

NATIONAL FISH AND WILDLIFE FOUNDATION

2020 CONSERVATION INVESTMENTS



NFWF



A snowy egret leaps into flight in Florida.

The National Fish and Wildlife Foundation is dedicated to sustaining, restoring and enhancing the nation's fish, wildlife, plants and habitats for current and future generations.

NFWF will advance its mission through innovative public and private partnerships, and by investing financial resources and intellectual capital into science-based programs designed to address conservation priorities and achieve measurable outcomes.

In fiscal year 2020, NFWF invested \$398.5 million to support more than 950 projects across the nation, generating an on-the-ground conservation impact of more than \$701.6 million.



An eastern indigo snake leaves its burrow in Georgia.

CONTENTS

United States and U.S. Territories Fiscal Year 2020 Conservation Investments

Alabama	3	Montana	39
Alaska	4	Nebraska	40
Arizona	5	Nevada	40
Arkansas	5	New Hampshire	41
California	6	New Jersey	42
Colorado	11	New Mexico	45
Connecticut	13	New York	45
Delaware	14	North Carolina	49
District of Columbia	16	North Dakota	51
Florida	17	Ohio	51
Georgia	19	Oklahoma	52
Hawaii	21	Oregon	52
Idaho	23	Pennsylvania	53
Illinois	24	Rhode Island	59
Indiana	25	South Carolina	60
Iowa	26	South Dakota	61
Kansas	26	Tennessee	62
Kentucky	26	Texas	63
Louisiana	27	Utah	65
Maine	29	Vermont	66
Maryland	30	Virginia	66
Massachusetts	32	Washington	69
Michigan	35	West Virginia	71
Minnesota	37	Wisconsin	72
Mississippi	37	Wyoming	73
Missouri	38	U.S. Territories	74

United States and International Fiscal Year 2020 Conservation Investments	76
--	-----------

Gulf Environmental Benefit Fund Fiscal Year 2020 Project Commitments	78
---	-----------

Impact-Directed Environmental Accounts Fiscal Year 2020 Project Commitments	82
--	-----------

UNITED STATES AND U.S. TERRITORIES
FISCAL YEAR 2020 CONSERVATION INVESTMENTS

ALABAMA

Alabama Forestry Foundation

Improving Habitat for At-Risk Species in South Alabama's Longleaf Forests — II

Engage family forest owners in south Alabama to restore and enhance longleaf pine forests to improve habitat for at-risk species such as gopher tortoise, eastern indigo snake and eastern hognose snake. Project will reach and educate landowners through direct mail and social media marketing, workshops and field days, restore 11,500 acres of longleaf through plantings, prescribed burning, and invasive species control, and collect gopher tortoise population data on private lands.

\$300,000

Alabama Forestry Foundation

Restoring Connectivity and Improving In-Stream Habitat in the Upper Sipsey Fork Watershed (AL)

Replace improperly installed and maintained culvert crossings to restore connectivity in 13 high-priority streams in Winston County, Alabama, benefiting numerous freshwater species, including the black warrior waterdog and flattened musk turtle. Project will improve habitat connectivity within 101 miles of streams, improve 20 acres of riparian forest, and engage at least 40 private landowners through education or technical assistance to promote conservation practices on private lands.

\$225,000

Alabama Wildlife Federation

Alabama Longleaf Pine Restoration on Private Lands - VI

Restore and enhance nearly 5,000 acres of longleaf pine on private lands within priority counties for longleaf pine and northern bobwhite restoration in Alabama. Project will engage at least 100 private landowners through targeted outreach and technical assistance and assist landowners with identifying eligible incentive programs for establishing and managing longleaf pine and associated wildlife habitat.

\$116,538

Birmingham-Southern College

Creating an Alabama Forest Classroom (AL)

Install a rainwater harvesting system, plant 30 native trees and shrubs and create a 0.3 mile "Return of the Natives" Trail on the 466-acre Turkey Creek Nature Preserve. Project will complement the addition of a 120-seat Turkey Creek Classroom, with new systems to channel rainwater from the roof to a 1,400 gallon cistern and drip irrigation system, filtering rainwater to protect the critically endangered vermilion darter.

\$35,450

Florida Agricultural and Mechanical University

GIS Capacity and Training to Support Gulf-Wide Ecosystem Conservation and Restoration (AL, FL, LA, MS, TX)

Provide geographic information system (GIS) expertise and training in support of Gulf-wide ecosystem conservation and restoration programs and projects. Project will develop GIS layers and maps where Gulf Coast Ecosystem Restoration Council and Natural Resources Damage Assessment projects have been approved for planning and implementation by the U.S. Department of Agriculture.

\$300,000

Mississippi State University

Novel Techniques for Restoring Shortleaf Pine-Hardwood Ecosystems on Reclaimed Mine Sites (AL)

Restore 182 acres of shortleaf pine and shortleaf pine-oak habitat on a reclaimed mine site in north-central Alabama, improving soil and water quality and benefiting species such as northern bobwhite and freshwater mussels. Project will use the restored property as a demonstration site to engage private landowners and land managers through field day events and short courses, seeking to increase adoption of habitat restoration practices on additional reclaimed mine sites.

\$174,999

Mobile County Commission

Dauphin Island Causeway Shoreline and Habitat Restoration Project (AL)

Complete design and implementation for breakwater and a coastal marsh in Mobile Bay on the east side of the Dauphin Island Causeway. Project will create and protect critical coastal marsh habitat and reduce the vulnerability of the only emergency/hurricane evacuation route between the mainland of south Mobile County and Dauphin Island.

\$4,900,000

Reef Fish Conservation and Education Foundation

Engaging the Next Generation of Commercial Fishermen in the Gulf of Mexico (AL, FL, LA, MS, TX)

Develop a workforce training program to recruit and educate young fishermen for the commercial seafood harvesting sector. Project will engage fishery leaders from various fisheries across the Gulf of Mexico in face-to-face meetings to design and plan a young fishermen training program for the Gulf of Mexico and develop a review of similar programs around the United States.

\$25,835

Saltwater

Expanding and Improving the Use of Electronic Monitoring in the Gulf of Mexico Shrimp Trawl Fishery (multiple states)

Expand and improve the use of electronic monitoring in the Gulf of Mexico shrimp trawl fishery by installing electronic monitoring systems and collecting data on protected species interactions and red snapper bycatch volume and locations. Project will maximize the utility of the collected data for both fishery management and dealer verification of catch origin and sustainable fishing practices.

\$173,145

The Longleaf Alliance

Collaborating to Restore Longleaf in the Gulf Coastal Plain Ecosystem Partnership Landscape (AL, FL)

Restore and maintain 44,000 acres of longleaf pine habitat in south Alabama and the western panhandle region of Florida to benefit rare and declining species such as the Bachman's sparrow, red-cockaded woodpecker, gopher tortoise and northern bobwhite. Project will provide technical assistance to private landowners and deploy an ecosystem support team to implement prescribed burning, plant longleaf pine, remove invasive species, and support rare species recovery on public and private lands.

\$300,000

The Nature Conservancy

Accelerating Longleaf Pine Ecosystem Restoration in the Chattahoochee Fall Line Area - V (AL, GA)

Accelerate longleaf pine conservation on more than 20,400 acres of public and private land in west Georgia and east Alabama, benefiting red-cockaded woodpecker, gopher tortoise and other at-risk species. Project will improve forests through silvicultural treatments and implement prescribed fire on existing and restored longleaf habitat, with activities focused on properties buffering Fort Benning, as well as high priority state and privately owned lands.

\$283,000

The Nature Conservancy

Calvert Prong and Turkey Creek Stream Restoration in the Locust Fork Watershed (AL)

Restore and enhance riparian forests and support federally-listed species on two sites within the Locust Fork watershed in Alabama. Project will restore approximately 10 acres of riparian buffer and .5 miles of streambank, preventing an estimated 400 cubic yards of sediment from entering the watershed annually, and improve critical habitat for the black warrior waterdog, flattened musk turtle, vermilion darter and other listed species.

\$145,948

The Nature Conservancy**Expanding Longleaf Pine Restoration in the Talladega Mountains (AL, GA)**

Plant 420 acres of longleaf pine and improve an additional 17,500 acres of existing longleaf habitat with prescribed fire within the Talladega Mountains Longleaf Pine Conservation Partnership area of north-central Alabama and northwest Georgia. Project will increase prescribed fire capacity with seasonal burn crews and establish longleaf on a recently acquired property adjoining the Talladega National Forest, benefiting red-cockaded woodpecker and other longleaf-dependent species.
\$274,000

**University of Georgia Research Foundation
Development of a Planted Longleaf Pine Growth and Yield Model for the Southeast (AL, FL, GA, NC, SC)**

Create a new growth and yield model system for longleaf pine that will allow more accurate growth projections for landowners considering longleaf pine reforestation who may have timber management objectives. Project will establish, document and measure permanent plots in planted unthinned longleaf pine stands on cut-over sites in the southeast United States, and the data will be used to calibrate a growth and yield model for multiple factors for longleaf pine.
\$243,999

ALASKA**Alaska Geographic Association****Connecting Anchorage Residents to their Watershed through Monitoring, Restoration and Education (AK)**

Remove 20 acres of invasive European bird cherry from the Anchorage Bowl Waterways, providing opportunities for urban youths and families to connect and become better stewards of local natural resources through recreation and restoration. Project will help break down barriers for Anchorage's diverse urban neighborhoods to access the waters by engaging 700 volunteers and 350 students through environmental education and training activities while addressing priority habitat restoration.
\$48,946

**Alaska Longline Fishermen's Association
Expanding Best Fishing Practices to Strengthen Innovation Uptake (AK)**

Enhance uptake of best fishing practices to improve the viability of small-scale fishing using a multi-tiered training program. Project will expand efforts to strengthen uptake of innovative tools and strategies through direct outreach to fishermen and by developing local expert trainers to continue the outreach.
\$69,994

Aleutians East Borough**Implementing Electronic Monitoring for the Pollock Trawl Fishery in the Western Gulf of Alaska**

Increase electronic monitoring for discard compliance in the small vessel Pollock mid-water trawl fleet in the Western Gulf of Alaska. Project will install electronic monitoring systems onboard vessels, develop compliance plans for these vessels, conduct shore based counts of salmon bycatch, and develop cost-effective data management tools.
\$531,217

Bering Sea Fishermen's Association**Assessing Mortality of Chinook Salmon During Freshwater Migration in Western Alaska (AK)**

Estimate the prevalence of heat stress and pre-spawn mortality in migrating western Alaska adult Chinook salmon using natural biomarkers in the tissues of living individuals. Project will identify specific locations and populations where heat stress mortality is more likely in order to prioritize conservation efforts.
\$67,936

Chordata**Electronic Monitoring Data Quality, Integration, and Cost in Alaska's Fixed Gear Fleet**

Analyze the cost associated with, and data quality provided by, current electronic monitoring review in Alaska for the benefit of the National Marine Fisheries Service, the North Pacific Fisheries Management Council, and industry. Project will examine how electronic monitoring and observer data streams can be integrated to reduce costs, improve consistency, quality and usability of information collected.
\$119,100

City of Point Hope**Identifying Priority Restoration Sites for Resilience in Point Hope, Alaska**

Assess potential shoreline sites that are vulnerable to coastal erosion, flooding, and storm surge for adaptation and resiliency projects in and around Point Hope, Alaska. Project will apply native knowledge and expertise in the scoping of projects, and will involve site assessments, modeling, and preliminary design development.
\$214,761

**College of William and Mary, Virginia
Institute of Marine Science****Test and Implement Commercial Grade Biodegradable Hinges on Dungeness Crab Traps (AK, VA, WA)**

Employ commercial-grade biodegradable hinges on dungeness crab traps to minimize adverse impacts when the traps become derelict. Project will test the durability of the hinges in both the active fishery utilizing watermen and in a simulated derelict trap mode to ensure the function as needed to be functional for fishermen and protect marine ecosystems.
\$130,579

Kenai Watershed Forum**Baseline Assessment of Hydrology and Water Quality within the Vogel Lake Complex (AK)**

Establish baselines for hydrology and water quality parameters throughout the Vogel Lake complex on the Kenai Peninsula in Alaska to develop a treatment plan for invasive northern pike for the benefit of native coho salmon, sockeye salmon, and rainbow trout. Project will conduct a hydrologic connectivity assessment, establish a stream discharge station to capture outflow, and perform water quality monitoring on three sites.
\$102,745

Native Village of Shaktoolik**Shaktoolik Alaska Storm Surge Berm and Restoration**

Build a storm surge berm between Shaktoolik and the Bering Sea using 100-percent, nature-based local materials, restoring coastal dune habitat. Project will prevent the destruction of the community, thereby avoiding contaminating marine habitat and coastal wetlands and rivers with fuel and other hazardous and biological waste.
\$1,000,000

Southeast Alaska Watershed Coalition**Engaging the Community to Restore Habitat for Sockeye Salmon in the Klawock Watershed (AK)**

Restore sockeye salmon habitat and engage with local community groups to build capacity for the management of Sockeye salmon. Project will improve fish habitat quality and quantity; conduct stream habitat assessments; and develop and implement a best management practice plan for watershed landowners.
\$59,318

Takshanuk Watershed Council**Water Quality Monitoring in Chilkat Valley to Assess Chinook Salmon Population (AK)**

Produce comprehensive, scientifically valid, and legally defensible current baseline water quality data for the Chilkat and Chilkoot watersheds in Alaska. Project will conduct baseline water data collection into its third year; engage state and federal regulators on permitting and water quality issues; and build capacity and engage with the Chilkat Indian Village, Chilkoot Indian Association, and the Village of Klukwan.
\$42,570

Trout Unlimited**Monitoring and Habitat Assessment of Pacific Salmon in the Eklutna River (AK)**

Conduct monitoring on four sites on the Eklutna River in Alaska, post-barrier removal, for the benefit of Pacific salmon. Project will determine the adequate amount of water to be returned to the Eklutna River to restore fish passage, and document the historical use of salmon by the Eklutna tribe to quantify the true cultural cost of salmon loss in the Eklutna River.
\$101,086

**U.S. Department of Agriculture,
U.S. Forest Service**

Assessing Impact and Effects of Elodea on Sockeye Salmon in Eyak Lake (AK)
Assess the impact and effects of Elodea, a nonnative aquatic plant, on sockeye salmon within Eyak Lake in Alaska to fill information gaps and provide insight on Elodea impacts on other Pacific salmon and native fish. Project will conduct three studies to inform relevant management agencies and stakeholders on cost-effective techniques to address Elodea control and eradication.
\$127,078

**U.S. Department of the Interior,
U.S. Fish and Wildlife Service**

Engaging Native Communities in Emperor Geese Conservation for Subsistence Hunting Opportunities (AK)
Conduct outreach in rural coastal Alaskan communities on Kodiak Island and in the Yukon-Kuskokwim Region to educate and engage Native Alaskan residents in emperor geese conservation to ensure future recreational and subsistence hunting opportunities. Project will initiate a broad-scale public education and outreach initiative to deliver a timely, clear, and consistent message about emperor goose ecology, harvest management, and conservation need.
\$50,000

**U.S. Department of the Interior,
U.S. Fish and Wildlife Service -
Kodiak National Wildlife Refuge**
Population Assessment and Development of a Statewide Monitoring Framework for Aleutian Tern (AK)

Continue a collaborative study at a suite of Alaska study sites during the 2020 field season to address conservation-critical information needs of the Aleutian tern. Project will produce a statewide monitoring framework, gain information on breeding season movements in a new sub-region of Alaska, continue colony level monitoring, and initiate a study on population genetic structure.
\$150,000

United Catcher Boats
Implementing Electronic Monitoring for Compliance in the Mid-water Trawl Pollock Fisheries (AK)

Implement operational testing to evaluate the feasibility and cost efficiency of using electronic monitoring systems in the Bering Sea and Gulf of Alaska Pollock mid-water trawl catcher vessels. Project will expand previous efforts to improve data quality, timeliness, and cost-efficiency for salmon bycatch monitoring compliance with retention regulations.
\$435,168

