighborhood (VA)

Implement a hydronic separator structure retrofit and extend a storm sewer to provide water quality treatment and enhance maintenance access. Project will intercept drainage and redirect flow through a new storm sewer

while engaging and educating local residents through the design and implementation process.

\$199,959

Living River Restoration Trust

Long-Term Land Conservation and Buffer Implementation on the Elizabeth River (VA)

Evaluate 29 forest and wetland sites for long-term conservation, prioritize sites and plan for a corridor of high-value habitat, place 50 acres in permanent protection, and plant 1,500 square feet of riparian buffer. Project will build the capacity to conserve wetlands and forested riparian buffers in the Elizabeth River watershed, including establishing conservation of high-quality riparian corridors.

\$48,500

Lynnhaven River Now

Restoring the Eastern Oyster in the Eastern and Western Branches of the Lynnhaven River (VA)

Restore three acres of oyster reef in the eastern and western branches of the Lynnhaven River. Project will support reaching the target of an additional 60 acres of oyster habitat target in the Lynnhaven, in partnership with the Chesapeake Bay Foundation, and builds on the 2018 National Fish and Wildlife Foundation-funded restoration in the Eastern Branch.

\$200,000

National Wildlife Federation

Accelerating Implementation through Information Sharing at the Choose Clean Water Conference (VA)

Bring together regional stakeholders and community members for a two-day educational and networking

experience. Project will focus on enhancing and facilitating cross-sector relationships across the Chesapeake Bay watershed in order to encourage stronger restoration efforts.

\$45,000

The Elizabeth River Project

River Stars: Maturing the Movement (VA)

Develop the first protocol in the Chesapeake Watershed for verifying residential best management practices and construct a living shoreline showcase on the Norfolk Southern corporate campus. Project will increase the capacity of the River Star Homes and River Star Businesses programs to reduce pollution, while developing important protocols and models for residential and industrial stewardship.

\$198,472

Town of Colonial Beach

Robin Grove Living Shoreline (VA)

Restore eroded shoreline along Monroe Bay by constructing a living shoreline with rock sills, sand fill, and wetland plantings to restore marsh habitat. Project will install oyster shell bag sills to maintain existing marsh fringe, partner with the Virginia Institute of Marine Science, and engage the community through volunteer installations of oyster bags.

\$197,804

OUR GRANTS

Trout Unlimited

Expanding Brook Trout Patch Size and Improving Water Quality in the North River Watershed (VA)

Restore 1 mile of instream habitat, install 7,000 feet of exclusion fencing, and establish 19 acres of riparian buffer in spring fed streams in the Mossy Creek and Briery Branch subwatersheds of Upper North River. Project will increase and expand eastern brook trout patches and improve water quality in the Shenandoah Valley while providing technical assistance to landowners working to implement restoration projects on their properties.

\$178,385

Virginia Polytechnic Institute and State University

Building Soil Health Through Collaboration, Implementation, and Market Opportunities (VA)

Pilot 45 producers with management control of 2,250 acres of cropland to create widespread adoption of cover crop, no-till, and enhanced nutrient management practices, increasing adoption to 20,000 acres post-pilot. Project will enhance the efforts of Virginia's Soil Health Coalition to expand awareness among both producers and consumers for the value of healthy soil practices and create increased partnerships that benefit soil health and water quality in priority regions in the Shenandoah Valley and the lower Eastern Shore.

\$1,000,000

Pennsylvania

Alliance for the Chesapeake Bay

Pennsylvania Lawn Conversion Program (PA)

Convert 60 pilot acres with urban forest planting and conservation landscaping best management practices. Project will develop a Lawn Conversion Program in Pennsylvania that can be carried and expanded by the commonwealth through the year 2025 through training practitioners, generating outreach materials, and starting an advisory committee to pilot implementation in south-central Pennsylvania.

\$199,942

Borough of Northumberland

Detailing and Designing Green Infrastructure in Liberty Hollow Run (PA)

Conduct site analysis, design, and public outreach to create 12 design documents, three community program plans, and an outreach report for Liberty Hollow Run. Project will advance formal action plans for rain barrels, disconnected downspouts, and tree planting programs while ensuring high community participation.

\$50,000

City of Lancaster

Maximizing Water Quality Benefits on School Campuses in Lancaster (PA)

Create a master plan of urban nutrient management at 19 campuses owned and maintained by the School District of Lancaster and implement a pollinator garden, seeded meadow, no-mow zone, and a basin retrofit at Hamilton Elementary and a native meadow planted at Elizabeth R. Martin School.

Project will determine how property maintenance and landscape techniques can be improved to maximize water quality benefits while balancing aesthetics, maintenance requirements, and needs of the school district.

