





OUR PROGRAM

Celebrating more than 20 years of partnership with local communities, and financial and technical support for farmers and private landowners who are working to restore polluted rivers and streams in the Chesapeake Bay region through voluntary, cost-effective, innovative and locally led solutions.

With our 2020 investments, NFWF's grant-making in the Chesapeake Bay region stands at more than \$200 million, with an additional \$315 million in local matching resources. Together with local partners, NFWF's total conservation impact in the Bay watershed now stands at over half a billion dollars.

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.

In 2020 NFWF helped regional restoration partners pivot their project implementation plans and timelines in the face of the unprecedented impacts

of COVID-19. NFWF even shifted its 2020 Agricultural Networking Forum to a first-ever, all-virtual format, bringing together more than 1,000 participants for networking and information sharing on best practices in sustainable agriculture in the region.

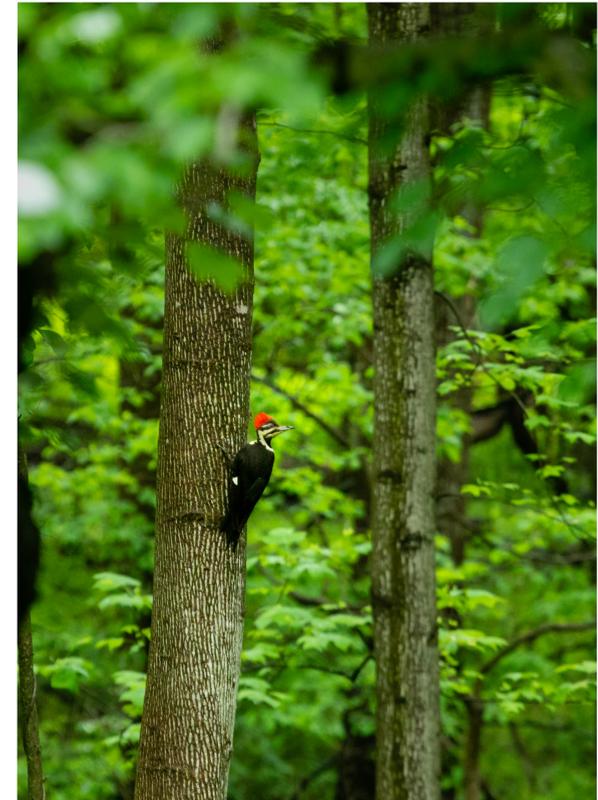
These results do not mean the work is finished. Data continues to demonstrate that the Bay watershed is rebounding after decades of decline, but additional work is needed to finish the job and sustain collective successes. That's why the Foundation continues to advance next-generation approaches to watershed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

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

ON THE COVER River herring

LEFT Farmland and marsh along the Chesapeake Bay in Queen Anne county, Maryland

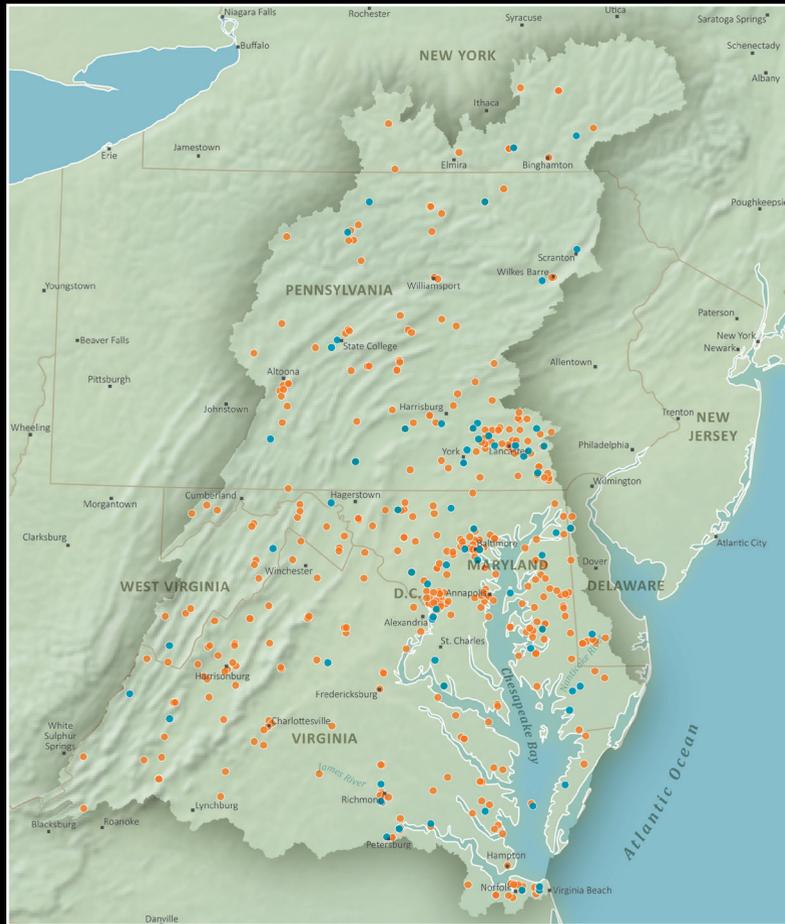
RIGHT PHOTO A red-cockaded woodpecker in hardwood forest