University of Alaska Anchorage
Community Engagement with Federal Fish and Wildlife Projects on the Copper River (AK)
Facilitate an Alaska Native Science and Engineering Program (ANSEP) student internship with U.S. Fish and Wildlife Service and U.S. Forest Service relating to Pacific salmon conservation projects on the Copper River, Alaska. Project will give an ANSEP student field work experience to support their pursuit of conservation careers, and the student will serve as liaisons between federal managers and local communities.
\$9,266

ARIZONA

Arizona Game and Fish Department
Restoring Wintering Grassland Habitat on the CO Bar Ranch by Removing Invasive Juniper (AZ)

Use a rubber-tired masticator to remove invasive juniper from historic grassland habitat on the CO Bar Ranch in northern Arizona. Project will restore more than 700 acres of wintering habitat for elk, pronghorn and mule deer.
\$109,000

Arizona Game and Fish Department
Restoring Wintering Grassland Habitat on the Kaibab Plateau by Removing Invasive Juniper (AZ)

Use mechanical and hand-thinning treatments to remove juniper trees that have invaded historical grassland on Bureau of Land Management lands within Coconino County in northern Arizona. Project will restore 1,480 acres of critical winter mule deer habitat.
\$200,000

Arizona State University
Developing and Testing Solar-Powered Net Illumination to Reduce Leatherback Sea Turtle Bycatch (AZ, FL)

Further develop and test a promising gill-net gear technology for the reduction of sea turtle bycatch. Project will improve existing design to enhance both usability and impact for leatherback turtles and conduct both controlled and active fishing tests of the gear.
\$102,083

Friends of the Verde River
Verde Watershed Restoration Coalition: Water Quality Monitoring and Restoration Volunteerism (AZ)

Engage volunteers, build stewardship in the community, and train community scientists to monitor water quality and identify sites in need of restoration along Oak Creek and Spring Creek. Project will engage seven partner organizations and 225 volunteers to install erosion control structures on 2 acres and monitor 10 sites for water quality.
\$47,645

National Audubon Society
Creating Habitat for Burrowing Owls in Powers Butte (AZ)

Mobilize volunteers to build homes for burrowing owls on an Arizona Game and Fish Department Wildlife Area located west of Phoenix called Powers Butte. Project will install artificial burrows in an area encompassing about 5 acres adjacent to the Gila River, build 100 new burrows and re-home 50-60 burrowing owls, as well as focus outreach efforts on high schools located in Phoenix's West Valley, adjacent to the new owl site.
\$30,000

**U.S. Department of the Interior,
U.S. Fish and Wildlife Service -**

Arizona Fisheries Resources Office
Replacing a Barrier on Big Bonito Creek to Support Apache Trout Recovery (AZ)
Replace an existing gabion structure, which no longer functions as a barrier to upstream movement of nonnative trout, with a barrier designed for a 50-year performance life. Project will separate Apache trout recovery populations from managed sportfish downstream and increase the availability of high-quality protected Apache trout recovery habitat by nearly 20 miles.
\$83,128

ARKANSAS

Ducks Unlimited
Enhancing Hydrology and Restoring Forests in the Lower Mississippi Alluvial Valley (AR, MS)
Restore and enhance bottomland hardwood forests and wetlands on public and private lands within the delta of Arkansas and Mississippi. Project will restore hydrology, enhance existing forests, and reforest areas to impact a total of 2,590 acres, benefiting migratory waterfowl, Louisiana black bear and other forested wetland-dependent species.
\$375,000

Louisiana Wildlife and Fisheries Foundation
Revising the Lower Mississippi Desired Forest Condition for Wildlife Report (multiple states)
Update the Lower Mississippi Valley Joint Venture's Desired Forest Condition for Wildlife report, which provides technical guidance to land managers on how to manage bottomland hardwood forests for the conservation of wildlife. Project will revise the report to integrate new science on the habitat needs of priority wildlife species, include updates from the Forest Resource Conservation Working Group, and add a section dedicated to the management of restored or young bottomland hardwood stands.
\$79,254

Mississippi River Trust

Forested Wetland Restoration in the Lower Mississippi River Floodplain (multiple states)
Reforest and protect frequently flooded, marginal cropland on private lands through the adoption of Wetland Reserve Easements in the active floodplain of the Lower Mississippi River. Project will establish 7,500 acres of bottomland hardwood forest to expand and enhance habitat and improve water quality, benefiting the Louisiana black bear, swamp rabbit, forest birds, waterfowl and freshwater fish.
\$653,696

Mississippi State University

Black Bear Monitoring in the Lower Mississippi Alluvial Valley (AR, LA, MS)
Monitor and collect baseline data on black bear movement, gene flow, and genetic isolation among five recovering populations within the Mississippi Alluvial Valley in Louisiana, Arkansas, and Mississippi. Project will help assess black bear response to bottomland hardwood restoration efforts and establish a regional black bear monitoring protocol by leveraging monitoring efforts in the three states, coordinating standardized protocols for sampling, and collaborating on analyses.
\$138,483

Pollinator Partnership

Improving Pollinator Habitat Connectivity in the Midwest and Great Lakes Flyway (AR, IL, MI, MN, WI)
Develop and expand a regional seed collection and native plant materials network program in the Midwest and Great Lakes region to support monarch butterflies, rusty patched bumble bees and other declining pollinator species. Project will improve more than 5,000 acres of pollinator habitat, collect 50 pounds of milkweed seed, collect 50 pounds of nectar plant seed, and propagate 2,000 milkweed and 1,000 nectar species seedlings.
\$74,971

Stephen F. Austin State University

Monitoring Avian Response to Forest Management in the Lower Mississippi Alluvial Valley (AR, LA, MS, TX)
Develop a baseline inventory of bird species in bottomland hardwood restoration sites in the Lower Mississippi Alluvial Valley through the deployment of autonomous sound recorders. Project will compare baseline data to avian community metrics captured in bottomland hardwood forests at different successional stages to identify effective management activities used in forestry wildlife treatments and stages of stand development that need further treatments for maintaining desired forest conditions.
\$73,377

The Nature Conservancy

Restoring Forested Wetlands through a Wetland Reserve Enhancement Partnership (AR, LA, MS)
Restore and protect forested wetlands within high-priority areas in the Mississippi Alluvial Valley region of Arkansas, Mississippi and Louisiana. Project will reforest 2,650 acres of marginal cropland, restore 600 acres of hydrologic wetland function and protect 3,300 acres with conservation easements, benefiting Louisiana black bear, swamp rabbits, waterfowl and neotropical migratory songbirds.
\$696,304

CALIFORNIA**Ai.Fish**

Artificial-Intelligence Assisted Data Management and Review Platform for Hawaii Longline Fisheries (CA, HI)
Develop a web-based application using machine learning and computer vision algorithms to pre-process electronic monitoring data from the Hawaii pelagic longline fisheries. Project will reduce costs and improve timeliness of the review process, lowering the barrier to entry for implementation of electronic monitoring and review technologies in the Hawaii-permitted longline fisheries.
\$300,617

American Bird Conservancy

Supporting On-the-Ground Riparian Restoration on Private Lands (CA)
Increase participation of private landowners in California to restore riparian habitat for southwestern willow flycatcher by providing technical assistance for on-the-ground riparian restoration projects using Natural Resources Conservation Service conservation practices. Project will engage 200 landowners and will improve management on 500 acres of riparian habitat to support the species recovery plan of the southwestern willow flycatcher.
\$113,361

American Conservation Experience

Fuels Reduction Training to Restore Forest Health and Promote Resilience in Crystal Lake (CA)
Restore forest health across 203 acres to improve wildlife habitat and reduce the risk of severe wildfires in the Golden Cup plantation area of Crystal Lake within San Gabriel Mountains National Monument. Project will provide training to a fuels reduction crew that will implement necessary fuels treatments to promote forest health and resilience.
\$321,246

American Rivers

Aquatic Organism Passage Barrier Removal and Meadow Restoration in the Pine Creek Watershed (CA)
Remove barriers to the passage of aquatic organisms, and restore meadows in the Pine Creek watershed in Lassen National Forest. Project will remove eight passage barriers, permit seven additional passage improvements, and restore 240 acres of meadow to improve instream flows and enhance native fish habitat and connectivity.
\$338,094

American Rivers

Meadow Restoration in Faith Valley and Grouse Meadow in the Desert Terminal Lakes Watersheds (CA)
Restore hydrological processes in Faith Valley, a priority meadow within the Carson Basin Watershed, and initiate planning for wet meadow restoration in Grouse Meadow, a high-priority site within the Walker Basin Watershed. Project will improve habitat for the willow flycatcher by restoring hydrology across 120 acres of meadows and conduct planning and design for 40 acres of meadows within suitable habitat for bi-state sage-grouse.
\$242,486

Amigos de los Rios

Interpretive Signage for Areas Impacted by the Copper and Powerhouse Fires (CA)
Research, develop, and produce educational, interpretive and wayfinding signage to boost awareness of Copper and Powerhouse fire impacts on Angeles National Forest in California. Project will produce signage that includes information related to the ecology and history of the region in addition to wayfinding information for trail users, which will enhance trail sites, increase awareness of fire ecology, and promote responsible forest stewardship.
\$65,000

Cachuma Resource Conservation District

Removal of Invasive Spanish Broom in Los Padres National Forest (CA)
Eradicate two isolated, invasive Spanish broom populations in the Los Padres National Forest to prevent further infestation. Project will apply herbicide treatments to invasives followed by planting of native chaparral plant species, and will also install interpretive signage to educate the public on invasive plant management and native plant restoration following wildfires.
\$478,740

California Association of Resource Conservation Districts
Using Technical Assistance to Increase Resource Conservation District Efforts for Monarchs (CA)

Utilize the California network of Resource Conservation Districts to advance technical assistance for monarch butterfly and pollinator habitat restoration and enhancement on private working. Project will develop 50 pollinator conservation plans, restore 50 acres of habitat, coordinate 63 meetings and workshops, and reach 150 landowners.
\$300,000

California Conservation Corps
Treatment and Removal of Golden Spotted Oak Borer Infestations in Green Valley (CA)
Treat and remove trees infested with the golden spotted oak borer within the Green Valley area and within the vicinity of the Sawmill Liebre Road in the Angeles National Forest in California. Project will treat 100 acres and will include the development of all appropriate safety measures, including a fire plan.
\$172,733

California Deer Association
Improving Meadows and Wildlife Migratory Corridors in the Shasta-Trinity National Forest (CA)
Create pollinator and wildlife migratory corridors and re-establish historic meadows in the McCloud Ranger District of Shasta-Trinity National Forest with tribe, public and private sector support. Project will improve watershed and meadow resilience, establish new forage sites and migratory corridors for pollinators and wildlife, re-establish historic aspen and meadows, and remove invasive conifers that are encroaching in critical habitat areas.
\$260,500

California Fire Safe Council
Regional Wildfire Mitigation Program for the Santa Barbara South Coast (CA)
Establish long-term wildfire resilience of shrubland-dominated watersheds and human communities on increasingly fire-prone landscapes in Southern California. Project will develop a comprehensive assessment of wildfire risk and vulnerability, as well implement a nature-based strategy and solutions for the built environment, natural landscape, and citizens along the coastal wildland-urban-interface region of Santa Barbara County.
\$5,472,641

California Institute of Environmental Studies
Evaluation of Artificial Nest Modules for Ashy Storm-Petrel on Santa Cruz Island (CA)
Evaluate suitability of artificial predator-proof nest modules for ashy storm-petrels breeding at Santa Cruz Island, California. Project will measure the effectiveness and functionality of modules by evaluating: visitation/occupancy, the number of breeding sites, breeding success rates and by comparing abiotic data between artificial and natural sites as well as recording interactions of ravens with modules and assessing depredation rates.
\$49,997

California Invasive Plant Council
Development of Environmental Compliance in Preparation for Invasive Vegetation Removal (CA)
Develop environmental compliance that will target a variety of invasive vegetation found within priority watersheds within the Lassen National Forest and incorporate an adaptive management strategy. Project will reduce Canada thistle infestation by 30 percent, or 1 acre, following the completion of an Environmental Assessment.
\$77,574

California Trout
Analysis of Irrigation Efficiency Priorities for Instream Flows in California
Identify and prioritize project opportunities where: 1) agricultural producers can improve the efficiency of irrigation water use through the adoption of modern technologies and management techniques that are consistent with practices funded under the Natural Resources Conservation Service's Environmental Quality Incentives Program; and 2) water conserved by irrigation efficiency improvements will be dedicated to provide quantifiable, protect-able and ecologically meaningful improvements to instream flows to benefit fish and wildlife.
\$66,955

California Trout
Shasta Watershed Flow Enhancement (CA)
Secure instream flows for the improvement of salmonid habitat throughout the Shasta River and its tributaries. Project will result in a permanent dedication of 1.5 cubic feet per second in the Little Shasta River for the improvement of coho spawning and rearing habitat, as well as the addition of at least 500 acre-feet of water into the Shasta River to support the in-migration of fall Chinook.
\$129,995

Channel Islands Restoration
Tamarisk Removal and Monitoring in the Sisquoc River Watershed in Los Padres National Forest (CA)
Treat and monitor tamarisk trees and seedlings in the Sisquoc River and nine tributaries within the Los Padres National Forest in an effort to eradicate the species from the upper watershed. Project will complete surveys and a combination of treatments, including chemical treatments and hand pulling across 40 miles, in addition to monitoring previously completed tamarisk treatments.
\$238,572

Channel Islands Restoration
Tamarisk Removal in the Upper Santa Ynez River Watershed in Los Padres National Forest (CA)
Survey, locate, and treat tamarisk trees and seedlings in the upper Santa Ynez River and monitor previously treated trees. Project will survey 170 miles of the upper Santa Ynez River and 14 tributary streams and canyons upstream of Gibraltar Dam, record the locations of all tamarisk trees and seedlings, monitor the results of last year's treatment of 120 tamarisk trees, and treat additional tamarisk trees in the upper watershed.
\$149,468

Conservation Biology Institute
Santa Monica Mountains Woolsey Fire Recovery and Adaptation Program (CA)
Create a comprehensive fire prevention program for the region, focusing on homeowner outreach and education while conserving and restoring plant and wildlife habitat functions by improving homeowner practices and reestablishing native oaks in critical locations. Project will leverage prior and ongoing planning efforts to achieve more sustainable and resilient approaches to wildfire management in the Santa Monica Mountains region.
\$2,500,000

Conservation Science Global
Raven Movements in the Desert and Implications for Tortoise Recovery (CA)
Track raven movements using GPS devices to determine frequencies and distances that these birds move into wildlands and the amounts and types of wildlands that urban ravens include in their home ranges. Project will use data on how ravens from urban areas, where their populations are large, interact with natural settings where desert tortoise are located in order to manage predation of the threatened Mojave desert tortoise by common ravens.
\$250,000

Contra Costa County Flood Control and Water Conservation District**Lower Walnut Creek Restoration (CA)**

Restore wetland habitats in the lower, tidal part of Walnut Creek to provide sustainable flood management. Project will set back levees from the channel to increase flood capacity and reconnect/create new floodplains reconnecting tides to brackish wetlands, thus restoring habitats for fish and wildlife.

\$1,400,000

Earth Island Institute**Finalization of Removal Plans for Wheeler Gorge Campground Aquatic Organism Passage Barrier (CA)**

Restore access for the federally endangered steelhead trout to 13 miles of creek habitat in the Ventura River watershed within the Wheeler Gorge campground of the Los Padres National Forest. Project will finalize engineering plans for the removal of four stream crossings.

\$49,581

Earth Island Institute**Comprehensive Community-Based Debris Flow Mitigation and Habitat Restoration (CA)**

Mitigate future flood impacts from debris flows and improve steelhead trout migration and habitat by removing passage barriers and restoring riparian areas. Project will excavate debris from ring nets, increase debris basin capacity, remove fish barriers, improve native riparian canopy and work with the community to increase awareness of the interconnectedness of watershed functions and flooding.

