



Delaware Watershed Conservation Fund

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ABOUT NFWF

Chartered by Congress in 1984, the National Fish and Wildlife Foundation (NFWF) protects and restores the nation's fish, wildlife, plants and habitats. Working with federal, corporate and individual partners, NFWF has funded more than 5,000 organizations and generated a total conservation impact of \$6.1 billion.

Learn more at www.nfwf.org

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Delaware River

OVERVIEW

The National Fish and Wildlife Foundation (NFWF) and U.S. Fish and Wildlife Service announced a 2020-year round of funding for Delaware Watershed Conservation Fund projects. Thirty-seven new or continuing conservation and restoration grants totaling \$8.12 million were awarded. The 2020 awards generated \$22.08 million in non-federal match from the grantees, providing a total conservation impact of more than \$30.2 million.

The Delaware Watershed Conservation Fund aims to conserve and restore natural areas, corridors, and waterways on public and private lands to support native migratory and resident wildlife and fish, and native plants; and to contribute to the social health and economic vitality of the communities in the Delaware River watershed. These grants address priorities in NFWF's Delaware River Watershed Business Plan.

The fund was launched in 2018 to bring together various stakeholders to collaboratively deliver restoration and conservation efforts throughout the Delaware River Watershed that strategically improve fish and wildlife habitat, grow partner capacity, build networks, and improve project efficiency and focus on a basin-wide scale.

(continued)

DELAWARE**Upland Habitat Restoration and Land Protection for Critical Coastal Conservation (DE)**

Grantee: Delaware Wild Lands

Grant Amount:\$129,247

Matching Funds:\$130,800

Total Project:\$260,047

Restore agricultural land to early successional and forested habitats in Taylor's Bridge Land Complex and facilitate land protection adjacent to Augustine Creek Complex. Project will restore 42 acres of agricultural lands, maintain 45 acres of recently restored wetland buffers, and protect 100 acres via land acquisition.

Lower Christina-Brandywine River Remediation Restoration and Resilience Plan (DE)

Grantee: Christina Conservancy

Grant Amount:..... \$249,300

Matching Funds:..... \$521,097

Total Project: \$770,397

Establish comprehensive tools to guide remediation, restoration and resilience efforts from sediment to shore. Project will create a blueprint for completing the transformation of the lower Christina and Brandywine Rivers in Wilmington into healthy river ecosystems by developing a set of recommended strategies and actions for managing and restoring riverine areas to maximize water quality, habitat and recreational values to guide future development, restoration and management of riverfront areas.

Restoring Wetland Habitat and Water Control in the Thousand Acre Marsh (DE)

Grantee: Delaware Department of Natural Resources

Grant Amount:..... \$500,000

Matching Funds:..... \$1,107,594

Total Project: \$1,607,594

Restore water control within the Thousand Acre Marsh Impoundment to prevent further decline in habitat quality and increase resiliency of coastal wetland habitat by restoring a failing water control structure. Project will enhance fish and wildlife habitat by improving water management capabilities within the wetland complex, improve water quality and sediment filtration capacity of the system, increase resiliency to climate change, and enhance wetland and wildlife-associated recreation.

Cover Crop Improvements for Increased Water Quality and Foraging Opportunities in Kent County (DE)

Grantee: Delaware Department of Agriculture

Grant Amount:..... \$250,000

Matching Funds:..... \$384,000

Total Project: \$634,000

Increase the diversity and quality of cover crops in the Delaware River watershed for purpose of increasing water quality for fish species, as well as forage opportunities for migratory bird species. Project will ensure that local tributaries to the Delaware Estuary remain healthy for fish



Horseshoe crabs in Delaware Bay

species and horseshoe crab, as well as improve soil health in the fields with nutrient best management practices.

Habitat Restoration and Outdoor Education in the Caesar Rodney School District (DE)

Grantee: Caesar Rodney School District

Grant Amount:..... \$147,302

Matching Funds:..... \$140,348

Total Project: \$287,650

Restore underutilized space on 10 public school campuses within the Caesar Rodney School District through student-led EcoTeams, classes, district staff, and a network of community partners. Project will provide benefits to wildlife and water quality, as well as meaningful outdoor learning opportunities for teachers and their preschool through 12th grade and special needs students.