\$176,000

Clauser Environmental

Good Spring Creek Watershed Restoration Plan (PA)

Develop a watershed restoration plan for the Good Spring Creek Watershed in Schuylkill County, Pennsylvania. The plan will fill critical gaps in the identification and prioritization of projects scheduled to be the next phase of a regional watershed restoration and construction initiative.

\$49,500

Cocalico Creek Watershed Association

Cocalico Creek Watershed Farmer Engagement for Conservation (PA)

Assist seven townships in collaboration with their farm community to achieve significant water quality improvements for local streams through farmer meetings and farm visits. Project will increase planning and implementation of barnyard improvements, riparian forested buffers, and manure storage to manage agriculture runoff, maximizing designs and applications to funding from state and other agencies for project completion.

\$199,350

OUR GRANTS

Lancaster Farmland Trust

Accelerating Acquisition of Conservation and Manure Management Plans in Paradise Township (PA)

Collaborate with Paradise Township to accelerate the acquisition of conservation and manure management plans for local farms by utilizing successful outreach strategies to position farmers for the implementation of agricultural best management practices. Project will set the stage for large-scale nutrient and sediment reductions in the Pequea Creek Watershed and help fulfill the Town's commitment to achieve 100-percent conservation plan compliance.

\$49,606

Lititz Run Watershed Alliance

Updating the Lititz Run Watershed Action Plan and Watershed-Based Permit (PA)

Update the Lititz Run Watershed Action Plan and include a framework for a more comprehensive method of determining current water resource conditions in the watershed while incorporating local citizen and government input with the establishment of a watershed-based permit. Project will protect the Cold Water Fishery Existing Use classification achieved for Lititz Run, self-propagating aquatic life observed, and improved water quality and flooding conditions.

49,960

Pennsylvania Department of Conservation and Natural Resources

Correctional Vocational Training: Increasing the Workforce for Buffer Planting and Maintenance (PA)

Increase available private riparian forest buffer

contractors available to conduct riparian forest buffer planting and maintenance through a correctional vocational training program, establishment of a workforce pipeline, and on-the-ground conservation projects. Project will increase the survivability rate of riparian forest buffers and expand buffer maintenance options to increase implementation of forested buffers.

Pennsylvania State University

Chiques-Conoy-Conewago Regional Partnership: Outreach and Implementation with Priority Farmers (PA)

Accelerate improved agriculture management in the lower Susquehanna River region through the implementation of 75 acres of forested riparian buffers, 1,360 acres with soil health practices, and 7,500 feet of stream restoration. Project will improve existing restoration data and analysis tools to prioritize work based on aquatic habitat impairment and engage farmers in Lancaster, Lebanon, and Dauphin counties through a strategic team of outreach and technical assistance.

\$1,000,000

Stroud Water Research Center

Accelerating and Converting Marginal Cropland to Forested Buffers (PA)

Convert near-stream marginal cropland to forested buffers, implement soil health best management practices and advanced nutrient management, and accelerate forested buffer implementation. Project will build on the Stroud Water Research

Center's Farm Stewardship Program and adapt it for use by crop farmers to improve profitability and environmental performance.

\$199,528

Stroud Water Research Center

Expanding Soil Health Through Partnership, Better Coordination, and Increased Practice Adoption (PA)

Expand soil health outreach to assist 75 farmers implement rotational grazing on more than 860 acres and 12,000 acres of new cover crops and/or no-till practices. Project will reach an estimated 4,500 farmers through grazing advisors and farmer-led, peer-to-peer soil health hubs throughout Pennsylvania, and will further employ applied research to develop a better understanding on the benefits of soil health practices to runoff, productivity and farm management.

\$999,318

Western Pennsylvania Conservancy

Riparian Restoration and Buffer Establishment in the Susquehanna River West Branch (PA)

Restore 20 acres of riparian habitat and expand local community riparian knowledge. Project will facilitate partner collaboration on reaching out to landowners with degraded riparian areas, leading to increased planting of new riparian acres and post planting establishment, monitoring, and stewardship development.

\$158,755

PHOTO (NEXT PAGE) Susquehanna River in Pennsylvania



OUR GRANTS

Lower Allen Township

Detention Basin Retrofit in Residential Lower Allen Township (PA)

Retrofit an existing dry detention basin to a bioretention facility in the Moreland residential neighborhood of Lower Allen Township. Project will retrofit a total drainage area of 17.7 acres improving water quality and stormwater management while engaging and educating the local community about stormwater pollution.