\$2,477,273

Earth Island Institute**Manzana Creek Watershed Sediment Reduction, Aquatic Protection and Road Restoration (CA)**

Implement erosion control and sediment prevention measures at active road sediment source sites within the Manzanita Creek Watershed in Los Padres National Forest in California. Project will complete necessary environmental compliance to target and treat 13 stream crossing sites and 20 road surface discharge sites, hydrologically disconnect 4 miles of road surfaces and cutbanks contributing to sedimentation, and restore altered hydrologic runoff processes along 5 miles of road.

\$423,908

Family Water Alliance**Collaboration to Identify Projects along the Klamath River Basin (CA, OR)**

Identify and build support for projects within the Klamath Basin Watershed to improve delivery of water to fish and farms. Project will include ecosystem restoration and water supply enhancement, and will involve collaboration from multiple stakeholder groups across the Klamath River Basin.

\$10,000

Farallon Institute**Integrating Science into Fisheries Management (CA)**

Develop additional inputs for assessment of the northern anchovy central stock in California. Project will analyze seabird spatial forage needs and fishery competition, synthesize all information to date in a novel Ecosystem Socio-Economic Profile and develop a tiered harvest rule based on long-term anchovy population and predator data.

\$99,992

Friends of the Los Angeles River**Re-Wilding the Los Angeles River Through Education and Engagement (CA)**

Mobilize volunteers to remove invasive plants, plant natives, conduct bird point counts and remove 120 tons of trash from an 11-mile stretch of river from Griffith Park through downtown. Project will engage 7,000 volunteers, remove invasive species on 3 acres of the Sepulveda Basin Wildlife Reserve, educate 1,000 students from Title I schools in Los Angeles, and train 25 more teachers to use LA River curriculum.

\$49,997

GS Black**Upper Parks Creek Water Assessment (CA)**

Increase irrigation delivery and efficiency on Parks Creek to reduce the number of diversion points allowing for instream benefit to Coho salmon in California. Project will develop designs to combine diversions, select a point of diversion for the combined water rights, including infrastructure to provide fish passage, allow sediment transport, install a compliant fish screen as well as stream flow and diversion volume measuring devices.

\$149,540

HANA Resources**Expanding Least Bell's Vireo Surveys on BLM Lands (CA)**

Complete Phase II of a least Bell's vireo (LBVI) study. Project will report on occupied habitat patches, quality of the habitat, estimated numbers of LBVI and potential threats to LBVI (e.g. brown-headed cowbirds) and will expand on a Phase I study conducted in 2019.

\$90,832

Humboldt County Public Works**Intertidal Coastal Marsh Restoration and Transportation Corridor Protection in Humboldt Bay (CA)**

Initiate implementation of intertidal coastal marsh restoration to increase community resilience to flooding, and demonstrate the use of natural ecological systems for sea level rise adaptation. Project will perform site characterization and prepare preliminary design (50 percent) for a project utilizing tidal benches or similar natural infrastructure techniques to help protect a critical transportation corridor along Humboldt Bay from flood hazards.

\$124,999

Lassen County Fire Safe Council**Prescribed Fire in Lassen National Forest (CA)**

Conduct prescribed burns to reduce wildfire risk, contribute to the landscape-level goals of community and habitat protection, and improve overall forest health of the Diamond Mountain project area within the Lassen National Forest. Project will facilitate burning piles across 1,075 acres of hand-thinned, overly dense conifers.

\$73,626

Mid Klamath Watershed Council**Klamath River Tributary and Mainstem Habitat Design and Planning (CA)**

Improve habitat for Coho salmon on the mainstem Klamath River and four priority tributaries in California. Project will engage landowners who are willing to have a floodplain fisheries restoration project occur on their property, and complete planning and/or design to further project development.

\$328,829

Mid Klamath Watershed Council**Strategic Thinning for Prescribed Fire in Six Rivers National Forest (CA)**

Conduct manual thinning to increase fire safety around the Orleans and Somes Bar communities within the Six Rivers National Forest and implement fuels reduction treatment along strategic fuel breaks to manage future fires and prepare for large scale prescribed fires. Project will prioritize thinnings to create buffers along private properties and critical routes and oversee strategic fuel breaks across 430 acres.

\$500,000

Monarch Joint Venture**Improve the Scale and Coordination of Monarch Conservation Efforts (CA)**

Increase strategic habitat implementation and stakeholder engagement in response to the declining western monarch population. Project will provide technical assistance to local farmers, ranchers, and other private landowners to implement monarch and pollinator habitat practices on private working lands, bringing 450 acres under improved management, restoring 50 acres and engaging 550 landowners.

\$182,699

Monterey County Resource Management Agency**Carmel River Floodplain Restoration and Environmental Enhancement (CA)**

Design the removal of sections of levees on the south bank of the Carmel River to construct a causeway that will allow redirected floodwaters to flow under the State Route 1 embankment, reducing flood risk within the 100-year floodplain. Project will design a mosaic of wetland, riparian, and upland habitats across the site providing foraging, nesting, and breeding habitat for many species of birds and other wildlife.

\$300,243

National Audubon Society**Increase Collaboration of Sagebrush Conservation (multiple states)**

Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stake holders and host field tour events that elevate on-the-ground conservation.
\$29,636

National Audubon Society

Transforming Marin City's Urban Wetland (CA)
Develop a publicly informed and community-supported design to restore and strengthen Marin City's urban wetland. Project will improve the functionality and resilience of wetland habitat that will serve as shoreline protection from storms and floods while supporting birds and other wildlife, and providing much-needed opportunities for local residents to engage with nature.
\$145,947

National Forest Foundation**Improving Forest Health of Sawmill Liebre Plantations Affected by the Powerhouse Fire (CA)**

Enhance and support post-fire restoration in the Powerhouse fire scar on the Angeles National Forest in California. Project will treat native conifer plantations and oak stands through brush canopy reduction, pruning, thinning, and dead tree removal along 120 acres to improve ecological function and resilience to future fires.
\$120,236

Pacific States Marine Fisheries Commission Integrated Fisheries Restoration and Monitoring Plan for the Klamath River (CA, OR)

Complete a final draft of the Integrated Fisheries Restoration and Monitoring Plan for the Klamath River. Project will:
1) convene a series of work sessions with identified groups of fish and habitat professionals in the various Klamath sub-basins and gather input on prioritization of identified restoration actions; 2) produce a revised version of the Klamath Plan that includes new phasing input; 3) re-form participants into a basin-wide technical group and perform ranking and phasing exercise at sub-regional spatial scales; 4) produce a first draft of Section 3 of Plan to include initial ranking and phasing of restoration activities at the sub-basin, sub-regional, and basin-wide level; and 5) produce a final draft of the completed Plan document.
\$200,000

Pfleger Institute of Environmental Research**Testing Electronic Monitoring to Address Observer Constraints in the Swordfish Deep-Set Fishery (CA)**

Compare and document the efficacy and feasibility of electronic monitoring to document catch and bycatch in the California deep-set buoy fishery. Project will directly compare traditional human observers and camera-based electronic monitoring to assess costs, improve the potential for monitoring small vessels and meet regulatory requirements while maintaining full accountability in the developing fishery.
\$172,863

Point Reyes Bird Observatory, Point Blue Conservation Science Restoration Implementation, Monitoring, and Bat Surveys in Colby Creek (CA)

Restore priority meadows within the Storrie Fire nexus watersheds, collect pre- and post-restoration monitoring data to evaluate effectiveness, and conduct surveys on sensitive bat species. Project will restore hydrology over 175 acres, improve over 2.5 miles of stream, and establish a baseline condition and sampling strategy to evaluate ecological effectiveness monitoring of meadows restoration activities.
\$705,563

Rancho Santa Ana Botanic Garden Improving Plant Diversity in Fire Affected Watersheds in Angeles National Forest (CA)

Improve capacity for resource management and promote resilience for future wildfires through seed collection, restoration of threatened and endangered plant species, monitoring and assessment of past and ongoing chaparral restoration sites, and development of a best management practices and propagation manual for chaparral and coastal sage scrub species. Project will work to enhance and restore wildlands following wildfire and protect the sensitive biodiversity on the Angeles National Forest.
\$201,552

Regents of the University of California Headstarting Tortoises and Raven Predation Pressure on Tortoise Recruitment (CA, NV)

Utilize radio-telemetry to track head-started Mojave desert tortoises that have been released in the wild to estimate size-dependent survival and use lifelike tortoise models and camera traps to evaluate the role of raven predation in size-dependent tortoise mortality. Project will use collected information to gauge the effectiveness of desert tortoise head-starting as a recovery tool and to understand the role that ravens play in limiting survival and recruitment of young tortoises into declining desert tortoise populations.
\$299,659

Resighini Rancheria

Fisheries Restoration Planning and Design (CA)
Produce 100-percent design for fish passage on one main channel culvert and 30-percent design on two tributary culverts to upgrade existing degraded culvert crossings on Junior Creek in California. Project will improve juvenile fish passage through the lower culvert and two tributary culverts in Junior Creek and improve connectivity with the Lower Klamath River to benefit Southern Oregon/Northern California Coastal Coho salmon.
\$93,500

Resource Conservation District of Tehama County

Culvert Removal and Improvement in the Griffin Creek Tributary (CA)
Remove and replace an existing culvert to improve stream flow in the Griffin Creek tributary within Mendocino National Forest. Project will replace a culvert that will reduce sedimentation and improve water quality.
\$34,191

Salmon River Restoration Council

Invasive Plant Removal to Enhance Riparian Habitat in Salmon River Watershed (CA)
Contain, control and eradicate invasive vegetation and plant native species to enhance riparian habitat in the Salmon River watershed in the Klamath National Forest. Project will remove invasive plant species, such as the spotted knapweed, and will plant locally sourced native species in riparian corridors to reduce ecological pressures on native organisms.
\$32,000

Sonoma Resource Conservation District Restoring Streamflow for Steelhead Trout in the Petaluma River Watershed (CA)

Improve instream flow in the Petaluma River watershed for steelhead trout by providing on-farm technical assistance to facilitate the implementation of conservation practices. Project will develop farm water conservation plans and engineered designs at four properties, consisting of at least 10 best management practices instream reaches where insufficient flow is a limiting factor limiting steelhead survival.
\$51,890

Sierra Institute for Community and Environment

Fuels Reduction Preparation, Monitoring, and NEPA for Green Island Lake Research Natural Area (CA)
Complete an environmental compliance document to analyze the ecological effects of prescribed fire as well as develop a prescribed burn monitoring plan in the Green Island Lake Research Natural Area. Project will complete restoration planning and design across 1,185 acres and will complete two studies to inform management decisions.
\$399,753

Sonoma Land Trust

Sonoma Valley Wildlands: Fire Resiliency for Communities and Natural Habitats (CA)

Perform vegetation management and fuel reduction activities throughout 18,000 acres of protected lands and implement a countywide public education campaign to increase wildfire resilience in Sonoma County, California. Project will treat 720 acres of wildlands to reduce risk to life, land and property and increase health and wildfire resilience of forest habitat.
\$319,364

Shasta Valley Resource Conservation District Storm-proofing and Watershed Infrastructure in the Horse Creek Watershed (CA)

Improve watershed health and reduce sediment sources within the Horse Creek tributary in the Klamath National Forest. Project will complete the engineering design to improve roads and replace or install culverts to reduce sedimentation and improve watershed condition, road infrastructure and instream habitat.
\$284,869

Sierra Institute for Community and Environment

Watershed Infrastructure Assessment in Lassen National Forest (CA)

Conduct an infrastructure assessment to identify and prioritize specific Watershed Improvement Plan projects in Lassen National Forest. Project will complete site-specific surveys of road features that will be used alongside ranking criteria to assist with project prioritization, a road-stream crossing inventory and condition assessment, and to help guide future planning efforts.
\$152,277

Terra Fuego Resource Foundation

Prescribed Fire Implementation on the Lake Tahoe Basin Management Unit (CA)

Conduct prescribed burns operations using existing piles of conifer that have been thinned on the Lake Tahoe Basin Management Unit in California. Project will implement prescribed fires across 15 prescribed fire units totaling to 68 acres to remove conifers that are encroaching on ecologically valuable Aspen stands, which provide habitat for a variety of species.
\$56,000

The Ocean Foundation

Otay River Watershed Bird and Habitat Restoration Project (CA)

Restore 3 acres within the Otay River watershed, including mapping native and nonnative plants, invasive plant species removal, litter abatement and native plant revegetation. Project will reach 700 students, 25 teachers, 50 parents and 10 volunteers in habitat restoration and environmental education, including classroom activities and outdoor excursions.
\$33,134

The Student Conservation Association

Development of Environmental Compliance for Fuels Reduction Preparation in Lower Yellow Creek (CA)

Prepare an Environmental Assessment for a project area in the high-priority Lower Yellow Creek Watershed in the Lassen National Forest, followed by fuels reduction preparation. Project will provide an environmental assessment for the project area and will subsequently perform fuels management using hand treatments on 61 acres and forest thinning using hand treatments on 114 acres.
\$287,772

The Student Conservation Association Noncommercial Thinning and Fuel Treatment on Frazier Mountain in the Los Padres National Forest (CA)

Reduce wildfire risk by treating vegetation around existing facilities and widely used areas, restore forest diversity and health, and maintain the health of mature conifer stands and conifer plantations on Frazier Mountain in the Los Padres National Forest. Project will support a restoration team that will perform non-commercial thinning on 1,000 acres and fuels reduction on approximately 500 acres.
\$212,273

The Student Conservation Association

Trail Restoration within the Jesusita Fire Scar in Los Padres National Forest (CA)

Repair fire-damaged trails within the Jesusita Fire burn area on the Los Padres National Forest. Project will support a trail team that will complete trail corridor brushing, repair trail tread, rebuild drainage structures, and rebuild rock walls that support and prevent trail degradation on steep slopes.
\$73,334

The Trust for Public Land

Markham Elementary Green Schoolyard Demonstration Project (CA)

Transform the asphalt schoolyard at Markham Elementary School into a green space with stormwater best management practices, an outdoor laboratory, and other amenities for boosting ecological health and environmental literacy. Project will replace 21,000 square feet of pavement with 67 trees, 1,000 square feet of native landscaping and an 8,500 square foot drought-tolerant grass field and engage 200 volunteers and 350 elementary school students in hands on conservation and education.
\$50,000

Trinity County Resource Conservation District

Improving Water Quality in the Headwaters of the South Fork Trinity River (CA)

Protect and improve water quality for anadromous fish habitat in the headwaters of the South Fork Trinity Watershed in the Shasta Trinity National Forest. Project will reduce road-related sediment delivery at 62 stream crossings, which will strengthen watershed resilience to storm damage, improve road infrastructure, and enhance water quality.
\$230,999

Trout Unlimited

Lahontan Cutthroat Trout Core Grant 2020 (CA, OR, NV)

Continue to address the needs identified in the Lahontan Cutthroat Trout (LCT) Business Plan. Project will provide partner coordination, science guidance, and field crew activities, including LCT expansion, hybridization management/assessment, barrier retrofitting and design, and eDNA monitoring.
\$582,702

Truckee River Watershed Council

Boca Meadows Restoration in the Truckee River Watershed (CA)

Restore disrupted hydrology, improve water quality, link existing and planned meadow restoration sites, and promote riparian habitat connectivity for willow flycatcher and other bird species in the Truckee River watershed. Project will restore 129 meadow acres, 1 stream mile, 5 acres of aspen habitat, and eliminate or reduce erosion from 26 road miles to improve watershed conditions.
\$239,899

U.S. Department of the Interior, Bureau of Land Management, Bishop Field Office

Preventing Wildlife-Vehicle Collisions on Highway 395 (CA)

Benefit habitat for mule deer, enhancing their migratory corridors, winter ranges and summer ranges, and install signage to improve highway safety for motorist traveling through the Mono County, California. Project will improve 10 miles of fencing and install highway signage to significantly decrease wildlife-vehicle collisions.
\$70,000