Dam Removal in the White Clay Creek (DE)

Grantee: New Castle Conservation District

Grant Amount:..... \$349,085

Matching Funds:..... \$355,000

Total Project: \$704,085

Demolish a 6-foot high, 160-foot wide obstacle to fish passage on the White Clay Creek. Project will restore a mile of river hydrology and stream habitat in the regionally significant and highly accessible White Clay State Park, enabling shad and river herring to spawn, while restoring riparian habitat essential to benthic organisms and neotropical warblers.

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NEW JERSEY**The County Line Dam Removal: Increasing Aquatic Connectivity in the Paulins Kill Watershed (NJ)**

Grantee: The Nature Conservancy

Grant Amount:\$498,797

Matching Funds:\$661,768

Total Project:\$1,160,566

Increase aquatic connectivity and improve water quality needed to sustain diadromous fish and sensitive mussel species. Project will remove a 220-foot-wide, run-of-the-river dam located on the main stem Paulins Kill benefitting resident and migratory fish species, reconnecting 15.8 miles of stream and improving the overall ecological function of the Paulins Kill watershed.

Ecological Restoration of a Former Cranberry Farm in Burlington County (NJ)

Grantee: New Jersey Conservation Foundation

Grant Amount:\$146,996

Matching Funds:\$147,667

Total Project:\$294,663

Conduct baseline monitoring data, perform engineering studies, design spillways and recreational access trails along the Burrs Mill Branch of the Rancocas River, and develop a strategy to protect critical habitats from illegal motorized use; ultimately conserving critical habitat of an abandoned cranberry farm. Project will design a plan to protect 438 acres of land on the former cranberry farm, resulting in water quality improvements and creation of exemplary passive recreational opportunities.

Installation of a Living Shoreline and Enhancing Public Access in Roebling Park (NJ)

Grantee: Mercer County Park Commission

Grant Amount:\$150,000

Matching Funds:\$516,687

Total Project:\$666,687

Implement a three-step restoration effort at Roebling Park in Hamilton, New Jersey to secure eroded shoreline, preserve Native American artifacts and reintroduce freshwater mussel. Project will construct a 500-linear-foot living shoreline along Watson's Creek, conduct a feasibility study for the re-introduction of freshwater mussels, and install a user-friendly and ecologically sensitive public boat launch.

Restoring Atlantic White-Cedar in the Maurice River and Rancocas Creek Watersheds (NJ)

Grantee: New Jersey Audubon Society

Grant Amount:\$94,823

Matching Funds:\$145,179

Total Project:\$240,002

Sustain and enhance fish and wildlife habitat, improve and maintain water quality, and enhance water resource management to benefit declining Atlantic white-cedar habitat. Project will restore 70 acres of Atlantic white-cedar wetland habitat and 30 acres of associated upland habitat on at least two properties in southern New Jersey who have existing Forest Stewardship Plans.



Red knots

Improving Habitat Quality for Horseshoe Crab and Red Knot in Cape May County (NJ)

Grantee: American Littoral Society

Grant Amount:\$486,658

Matching Funds:\$530,038

Total Project:\$1,016,696

Restore, stabilize, and expand important habitat for horseshoe crabs and shorebirds using proven restoration strategies to reduce erosion, combat sea level rise, and increase resilience to storms. Project will create intertidal oyster reefs at the mouth of Dias Creek to preserve and expand important horseshoe crab spawning habitat and add sand to Pierce's Point beach to further sustain previous restoration efforts.

Community-Driven Wetland Restoration in the Upper Paulins Kill Watershed (NJ)

Grantee: Sussex County Municipal Utilities Authority-Wallkill River Watershed Management Group

Grant Amount:\$70,116

Matching Funds:\$70,163

Total Project:\$140,279

Restore and enhance ten acres of wetlands along a first and second-order tributary in the Upper Paulins Kill watershed through riparian reforestation, invasive species management, beaver dam analog creation, and dormant hardwood cutting installation. Project will not only improve habitat conditions for threatened and endangered species documented on the restoration site, but will also help turn it into a demonstration site for comprehensive, community-driven conservation practices.

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Tidal Marsh Restoration at Reeds Beach (NJ)

Grantee: U.S. Fish and Wildlife Service, Cape May National Wildlife Refuge

Grant Amount: \$50,000
 Matching Funds: \$50,000
 Total Project: \$100,000

Restore tidal marsh at Reeds Beach in Cape May Court House, New Jersey through shallow tidal ditch enhancement, clearing of blocked tidal ditches, and re-orientation of straight tidal ditches. Project will restore 52 acres of tidal marsh, improving tidal hydrology, vegetation health, and enhancing habitat for wildlife including American black duck, saltmarsh sparrow, diamondback terrapin, fish and shellfish.