OUR INVESTMENTS

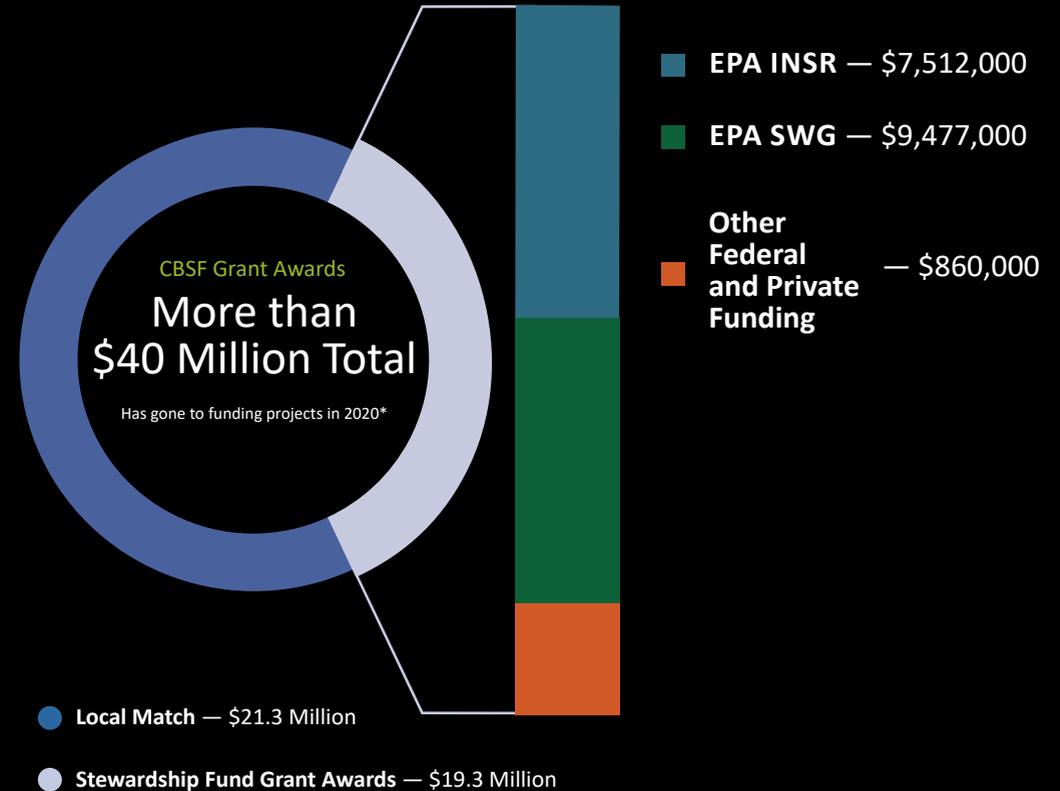
Through a partnership with the U.S. Environmental Protection Agency and the Chesapeake Bay Program, the Stewardship Fund advances cost-effective and creative restoration solutions.

Local Water Quality Investments



- Location of New 2020 Stewardship Fund Grants
- Location of Historic Stewardship Fund Grants

2020 Project Funding Snapshot



* This chart reflects grant awards only

OUR IMPACT

Through grants awarded in 2020, the Stewardship Fund will achieve measurable results for a healthier Chesapeake Bay watershed by working to restore local rivers and streams.

2020 Highlights

- Awarded \$1.1 million through 23 **Small Watershed Grants – Planning and Technical Assistance Program** for planning and design work that enhances local capacity for restoration.
- Awarded more than \$10 million through 26 **Small Watershed Grants – Implementation** and \$6.9 million in **Innovative Nutrient and Sediment Reduction Program** grants to implement restoration projects in the Bay.
- Awarded more than \$1.2 million in 8 grants through the **Pennsylvania Local Government Implementation Grants Program** to implement restoration projects in selected Pennsylvania communities.
- Hosted a **Regional Collaborative Spotlight Series**, a five-part webinar series for Chesapeake Bay restoration practitioners and stakeholders to explore and elevate understanding of what constitutes effective, regional-scale collaborative approaches for Bay restoration.

Since 1999

26.1 Million
Pounds

Of Nitrogen Avoided Annually

4.6 Million
Pounds

Of Phosphorus Avoided Annually

945 Million
Pounds

Of Sediment Avoided Annually

2,262
Miles

Of Riparian Habitat Restored

1.7 Million
Square Feet

Of Impervious Surface Removed

895,559 Acres

Under BMPs for Nutrient and Sediment Reduction

OUR PROJECTS

Scaling Up Agricultural Best Practices Through Collaboration

Working Together to Preserve the Shenandoah Valley Lands and Waterways That Lead to the Bay

Known for its gorgeous iconic landscapes, the Shenandoah Valley is also home to a recently established collaborative effort to preserve rural open landscapes and improve water quality throughout the region.

“The Shenandoah Valley Conservation Collaborative brings together these terrific partners that have been doing land protection and clean water work in the region for years,” said Emily Warner, conservation director for Potomac Conservancy, a partner in the Collaborative. “Now, as a formal partnership, we have access to shared expertise and new tools to help landowners achieve their conservation goals.”

Banding together has also created the opportunity for better access to larger grant support. The Collaborative was awarded an Innovative Nutrient and Sediment Reduction grant from NFWF for \$996,600 to accelerate the implementation of voluntary conservation practices, like fencing cattle out of streams and planting trees along waterways. These proven practices benefit agricultural operations and restore clean water for communities and for local waters that ultimately lead to the Chesapeake Bay.

Working together with support from NFWF also improves opportunities to protect the Valley’s working lands for future generations. “We want to capitalize on the tremendous opportunity for more land protection—farmland and forest land

are being converted to development every day,” said Kate Wofford, executive director of Alliance for the Shenandoah Valley, the New Market-based nonprofit organization that coordinates the Shenandoah Collaborative. “We will continue to work with landowners to get proven best management practices on the ground to improve the farms and water quality.”



“The Bullard farm protection is an example of the partnership approach that we want to take to scale with our recent NFWF award. The property is in an area that our partners identified as a shared priority for protection,” said Wofford.

Blake and Tammy Bullard own the 200-acre property outside Strasburg, Virginia. “While we were refurbishing the house and barn, a friend told me about conservation easements. We’re excited about preserving the land for the future,” said Blake.

Blake Bullard said there are other neighbors who are interested, and he hopes they will do the same with their land. “The Shenandoah Valley is one of the prettiest places in the country, and it feels good to know that this property is always going to look as it does now.”