United Water Conservation District

Bird Surveys, Mapping, and Nonnative Cowbird Removal in Los Padres National Forest (CA)

Conduct habitat mapping, complete surveys, and manage nonnative cowbirds in riparian areas within Los Padres National Forest to provide data on sensitive riparian bird populations. Project will map breeding areas and trap cowbirds along Middle Piru Creek to assess the size and distribution of sensitive bird species such as least Bell's vireo in order to inform future management decisions and protect existing populations.
\$154,440

University of California - Davis

Assessing the Restoration of Ecosystem Services in Post-Fire Chaparral Landscapes (CA)
Assess and pilot restoration within the Piru fire scar in Los Padres National Forest. Project will collect data on ecosystem services to assess their impact on restored chaparral sites in comparison to unrestored sites to help inform restoration efforts related to ecosystem services.
\$425,413

Ventura Audubon Society

Least Bell's Vireo Range Expansion Surveys (CA)
Conduct least bell's vireo surveys in native riparian habitat in northern coastal drainages each spring from 2020–2022. Project will help determine the current population of the state and federally endangered vireo in Ventura County and in a portion of Los Angeles County and will also determine if the vireo has expanded back into coastal portions of the historic range as well as evaluate cowbird threats and habitat condition.
\$157,500

Watershed Research and Training Center South Fork Trinity River Flow Restoration (CA)

Work with water diverters to engage in two temporary water lease transactions to return 3.9 cubic feet per second of stream flow to Big, Tule and Hayfork creeks. Project will monitor stream flow, stream temperature and aquatic biology before, during and after these water leases occur to determine impact of water returned.
\$67,708

Yurok Tribe

Restoration Feasibility and Planning in Blue Creek, Lower Klamath River (CA)
Conduct priority planning to support development of comprehensive, feasible, and effective stream and floodplain restoration designs within 5.7 miles of Blue Creek. Project will enhance existing cold water habitats within a key salmonid spawning and rearing area, and increase floodplain connectivity and complexity to benefit species such as the ESA listed Southern Oregon/Northern California Coast Coho salmon.
\$80,864

Xerces Society for Invertebrate Conservation

Evaluating and Enhancing Monarch Overwintering Habitat (CA)
Enhance the quality of critical overwintering habitat to help western monarch survival. Project will evaluate the quality of 27 overwintering sites and provide recommendations for enhancement to land managers, develop site management plans for seven of the top 50 most important overwintering sites, enhance 32 acres at sites receiving management plans, and hold two workshops for 40 managers of overwintering sites.
\$75,000

Xerces Society for Invertebrate Conservation

Providing Technical Assistance on Private Working Lands to Increase Monarch Conservation (CA)
Develop monarch conservation plans, provide technical assistance for habitat restoration projects on private working lands, and coordinate trainings and outreach on monarch conservation for landowners in California. Project will bring 500 acres under improved management, restore 100 acres of habitat, develop 36 conservation plans, conduct eight workshops and provide technical assistance to over 200 landowners.
\$171,783

COLORADO**Aridlands**

Refining Aerial Surveys of Population and Habitat Data for Two Endangered Plant Species (CO)
Use drones and very high resolution sensors to trial and refine methods for aerial surveys of populations and habitats of two federally listed rare plant species (*Parachute penstemon* and *Debeque phacelia*) located on fragile and inaccessible substrates in western Colorado. Project will provide management agencies with quantitative and actionable information on surveying technology for endangered plants whose populations are dispersed over large areas on fragile or difficult to access terrain.
\$179,784

Chaffee County

Restoring Forest Habitat in Chaffee County to Reduce Risk of Catastrophic Wildfire (CO)
Strategically assess the forests at the headwaters of the Arkansas River in Chaffee County, Colorado to identify the 5-10 percent of the landscape where treatment will decrease the risk severe wildfire poses to community assets by 50-70 percent. Project will employ forest thinning and seeding to restore more than 400 acres of habitat once forests are assessed.
\$366,310

Colorado Department of Transportation Improving Wildlife Connectivity and Motorist Safety Across U.S. Highway 24 (CO)

Restore a safe migration corridor for the Mosquito Range, Buffalo Peaks and South Park mule deer and elk herds across U.S. Highway 24 in Colorado. Project will improve motorist safety and decrease wildlife-vehicle collisions by 90 percent by installing 4 miles of fencing to direct elk, deer and other wildlife to an existing wildlife bridge.
\$267,853

Colorado Department of Transportation**Reducing Wildlife-Vehicle Collisions along State Highway 13 by Installing Underpass Fencing (CO)**

Install fencing to guide wildlife to an arch underpass being constructed under State Highway 13 North of Craig, Colorado. Project will reduce wildlife-vehicle collisions and maintain connectivity within a priority migratory corridor for mule deer and elk herds.
\$480,400

Colorado Rio Grande Restoration Foundation

Rio Grande National Forest Beaver Characterization, Restoration, and Reintroduction (CO)
Improve the condition of the Rio Grande headwaters in Colorado by characterizing North American beaver populations and habitat in priority watersheds within the Rio Grande National Forest, restoring 5 miles of stream channel and 200 acres of riparian wetland habitat through the construction of beaver dam analogs, and reintroduce 50 beavers to key locations on the forest. Project will increase North American beaver populations to benefit watershed health, riparian habitat, and native aquatic species like the Rio Grande chub, Rio Grande sucker, and Rio Grande cutthroat trout.
\$39,840

Colorado Rio Grande Restoration Foundation

Removing Fish Barriers and Restoring the Conejos River Floodplain (CO)
Improve aquatic and riparian habitat on the South Branch of the Conejos River in Colorado by replacing three irrigation diversions currently acting as fish barriers. Project will re-open more than 9 miles of stream and restore nearly 24 acres of floodplain and streambanks.
\$350,000

Dolores Public Lands Office

Improving Big Game Winter Habitat on the San Juan National Forest (CO)
Improve and enhance habitat conditions for big game transitional and winter ranges on the San Juan National Forest, Dolores Ranger District in Colorado. Project will improve 400 acres of ponderosa pine habitat by using thinning, prescribed fire.
\$150,000

Ducks Unlimited

Restore Platte River Wetlands Habitat to Benefit Ducks, Geese and Waterbirds (CO)
Enhance habitat for ducks, geese and other waterbirds that depend upon high-quality wetland habitats being available during critical periods of their life cycles in Colorado. Project will restore 830 acres of floodplain wetlands and 1,878 acres of mesic habitat, and improve management on 2,791 acres.
\$272,954

Mountain Island Ranch

Restoring Wet Meadow Habitat on Mountain Island Ranch along the Little Dolores River (CO, UT)

Improve wet meadow habitat and forage along the Little Dolores River in Western Colorado to benefit Gunnison sage-grouse, elk, mule deer, wild turkeys and waterfowl; restore stream flows and improve water quality; improve soil health; and increase drought resilience. Project will install 170 beaver dam analogues and Zeedyk structures, remove invasive vegetation and alter grazing patterns to restore 240 acres of wet meadow habitat.

\$175,500

National Audubon Society

Increase Collaboration of Sagebrush Conservation (multiple states)

Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stakeholders and host field tour events that elevate on-the-ground conservation.

\$29,636

Pheasants Forever

Coordinating Range Wildlife Conservation in the Lesser Prairie Chicken Range (CO, KS, NM, OK, TX)

Work with private landowners and other partners to implement on-the-ground riparian habitat restoration across the lesser prairie chicken range. Project will enroll landowners into voluntary contracts that will restore or improve management on 30,000 acres of southwestern grassland habitat.

\$101,436

Rocky Mountain Bird Observatory

Combating Habitat Fragmentation and Loss in Grassland Ecosystems (CO)

Help reverse the decline of grassland obligate bird species by combating habitat fragmentation and loss through collaborative efforts in Colorado. Project will work with landowners and other resource professionals to conserve 40,000 grassland acres on private working lands.

\$378,465

Rocky Mountain Elk Foundation

Conserving Ungulate Wintering Habitat on Buffalo Horn Ranch (CO)

Permanently protect more than 12,000 acres of ungulate winter range habitat on the Buffalo Horn Ranch in northwestern Colorado. Project will secure habitat connectivity across public and private lands for wildlife movement and migration.

\$100,000

Rocky Mountain Field Institute

Engaging Community Volunteers in the Stewardship of Public Lands in Southern Colorado (CO)

Engage community volunteers in habitat protection, riparian restoration, post-wildfire restoration, trail construction and maintenance, the removal of invasive species, erosion control and environmental education. Project will engage 2,300 volunteers and 800 students to restore 100 acres through various habitat restoration activities, remove a mile of invasive species and complete a mile of riparian restoration.

\$30,000

Rocky Mountain Bird Observatory

Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)

Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.

\$250,000

Rocky Mountain Bird Observatory

Increase Landowner Enrollment in Farm Bill and Sage-grouse Initiative Conservation Programs (CO)

Launch a widespread, collaborative network of partners to deliver sagebrush conservation outreach resulting in increased enrollment in Farm Bill and Sage-grouse Initiative conservation programs. Project will bring 10,100 acres under improved management, enrolling 10 landowners in Farm Bill programs using existing best management practices to advance conservation and management plans for each ranch.

\$200,554

Southern Plains Land Trust

Modifying Fences on Private Ranches to Improve Wildlife Connectivity through Grassland Habitat (CO)

Improve habitat connectivity for pronghorn, elk, mule deer and other grassland obligates in shortgrass prairie in southeastern Colorado. Project will remove, replace, or modify 50 miles of fencing to increase wildlife access across the landscape and to improve livestock management.

\$216,002

State of Colorado Department of Natural Resources

Improving Big Game Winter Range and Restoring Sagebrush Habitat (CO)

Expand capacity related to planned and ongoing landscape scale habitat management activities in the Bears Ears and White River priority big game herd management units in Colorado. Project will remove 40 miles of fencing and restore 680 acres of sagebrush habitat by removing invasive trees.

\$250,000

State of Colorado Department of Natural Resources

Fish Barrier Construction in North Elk Creek (CO)

Construct a fish barrier to facilitate a Colorado Parks and Wildlife chemical reclamation to remove nonnative fishes and to eradicate whirling disease from the upper watershed of North Elk Creek, a tributary to the White River, near Meeker, Colorado. Project will increase the likelihood that the North Elk Creek Colorado River Cutthroat Trout population can persist indefinitely.

\$50,000

Tamarisk Coalition

Removing Invasive Tamarisk and Russian Olive to Restore Habitat for Endangered Fish and Birds (CO)

Systematically remove invasive tamarisk and Russian olive and revegetate floodplains in the Grand Valley in Mesa County, Colorado to open up backwater habitat for endangered fish. Project will enhance habitat for native and migratory birds and the endangered razorback sucker along a 25-mile stretch of the Colorado River.

\$128,018

The Trust for Public Land

Fishers Peak Conservation (CO)

Collaborate with local, state and national partners to permanently conserve the 19,200-acre Fishers Peak property, located just south of Trinidad, Colorado. Project will achieve landscape-level conservation by protecting an entire mountain that serves as a critical link of intact habitat between the Eastern Plains of Colorado and the Western Slopes of Colorado and the Rocky Mountains, while also providing a significantly improved level of public recreational access.

\$650,000

Trout Unlimited

Rio Grande Cutthroat Trout Habitat Restoration (CO)

Recover and conserve the Rio Grande cutthroat trout in Colorado. Project will bolster and maintain an existing riparian fence, construct a key half-mile section of additional fencing, and restore another one mile of habitat on State Land Board lands.

\$152,416

Trout Unlimited**San Juan Cutthroat Trout Watershed Restoration Assessment (CO)**

Conduct a landscape-scale watershed assessment to examine the potential for flow improvement and landscape-based water storage projects in the upper San Juan River basin in southwest Colorado in the Wolf Creek and Navajo River watersheds, for the benefit of San Juan cutthroat trout. Project will outline an appropriate monitoring protocol to verify the expected impact of treatments in terms of water quantity, timing of delivery, and water quality parameters.

\$77,498

University of Oklahoma**Developing Tools to Advance Grassland Bird Wintering Habitat Management Practices (CO, NM, OK, TX)**

Expand on an existing framework studying the wintering ecology of longspurs and other grassland birds in the Great Plains using species distribution modeling, automated radio telemetry biologging, and weather radar analysis. Project will develop tools to improve field grassland bird surveys to more accurately estimate abundance and habitat usage, and to improve grazing management regimes to best advance bird conservation.

\$138,145

Upper Gunnison River Water Conservancy District**Enhancing Sagebrush Resiliency by Restoring Mesic Habitat Hydrology (CO)**

Restore healthy and productive sagebrush ecosystems at a landscape scale through enhanced coordination and collaborative implementation throughout western Colorado. Project will install more than 200 Zeedyk and beaver dam analog structures to restore hydrology on 14 acres of mesic habitat.

\$139,447

U.S. Department of the Interior, U.S. Fish and Wildlife Service**Colorado Partners for Fish and Wildlife Removing Invasive Conifer to Restore Sagebrush Habitat (CO)**

Enhance sagebrush habitats in priority Colorado Partners for Fish and Wildlife focal areas to benefit primarily Gunnison sage-grouse. Project will remove invasive conifer trees to improve 500 acres and implement wet meadow restoration projects on 50 acres of privately owned working lands.

\$100,000

Walking Mountains Science Center**Eagle River Preserve Riparian Restoration and Environmental Stewardship Program (CO)**

Restore and protect the riparian habitat of the half-mile stretch of the Eagle River running through the Eagle River Preserve and train high school interns living in affordable housing communities to work with volunteers. Project will hire eight interns who will engage 30 volunteers to restore half-mile of riparian habitat through planting and seeding native vegetation, establishing formal fishing access points and implementing erosion control methods to protect new vegetation.

\$27,147

Wildlands Restoration Volunteers**Restoring Mesic Meadow and Sagebrush Habitat for Greater Sage-Grouse and Big Game Species (CO)**

Restore sagebrush shrublands, mesic wet meadows and big game winter range habitat to benefit greater sage-grouse in Northwest Colorado. Project will restore hydrology on 40 acres of private lands by installing 400 mesic meadow restoration structures and remove 20 miles of fencing to restore state-identified priority big game migration routes.

\$238,658

CONNECTICUT**Aspetuck Land Trust****Fish Passage on the Bulkley Pond Dam (CT)**

Remove a barrier to fish passage at Bulkley Pond Dam, Sasco Brook in Fairfield and Westport, Connecticut. Project will open 3.75 miles of river corridor benefiting river herring, sea lamprey and American eel that migrate between rivers and Long Island Sound.

\$143,300

City of New London**City of New London Watershed Management Plan — II (CT)**

Complete development of a watershed management plan in for New London, Connecticut. Project will ensure that the causes and sources of pollution are identified, key stakeholders are involved in the planning, and restoration and protection strategies are identified that address local and Long Island Sound water quality problems.

\$50,000

Connecticut Audubon Society**Restoration of Coastal Forest and Dune at the Smith Hubbell Wildlife Sanctuary (CT)**

Restore coastal beach/dune and forest habitat at the Smith Hubbell Wildlife Sanctuary, Milford Point, Connecticut. Project will enhance biodiversity, establish a long-term framework to fight back against invasive plants and provide education and stewardship experiences about Long Island Sound to the public.

\$44,468

Connecticut Fund for the Environment**Planning for a Nature-Like Fishway for Long Pond Dam (CT)**

Develop a plan to install fish passage on Long Pond Dam, Whitford Brook, Ledyard, Connecticut. Project will set the stage to restore access to 1.8 miles of migratory riverine corridor for blueback herring, American shad, American eel, sea lamprey and resident brook trout to Long Island Sound.

\$172,000

Connecticut River Watershed Council**Hepburn Living Shoreline Project — II (CT)**

Construct a living shoreline along a barrier spit on Long Island Sound in Fenwick, Connecticut. Project will provide protection for the nearby community and a 10-acre tidal marsh from storms and rising waters.