\$160,486

Hallam Borough

Streambank Restoration on a Tributary to Kreutz Creek (PA)

Restore 545 linear feet of stream bank along with 400 linear feet of eroded swale on an unnamed tributary to Kreutz Creek in Hallam Borough, York County, PA. Project will stabilize stream banks and reduce sediment discharge to Kreutz Creek.

\$200,000

Conservation Foundation of Lancaster County

Cocalico Creek Floodplain Restoration (PA)

Establish native vegetation and stabilize streambanks in preparation for next phases of floodplain restoration within the Little Cocalico Creek and Cocalico Creek watershed. Project will improve water quality through reduction of pollution and increase of wetland habitat.

\$200,000

West Lampeter Township

Groff Farm Floodplain Restoration (PA)

Restore a 2,300 linear foot section of an eroded streambank and create approximately 4.4 acres of riparian habitat on a large portion of streambank of Big Spring Run in the Mill Creek Watershed. Project will reduce pounds of sediment, pounds of nitrogen, and pounds of phosphorus through the construction of Agricultural Best Management Practices on Groff Farm.

\$200,000

Alliance for the Chesapeake Bay, Inc.

Lancaster City Retrofit and Rain Garden Implementation (PA)

Support the City of Lancaster in implementing two green infrastructure projects within the southwest quadrant of Lancaster City. Project will partner with the Chesapeake Bay Landscape Professionals and Interfaith Partners of the Chesapeake to retrofit an existing rain garden in Brandon Park, and a rain garden will be installed on the property of a neighborhood church to reduce the amount of stormwater entering Lancaster City's combined sewer overflow system.

\$200,000

Borough of Akron

Akron Borough Community Rain Garden and Stream Restoration (PA)

Implement a rain garden for runoff control from the Akron Borough office building and restore approximately 500 feet of eroded stream through Roland Park. Project will reduce stormwater runoff and maximize infiltration and will continue

community education events to encourage its residents, businesses, and churches to do similar Best Management Practices to reduce stormwater runoff and maximize infiltration.

\$120,000

Mount Joy Borough

Stormwater Management in Rotary Park (PA)

Establish a native vegetative bioswale to slow down the velocity of water through a native grass channel while providing heavy erosion control to prevent future washouts. Project will reduce the amount of annual sediment, phosphorus, and nitrogen transported to Little Chiques Creek and erect educational kiosks throughout the park to promote education on pollutants, erosion control, and stormwater best management practices for Borough residents and participants at the park.

\$100,000

Manheim Township

Stoner Park Streambank Restoration (PA)

Restore streambank along Landis Run within Stoner Park for approximately 1,336 linear feet of property owned by Manheim Township. Project will contribute to the sediment load reduction objectives of Manheim Township's Pollutant Reduction Plan by eliminating a known source of sediment.

\$200,000

OUR GRANTS

Manheim Borough

Memorial Park Stream Restoration (PA)

Implement riparian buffers and stream bank stabilization for an approximate 3,000 linear foot section of the Chiques Creek. Project will reduce sediment and associated nutrients and other pollutants entering the stream in addition to providing educational and passive recreational opportunities.

\$200,000

Penn Township

Stream Restoration on a Tributary to Chiques Creek (PA)

Partner with a plain-sect farmer to restore an eroded stream channel that conveys stormwater discharge to a tributary to Chiques Creek from an upland developed area, including installing a stormwater bioretention facility to reduce stormwater volume and provide water quality benefits. Project will achieve a portion of the Township's required pollutant reductions through stream restoration and native forest riparian buffers.

\$200,000

TeamAg, Inc.

Agriculture Runoff Water Quality Improvement (PA)

Implement prepared Comprehensive Nutrient Management Plans for several small Plain Sect dairies in Salisbury Township identified with critical water concerns including leaking manure storage facilities, runoff from barnyards and loafing areas, inadequate manure storage, improper treatment of milk house wastewater, and lack of cattle stream crossings and fencing to exclude cattle. Project will implement

environmental improvements on farms to increase their economic and environmental performance.

\$200,000

Manheim Township

Streambank Restoration on a Tributary to Conestoga Creek (PA)

Restore approximately 1,065 linear feet of an unnamed tributary to the Conestoga River along Manheim Township property in Lancaster County, PA. Project will provide sediment load reductions to help meet Manheim Township's Pollutant Reduction Plan by eliminating a causal source of sediment.

\$93,780

West Hempfield Township

Streambank Stabilization and Stormwater Management on a Tributary to Chiques Creek (PA)

Partner with a plain-sect farmer to stabilize an eroded stream and drainage channel that conveys stormwater discharge from an upland developed area to Chiques Creek and install a bioretention basin to reduce stormwater volume and provide water quality benefits. Project will advance load reduction efforts through accelerated implementation of structural load-reduction practices.