MAP (ABOVE) Shenandoah watershed

PHOTO (NEXT PAGE) Shenandoah Valley in Virginia



OUR PROJECTS

Turning Fallow Farmlands into Wetland Habitat

The University of Maryland is helping Eastern Shore landowners pursue restoration options for salt-damaged agricultural land, reducing pollution and increasing wildlife habitat

Farmers near coastal waterways are increasingly having to face “saltwater intrusion,” a phenomenon that occurs when saltwater from the Bay or ocean ends up in groundwater, eventually infiltrating the soil. Saltwater intrusion can have a devastating impact on farmland and forests alike. Historically there have been few viable options for the fallow areas lost to saltwater intrusion, but scientists at the Harry R. Hughes Center for Agro-Ecology (affiliated with the University of Maryland) in Queenstown are working on ways to offset these losses and enhance wildlife habitat in the process.

According to Kathryn Everts, director of the Wye Research and Education Center and the Harry R. Hughes Center for Agro-Ecology, large areas of tidal wetlands are being lost each year in the Chesapeake Bay watershed when wetland habitat is eroded as the saltwater border moves upland and takes over.

There may be a creative solution—an opportunity to establish much-needed native tidal wetlands on areas that have been encroached upon by saltwater intrusion.

A Small Watersheds Grant from NFWF for \$632,000 to the University of Maryland will evaluate native grasses for their ability to establish along the margins of farm fields affected by saltwater intrusion. This effort will increase healthy wetland habitat that supports species that depend on it like the threatened American black duck, a focal species of the Chesapeake Bay Stewardship Fund.

The project will identify areas at risk of saltwater intrusion that have the potential

for tidal wetland habitat creation with the goal of implementing wetland restoration projects on 32 acres of farmland.

Kate Tully, associate professor of agroecology at the University of Maryland, said “The purpose of the grant is to provide landowners with alternatives. We want proof of concept that there are restoration options that are going to work on these lands and give multiple benefits.”

“Part of the grant is to roll out wetlands, to increase the acreage that will support what’s best for the black duck population, what works best in pulling nutrients out of the soil that would otherwise add pollutants to the bay waterways,” said Tully.

Landowner Betty Schulz has property next to a tidal creek in Somerset county. UMD has been installing different varieties of native grasses to determine which wetland plant species work best.

Schulz is committed to pursuing options that she considers sustainable. “We have really seen the water level rising, and I want to do what we can to preserve land and wildlife in the healthiest way possible,” said Schulz.

Tully has found that most farmers appreciate finding out about options. “They say, ‘my grandfather would roll over in his grave if he saw these fields!’ The thing they hate the most is land going to waste. They want to see the land be productive whether that’s soy or corn or a healthy restoration field, one that perhaps ends up being a beautiful wetland,” said Tully.



MAP (ABOVE) Nanticoke watershed
PHOTO (NEXT PAGE) American black duck



OUR PROJECTS

Addressing Tree Equity and Access in Southside Richmond

The Chesapeake Bay Foundation is partnering with the City of Richmond Office of Sustainability to increase tree canopy and green spaces in Southside Richmond.

Southside Richmond is an urban landscape south of where the James River runs through Virginia's state capitol. Many neighborhoods in this area have few trees and large amounts of concrete and asphalt that trap and radiate heat. Increasing the amount of shade in Southside Richmond can improve the health of residents by lessening the chance for heat stroke and cardiac arrest, and even improving symptoms of respiratory conditions such as asthma and diabetes.

"We are looking at climate risk and how it intersects with illnesses like COVID-19, or even asthma. There is a real health-equity issue in Southside," said Kendra Norrell, community outreach coordinator at the Office of Sustainability in the city of Richmond. "We want to improve urban heat islands and reduce the temperature and also improve air quality."

The Chesapeake Bay Foundation (CBF) received a 2020 Small Watersheds Implementation Grant award of \$227,000 from NFWF to address impervious surfaces and managed turf in Southside Richmond. They will plant 250 trees on municipal property and install other green infrastructure projects to retain and treat polluted runoff in the city.

Chesapeake Bay Foundation will work closely with the City of Richmond Office of Sustainability and use the Sustainability Office's Climate Equity Index, an interactive tool that explores factors impacting communities and displays areas exposed to harm.

"Richmond is excited to be partners in the NFWF Greening Southside Richmond Project," said Richmond Mayor Levar Stoney. "Our partnership includes not only funding, but the valuable work from the Office of Sustainability and their Climate Equity Index, which identifies communities in Southside that will benefit from this project."



The City of Richmond's overall goal is to increase the tree canopy city-wide within all neighborhoods, which will be aided by the new tree-planting initiative. Prioritizing Southside Richmond, which has a high heat vulnerability index rating and low tree canopy coverage, will provide additional benefits beyond lowering the temperatures of urban heat islands in that area.

Mayor Stoney also announced a new initiative to expand urban parks and increase green space within the city, with the goal that all residents live within a 10-minute walk to a park. The Greening Southside Richmond project will help close this gap.

"Supplementing this work, the Green Team has identified five new parks in Southside connecting more Richmonders, equitably, to green spaces that the community will design," said Mayor Stoney. "These efforts all help the city we love by contributing to a better quality of life for all Richmonders, and a healthier, more resilient Richmond."

MAP (ABOVE) James River watershed, Virginia
(NEXT PAGE) Aerial view of Richmond, Virginia



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.

\$50,000

District of Columbia

Department of Energy and Environment

Enhancing Community Partnerships for Restoration of the Anacostia River Corridor (DC)

Restore freshwater tidal habitat in the Anacostia River. Project will lead to the creation of one comprehensive restoration plan and restoration of 10 acres of tidal wetland for American black duck and water quality improvements.

\$500,000

Maryland

Alliance for the Chesapeake Bay

Expanding Tree Canopy in Charles County (MD)

Improve local water quality and habitat in Charles County, Maryland. Project will create an Urban Tree Canopy Plan with local organizations and government

agencies, train 40 Chesapeake Tree Stewards, expand the urban tree canopy by planting 75 native trees in the town of La Plata, and reforest 55 acres of land with native trees throughout Charles County.