\$226,025

Earthplace, The Nature Discovery Center**Water Quality Monitoring to Improve Fairfield County Waterways and Long Island Sound — VI (CT)**

Conduct water quality monitoring to help improve nine waterways affected by pollution in Fairfield County, Connecticut. Project will utilize water quality data to inform local government actions to reduce sewage pollution into Long Island Sound.

\$73,890

Highstead**A Partnership Approach to Watershed Restoration and Community Engagement (CT, NY)**

Restore 10 acres of urban watershed habitat and prevent 1,200 pounds of trash from entering waterways in efforts to improve watershed, wildlife and community health. Project will engage 2,100 community members, volunteers and students in stewardship opportunities and reach 10,000 people through outreach events, workshops, and online communications with information, opportunities for action and exchange of best practices in watershed restoration.

\$49,525

Housatonic Valley Association**Developing a Municipal Culvert Cooperative to Improve Fish Passage in the Housatonic River (CT, MA)**

Create a municipal culvert cooperative that builds on years of road-stream crossing assessments and replacement planning work in the Housatonic River of western Massachusetts and northwest Connecticut. Project will complete 10 shovel-ready culvert designs and utilize two demonstration sites to show other municipalities best practices for stream restoration that benefit native brook trout and reduce flood hazard risks.

\$151,510

National Audubon Society**Restoring Great Meadows Marsh on Long Island Sound (CT)**

Restore 40 acres of salt marsh and other coastal habitats at Great Meadows Marsh in the Stewart B. McKinney National Wildlife Refuge, Stratford, Connecticut. Project will restore marsh hydrology, increase wildlife habitat and enhance public access to Long Island Sound.

\$499,975

National Audubon Society**Share the Shore with Shorebirds: A Coastal Stewardship Program (CT)**

Provide education and deliver targeted stewardship of American oystercatcher and other migratory shorebirds and habitat along the Long Island Sound coastline of Connecticut and New York. Project will increase awareness about the value of sharing the shore with birds among recreational users and local government and reduce disturbance to the birds' breeding and roosting sites.

\$75,286

Neighborhood Housing Services of New Haven**Community Conservation Stewardship in New Haven (CT)**

Conduct environmental education and community stewardship projects in Newhallville, New Haven, Connecticut. Project will stimulate public engagement in the stewardship of the West River watershed and Long Island Sound.

\$17,813

New Haven Ecology Project**Green Jobs Corps: Growing the Urban Refuge Partnership (CT)**

Engage a diverse group of high school students to restore and bring best management practices to schoolyard habitats, urban green spaces coastal preserves and National Wildlife Refuge land across the City of New Haven and surrounding communities. Project will engage 8,610 students through outdoor days and teacher-led lessons and hire 53 student interns to plant 40 street trees and restore 3 acres through invasive removal, native plantings and improved management practices.

\$29,943

Sacred Heart University**Planning for a Living Shoreline at the Mouth of the Housatonic River (CT)**

Create a permit-ready design for a living shoreline at the mouth of the Housatonic River in Stratford, Connecticut. Project will ultimately provide for restoration of 900 linear feet of shoreline, 2 acres of salt marsh and oyster reef providing habitat for fish and wildlife and buffering nearby communities from storms.

\$65,080

Sea Research Foundation**A Plastic Free Long Island Sound Program (CT)**

Conduct a Long Island sound-based educational program about the impact of plastic pollution at the Mystic Aquarium, Connecticut. Project will increase awareness about actions people can take to reduce plastic pollution on shorelines, local waterways, and the sound.

\$48,043

Town of Brookfield**Still River Watershed Plan Implementation: Brookfield Public Works Stormwater Retrofit (CT)**

Develop design plans and secure permits for a green infrastructure retrofit at the public works facility in Brookfield, Connecticut. Project will ultimately remove 3.3 acres of impervious paved area to reduce nitrogen into the Still River and downstream to Long Island Sound.

\$24,299

Town of Newtown**Watershed Planning to Reduce Water Pollution in the Pootatuck River Basin of Long Island Sound (CT)**

Develop a watershed plan for the Pootatuck watershed in Newtown, Connecticut. Project will ensure that the causes and sources of nonpoint source pollution are identified, key stakeholders are involved in the planning, and restoration and protection strategies are identified that address local and Long Island Sound water quality problems.

\$29,216

University of Connecticut**Ensuring a Resilient Coastal Forest to Address Changing Climate in Connecticut (CT)**

Deliver a comprehensive strategy of coastal forest management at the Hoffman Evergreen Preserve in Stonington, Connecticut. Project will deploy an innovative program designed to respond to the projected impacts of climate change to make forests in southeastern Connecticut more resilient using guidance such as from the U.S. Forest Service Forest Ecosystem Vulnerability Assessment and Synthesis for the Mid-Atlantic and New England.

\$57,144

University of Connecticut**Rapid Action Plans to Deliver Green Infrastructure in Coastal Connecticut Communities — II (CT)**

Develop and implement five green infrastructure projects and provide guidance to local government about overcoming barriers to deployment of green infrastructure in communities of the South Central Basin of Connecticut. Project will reduce 500,000 gallons of stormwater pollution into Long Island Sound and increase green infrastructure projects around it.

\$272,375

Wildlife Management Institute**Enhancing Forest Habitat for New England Cottontails, Golden-Winged Warbler and American Woodcock (multiple states)**

Enhance participation in Farm Bill programs by supporting habitat biologists and outreach specialists to interface with private landowners to provide young forest habitat for more than 50 species of conservation need in New England. Project will develop forest management plans, develop healthy diverse forest age classes, and protect riparian habitat values, improving management on 200 acres.

\$156,290

DELAWARE**Academy of Natural Sciences of Drexel University****Delaware River Restoration Fund Project Impact Assessments — II (DE)**

Conduct a preliminary selection and design of monitoring plans for a subset of restoration projects funded under the Delaware River Restoration Fund. Project assessments will include monitoring water chemistry, habitat, macroinvertebrates, fish and algae at these sites as they inform its success in improving stream ecosystems, and project will summarize and submit data to NFWF and store data in a database for access by partners.

\$280,960

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

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.

\$249,300

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

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.

\$147,302

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

Draft and publish peer-reviewed literature summarizing the core set of lessons learned through the work of the Chesapeake Bay restoration partnership which are applicable to other restoration efforts. Project will share the key lessons learned during the multi-decade, partnership-based, Chesapeake Bay restoration efforts, and will result in a multi-media series of “lessons learned” products.

\$25,316

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

DNREC Coastal Programs**Assessing Beneficial Use of Dredged Sediments for Habitat Restoration of Bay shore Communities (DE)**

Assess the feasibility of using dredge material and other nearshore sediments for beach restoration in the Delaware Bay shore communities of Bowers Beach and South Bowers, to enhance community resilience and restore habitat. Project will integrate a plan to employ this tactic into future community shoreline and habitat management practice.

\$75,000

Delaware Department of Agriculture**Cover Crop Improvements for Increased Water Quality and Foraging Opportunities in Kent County (DE)**

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

\$250,000

Delaware Department of Natural Resources**Restoring Wetland Habitat and Water Control in the Thousand Acre Marsh (DE)**

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.

\$500,000

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

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.

\$200,000

Delaware State University**Developing Risk Assessment Framework for Atlantic Sturgeon (DE, NJ, PA)**

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.

\$312,129

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

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

\$225,177

Delaware Wild Lands**Upland Habitat Restoration and Protection (DE)**

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.

\$129,247

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.

\$49,890

Friends of the Heinz Refuge at Tinicum**Developing a Marketing Plan for Delaware Valley Friends Organizations (DE, NJ, PA)**

Develop a marketing plan to build membership for John Heinz National Wildlife Refuge at Tinicum, Bombay Hook National Wildlife Refuge, and Edwin B. Forsythe National Wildlife Refuge. Project will raise awareness of the participating Friends organizations and enhance their efforts to acquire and maintain active members and volunteers.

\$13,200

Manomet**Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)**

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.

\$79,999

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

Nanticoke Watershed Alliance**Stormwater Management Strategies in the Nanticoke River Watershed (DE)**

Develop a stormwater management strategy for regulated and unregulated communities to meet Delaware's Chesapeake Bay Phase III Watershed Implementation Plan goals in the Nanticoke River watershed. Project will begin implementation of the top three priorities: maximize existing water quality opportunities and investments; reinvigorate water quality project convening and coordination; and improve ditch management for water quality benefits.
\$49,978

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

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.
\$250,000

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

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.
\$499,999

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

New Castle Conservation District**Dam Removal in the White Clay Creek (DE)**

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.
\$349,085

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

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.
\$178,028

University of Delaware**Using Natural Infrastructure to Increase Flood Resilience in Northeast Wilmington (DE)**

Develop a master plan to retrofit vacant lots using a community engagement planning approach to increase flood resilience in Wilmington, Delaware. Project will evaluate existing conditions and prospective designs to inform and support priority phases of implementation and transferability of findings.
\$124,411

DISTRICT OF COLUMBIA**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 restoration study design, and develop protocol testing and data generation at two to four restoration sites at varying stages of installation.
\$230,279

Association of Fish and Wildlife Agencies**Responsible Recreation – Hunting, Fishing and Outdoor Recreation During the COVID 19 Crisis (DC)**

Developed the Responsible Recreation campaign, in collaboration with member agencies, partners and the outdoor recreation industry as a whole. Project will address potential impact of the COVID 19 crisis on outdoor recreation and its stakeholders.
\$300,000

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

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

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

Congressional Sportsmen's Foundation
 Responsible Recreation: Protecting Conservation Funding Through Social Outreach (DC)
 Maintain the integrity of conservation funding mechanisms that are dependent on the ongoing availability of access to our public lands, waters and facilities that support hunting, recreational fishing, boating, and shooting sports. Project will support activities that generate the majority of funding for state-based conservation through the American System of Conservation Funding.
\$300,000

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

Department of Energy and Environment
 Oxon Run Environmental Assessment and Preliminary Designs (DC)
 Conduct an environmental assessment and develop preliminary designs for over 16,000 feet of restored stream and wetland creation for Oxon Run in southeast Washington, District of Columbia. Project will develop designs focused on reducing impacts from a 100 year flood, removing 5,000 feet of a trapezoidal concrete stream channel, and improving in-stream habitat conditions.
\$250,000

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

Theodore Roosevelt Conservation Partnership
 Promoting Responsible Outdoor Recreation in the Time of Coronavirus (DC)
 Work with other leaders in the conservation community to promote the message of responsible recreation. Project will launch a social media campaign promoting #responsiblerecreation.
\$300,000

FLORIDA

Alachua Conservation Trust
 Restoring and Maintaining Longleaf Pine in the Ocala Local Implementation Team Geography (FL)
 Enhance 18,000 acres of existing longleaf habitat and establish an additional 1,000 acres of longleaf pine seedlings to benefit red cockaded woodpecker, Bachman's sparrow, and gopher tortoise in north-central Florida. Project will engage private landowners in longleaf restoration through a prescribed burn association, and will restore and enhance longleaf pine habitat on the Ocala National Forest and public and private lands surrounding Camp Blanding Joint Training Center.
\$285,000

Anthropocene Alliance
 Higher Ground: Green Infrastructure for Resilience (multiple states)
 Convene six community-based organizations in disaster-prone neighborhoods to engage local partners to train volunteers and teach residents about nature-based practices and install six high visibility projects as a catalyst for broader implementation. Project will reach 600 community members and successes will be shared with peer flood survivors around the country through a network of 48 leaders in 22 states.
\$494,758

Apalachee Regional Planning Council
 Franklin County Living Shoreline (FL)
 Install nearshore reefs to reduce wave energy and allow the creation of expansive intertidal salt marshes to protect 12 miles of shoreline and Highway 98. Project will improve Apalachicola Bay's health and productivity with anticipated benefits to include 12 miles of shoreline habitat improved and roadway protected, 30 acres of intertidal marsh created, 20 acres of estuarine reef created, and almost 3,000 community residents benefitted.
\$7,443,063

Arizona State University
 Developing and Testing Solar-Powered Net Illumination to Reduce Leatherback Sea Turtle Bycatch (AZ, FL)
 Further develop and test a promising gill-net gear technology for the reduction of sea turtle bycatch. Project will improve existing design to enhance both usability and impact for leatherback turtles and conduct both controlled and active fishing tests of the gear.
\$102,083

City of Mexico Beach
 City of Mexico Beach Wetland Restoration and Dune Installation (FL)
 Restore 45 acres of wetlands to address flood control, water quality and habitat restoration, and complete design of a beach dune to protect against storm surge and establish beach vegetation habitat for the benefit of species. Project will conduct planning, design and permitting required to get the project construction-ready and implement wetland restoration.
\$335,908

City of Mexico Beach
 Post Hurricane Michael Marine Debris Assessment and Removal in the City of Mexico Beach (FL)
 Assess the current levels of marine debris that remain from Hurricane Michael along the city of Mexico Beach and nearshore area and develop a plan for removal. Project will first assess and then, if warranted, establish a removal and disposal effort to address storm debris along 16,000 linear feet of the city's shoreline.
\$100,000

Coral Restoration Foundation
 Increasing Coral Nursery Capacity and Active Restoration of Reefs in the Florida Keys (FL)
 Support active coral restoration at four sites in the Florida Keys to benefit endangered coral species. Project will improve 27.5 acres of reef habitat through increased coral propagation and direct reef restoration.
\$99,998

Dog Island Conservation District
 Dog Island Post Hurricane Marine Debris Removal (FL)
 Remove the debris field from Hurricane Michael that is impacting coastal habitat on Dog Island. Project will restore 2 miles of beach and dunes that were severely impacted by damage and debris from this storm.
\$516,780

Florida Agricultural and Mechanical University**GIS Capacity and Training to Support Gulf-Wide Ecosystem Conservation and Restoration (AL, FL, LA, MS, TX)**

Provide geographic information system (GIS) expertise and training in support of Gulf-wide ecosystem conservation and restoration programs and projects. Project will develop GIS layers and maps where Gulf Coast Ecosystem Restoration Council and Natural Resources Damage Assessment projects have been approved for planning and implementation by the U.S. Department of Agriculture.

\$300,000

Florida Aquarium**Coral Genetic Diversity and Diadema Urchin Propagation Techniques for Reef Restoration (FL)**

Address key capacity gaps in the full execution of the Mission: Iconic Reefs strategy in the Florida Keys. Project will increase genetic diversity of elkhorn coral and develop a nursery stock of Diadema urchins to be used in the broader restoration effort.

\$168,720

Florida Fish and Wildlife Conservation Commission**Implementing a Comprehensive Marine Debris Management Program (FL)**

Build capacity for marine debris conservation and implement key elements of a comprehensive marine debris management program in Florida. Project will develop and implement multiple state marine debris plan activities and develop a marine debris website to facilitate statewide and regional marine debris prevention, removal, research, education and outreach.

\$162,000

Gulf County Board of County Commissioners**St. Joseph Peninsula Dune Habitat Enhancement Project (FL)**

Restore 3 miles of shoreline on St. Joseph Peninsula through sand and vegetation restoration. Project will provide coastal resilience by increasing the stability and longevity of the beach sand and encouraging additional dune growth through trapping wind-blown sand, increasing storm protection by limiting the damaging effects of storm surge, and promoting wildlife protection and increasing habitat.

\$3,700,000

Manomet**Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)**

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.

\$79,999

Mote Marine Laboratory**Using Electronic Monitoring for Sustainability in the Gulf of Mexico Reef Fish Fishery (FL, LA, TX)**

Expand electronic monitoring in the Gulf of Mexico reef fish fishery to address fisheries management objectives by monitoring for catch and bycatch, improving data management, and enhancing usability. Project will build on more than four years of electronic monitoring system improvements and comprehensive data collection to advance implementation of electronic monitoring as a Gulf-wide priority.

\$500,292

Ocean Aid 360**Restoring Coastal Estuaries through Gear Removal and Community Engagement (FL)**

Mobilize diverse entities, including boaters, anglers, watershed groups, industry, students and government; through training and sponsored events to detect and remove marine debris along Florida coastlines. Project will remove roughly 30,000 pounds of derelict fishing gear from estuary habitat.