Accelerating Habitat Management and Restoration in the Musconetcong Watershed (NJ)

Grantee: Musconetcong Watershed Association

Grant Amount: \$225,000
 Matching Funds: \$225,967
 Total Project: \$450,967

Implement an integrated, multi-objective effort to improve riparian buffers along the Musconetcong Education Trail and control existing invasive species infestations. Project will restore 0.75 acres of riparian buffer through native tree and shrub planting and enhance New Zealand mud snail monitoring through development of a management plan.

Managing Anthropogenic Disturbances to Migratory Shorebirds in Delaware Bay (NJ)

Grantee: American Littoral Society

Grant Amount: \$86,700
 Matching Funds: \$266,359
 Total Project: \$353,059

Conserve and protect beach habitat in the Delaware Bay for horseshoe crabs and shorebirds, including the federally listed red knot. Project will use strategies to reduce disturbance to shorebirds allowing for improved foraging conditions and promote long-term community understanding of the importance of beach restrictions to protect shorebirds and horseshoe crabs.

Wildlife Habitat Restoration and Agricultural Community Engagement in Cape May County (NJ)

Grantee: New Jersey Audubon Society

Grant Amount: \$114,740
 Matching Funds: \$117,327
 Total Project: \$232,067

Work closely with the agricultural community in Cape May County to recruit at least 10 public and private landowners to increase participation in habitat management programs. Project will restore 100 acres of wildlife habitat and provide vital resources to local and migrating wildlife species, many of which are considered at-risk or imperiled.



Green heron on the Delaware River

PENNSYLVANIA**Implementation of Best Management Practices and Riparian Restoration on Irish Creek Farm (PA)**

Grantee: Berks County Conservation District

Grant Amount: \$132,500
 Matching Funds: \$132,529
 Total Project: \$265,029

Implement agricultural Best Management Practices including manure storage, stable animal heavy use areas, livestock exclusion fencing, and pasture management conservation practices to reduce non-point source pollution runoff into the Irish Creek. Project will conserve and 4.8 acres of non-tidal wetlands by controlling invasive species and protect 10 acres of critical floodplain habitat.

Bartram's Mile Fishing Pier Rehabilitation (PA)

Grantee: Schuylkill River Development Corporation

Grant Amount: \$50,000
 Matching Funds: \$417,826
 Total Project: \$467,826

Rehabilitate an abandoned industrial pier into a usable recreational pier and the surrounding riverbank on the tidal Schuylkill River in Philadelphia. Project will improve recreational opportunities and river access consistent with local conservation efforts, and restore shorelines resulting in enhancements to water quality and wildlife habitat.

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Watershed Restoration and Habitat Improvement in the Chester, Ridley, and Crum Creek Watersheds (PA)

Grantee: CRC Watersheds

Grant Amount: \$82,100
 Matching Funds: \$115,769
 Total Project: \$197,869

Improve habitat for fish and wildlife and increase opportunities for recreation and education in up to ten locations within the Chester, Ridley, and Crum Creek watersheds. Project will leverage partnerships with local educational institutions, municipalities, corporations, and civic organizations to restore riparian buffer areas and remove invasive plant material at sites that are crucial to the local watersheds and the greater Delaware River watershed.

Penrose Swamp Acquisition (PA)

Grantee: Wildlands Conservancy

Grant Amount: \$99,957
 Matching Funds: \$5,400,000
 Total Project: \$5,499,957

Facilitate the acquisition of the 2700-acre Penrose Swamp property located in Lausanne, Banks, and Packer Townships, Weatherly Borough, Carbon County, Hazle and Foster Townships, and Luzerne County, Pennsylvania. Project will result in permanent protection of a core Natural Heritage Area and an Important Bird Area, as well as wetlands, intact forest, Penrose Creek, and sections of Beaver and Hazle Creeks.

Implementation of Water Quality Best Management Practices at Lake Luxembourg (PA)

Grantee: Bucks County Conservation District

Grant Amount: \$250,000
 Matching Funds: \$300,000
 Total Project: \$550,000

Convert the 17-acre Conservation Pool of Lake Luxembourg in Bucks County, Pennsylvania to a regional stormwater best management practice. Project will enhance water quality and

habitat value through reduced phosphorous and sediment loading, the establishment of 7 acres of emergent wetland, and native wetland plantings and placement of large woody debris structures benefitting reptile and avian species.