\$200,000

Lancaster Farmland Trust

Stream Restoration on Cedar Creek (PA)

Implement the following priority practices: loafing lot management, forest and grass buffers with exclusion fencing, and stream restoration along five properties on Cedar Creek in East Earl Township. Project will

reduce nutrient and sediment pollution near the headwaters of the Conestoga River Watershed, improving water quality for downstream neighbors.

\$161,934

West Virginia

Trout Unlimited Home Rivers Initiative

Potomac Brook Trout Patch Reconnection from Big Run to Judy Gap (WV)

Restore, reconnect, and meld two stronghold patches of eastern brook trout in the North Fork of the South Branch of the Potomac River. Project will expand existing patches to restore adjacent 50 square miles of stream habitat to improve water quality through riparian and in-stream restoration, aquatic organism passage barrier mitigation, and the installation of agricultural practices that meet the needs of the fish and the farms.

\$194,418

Multiple States

Alliance for the Chesapeake Bay

Strengthening Watershed Initiatives and Increasing Capacity to Implement Watershed Restoration (multiple states)

Help local watershed groups increase capacity to implement restoration projects at more efficient and effective levels by strengthening networks of individuals, communities, businesses, and governments around shared goals of advancing watershed protection and restoration. Project will

OUR GRANTS

organize nine Watershed Initiative tasks to offer information sharing activities, overarching objectives of peer-to-peer learning, areas of common concern and need, and solutions to common challenges.
\$500,000

The Nature Conservancy

Accelerating Wetland Restoration Through Partnerships and Landowner Engagement (DE, MD, PA, VA)

Accelerate water quality and black duck habitat improvements through strengthened partnerships to advance wetland and stream restoration in priority regions and identification of landowner priorities and constraints to guide restoration outreach and opportunities. Project will leverage existing partnerships and expertise and add needed capacity to further foster watershed-wide collaboration to restore, enhance, and protect a network of habitats to improve water quality.
\$965,852

Chesapeake Stormwater Network

Chesapeake Bay Stormwater Training and Engagement III: (multiple states)

Focus stormwater training and engagement efforts on four critical and under-served target populations in the Chesapeake Bay watershed to accelerate the pace of local nutrient load reductions. Project will promote more widespread implementation of effective stormwater and restoration practices across the watershed.
\$125,000

University of Maryland Center for Environmental Science

Increasing Stakeholder Engagement in the Chesapeake Bay Report Card (multiple states)

Improve the Chesapeake Bay Report Card process and product by engaging in new partnerships to develop ecosystem health indicators for non-tidal watershed areas and indicators for social, cultural, and economically relevant values identified by stakeholders. Project will refine the process of integrating new indicators via stakeholder engagement workshops, which require new regional partnerships and collaborations, a vital outcome of this project.
\$82,678

Tioga County Soil and Water Conservation District of New York

Expanding Engagement in the Upper Susquehanna Coalition Buffer Program (NY, PA)

Expand and engage new partners and populations in the Upper Susquehanna Coalition Buffer Program. Project will build outreach opportunities and engage populations that have yet to be engaged in pilot projects incorporating riparian restoration, livestock exclusion, agricultural land retirement, green infrastructure, and natural stream corridor restoration.
\$200,000

Alliance for the Chesapeake Bay

Nestle Agriculture and Dairy Conservation Initiative (MD, PA, VA)

Pilot the planning and implementation of agriculture conservation practices with six Nestle farmers to build a model to scale implementation to the entire 900 farms that supply milk to the company in the Chesapeake Bay Watershed. Project will lay the ground work for building a watershed-wide conservation program to support the farmers that supply to Nestle.
\$200,000

Chesapeake Bay Commission

Lessons Learned from Decades of Experiences of the Chesapeake Bay Program Partnership (multiple states)

Draft and publish a multi-author paper in the peer reviewed literature summarizing the core set of lessons learned through the work of the Partnership which are applicable to other watershed-based/partnership-based restoration efforts, at the result of repeated requests to share the key lessons learned during the multi-decade, partnership-based, Chesapeake Bay restoration efforts. Project will result in a multi-media series of 'lessons learned' products.
\$25,316

Canvasback ducks flying over the
Chesapeake Bay in Maryland





Altria



FOR ADDITIONAL INFORMATION ABOUT THE CHESAPEAKE BAY STEWARDSHIP FUND, PLEASE CALL US AT: 202-857-0166. OR VISIT OUR WEBSITE AT: WWW.NFWF.ORG/CHESAPEAKE

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