\$60,000

Okaloosa County**Veterans Park Living Shoreline, Erosion Control and Habitat Restoration (FL)**

Install a living shoreline to protect over 2,200 linear feet of shoreline at Veterans Park on Choctawhatchee Bay. Project will reduce the impact of wave energy and provide oyster habitat, a seagrass recruitment area, and a salt marsh shelf.

\$1,500,000

Okaloosa County**Okaloosa Island Dune Restoration and Enhancement (FL)**

Install sand fencing and plant native vegetation across a 3 mile stretch on Okaloosa Island. Project will reestablish the sand dunes to mitigate lost habitat and create additional habitat and the native vegetation will help stabilize the dunes especially during major storm events.

\$60,000

Reef Fish Conservation and Education Foundation**Engaging the Next Generation of Commercial Fishermen in the Gulf of Mexico (AL, FL, LA, MS, TX)**

Develop a workforce training program to recruit and educate young fishermen for the commercial seafood harvesting sector. Project will engage fishery leaders from various fisheries across the Gulf of Mexico in face-to-face meetings to design and plan a young fishermen training program for the Gulf of Mexico and develop a review of similar programs around the United States.

\$25,835

Saltwater**Expanding and Improving the Use of Electronic Monitoring in the Gulf of Mexico Shrimp Trawl Fishery (multiple states)**

Expand and improve the use of electronic monitoring in the Gulf of Mexico shrimp trawl fishery by installing electronic monitoring systems and collecting data on protected species interactions and red snapper bycatch volume and locations. Project will maximize the utility of the collected data for both fishery management and dealer verification of catch origin and sustainable fishing practices.

\$173,145

Southeastern Association of Fish and Wildlife**Implementing Innovative Technologies in the Apalachicola-Chattahoochee-Flint River Basin (FL, GA)**

Increase implementation of agricultural best management practices for irrigation efficiencies by providing technical and financial assistance to farmers to improve water conservation and benefit native aquatics species in the lower Apalachicola-Chattahoochee-Flint basin.

\$114,525

The Longleaf Alliance**Collaborating to Restore Longleaf in the Gulf Coastal Plain Ecosystem Partnership Landscape (AL, FL)**

Restore and maintain 44,000 acres of longleaf pine habitat in south Alabama and the western panhandle region of Florida to benefit rare and declining species such as the Bachman's sparrow, red-cockaded woodpecker, gopher tortoise and northern bobwhite. Project will provide technical assistance to private landowners and deploy an ecosystem support team to implement prescribed burning, plant longleaf pine, remove invasive species, and support rare species recovery on public and private lands.

\$300,000

The Nature Conservancy**Increasing Longleaf Pine Restoration and Management in the Okefenokee/Osceola Landscape (FL, GA)**

Establish 1,000 acres of longleaf pine and improve the management of an additional 50,000 acres of longleaf habitat with prescribed fire on public and private lands in south Georgia and northeast Florida. Project will target longleaf pine establishment and improved management on lands that will maximize wildlife habitat value and connectivity and reduce the likelihood and impact of catastrophic wildfire.
\$275,000

The Nature Conservancy**Improving and Expanding Longleaf Pine Habitat in the Florida Panhandle (FL)**

Restore and enhance 31,000 acres of longleaf pine habitat within the Apalachicola Regional Stewardship Alliance area of the Florida Panhandle located between the Aucilla and Choctawhatchee rivers. Project will plant longleaf pine and understory species, implement fire and mechanical management in existing longleaf habitat, and provide financial assistance to priority private landowners, improving habitat for the eastern indigo snake and Bachman's sparrow.
\$300,000

Town of Cutler Bay**Cutler Bay Wetland Habitat Restoration (FL)**

Create an environmental learning lab along the Biscayne Bay Coastal Wetlands within the Town of Cutler. Project will engage 40 volunteers to improve and enhance the 2 acre upland area with native trees, plants and shrubs in addition to establishing a walking path with educational signage promoting the conservation of the adjoining wetlands, pine rocklands and the sensitive ecology of Biscayne Bay.
\$20,000

University of Florida**Gulf-wide, In-water Sea Turtle Monitoring Plan (FL)**

Develop a statistically sound plan for the establishment of a coordinated Gulf-wide network for collection and compilation of critical abundance, demographic, and biological information on sea turtles in the Gulf of Mexico. Project will provide Gulf-wide monitoring of sea turtles and the implementation of standardized monitoring protocols that will provide important context for project-level monitoring at individual sites where restoration is implemented and would assist with comparisons across multiple projects.
\$256,940

University of Florida**Hurricane Michael Marine Debris Removal in Northwest Florida**

Removal and disposal of hurricane caused vessel and structural debris resting on coastal vegetation and adjacent uplands. Project will address marine debris negatively impacting St. Andrew, St Joseph, and Apalachicola Bay communities.
\$3,000,000

University of Florida**Testing Coral Intervention Methods to Optimize Reef Restoration in the Florida Keys (FL)**

Field test management interventions to address local threats to coral restoration success. Project will evaluate the effectiveness of localized coral predation control and monitor water quality gradients to establish best practices in coral restoration.
\$149,204

University of Georgia Research Foundation**Development of a Planted Longleaf Pine Growth and Yield Model for the Southeast (AL, FL, GA, NC, SC)**

Create a new growth and yield model system for longleaf pine that will allow more accurate growth projections for landowners considering longleaf pine reforestation who may have timber management objectives. Project will establish, document and measure permanent plots in planted unthinned longleaf pine stands on cut-over sites in the southeast United States, and the data will be used to calibrate a growth and yield model for multiple factors for longleaf pine.
\$243,999

University of Hawaii - Manoa**Studying Effects of Water Quality on Coral Reproductive Success (FL, HI)**

Study coral proteins to determine the role of reduced coastal water quality and associated stressors on reproductive success of corals in Florida and Hawaii. Project will study water quality effects on coral reproduction to help understand the extent of reproductive failure at priority restoration sites and to identify site-specific stressors.
\$149,803

University of Miami**Using Coral Reef Restoration to Enhance Coastal Resilience of South Florida Shorelines (FL)**

Restore over 150,000 coral colonies to over 125 acres of reef habitat in Miami-Dade and Broward Counties, Florida. Project will build coastal resilience to extreme weather, waves, flooding, and beach erosion; incorporate state-of-the-science approaches to build climate resilience into restored corals; and create essential habitat for fisheries and enhanced recreation opportunities.
\$2,996,814

Walton County, Florida**Coastal Dune Lake Hydrologic Restoration (FL)**

Remove two old and dilapidated culverts vulnerable to catastrophic weather events under County Road 30A and replace them with bridges on two coastal dune lakes. Project will restore the connection and circulation of the lakes and improve the lake community and adjacent ecosystems.
\$1,224,604

GEORGIA**Athens Land Trust****Southeast Clarke Park Restoration and Education Project (GA)**

Remove invasive plants and restore 3 acres of native oak-hickory-pine habitat in a community park. Project will include direct outreach to at least 16,780 individuals on habitat restoration and employ 16 young conservation stewards and crew leaders to work over two summers to eradicate invasive plants on 15 acres of highly visible public greenspace and build a .25-mile trail that will increase educational and outdoor recreation opportunities for the community.
\$49,854

City of Tybee Island**City of Tybee Island Coastal Marsh and Community Resilience Adaptation (GA)**

Utilize a design approach focused on the interface of engineering, hydrology, ecology and social science to enhance natural features and protections that reduce flooding impacts on critical human infrastructure and fish and wildlife habitat. Project will launch initial measures for the assessment and prioritized identification of integrated design strategies thus increasing resilience to storm and flood events.
\$125,000

College of William and Mary**Conserving Whimbrel Across the Western Atlantic Flyway (multiple states, Canada)**

Expand on efforts to monitor declining whimbrel populations along the western Atlantic Flyway. Project will update the whimbrel conservation plan with whimbrel working group input, develop an index of reproductive performance and engage partners to establish a monitoring network, expand roost surveys during spring migration to improve protection at key sites, continue building an online shorebird roost registry, and make managers aware of roost locations to facilitate their protection.
\$99,374

Dunwoody Nature Center

Dunwoody Nature Center Habitat and Wetland Restoration and Education (GA)
Restore 22 acres of habitat within the Dunwoody Nature Center that includes 3 acres of natural wetlands, 2 miles of streams in the impaired Ball Mill Creek watershed and more than 15 acres of transitioning and old-growth Piedmont slope forests. Project will recruit and train 1,000 community volunteers as eco-stewards through the project's educational focus that will also be leveraged to educate over 15,000 students that come to the grounds yearly.
\$49,246

Forest Landowners Association

Restoring Longleaf Pine on Large-Acreage Private Lands (GA, LA, SC)
Establish 1,500 acres of longleaf pine and improve 4,500 acres of existing longleaf forest with prescribed fire on large-acreage private lands in Georgia, Louisiana and South Carolina. Project will address barriers to restoring longleaf pine on large-acreage private lands and provide technical and financial assistance to support planting and management, with a particular focus on restoring forest lands impacted by hurricanes Michael and Florence in Georgia and South Carolina.
\$200,000

Georgia Department of Natural Resources Population Estimate and Threat Assessment of Red Knot Along the Georgia Coast

Assess the red knot population along the coast of Georgia to provide a population estimate and create a comprehensive conservation plan for the Georgia coastline. Project will provide critical data on red knot to help guide habitat management and a unified conservation plan to help assess life-cycle threats for red knots and other high-priority shorebird species.
\$75,000

Georgia Forestry Commission**Restoring Longleaf Forest Habitat on Private Lands in South Georgia to Benefit At-Risk Species**

Restore and enhance 15,000 acres of longleaf pine on family forests to improve habitat for at-risk species in south Georgia. Project will engage and educate non-industrial private forest landowners and provide technical and financial assistance to actively manage priority habitat and improve populations of imperiled species, including gopher tortoise and eastern indigo snake.
\$300,000

Georgia Forestry Commission**Restoring Shortleaf Pine and Oak Habitat in the Georgia Cumberlands (GA)**

Restore and enhance shortleaf pine and shortleaf pine-oak savanna habitat on private lands in northwestern Georgia, benefiting northern bobwhite, prairie warbler, pine warbler, Bachman's sparrow and other forest- and savanna-dependent birds. Project will establish 200 acres of shortleaf pine and enhance an additional 2,000 acres of existing shortleaf pine and shortleaf pine-oak savanna habitat with prescribed burning and mid-rotation management techniques.
\$150,000

Kennesaw State University Research and Service Foundation**Testing Volatile Organic Compounds to Combat White-nose Syndrome at Black Diamond Tunnel in Georgia**

Implement an integrated disease management system to increase survivorship of tri-colored bat populations affected by white-nose syndrome (WNS) at Black Diamond Tunnel in Georgia. Project will fumigate Black Diamond Tunnel with volatile organic compounds to reduce the amount of the fungus that causes WNS and compare fungal loads and bat mortality with four other significant sites that are not receiving treatment, with the goal of reducing the fungal load to zero and reducing the mortality rate by 50 percent.
\$117,422

Manomet**Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)**

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.
\$79,999

National Wildlife Federation**Georgia Longleaf Stewardship on Private Lands – II**

Identify and engage at least 40 landowners through wildlife and forestry technical assistance to restore and maintain longleaf pine habitat in Georgia. Project will utilize collaborative, data-driven outreach to restore and enhance 2,350 acres of longleaf pine, expanding and connecting existing longleaf forests to improve habitat for at-risk species, such as gopher tortoise, as well as game species such as wild turkey and northern bobwhite.
\$150,000

Southeastern Association of Fish and Wildlife**Implementing Innovative Technologies in the Apalachicola-Chattahoochee-Flint River Basin (FL, GA)**

Increase implementation of agricultural best management practices for irrigation efficiencies by providing technical and financial assistance to farmers to improve water conservation and benefit native aquatics species in the lower Apalachicola-Chattahoochee-Flint basin.
\$114,525

The Longleaf Alliance**Restoring Longleaf Pine Habitat on Public and Private Lands in the Fort Stewart/Altamaha Area (GA)**

Restore 16,500 acres of longleaf pine habitat with prescribed fire and plantings on public and private lands in southeast Georgia. Project will support seasonal burn crews and technical assistance to private landowners to increase restoration on high-priority lands around Fort Stewart, benefiting gopher tortoise, northern bobwhite and other open-pine and grassland-dependent species.
\$265,000

The Nature Conservancy**Accelerating Longleaf Pine Ecosystem Restoration in the Chattahoochee Fall Line Area – V (AL, GA)**

Accelerate longleaf pine conservation on more than 20,400 acres of public and private land in west Georgia and east Alabama, benefiting red-cockaded woodpecker, gopher tortoise and other at-risk species. Project will improve forests through silvicultural treatments and implement prescribed fire on existing and restored longleaf habitat, with activities focused on properties buffering Fort Benning, as well as high priority state and privately owned lands.
\$283,000

The Nature Conservancy**Expanding Longleaf Pine Restoration in the Talladega Mountains (AL, GA)**

Plant 420 acres of longleaf pine and improve an additional 17,500 acres of existing longleaf habitat with prescribed fire within the Talladega Mountains Longleaf Pine Conservation Partnership area of north-central Alabama and northwest Georgia. Project will increase prescribed fire capacity with seasonal burn crews and establish longleaf on a recently acquire property adjoining the Talladega National Forest, benefiting red-cockaded woodpecker and other longleaf-dependent species.
\$274,000

The Nature Conservancy**Improving Fish Passage for Aquatic Organisms in the Holly Creek Watershed (GA)**

Replace one culvert in the Holly Creek watershed in northwest Georgia that has ranked as either a significant or severe barrier to aquatic organism passage. Project will result in approximately 4 miles of stream habitat opened and benefit aquatic species, including the trispot darter, bridled darter, Coosa creekshell and Alabama rainbow. *\$250,000*

The Nature Conservancy**Increasing Longleaf Pine Restoration and Management in the Okfenokee/Osceola Landscape (FL, GA)**

Establish 1,000 acres of longleaf pine and improve the management of an additional 50,000 acres of longleaf habitat with prescribed fire on public and private lands in south Georgia and northeast Florida. Project will target longleaf pine establishment and improved management on lands that will maximize wildlife habitat value and connectivity and reduce the likelihood and impact of catastrophic wildfire. *\$275,000*

Trees Atlanta**South Bend Park Restoration (GA)**

Restore 5 acres within South Bend Park, a 78-acre City of Atlanta park in southeast Atlanta. Project will remove 5 acres of heavily invasive kudzu and plant 400 trees and ground layer perennials to improve and protect restored natural areas and help prevent streambank erosion, as well as promote volunteerism by engaging 415 volunteers and engaging 5,125 members of the public through outreach and education. *\$33,000*

University of Georgia Research Foundation**Development of a Planted Longleaf Pine Growth and Yield Model for the Southeast (AL, FL, GA, NC, SC)**

Create a new growth and yield model system for longleaf pine that will allow more accurate growth projections for landowners considering longleaf pine reforestation who may have timber management objectives. Project will establish, document and measure permanent plots in planted unthinned longleaf pine stands on cut-over sites in the southeast United States, and the data will be used to calibrate a growth and yield model for multiple factors for longleaf pine. *\$243,999*

Upper Chattahoochee Chapter of Trout Unlimited**Chattahoochee River Water Quality and Habitat Improvement Project on Crayfish Creek (GA)**

Restore and stabilize 500 feet of impaired streambank at Crayfish Creek to improve water quality and wild trout habitat. Project will engage 300 volunteers to remove trash and debris, including two abandoned culverts, restore riparian forest by removing invasive plant species, plant 1,000 native trees and shrubs, and engage 150 K-12 students in educational programming. *\$50,000*

HAWAII**Ai.Fish****Artificial-Intelligence Assisted Data Management and Review Platform for Hawaii Longline Fisheries (CA, HI)**