Lenape Dam Removal on Brandywine Creek (PA)

Grantee: Brandywine Red Clay Alliance

Grant Amount: \$57,182
 Matching Funds: \$57,261
 Total Project: \$114,443

Restore a 3,300 foot section of the Brandywine Creek to free-flowing condition by removal of the 280 foot Lenape Dam. Project will enhance fish habitat, restore fish populations and migration, and improve water hydrology and safe public access to the stream for boaters and anglers.

Building Bridesburg Riverfront Park (PA)

Grantee: Delaware River City Corporation

Grant Amount: \$160,036
 Matching Funds: \$4,550,000
 Total Project: \$4,710,036

Build Bridesburg Riverfront Park, the last of eight planned parks on the Riverfront North greenway. Project will transform a former concrete factory in a neighborhood that has been cut off from its river by industry for a century into a 10 acre park and open space with native meadows, trees, and shrubs, reducing forest fragmentation reducing non-point source pollution.

Restoring Big Creek Watershed and Reintroducing Native Brook Trout (PA)

Grantee: Delaware Riverkeeper Network

Grant Amount: \$94,798
 Matching Funds: \$134,462
 Total Project: \$229,260

Evaluate limestone sand additions to the strip mined headwaters of Big Creek Pennsylvania to determine influence on continuous pH conditions, habitat quality, and the recovery of sensitive insects and other benthic invertebrates. Project will re-introduce native brook trout to the currently fishless watershed, piloting long-term strategies to maintain water quality and ecological improvements attained through restoration efforts.

Improving Public Access and Recreation in the Pennsylvania Portion of the Delaware River

Grantee: The Pennsylvania Fish and Boat Commission

Grant Amount: \$200,000
 Matching Funds: \$400,000
 Total Project: \$600,000

Improve public access and recreation by providing grants to public entities, including townships, boroughs, municipal and county governments as well as to nonprofit groups for the planning, acquisition, development, expansion and rehabilitation of public boating facilities located in the Pennsylvania portion of the Delaware River Watershed.



Cerulean warbler

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Project will ensure that boaters in the Delaware River watershed have safe, clean, and updated boating facilities.

Youth Stewardship and Community Recreation Access on the Tidal Schuylkill River (PA)

Grantee: John Bartram Association

Grant Amount:\$258,367
Matching Funds:\$287,346
Total Project:\$545,713

Implement a year-round youth-driven river engagement program at Bartram's Garden, hiring up to 16 local youth interns annually to serve as riverfront ambassadors for river recreation programs that currently welcome roughly 8,000 neighbors annually. Project will encourage students to deepen their own skills and understanding in both watershed stewardship and river recreation while also sharing their learnings with members of the public through on-site recreation, and facilitated volunteer days.

Restoring Dynamic Forest Structure for Priority Birds in the Delaware River Watershed: Phase IV (PA)

Grantee: American Bird Conservancy

Grant Amount:\$362,135
Matching Funds:\$367,245
Total Project:\$729,380

Develop and implement a comprehensive forest management strategy targeting long-term availability of diverse forest age classes and structural complexity benefiting the entire reproductive cycle of golden-winged warbler, cerulean warbler and wood thrush. Project will draft the comprehensive plans for two new Dynamic Forest Restoration Blocks and will continue to implement management activities and monitor avian response outlined in existing comprehensive plans.



Wood thrush

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Improving Wildlife Habitat and Water Quality along the Cynwyd Heritage Trail (PA)

Grantee: Lower Merion Conservancy

Grant Amount:\$223,830
Matching Funds:\$1,459,362
Total Project:\$1,683,192

Improve stormwater management, restore wildlife habitat, and improve recreational access on the Cynwyd Heritage Trail and along sections of Vine Creek, an important feature of the trail and a tributary to the Schuylkill River. Project will reduce erosion and flood damage to Vine Creek, convert open space into a habitat corridor, and increase public awareness of stormwater issues and habitat loss through creation of meadows, rain gardens, and bioswales.

MULTI-STATE

Improving Water Resources Management in the Delaware River Basin via Data Access (DE, NJ, NY, PA)

Grantee: Delaware River Basin Commission

Grant Amount:\$200,000
Matching Funds:\$447,000
Total Project:\$647,000

Support the Delaware River Basin Commission's comprehensive Water Resources Program to improve water quality management, monitoring and ultimately improve aquatic habitat. Project will manage, protect, and improve water resources by developing a Basin-focused Water Quality Data Portal to facilitate data access for the public.