\$297,300

Blue Water Baltimore

Implementing Green Stormwater Infrastructure in East and West Baltimore (MD)

Implement green stormwater infrastructure projects and expand outreach and planning services to new target neighborhoods in West Baltimore to reduce nitrogen, phosphorus and sediment pollution; develop regional scale partnerships, and increase citizen engagement. Project will expand, develop, and build upon previous success in East Baltimore to support neighborhoods in West Baltimore facing stormwater challenges in the Dead Run-Gwynns Falls watershed.

\$500,000

Carroll County Government, Bureau of Resource Management

Roberts Field Restoration (MD)

Engineer drawings to retrofit the Roberts Field existing wet pond stormwater management facility with a drainage area of 47 acres, 21 of which are impervious, to an innovative wet pond and submerged gravel wetland facility and create 900 linear feet of restored stream. Project will lead to improved water quality, provide additional natural habitat, reduce thermal impacts, and maintain the community amenity at the headwaters for Piney Run, a cold-water trout stream.

\$50,000

Center for Watershed Protection

Maryland State Fairgrounds Green Infrastructure Planning and Design

Provide technical and coordination assistance to the Maryland State Fair and its many partners to advance high-profile green infrastructure projects and facilitate improved Fairgrounds operations. Project will include a project site survey, geotechnical investigation, stormwater engineering design, project implementation planning and coordination, and capacity building for local residents.

\$49,500

Greater Baybrook Alliance

Greater Baybrook Green Infrastructure Master Plan (MD)

Develop a green infrastructure master plan that will create a network of green hubs and corridors and related programming and jobs. Project will build upon a green infrastructure concept plan, conducted by the American Planning Association, for the Brooklyn community and is identified as a high priority in the 2016 Greater Baybrook Vision and Action Plan, the communities' master plan.

\$49,800

Howard County, Maryland

Planting the Trees for the Future Initiative (MD)

Expand local collaborations on environmental restoration, the rate and scale of reforestation and other natural filters, strategic land conservation, and environmental job opportunities in Central Maryland. Project will triple the average annual number of trees planted across the pilot area by the end of the three-year period, with a target rate of 100,000 trees per

OUR GRANTS

year across the Greater Baltimore Wilderness Coalition territory, including Howard County, Baltimore County, and Baltimore City.

\$999,200

Lower Shore Land Trust

Delmarva Working and Natural Lands Conservation and Restoration (MD)

Develop a Delmarva Rural Lands Working Group and Tri-County Forest Conservation Program to assess, prioritize, and implement restoration and conservation projects in the Chesapeake Bay portion of the lower Delmarva Peninsula in Maryland. Project will lead to healthy riparian forests, improved water quality, and restored wetland habitat, benefiting American black duck, and other terrestrial and aquatic living resources.

\$194,600

Montgomery County, Maryland

Glenmont Forest Green Streets Water Quality Restoration (MD)

Construct a community-wide green street project in Silver Spring, Maryland, with 67 rain gardens, bioretention gardens and tree box filters to improve water quality. Project will work in collaboration with Rock Creek Conservancy, and the green infrastructure implemented will educate and engage the community while reducing 133 pounds of nitrogen, 20 pounds of phosphorous, and 35 tons of sediment pollution annually to Rock Creek, the Potomac River, and the Chesapeake Bay.

\$500,000

National Wildlife Federation

Modeling an Approach to Greening Gray Infrastructure (MD)

Conduct studies of offshore breakwaters in the Choptank River and complete engineered designs incorporating original structures with oyster castles and oyster spat on identified sites, including Bill Burton Fishing Piers State Park and Horne Bay along Horn Point Laboratory's campus. Project will develop oyster retrofit designs that will create complex fish and shellfish habitat and provide enhanced, measurable nutrient and sediment reduction benefits when implemented.

\$50,000

Neighborhood Design Center

Municipal Urban Forestry Needs Analysis and Pilot Projects for Prince George's County (MD)

Conduct an urban forestry needs analysis for municipalities in Prince George's County. Project will survey urban forest managers to assess their current urban forest status and identify opportunities to provide planning and technical assistance for managing public trees and will also assist the Town of Forest Heights and the City of New Carrollton to assess and manage their public trees.

\$49,300

Shorerivers

Old Love Point Park Stream and Park Restoration (MD)

Produce a comprehensive stream-restoration design that incorporates new stormwater practices within the park, wetland areas adjacent to the stream restoration, and a stream-restoration design that will

complement both the new stormwater and wetland areas. Project will design approximately 1,500 linear feet of stream restoration, 2 to 3 acres of wetlands/floodplains, and two to three bioretentions.

\$50,000

Smithsonian Institution

River Herring Response to Fish Passage Improvement in the Patapsco River (MD)

Uses environmental DNA (eDNA) techniques and ichthyoplankton surveys to assess river herring spawning habitat use in the Patapsco River and develops a relationship between sonar run counts and eDNA concentration. Project will build on four years of monitoring prior to complete removal of Bloede Dam to determine changes in habitat use following fish passage improvement and enables eDNA methods to be used to estimate run counts for long-term population monitoring.

\$86,700

Wicomico Environmental Trust

Monitoring Water Quality and Health of the Wicomico River (MD)

Recruit volunteers to monitor the waters of the Wicomico River and its tributaries on Maryland's Lower Eastern Shore to collect and develop objective, scientifically credible water-quality data. Project will train volunteers to collect water samples and record site conditions, assess samples water clarity, total nitrogen and phosphorus, chlorophyll a, and bacteria, and conduct scientific analysis by trained scientists before results are delivered to the public.

\$50,000

OUR GRANTS

New York

Trout Unlimited

Wylie Brook Aquatic Passage Connectivity Project (NY)

Replace three undersized culverts that are a barrier for brook trout, which will reconnect more than 7 miles of habitat for brook trout in the watershed. Project will build a partnership between Trout Unlimited, the U.S. Fish and Wildlife Service, the state Department of Environmental Conservation and the local township of Coventry, New York, and enhance the eastern brook trout population stronghold.