Develop a web-based application using machine learning and computer vision algorithms to preprocess electronic monitoring data from the Hawaii pelagic longline fisheries. Project will reduce costs and improve timeliness of the review process, lowering the barrier to entry for implementation of electronic monitoring and review technologies in the Hawaii-permitted longline fisheries. *\$300,617*

American Bird Conservancy**Establishing Populations of Endemic Seabirds at Kilauea Point National Wildlife Refuge — VIII (HI)**

Translocate 20 Hawaiian petrel chicks and up to 20 Newell's shearwater chicks to Kilauea Point National Wildlife Refuge, Kauai. Project will provide long-term resilience for these endemic Hawaiian seabirds by establishing new breeding populations within a predator safe enclosure; additional actions include habitat restoration, social attraction to attract prospecting, pre-breeding adults and monitoring recruitment of seabirds. *\$224,955*

American Bird Conservancy**Saving Hawaii's Imperiled Forest Birds XII (HI)**

Improve native Hawaiian forest bird populations on the islands of Hawaii, Maui, and Kauai and continue efforts in implementing biotechnology-based avian disease vector control program. Project will introduce Palila to the northern slope of Mauna Kea, conduct predator management and restore habitat on Hawaii and Maui, maintain fencing around palila critical habitat, and conduct palila population surveys and mosquito surveys on the Alaka'i Plateau and eastern Maui. *\$320,000*

College of Charleston**Understanding the Impacts of the Invasive Alga to Support Management of Papahānaumokuākea (HI)**

Understand and mitigate the effects of the invasive alga at Pearl and Hermes Atoll in the Papahānaumokuākea Marine National Monument. Project will determine its current distribution in the Monument, ecological impact on diversity at multiple scales, assess its population dynamics, describe and model its physiological characteristics in cooperation with oceanographic phenomena, and develop best management practices for removal. *\$120,000*

Coral Reef Alliance**Expanding Stream Gulch Restoration Actions to Improve Coral Reef Health in Waihikuli, West Maui (HI)**

Address land-based pollution from sedimentation using best management practices recommended by the Stream Restoration Knowledge Sharing Group in West Maui. Project will install 30 practices to address erosion, stabilize sediment and increase the infiltration of storm water to improving coral reef health. *\$85,000*

Hawaii Wildfire Management Organization**Decreasing Sedimentation of Priority Coral Reefs through Fire Risk Reduction in South Kohala (HI)**

Reduce the threat of erosion and sedimentation of coral reef ecosystems by developing comprehensive wildfire planning and ignition risk reduction for the entire region of South Kohala, Hawaii. Project will implement recommendations from the Pelekane Bay Watershed Management Plan, Wai'ula'ula Watershed Management Plan, and South Kohala Conservation Action Plan. *\$79,908*

Horsley Witten Group**Protecting Kaopala's Coastal Infrastructure Using a Nature-Based Flood Management Design (HI)**

Generate conceptual green infrastructure alternatives for an open parcel of land to reduce flooding while providing co-benefits such as water quality improvement, community open space, and nearshore marine and floodplain habitat improvement. Project will investigate options and prepare permit-ready design plans for a natural floodplain restoration upstream from a threatened coastal road. *\$126,406*

Island Conservation**Monitoring and Evaluating Rat Activity and Eradication on Lehua Island (HI)**

Support an independent review of the Lehua Island, Hawaii, Polynesian rat eradication operation and continue seabird and rat monitoring. Project will continue to assess rat presence, deploy appropriate removal tools, assess seabirds response to the 2017 rat eradication attempt and will contract an independent evaluation of the rat eradication operation as best practice for gleaned lessons learned from unsuccessful eradication operations.

\$75,000

Maui Nui Marine Resource Council**Implementing a Storm water Management Plan in the Pohakea Watershed (HI)**

Identify management strategies for storm water-related sources of pollution such as sediments, nutrients, pathogens, and other chemicals currently being transported within Pohakea watershed. Project will monitor water quality and erosion with the County of Maui and private landowners to mitigate land-based sources of pollution and reduce pollutant inputs to important reef systems.

\$45,000

Maui Ocean Center Marine Institute**Collection of Decommissioned Fishing Nets to Clean Beaches and Reefs on Maui, Hawaii**

Collect decommissioned fishing nets from the shores of the island of Maui, Hawaii by communication with local commercial fishermen that utilize harbors on Maui. Project will convert to energy 6 tons of nets, resulting in less polluted beaches and reefs and reducing the negative impact derelict fishing nets can have on threatened and endangered species, including sea turtles, corals, Hawaiian monk seals, and humpback whales.

\$9,478

National Marine Sanctuary Foundation**Community Engagement Programing for Papahānaumokuākea Marine National Monument Discovery Center (HI)**

Provide dedicated cultural programming at the Mokupapapa Discovery Center and other Hawaii based education centers to nurture and strengthen connections with the remote ocean wilderness of Papahānaumokuākea Marine National Monument. Project will create exhibits, host public outreach events and use social media to highlight the ecological and cultural resources of the Monument and spotlight the work that is being supported to protect them.

\$200,491

Oahu Resource Conservation and Development Council**Developing a Conservation Framework for Agricultural Wetlands on Oahu's North Shore (HI)**

Engage private landowners and land managers in the Hale'iwa and Waiāluā communities on North Shore, Oahu in order to identify and implement conservation practices that will improve habitat for species such as the 'ālae 'ūla by utilizing Farm Bill programs. Project will develop a management plan for wetland bird habitat enhancement, which will incorporate effective conservation practices identified.

\$124,000

Oregon State University**Equipping Albatross with Radar-Detecting Tags to Monitor Fishing Around Papahānaumokuākea (HI)**

Deploy radar-detecting tracking devices on breeding black-footed and Laysan albatrosses at Midway Atoll National Wildlife Refuge to determine the frequency of vessel encounters and potential drivers of albatross-fisheries associations within and outside the Papahānaumokuākea Marine National Monument. Project will allow managers to infer and mitigate the potential bycatch risk to breeding albatrosses, thus furthering conservation goals for the species, and increase monitoring of illegal fishing.

\$216,904

Pacific Rim Conservation**Creating Resilient Tropical Seabird Colonies at James Campbell National Wildlife Refuge (HI)**

Translocate three species of seabirds to create new resilient breeding colonies at James Campbell National Wildlife Refuge, Oahu, Hawaii. Project will safeguard sea level rise vulnerable species by translocating chicks from low-lying nesting colonies in the NW Hawaiian Islands to a "high island" protected predator proof fence location on Oahu.

\$320,000

Pacific Rim Conservation**Creating the First Predator-Free Montane Hawaiian Petrel Colony on Kauai, Hawaii**

Construct a 3 acre predator-exclusion fence at Pohakea within the Hono O Na Pali Natural Area Reserve, Kauai. Project will protect a small colony of Newell's shearwaters and serve as a social attraction site for Hawaiian petrels and band rumped storm-petrels, predators will be removed from within the fenced site following construction and habitat restoration along with artificial burrows will be used to enhance the sites potential for nesting seabirds.

\$440,000

Pacific Rim Conservation**Using Thermal Imaging Drones to Locate Newell's Shearwaters and Hawaiian Petrels on Oahu (HI)**

Search for breeding colonies of Newell's shearwater and Hawaiian petrel to determine if birds detected in previous surveys are prospecting or breeding on Oahu. Project will test and develop thermal imaging drones to detect burrow nesting seabirds on a landscape scale, deploy song meters at strategic locations, visit each site monthly to retrieve data for rapid analysis and coordinate intensive visual and ground searching.

\$45,000

Papahānaumokuākea**Marine Debris Project****Marine Debris Removal from Papahānaumokuākea Marine National Monument (HI)**

Mitigate hazards to protected species and coral reef habitat of Papahānaumokuākea Marine National Monument through large scale marine debris removal from the coral reefs and shorelines. Project will remove an estimated 240,000 pounds of derelict fishing gear and plastics, restoring 1,300 acres of coral reef habitat and 400 acres of shoreline habitat.

\$299,629

Pono Pacific Land Management**Ungulate Fencing Assessment and Feasibility Study on Northeast Lanai (HI)**

Identify, map, and provide cost estimates and implementation plans for ungulate fencing alignments along the northern and southern boarders of the program area, as well as interior fencing options on northeast Lanai, Hawaii. Project will assist in prioritizing fence implementation locations and provide conservation recommendations for ungulate monitoring and control strategies.

\$19,017

Queen Emma Land Company**Reduce Chronic Sedimentation and Restore Resilience to South Kohala Reefs (HI)**

Remove unmanaged feral goats from the Pelekane Watershed to significantly decrease erosion and subsequent sedimentation of nearshore coral reefs. Project will allow vegetation to reestablish in critical and susceptible erosion-prone areas, preventing 15,000 pounds of sedimentation runoff annually.

\$31,130

Ridge to Reefs**Reducing Land-based Sources of Pollution at Three Priority Sites in Maui Nui (HI)**

Implement sediment and nutrient reducing practices to reduce runoff onto three reef tracks in Maui Nui. Project will work with management and local partners in West and South Maui and on Lanai to install best practices, pilot new approaches and plan for further implementation actions.

\$268,950

The Nature Conservancy**Assessment of Kiwikuu and Mosquito Populations in Waikamoi Preserve (HI)**

Determine the current status of the windward population of kiwikuu in the Waikamoi Preserve on Maui and assess the abundance and distribution of mosquitoes that cause avian malaria. Project will conduct a population assessment of kiwikuu and mosquitoes in the Waikamoi Preserve and install remote cameras to document predator presence.

\$25,000

The Nature Conservancy**Coral Reef and Nearshore Water Quality Assessment on Northeast Lanai (HI)**

Establish a baseline of the nearshore fish and coral communities along the northeast coast of Lanai, Hawaii to inform local watershed mitigation activities and the State of Hawaii's 30x30 Initiative. Project will collect benthic, fish, and nearshore water quality data and establish sedimentation flow patterns and recommendations for monitoring.

\$71,433

Trees for Honolulu's Future**Tree Planting and Community Outreach in Kaimuki (HI)**

Train volunteers to inventory urban tree canopy, plant trees on streets and in parks, and educate people on the benefits of trees. Project will plant 100 new trees, receive commitments of adjacent landowners to help maintain existing and new trees, and engage 5,000 community members, 275 students and 12 teachers in education and outreach.

\$33,000

U.S. Department of the Interior, U.S. Geological Survey**Light Detection and Ranging (LIDAR) Mapping and Sedimentation Evaluation on Lanai (HI)**

Map, model, and monitor sources of fine-sediment pollution from the ridgelines down to the shoreline on northeast Lanai, Hawaii. Project will collect high-quality airborne light detection and ranging data, conduct infiltration tests, and install erosion pin monitoring sites to identify sedimentation hot spots in order to inform management decisions on fencing of priority watersheds, ungulate population control, and re-vegetation efforts.

\$149,868

U.S. Department of the Interior, U.S. Geological Survey, Pacific Island Ecosystems Research Center**Mapping Native and Nonnative Vegetation Communities on Lanai (HI)**

Develop vegetation classification maps and conduct a change analysis for Lanai using high-resolution spatial imagery, historical data and images combined with data samples collected on the ground to produce native and nonnative vegetation maps. Project will inform land managers on areas of recent and rapid invasive species encroachment and guide future Hawaiian petrel habitat conservation and restoration efforts.

\$115,616

University of Hawaii**Community Engagement Building and Water Quality Monitoring on Lanai (HI)**

Engage the community by facilitating the building, deployment, and monitoring of real-time water quality sensors at two strategic coastal sites on northeast Lanai, Hawaii. Project will establish, support, and enhance a diverse community of participants from local community colleges, grade schools, conservation organizations, and interested citizen scientists to fill downstream data gaps to inform future management decisions and monitor long-term water quality improvements.

\$48,889

University of Hawaii**Discovering Deepwater Habitats and Species in the Papahānaumokuākea Marine National Monument (HI)**

Establish an online catalog of deep-sea habitats and species of the Papahānaumokuākea Marine National Monument to increase management understanding of the resources of these remote environments. Project will combine animal records from 284 submersible dives conducted in deep-sea habitats into a single, standardized dataset and create an animal identification guide and interactive web map.

\$122,460

University of Hawaii**Responding to Invasive Species and Hurricane Walaka Impacts in Papahānaumokuākea (HI)**

Increase conservation and management capacity for mitigating the impacts of an invasive species outbreak and hurricane damage at two locations in Papahānaumokuākea Marine National Monument. Project will evaluate the potential management/control options for the invasive red alga outbreak at Pearl and Hermes Atoll and recommend monitoring and management actions for reefs and island habitats at French Frigate Shoals damaged by Hurricane Walaka.

\$299,891

University of Hawaii**Restoring Maui's Coastal Dunes to Improve Community Resilience and Enhance Wildlife Habitat (HI)**

Using a collaborative and community-based planning process to develop site-specific plans for the restoration of coastal dunes on Maui's north shore. Project will result in reduced impacts of erosion and high wave flooding, mitigation of extensive losses of wind blown sand from beaches, improved public shorelines access, and restored or expanded habitat for unique native Hawaiian plants and animals.

\$199,506

University of Hawaii**Studying Effects of Water Quality on Coral Reproductive Success (FL, HI)**

Study coral proteins to determine the role of reduced coastal water quality and associated stressors on reproductive success of corals in Florida and Hawaii. Project will study water quality effects on coral reproduction to help understand the extent of reproductive failure at priority restoration sites and to identify site-specific stressors.

\$149,803

Zoological Society of San Diego**Reintroduction of the 'Alala to Hawaii Island — IV (HI)**

Implement a conservation breeding and reintroduction program for the 'Alala in the Pu'u Maka'ala Natural Area Reserve on Hawaii Island. Project will continue efforts toward establishing a self-sustaining population of 'Alala by tracking released individuals, providing veterinary care as needed, and conducting intensive post-release monitoring.

\$64,999

Zoological Society of San Diego**Review of Hawaiian Petrel Reproductive Success Monitoring on the Island of Lanai (HI)**

Develop a reproductive success monitoring plan for Hawaiian petrels on the island of Lanai in Hawaii. Project will detect changes in Hawaiian petrel reproductive success due to predation or other emerging threats, and report on the effectiveness of Hawaiian petrel conservation measures on Lanai, including predator control and habitat restoration.

\$41,143

IDAHO**Idaho Department of Water Resources****Identifying, Assessing, Prioritizing and Implementing Water Transactions in the Upper Salmon and Teton River Basins (ID)**

Identify, assess, prioritize, and implement new water transactions in the Upper Salmon and Teton River Basins. Project will improve tributary flows for the benefit of Snake River spring/summer-run Chinook salmon, Snake River steelhead, and native trout populations.