Delaware River Basin Urban Wildlife Community Engagement Program (DE, NJ, NY, PA)

Grantee: National Wildlife Federation

Grant Amount:\$499,999
Matching Funds:\$500,000
Total Project:\$999,999

Engage a broader demographic by identifying and addressing specific community barriers to conservation engagement. Project will develop tools for cultivating programs that provide high-quality recreational and conservation opportunities that benefit the communities and the environment, increasing public access to the Delaware river and its lands, and inspiring participants to engage in outdoor activities and protect and improve their local watershed.

Identifying Environmental Drivers of American Eel Emigration in the Delaware River (DE, NJ, NY, PA)

Grantee: Delaware State University

Grant Amount:\$225,177
Matching Funds:\$225,178
Total Project:\$450,355

Model the outmigration of adult, silver-phase American eel in both the tidal and non-tidal portions of the Delaware River, utilizing a large-scale passive acoustic telemetry network annotated with environmental and astronomical parameters. Project will increase understanding of the underlying drivers and timing of movement in the Delaware River Basin,



Blue mussels

informing conservation and management of American eel in impounded systems where passage and increased mortality are key concerns.

Developing Risk Assessment Framework for Atlantic Sturgeon (DE, NJ, PA)

Grantee: Delaware State University

Grant Amount:..... \$312,129
 Matching Funds:..... \$312,129
 Total Project: \$624,258

Work with regional and federal partners to provide robust estimates of adult spawning run size which will serve as a key parameter for a broader effort to develop a species-specific risk assessment model for Atlantic Sturgeon in the Delaware River. Project will serve to help quantify specific threats and their impacts ultimately facilitating effective decision-making as stakeholders work to recover this once iconic species.

Developing the Mussels for Clean Water Initiative to Enhance Habitat and Water Quality (DE, NJ, PA)

Grantee: Partnership for the Delaware Estuary

Grant Amount:..... \$179,979
 Matching Funds:..... \$180,000
 Total Project: \$359,979

Overcome key research and planning bottlenecks that impede implementation of the new Mussels for Clean Water Initiative that aims to restore beds of freshwater mussels. Project will develop a Mussels for Clean Water Initiative Restoration Plan, Genetics Management Plan, and Disease Management Plan, as well as conduct laboratory research to enhance juvenile mussel survival and growth in a hatchery setting.

The River Unites Us: Bird Conservation Across the Delaware River Watershed (DE, NY, PA)

Grantee: National Audubon Society

Grant Amount:..... \$250,000
 Matching Funds:..... \$500,000
 Total Project: \$750,000

Address conservation needs reflecting the rich diversity of habitat and conditions across three states in the Delaware River Watershed. Project will increase the number of people engaged in direct conservation efforts, measurably improve bird habitat, and increase scientific data awareness and support for restoration efforts in Delaware.

Enhancing Forest Habitat in the Northern Delaware River Watershed - Phase III (PA, NJ)

Grantee: Wildlife Management Institute

Grant Amount:..... \$200,000
 Matching Funds:..... \$200,000
 Total Project: \$400,000

Implement forest management plan activities on public and private lands in the northern Delaware River Watershed. Project will aid in the creation of young forest habitat, the enhancement of middle-aged and mature forest habitat, the control of native and exotic invasives, as well as expand partnerships and build upon previous success to enhance work in northwest New Jersey.

Improving Trout Habitat and River Access in the Upper Delaware River Watershed (NY, PA)

Grantee: Friends of the Upper Delaware River

Grant Amount:..... \$405,478
 Matching Funds:..... \$406,150
 Total Project: \$811,628

Implement five stream restoration projects including the replacement of three failing culverts, installation of habitat improvement structures, floodplain reconnection, and continued outreach to the community. Project will improve water quality, improve trout spawning habitat, expand fish passage, and develop scientific support for future stream restoration projects.

Evaluating Headwater Biodiversity and Resilience to Inform Conservation in the Delaware Basin (PA, NY)

Grantee: Academy of Natural Sciences of Drexel University

Grant Amount:..... \$327,500
 Matching Funds:..... \$328,328
 Total Project: \$655,828

Study the diversity and functioning of headwater streams, their potential resilience, and the species in their watersheds that are vulnerable to human activities, including climate change. Project will provide data and approaches to partners that can be applied to maintain protection of important headwaters and to give an understanding of where climate change may pose a higher threat to certain areas within the watershed.