\$171,100

Pennsylvania

Alliance for the Chesapeake Bay

Little Beaver Creek Stream and Riparian Buffer Restoration (PA)

Conduct initial feasibility analysis and planning efforts on the highly eroded streambanks of 1,275-foot segment of Little Beaver Creek, which runs through farm property owned in Strasburg Township, Lancaster County, Pennsylvania. Project will result in a report which will outline project scope, permitting requirements, and estimated project costs which will address streambank erosion.

\$50,000

Alliance for the Chesapeake Bay

Paradise Township Plain Sect Clean Water Demonstration Farm (PA)

Support a landowner in Paradise Township in Lancaster County, Pennsylvania, within the Pequea Creek Watershed with the installation of animal waste management facilities, loafing lot management and barnyard runoff controls.

\$200,000

Alliance for the Chesapeake Bay

Restoring the Octorara Reservoir: Continued Plain Sect Conservation Action (PA)

Achieve pollutant reductions in subwatersheds contributing to drinking water supplies in the Octorara Creek Watershed through outreach and agricultural best management practices installation on Plain Sect farms. Project will prioritize farms and agricultural best management practices based on their nitrogen reduction potential, with implementation efforts being led by the Alliance for the Chesapeake Bay alongside partners belonging to Octorara Source Water Collaborative.

\$500,000

Alliance for the Chesapeake Bay

Turkey Hill Clean Water Partnership: Continued Momentum for Market-Driven Conservation Action (PA)

Work collectively with Turkey Hill Dairy, the Alliance for the Chesapeake Bay and the Maryland and Virginia Milk Producers Cooperative Association to

support the farmers that supply milk to Turkey Hill Dairy by installing conservation practices. Project will accelerate implementation and build momentum for the Turkey Hill Clean Water Partnership.

\$500,000

Bedford County Conservation District

Bedford County Watershed Action Plan Development (PA)

Conduct subwatershed assessments of Spicer Brook, Cumberland Valley Run, Beaverdam Creek and their related tributaries in Lebanon County to determine excessive sources of nutrients and sediment and provide recommendations for restoration or improvements with the goal of identifying best management practices for implementation. Project will deliver Watershed Action Plans that will identify priority restoration sites and the associated concept master plans for those sites.

\$47,000

Bradford County Conservation District

Bradford County Accelerated Watershed Implementation Plan Development (PA)

Accelerate planning of Bradford County's Watershed Implementation Plan. Project will address resource gaps in project implementation utilizing Bradford County's database of planning needs resulting from landowner and/or municipal assistance requests.

\$50,000

PHOTO (NEXT PAGE) "Ghost forests" of dead trees caused by saltwater intrusion in Maryland



OUR GRANTS

Capital Resource Conservation and Development Area Council

Support for a Successful Transition to Rotational Grazing (PA)

Support the transition of up to 1,000 acres of crop land and unmanaged pasture to a rotational grazing system, including cost-share for grazing infrastructure and technical assistance to ensure the successful implementation of the funded grazing projects. Project will complement work being conducted in the Chesapeake Bay Watershed to promote rotational grazing and soil health, including the Mountains to Bay Grazing Alliance and the Pennsylvania Soil Health Coalition.

\$406,200

Chesapeake Bay Foundation

Accelerating Riparian Forest Buffer Implementation in Priority Pennsylvania Counties (PA)

Build relationships between private and public partners of conservation districts in Pennsylvania's Final Phase 3 Watershed Implementation Plan to accelerate implementation, maintenance resources and innovative financial incentives of riparian forested buffers in Pennsylvania. Project will provide technical assistance to local contractors and implement 360 acres of buffers, resulting in an annual load reduction of 42,071 pounds nitrogen, 635 pounds phosphorus, and 1,656,578 pounds of sediment.

\$975,900

Chesapeake Conservancy

Precision Conservation Partnership Implementing a Regional Restoration Plan in Central Pennsylvania (PA)

Implement a regional restoration plan in central Pennsylvania, build upon a Precision Conservation Partnership and increase and strengthen local capacity and partnerships. Project will result in full-farm restoration on 25 farms, enhanced coordination of outreach and technical assistance, improved messaging to accelerate landowner recruitment, and knowledge transfer in the region, and prioritize restoration projects to improve 46 miles of impaired streams.

\$1,000,000

Cumberland County Conservation District

Cumberland County Conservation District Cover Crop Incentive (PA)

Continue and expand a successfully implemented cover crop incentive program in Cumberland County which incentivizes low or no-till cover crops through offering payments to farmers to utilize approved winter small grain crops. Project will encourage implementation of additional cover crop acres on county farms, which are a priority agricultural water quality practice with respect to the Pennsylvania Phase 3 Watershed Implementation Plan.

\$54,600

Eastern Pennsylvania Coalition for Abandoned Mine Reclamation

Wyoming Valley Chesapeake Bay Tributary Field Assessments and Monitoring (PA)

Conduct field assessments and monitoring of various streamside conditions and structural impediments

to aquatic organism passage at culverts throughout the targeted supporting municipalities with a focus on Sugar Notch Run, Solomon, Warrior, Nanticoke, and Newport creeks, along the Susquehanna River in the Wyoming Valley, Luzerne County. Project will communicate and recommend to partners, projects for future improvements and best management practices.

\$50,000

Ferguson Township

Park Hills Stream Restoration (PA)

Restore 2,350 linear feet of eroding, forested, urban stream using regenerative stormwater conveyance techniques. Project will mitigate 178,632 pounds annually of total suspended solids, achieve 0.3 acres of floodplain connection and will restore 0.45 miles of forest buffer habitat.

\$200,000

Lackawanna River Conservation Association

Leggett's Creek Greenway Project (PA)

Address environmental issues caused by past anthracite coal mining activities and commercial and residential development within this subwatershed which has resulted in a compromised ecosystem lacking in biodiversity. Project will mitigate erosion and sediment loading through the installation of bank stabilization measures, and storm water runoff management, and monitoring and management program will be established to ensure sustained project efficiency.

\$50,000

OUR GRANTS

Lancaster Farmland Trust

Implementation of Agricultural Best Management Practices in Salisbury Township (PA)

Reduce nitrogen, phosphorus and sediment pollution flowing from Salisbury Township farms to the Chesapeake Bay, specifically in the Pequea Creek Watershed. Project will expand on an existing, innovative initiative in Salisbury Township to drive the agricultural community toward environmental compliance and sustainability and result in best management practices implemented on five farms in the Pequea Creek Watershed and contribute to the completion of two whole-stream restoration efforts. **\$494,300**

Londonderry Township

Conewago Creek Water Quality Improvements (PA)

Restore the floodplain of the Conewago Creek and its tributary, Brills Run, including 4,877 feet of stream restoration, 2,988 feet of stream creation, the restoration of approximately 15 acres of the floodplain to historical conditions, and the enhancement of a 15-acre wetland system. Project will remove approximately 125,000 cubic yards of legacy sediment, and a yearly sediment load reduction of 1,524 tons. **\$200,000**

Mount Joy Borough

Little Chiques Park Stream Bank Restoration and Green Infrastructure Master Plan (PA)

Design and permit an approximately 5,000-linear-foot stream segment of Little Chiques Creek, located within the bounds of Little Chiques Park situated in Mount Joy, Pennsylvania. Project will plan to improve

drainage patterns within the park as they impact the stream corridor and cause uncontrolled flooding within the park, and will improve public access to the creek for fishing and other recreation purposes.

\$50,000

Mountville Borough

Mountville Borough Dry Extended Detention Basin and Constructed Wetland Project (PA)

Retrofit an existing dry detention basin in Spring Hill Park to a dry extended detention basin with a linear area of constructed wetlands to treat continual spring flow through the basin. Project will align with Pennsylvania's state-level priority initiatives to strategically advance load-reduction efforts through accelerated implementation of structural load-reduction practices, including bioretention, rain gardens, bioswales and stormwater wetlands.

\$200,000

Red Barn Consulting

Altria Rapid Planning Assistance Program (PA)

Provide conservation planning assistance to more than 100 agricultural producers in the Lower Susquehanna region to support long-term, on-farm conservation efforts and emerging supply chain sustainability initiatives. Project will provide on-demand conservation plan writing services through expert agricultural service providers in the region and link recommended on-farm conservation improvements with state and local priorities for water quality improvement and agricultural sustainability.

\$250,000

Springettsbury Township

Wastewater Treatment Plant in a West Tributary of Codorus Creek (PA)

Implement stream restoration to remove approximately 529,500 pounds of sediment per year, stabilize approximately 1.2 miles of actively eroding streambanks, and restore approximately 0.6 miles of streams and 1.2 miles of permanent riparian buffer on an unnamed tributary to the Codorus Creek. Project will provide design, permitting, construction, and operations, maintenance, and monitoring.

\$200,000

Stroud Water Research Center

Accelerating Farm Stewardship Forested Buffers and Best Management Practices Implementation (PA)

Build on Farm Stewardship Program success and add new emphases on implementing agricultural best management practices while bringing along much-needed forested buffers. Project will accelerate the rate of best management practices implementation, incentivize the inclusion of forested buffers that earn vouchers to pay for planning and implementation, and focus efforts in existing or emerging clusters of conservation so that research can help document the recovery of stream health.

\$499,900

Terre Hill Borough

Terre Hill Borough Rain Garden, Bioretention, and Bioswale (PA)

Construct a rain garden, bioretention facility, and a bioswale, which will remove more than 7,000 pounds annually of sediment from the streams. Project will

OUR GRANTS

contribute to implementing projects that correspond with Terre Hill Borough's Pollution Reduction Plan.
\$73,000

Trout Unlimited

Strengthening Stronghold Brook Trout Patches through Stream Restoration and Habitat Improvement (PA)

Complete 10 high-priority habitat restoration projects and 20 new technical assistance projects located within eastern brook trout stronghold patches in three geographic focus areas in the Chesapeake Bay watershed of Pennsylvania. Project will select focal geographies considering existing partnerships, ownership, access, and presence of both stronghold and persistent eastern brook trout patches.
\$274,300

York County Planning Commission

Improving the Delivery of Outreach and Technical Assistance for Implementation in York County (PA)

Complete groundwork for a successful messaging campaign, a coalition with broader and more diverse representation, and reported implementation of water quality best management practices. Project will develop a Countywide Action Plan messaging strategy to effectively educate the community, expand the capacity of the York County Coalition for Clean Waters, a key partner in Countywide Action Plan implementation efforts, and embark on a long-term clean water messaging campaign.
\$50,000

Virginia

Capital Region Land Conservancy

Preserving Open Space and Protecting Vulnerable Habitat (VA)

Develop a strategy for the city of Richmond to identify and protect additional lands that improve the health and function of tributaries, improve habitat and establish wildlife corridors, while also creating public access. Project will include significant community outreach and engagement to improve public participation in the location and design of habitat restoration, and outcomes will include one implementation plan that includes prioritization of 10 parcels.

\$50,000

Chesapeake Bay Foundation

Bringing the Lynnhaven River Oyster Population to Restored Status (VA)

Deliver a comprehensive oyster restoration project in the Lynnhaven River that will enhance the population of native eastern oysters and engage the watershed community on oyster restoration projects. Project will establish 7 acres of new oyster reef and place 15 million young oysters within the river, which are estimated to remove 335 pounds of nitrogen and 67 pounds of phosphorus from the Lynnhaven River.

\$490,400

Chesapeake Bay Foundation

Greening Southside Richmond (VA)

Improve water quality in Little Westham, Almond, Proctors, and Falling creeks located in Southside

Richmond, Virginia, by reducing impervious surfaces and managed turf, planting 250 trees on municipal property, and installing green infrastructure projects to retain and treat polluted runoff. Project will work with Richmond's Office of Sustainability to identify areas where green infrastructure projects are most needed to reduce heat stress and improve health outcomes for communities.

\$227,500

City of Hopewell, Virginia

Hopewell Stormwater Green Infrastructure (VA)

Implement a stormwater green infrastructure project, including the stabilization of three storm drain outfall channels that convey stormwater down the highly erodible escarpment between the developed areas of the city and the James and Appomattox river floodplains. Project will provide a significant reduction in stormwater pollutant load to the Appomattox River, specifically two outfalls located in the Ashton Creek-Appomattox River Priority Subwatershed.

\$500,000

City of Hopewell, Virginia

Outfall and Gully Stabilization Project Design and Regional Pollutant Reduction Calculator (VA)

Restore three severely eroding stormwater outfalls in the City of Hopewell, Virginia, and develop standard design guidance and a pollutant reduction calculator to assist regional adoption of the newly approved Chesapeake Bay Program's Guidance for crediting Outfall and Gully Stabilization Projects. Project will

PHOTO (NEXT PAGE) Great blue heron



OUR GRANTS

improve the water quality of local impaired waters and the Appomattox River and create a planning tool for evaluating and design that will be distributed to regional partners.

\$34,100

City of Petersburg

Fleets Branch Stream Restoration (VA)

Implement a shovel-ready, cost-effective stream restoration project. Project will complete phase two of a 2,027-linear-foot restoration of Fleets Branch that has already been designed, the first half of which is presently under construction.

\$500,000

College of William and Mary, Virginia Institute of Marine Science

Analyzing Impacts of Poultry Litter on Water Quality on Eastern Shore Freshwater Streams (VA)

Investigate and expand freshwater stream assessments on the Eastern Shore of Virginia, specifically Chesapeake Bay drainages in Accomack and Northampton counties. Project will examine freshwater stream nutrient levels to identify water quality impairments from poultry operations via stormwater runoff using estimates of land cover in the drainage areas, including variables such as the presence and distance of poultry operations, agricultural fields, residential housing, forest and swamps.

\$49,300

Elizabeth River Project

Restoring Two Key Tributaries in the Elizabeth River (VA)

Work with Norfolk, three universities and citizens and businesses to restore urban water quality, oysters and wetlands in two key tributaries to the Elizabeth River. Project will achieve a subwatershed management plan for Knitting Mill Creek and construction of catalyst projects, including a living shoreline, oyster reef, rain gardens and other green infrastructure to be open to the public at a new Resilience Learning Park.

\$499,200

Hampton Roads Planning District

Retrofitting Businesses and Industrial Properties (VA)

Identify large-scale private industrial and business sites willing to improve water quality and provide flood protection with green infrastructure and implementation of best management practices (BMPs). Project will 1) identify 10-12 business or industries that will implement BMPs in the private sector, 2) develop a list of design concepts, budgets, and funding solutions for future implementation, and 3) identify barriers and provide incentives for reporting nutrient credits for the Bay total maximum daily load.

\$50,000

Headwaters Soil and Water Conservation District

Demonstrating Sustainable Farm Operations at the Augusta County Correctional Center (VA)

Install 5 miles of stream fencing, improve 350 acres of livestock pasture management, and establish 35

acres of grass buffers and 16 acres of forest buffers on an agriculture operation at the Augusta County Correctional Center. Project will improve sustainability of the farm operation and advance measurable progress toward Virginia's Phase 3 Watershed Implementation Plan.

\$238,000

James River Association

Water Quality Improvements through a Living Shoreline Collaborative (VA)

Combat erosion and adapt to changing shorelines through accelerated living shorelines implementation. Project will develop and deliver a living shoreline training program to increase technical capacity, formalize an existing partnership in the lower James River, increase the capacity of partners, and bring in partners from outside of the watershed to expand the network of knowledge to build on existing efforts.

\$1,000,000

Lewis Ginter Botanical Garden

Glen Stream Restoration (VA)

Improve 550 feet of stream through use of vegetation that will increase plant, soil and water interaction, leveraging natural ability to absorb the particulate matter and excess nutrients that flow from the man-made landscape. Project will restore natural drainage patterns and water table levels, and the project will offer educational experiences for more than 450,000 visitors a year.

\$94,200

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Lynnhaven River Now

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

Restore oyster reefs in the Eastern Branch of the Lynnhaven River in Virginia Beach, Virginia. Project will remove approximately 1,626 pounds of nitrogen a year through denitrification and 2,541 pounds of nitrogen storage in the shells and bodies of oysters and reef fauna, an additional 60 acres reef habitat target in the Lynnhaven, resulting in removal of 32,520 pounds of nitrogen a year through denitrification and 50,820 pounds of nitrogen storage.

\$500,000

Rappahannock-Rapidan Regional Commission

Urban Green Stormwater Infrastructure Implementation (VA)

Install three urban stormwater green infrastructure projects at or adjacent to two schools in Fauquier County, and use to conduct outreach and education in the school district. Project will improve participation in the Virginia Conservation Assistance Program in Fauquier County by providing program outreach and cost-share matching funds for a minimum of five BMP projects and develop a GIS-based prioritization to guide future implementation in the Rappahannock-Rapidan Region.

\$301,200

Trout Unlimited

Sediment Reductions Through Collaborative Technical Assistance in Virginia Headwaters (VA)

Expand technical assistance capacity in the headwaters of the Chesapeake Bay in Virginia to

improve water quality and habitat for native eastern brook trout. Project will install 15 miles of exclusion fencing, establish 80 acres of new riparian forest buffer, exclude livestock from and protect 151 acres, and restore and stabilize 14 miles of streambanks and 1.5 miles of eroding streambanks.

\$949,100

West Virginia

Cacapon and Lost Rivers Land Trust

Collaborative Conservation and Brook Trout Restoration in the Cacapon Watershed (WV)

Conserve high-quality riparian corridors through conservation easements and improve brook trout habitat. Project will convene the Cacapon Watershed Collaborative to identify shared goals of watershed partners and build capacity for increased land protection and ecologically sustainable land management, and behavior change research will be conducted to learn effective strategies for engaging landowners in stewardship.

\$350,600

Trout Unlimited

Restoring, Enhancing, and Expanding Brook Trout Patch Strongholds in Thorn Creek (WV)

Restore riparian buffers, in-stream habitat, eroding stream banks and aquatic organism passage within the Thorn Creek watershed and the Upper South Branch of the Potomac to the benefit of water quality, local agricultural producers, and brook trout strongholds. Project will result in the completion of restoration efforts to enhance a brook trout stronghold, the

expansion of such efforts into the Upper South Branch of the Potomac, and the documentation of additional un-assessed brook trout patches.

\$476,500

Multiple States

Alliance for the Chesapeake Bay

Healthy Streams Farm Stewardship: Chesapeake Loggerch Initiative (MD, PA)

Develop and pilot a conservation incentive program that accelerates the adoption and establishment of riparian forest buffers by agricultural producers in the Susquehanna Basin of York County, Pennsylvania, and Cecil and Harford counties in Maryland. Project will multiply the amount of implementation of agricultural best management practices, restore 160 acres of riparian forest habitat, and improve the in-stream habitat and passage specifically for the threatened Chesapeake loggerch.

\$487,800

Alliance for the Chesapeake Bay

Developing an Integrated Community-based Monitoring Approach to Track Restoration (DC, MD, PA, VA)

Leverage relationships with local, county, state and federal agencies, community partners and restoration experts to ensure that the monitoring plan developed meets diverse needs. Project will complete research on existing restoration monitoring protocols and engagement of diverse stakeholders, conduct development of a comprehensive community-based

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restoration study design and develop protocol testing and data generation at two to four restoration sites at varying stages of installation.

\$230,300

Chesapeake Bay Trust

Chesapeake Bay Trust Regional Capacity Building Initiative (DC, MD, PA, VA, WV)

Build collaborative and organizational capacity of regional entities and organizations within the Chesapeake Bay watershed working together to accelerate watershed restoration through tailored assessment. Project will heighten capacity of groups to advance clean water plans, increase communication, coordination and collaboration among partners within and across priority regions within the watershed, and increase power of the grassroots movement for sustained environmental and clean water protections.

\$1,500,000

Chesapeake Stormwater Network

Chesapeake Bay Stormwater Training and Engagement in Urban Watersheds (multiple states)

Focus stormwater training and engagement efforts on four critical and vulnerable target populations in the Bay watershed to accelerate the pace of local nutrient reduction and promote more widespread implementation of effective stormwater and restoration practices across the watershed.

\$325,000

Delmarva Poultry Industry

Establishing Poultry Litter Matching Service for a Cleaner Bay and Healthy Farms (DE, MD, VA)

Develop an online poultry litter matching tool to connect producers with excess litter to improve crop growth and soil health. Project will support the implementation of Maryland's Phosphorus Management Tool and Phase 3 Watershed Implementation Plans across Delmarva, thereby helping to meet regional water quality and healthy watershed goals.

\$49,900

Mid-Atlantic 4R Nutrient Stewardship Association

Accelerating Implementation of Farmer Adoption of Nutrient Stewardship Practices (DE, MD, PA, VA)

Bring together stakeholders involved in nutrient management and those who have concerns about excess nutrients to develop locally relevant solutions. Project will identify barriers to nutrient management adoption, design a communications strategy, engage 300 farms to implement nutrient management, increase implementation of split application of nitrogen and pilot a model for a Pennsylvania Manure Transport Exchange.

\$990,000

Metropolitan Washington Council of Governments ***River Herring Habitat Assessment (DC, MD)***

Evaluate river herring habitats upstream and downstream of the fish blockages and monitor for the strength of river herring and provide a brief study informational plan. Project will restore river herring access and provide capacity and planning information for Prince George's County Department of the Environments and District of Columbia Department of Energy and Environment.

\$49,805

National Wildlife Federation

Developing Capacity Building Framework within the Chesapeake Bay Community (multiple states)

Address gaps in capacity within the Chesapeake Bay community through a partnership with the Choose Clean Water Coalition and the Alliance for the Chesapeake Bay, with the objective to research, analyze and develop a capacity building framework. Project will target an audience of capacity builders and the NGO community with missions that include improving the Chesapeake Bay watershed.

\$421,147

Potomac Conservancy

Expanding Growing Native Tree Initiative (MD, VA)

Expand the Growing Native program by building a regional coalition of stakeholders to connect disparate native tree planting efforts in the Potomac Watershed and build a network of volunteers increasing the

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number of native seeds collected and market existing native tree planting opportunities. Project will convene the coalition, build a website that will consolidates community engagement opportunities, and expand seed collection drop off sites, nursery sites, and community-led seed events.

\$47,500

The Nature Conservancy

Identifying, Prioritizing, and Incentivizing Marsh Management Actions in the Chesapeake Bay (MD, VA)

Develop a marsh management action decision support tool and resilience credit targeting parameters, plus streamline and enhance the effectiveness of marsh management actions and make funding opportunities more accessible for tidal marsh conservation practitioners throughout the Chesapeake Bay. Project will evaluate the climatic and human pressures that are degrading tidal marsh habitats within a holistic context that weighs inputs, actions, and outcomes to determine best management practices.

\$49,700

Tioga County Soil and Water Conservation District of New York

Strengthening the Conservation Community Foundation in the Upper Susquehanna Watershed (NY, PA)

Focus on providing training to new and existing staff to further provide a framework for the Upper Susquehanna Coalition to evaluate available programs

for future sustainability. Project will implement 114 acres of riparian buffer, 400 acres of prescribed grazing, 3,800 acres of stream corridor restoration and 39 acres of wetland restoration that is estimated to generate nutrient reductions of 4,155 pounds of nitrogen, 689 pounds of phosphorus and 456,130 pounds of sediment annually.

\$1,000,000

Trout Unlimited

Chesapeake Bay Watershed Priority Brook Trout Strongholds Conservation Analysis (MD, NY, PA, VA, WV)

Complete focal analyses for 11 brook trout stronghold patches within the Chesapeake Bay watershed. Project will develop a strategic restoration approach focused on brook trout populations and following the compilation of the available data for each patch and the completion of the conservation portfolio analysis, Trout Unlimited will provide a summary report for each priority patch that outlines potential projects, current data available, monitoring needs, and other information.

\$41,600





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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