\$293,683

Idaho Fish and Wildlife Foundation**Managing the Encroachment of Invasive Plant Species to Improve Sagebrush Habitat (ID)**

Work collaboratively across jurisdictions in southern Idaho to implement ecologically based rangeland improvement projects to reduce the threat of annual grass invasion. Project will treat invasives and improve management on more than 20,000 acres. Long term, restoration will reduce fire size, frequency, and intensity, allowing ecosystems to reach desired conditions and provide ample wildlife habitat.
\$220,000

Mule Deer Foundation**Improving Coordination between Idaho Stakeholders to Implement Ungulate Conservation Projects (ID)**

Coordinate between the Mule Deer Foundation and the Idaho Migration and Transportation Team to work on wildlife corridor issues where ungulates cross roadways. Project will improve 24 miles of fencing, place 1,800 acres under permanent conservation easement, improve management on 255,000 acres, restore 1,700 acres and significantly decrease wildlife-vehicle collisions.
\$309,661

National Audubon Society**Increase Collaboration of Sagebrush Conservation (multiple states)**

Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stake holders and host field tour events that elevate on-the-ground conservation.
\$29,636

Nez Perce Tribe**Increase Flow Restoration Efforts in the Nez Perce Tribal Geographies (ID, OR, WA)**

Increase flow restoration efforts in the Nez Perce tribal geographies. Project will increase tribal capacity to coordinate with other groups developing water transactions within the broad geography of ceded lands, and also enable the Tribe to propose transactions uniquely linked to tribal relationships, tribal treaty rights, and tribal sovereignty.
\$15,000

Pheasants Forever**Improving Sage-Grouse Habitat through Juniper Removal and Mesic Restoration (ID)**

Restore mesic habitat using low-tech rock structures and upland habitats by removing invading juniper in southwestern and central Idaho. Project will restore 3,889 acres of sage-grouse habitat, increasing the resiliency and persistence of mesic habitats within the project landscape to benefit population maintenance and growth of sage-grouse.
\$446,522

West Box Elder Conservation District**Creating and Improving Wet Meadow and Grassland Habitat along Grouse Creek (UT, ID)**

Improve and create wet meadow and grassland habitat for wildlife, promote aquatic habitat protection, and expand water developments to limit cattle use of riparian areas in Grouse Creek in Box Elder County, Utah. Project will bring 3,000 acres under improved management and restore hydrology on more than 500 acres of mesic habitat.
\$215,303

ILLINOIS**Center for Neighborhood Technology****Installing Green Infrastructure to Improve Water Quality and Reduce Flooding in Riverdale (IL)**

Increase stormwater infiltration and reduce runoff in Ivanhoe Park by installing rain gardens and bioswales. Project will improve downstream water quality by capturing 294,000 gallons of stormwater annually and engage residents throughout the planning process to ensure the final designs provide a direct community benefit.
\$121,008

Forest Preserve Foundation**Restoration of Sweet Woods in the Forest Preserves of Cook County (IL)**

Restore 180 acres of native uplands ecosystem in Sweet Woods Forest Preserve, a high-priority conservation area for the Forest Preserves of Cook County. Project will be conducted by professional restoration contractors, as well as a 21-person restoration crew from Greencorps, a program which provides conservation work and training for adults facing barriers to employment.
\$324,994

Friends of the Chicago River**Expanded Habitat Restoration at Crooked Creek (IL)**

Improve habitat quality in the Crooked Creek watershed through invasive species control. Project will increase high-quality habitat and improve stormwater infiltration across 85 acres, and improve adjacent habitat for the endangered Hine's emerald dragonfly.
\$243,979

Friends of the Forest Preserves**Expanding the Centennial Volunteers Program to Increase Forest Preserves Conservation (IL)**

Fortify and expand the Centennial Volunteers program at seven forest preserves to increase invasive species control work and improve restoration management. Project will restore 80 acres along the North Branch of the Chicago River and the Little Calumet River through outreach and engagement of over 750 people.
\$186,609

Friends of the Forest Preserves**Restoring Biodiversity in the Southern Lake Michigan Watershed through Invasive Species Control (IL)**

Engage local participants from diverse urban communities and increase capacity to respond to invasive species in the Calumet region in the Southern Lake Michigan Watershed, Illinois. Project will control invasive species on 254 acres of high-quality natural areas within eight project sites.
\$200,000

Friends of the Forest Preserves**Wetland Restoration, Community Engagement and Citizen Science at Watersmeet Woods Forest Preserve (IL)**

Remove invasive species on 40 acres of habitat for birds, amphibians and wetland plants at Watersmeet Woods forest preserve in the Chicago River watershed to improve regional water quality. Project will engage 50 volunteers and support five Conservation Corps interns in invasive plant removal and train 10 citizen science leaders to monitor plants and animals at the project site.
\$25,000

Illinois Corn Growers Association**Increasing Adoption of Voluntary Conservation Practices on Private Lands (IL, KY)**

Address natural resource concerns on a field-by-field basis by identifying conservation practices that effectively address environmental issues in a financially viable way throughout Illinois and Kentucky. Project will prevent 95 tons of nutrient pollution and 6,375 tons of sediment from entering the system annually by increasing best management practices on 33,000 acres.
\$257,782

Lake County Forest Preserve District**Expanding Invasive Buckthorn Management to a Landscape Scale (IL)**

Improve ecosystem function and habitat complexity near the North Branch of the Chicago River by clearing invasive woody species and planting a native cover crop mixture. Project will restore and enhance 140 acres of natural areas buffering the Middlefork Savanna Forest Preserve and expand invasive species management to the landscape scale.
\$171,146

Lake County Forest Preserve District**Maintaining and Enhancing Coastal Dune and Swale Habitat by Removing Invasive Species (IL, WI)**

Maintain and enhance previous restoration efforts through continued, targeted use of the invasive plant strike team to identify, map and eradicate or contain invasive species in Lake County, Illinois and Kenosha County, Wisconsin. Project will restore and retreat 200 acres of high-quality coastal dune and swale habitat which provides habitat for three federally and 63 state-protected species.

\$250,000

Pollinator Partnership**Improving Pollinator Habitat Connectivity in the Midwest and Great Lakes Flyway (AR, IL, MI, MN, WI)**

Develop and expand a regional seed collection and native plant materials network program in the Midwest and Great Lakes region to support monarch butterflies, rusty patched bumble bees and other declining pollinator species. Project will improve more than 5,000 acres of pollinator habitat, collect 50 pounds of milkweed seed, collect 50 pounds of nectar plant seed, and propagate 2,000 milkweed and 1,000 nectar species seedlings.

\$74,971

Prairie Enthusiasts**Increasing Technical Assistance to Engage Landowners in Pollinator Conservation (IA, IL, MN, WI)**

Create two landowner-focused staff positions and develop an outreach and technical assistance program in the upper Midwest to implement recovery plans for the monarch butterfly, Karner blue butterfly, and rusty patched bumble bee. Project will identify and engage private working landowners to carry out pollinator habitat restoration and management projects, bringing 3,000 acres under improved management and restoring 2,000 acres of habitat.

\$245,508

Shedd Aquarium Society**Installing Floating, In-stream Habitat to Support Greater Biodiversity in the Chicago River (IL)**

Design and install floating, in-stream habitat to advance a section of unique habitat in the Chicago River, designated as the "Wild Mile." Project will enhance habitat quality, creating a more naturalized shoreline and support public engagement through stewardship activities at the installed habitat site.

\$128,150

Trout Unlimited**Brook Trout Monitoring and Evaluation for Sustain our Great Lakes (multiple states)**

Conduct an evaluation to understand brook trout response, including abundance, young of year, multiple life stages, and effective breeders, to the improved access to and quality of habitat. Project will track progress towards the Great Lakes Business Plan stream habitat related goals.

\$292,650

Trout Unlimited**Conservation Assessment of Brook Trout and Planning and Impact Tool Development in the Great Lakes Region (multiple states)**

Conduct a broad assessment of existing brook trout population viability within the U.S. portion of the Great Lakes watershed that will build off of and be compatible with the analysis and associated tools developed for NFWF's Mid-Atlantic/Northeast region. Project will assist NFWF in identifying conservation needs and priority investment areas throughout the basin and associated tools will enable NFWF to develop and measure population-based recovery goals over time across multiple NFWF landscapes, particularly the Northeast and Great Lakes.

\$126,967

Trout Unlimited**Engaging Landowners in Farm Bill Programs (IA, IL, MN, WI)**

Restore cold-water streams and watersheds in the Driftless Area, creating habitat practices for fish, shorebirds, amphibians, reptiles and other aquatic biota. Project will improve management on 525 acres, restore 30 miles of stream, prevent 9,000 tons of sediment and four tons of nutrient pollution from entering the system annually.

\$199,961

Wetlands Initiative**Increase Landowner Adoption of Wetland Construction (IL)**

Accelerate implementation of constructed wetlands, reducing nutrient runoff in priority watersheds across Bureau, Ford, LaSalle, Livingston, and Marshall-Putnam counties in north-central Illinois. Project will reach 300 landowners, install six new constructed wetlands and increase on-the-ground sustainability efforts.

\$143,393

Wetlands Initiative**Restoring Remnant Wetland Habitat (IL)**

Restore habitat quality and biodiversity in the Indian Ridge Marsh, a priority remnant wetland in the Calumet region, to benefit wetland-dependent birds and wildlife while engaging the surrounding low-income communities with the site as a local natural area open for public access. Project will restore 76 acres of marsh, wet meadow and upland prairie habitats.

\$134,281

INDIANA**Big Oaks Conservation Society****Dock and Fishing Outreach****at Big Oaks National Wildlife Refuge (IN)**

Build a dock and concrete pad and host fishing events for the public at Big Oaks National Wildlife Refuge. Project will increase accessible facilities at the refuge, increase the number of fishing participants, and raise awareness of conservation.

\$6,705

Delta Institute**Duck Creek Tributary Restoration and Stabilization (IN)**

Restore a 0.2 mile section of Duck Creek through stream bank restoration and riparian buffer installation as part of a phased approach. Project will improve water quality, enhance instream and riparian habitat quality, and reduce local flooding by increasing infiltration capacity.

\$100,000

Indiana Dunes Environmental**Learning Center****Environmental STEM Education****in the Lake Michigan Watershed (IN)**

Deliver a continuum of community-based environmental programs that connect classroom lessons with the Lake Michigan watershed. Project will reach 200 participating teachers and 5,000 Northwest Indiana students with limited access to nature in primarily low-income, urban areas and restore 5 acres through planting 25 trees, removing invasive plants, planting native plugs and spreading native needs.

\$40,000

LaGrange County Community Foundation**Removing and Managing Woody and Herbaceous Invasive Species Around****Duff Lake (IN)**

Build on a previously successful grant to control invasive herbaceous and woody plant species through retreatment efforts on ecologically unique, restored fen, prairie, and oak savanna habitat around Duff Lake in LaGrange County, Indiana. Project will reinforce the effects of the original project and protect the acquired effects by controlling invasive plant species on a total of 208 acres of habitat.

\$139,800

Student Conservation Association**Calumet Tree Conservation Corps (IN)**

Reduce stormwater runoff and create urban habitat by planting 500 new trees in northwest Indiana. Project will build upon previous investments and continue to improve water quality at a regional scale while engaging the community and volunteers.

\$165,653

Trout Unlimited

Brook Trout Monitoring and Evaluation for Sustain our Great Lakes (multiple states)
Conduct an evaluation to understand brook trout response, including abundance, young of year, multiple life stages, and effective breeders, to the improved access to and quality of habitat. Project will track progress towards the Great Lakes Business Plan stream habitat related goals.
\$292,650

IOWA**Friends of the Neal Smith NWR**

Spurs and Tails: Engaging Hunters at Neal Smith National Wildlife Refuge (IA)
Host a "Spurs and Tails" pheasant hunting contest, construct an informational kiosk, and sponsor a National Hunting and Fishing Day at Neal Smith National Wildlife Refuge. Project will support hunter recruitment, retention, and reactivation efforts and increase awareness of the refuge's conservation value.
\$10,152

**Iowa Department of Natural Resources
Loess Hills Prairie and Woodland Protection (IA)**
Protect an 834 acre tract of untilled prairie and oak woodland in the Loess Hills of western Plymouth County, Iowa. Project will connect existing protected lands, prevent fragmentation from development, and ensure wildlife populations and their habitat are properly managed.
\$270,000

**Iowa Natural Heritage Foundation
Increasing Native Prairie Habitat Abundance and Quality to Benefit Pollinators (IA)**
Purchase seeds and plant new native prairie habitat to increase the amount of quality native prairie on public land to benefit monarchs, pollinators, birds, wildlife, water and soil and to improve management on remnant and previously restored prairie and savanna habitat throughout Iowa. Project will bring 2,000 acres under improved management and restore 415 acres of habitat through new prairie plantings.
\$75,000

**Iowa Soybean Association
Increasing Adoption of Conservation Agriculture Practices through Technical Assistance (IA)**
Leverage a network of agronomists to increase conservation capacity to accelerate producer conservation practice adoption throughout Ohio. Project will develop cover crop, edge of field, and strip till best management practice recommendations, improve management on 65,500 acres and prevent 131 tons of nutrient runoff annually.
\$250,000

Prairie Enthusiasts

Increasing Technical Assistance to Engage Landowners in Pollinator Conservation (IA, IL, MN, WI)
Create two landowner-focused staff positions and develop an outreach and technical assistance program in the upper Midwest to implement recovery plans for the monarch butterfly, Karner blue butterfly, and rusty patched bumble bee. Project will identify and engage private working landowners to carry out pollinator habitat restoration and management projects, bringing 3,000 acres under improved management and restoring 2,000 acres of habitat.
\$245,508

**Sustainable Environmental Consultants
NRCS-CIG On-Farm Trials Danone Soil Health 2019 (IA)**
Accelerate implementation of innovative soil health practices on farms within Danone's dairy supply chain and evaluate the ecological and economic benefits of this effort. Project will: 1) provide the pool of pre-identified participating farmers with the technical assistance needed to design and implement new practices; 2) verify practice eligibility and on-the-ground implementation prior to NFWF providing incentive payments to participating farmers; and 3) gather and analyze data on farm condition and profitability and make comparisons to pre-project baseline conditions.
\$183,220

**Trout Unlimited
Engaging Landowners in Water Quality and Wildlife Habitat Farm Bill Programs (IA, IL, MN, WI)**
Restore cold-water streams and watersheds in the Driftless Area, creating habitat practices for fish, shorebirds, amphibians, reptiles and other aquatic biota. Project will improve management on 525 acres, restore 30 miles of stream, prevent 9,000 tons of sediment and 4 tons of nutrient pollution from entering the system annually.
\$199,961

KANSAS

**Friends of the Great Plains Nature Center
Aquatic Education, Clean Up and Restoration at the East Fork Chisholm Creek (KS)**
Restore 5 acres of riparian habitat and perform water quality monitoring and trash removal on a mile of East Fork Chisholm Creek. Project will use professional naturalists and volunteers to lead aquatic education with 900 high school students and use 100 volunteers to collect 2,000 pounds of trash and debris and remove 5 acres of invasive bush honeysuckle in the riparian area surrounding the creek.
\$50,000

Pheasants Forever

Coordinating Range Wildlife Conservation in the Lesser Prairie Chicken Range (CO, KS, NM, OK, TX)
Work with private landowners and other partners to implement on-the-ground riparian habitat restoration across the lesser prairie chicken range. Project will enroll landowners into voluntary contracts that will restore or improve management on 30,000 acres of southwestern grassland habitat.
\$101,436

**Rocky Mountain Bird Observatory
Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)**
Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.
\$250,000

KENTUCKY

**Illinois Corn Growers Association
Increasing Adoption of Voluntary Conservation Practices on Private Lands (IL, KY)**
Address natural resource concerns on a field-by-field basis by identifying conservation practices that effectively address environmental issues in a financially viable way throughout Illinois and Kentucky. Project will prevent 95 tons of nutrient pollution and 6,375 tons of sediment from entering the system annually by increasing best management practices on 33,000 acres.
\$257,782

**Kentucky Association
For Environmental Education
Regional Environmental Education Landscape Analysis for the Southeastern States (KY)**
Conduct a landscape analysis for each of the eight southeast states that focuses on identifying the potential collaborators, key players, and initiatives in that state as well as determining opportunities are on the horizon for best practices to have the biggest impact. Project will collect research, data and best practices from other states and similar systems to provide the tools and provide recommendations for the southeast region.
\$99,992

Louisiana Wildlife and Fisheries Foundation

Revising the Lower Mississippi Desired Forest Condition for Wildlife Report (multiple states)
Update the Lower Mississippi Valley Joint Venture's Desired Forest Condition for Wildlife report, which provides technical guidance to land managers on how to manage bottomland hardwood forests for the conservation of wildlife. Project will revise the report to integrate new science on the habitat needs of priority wildlife species, include updates from the Forest Resource Conservation Working Group, and add a section dedicated to the management of restored or young bottomland hardwood stands.
\$79,254

Mississippi River Trust Forest and Wetlands Restoration and Management in the Mississippi River Basin (KY, MO, TN)

Restore and enhance privately-owned upland, riparian and bottomland hardwood forests through technical and financial assistance within the Mississippi River Basin in Kentucky, Missouri and Tennessee. Project will engage private landowners to implement conservation practices on 3,000 acres to improve forest health, reduce forest fuels, improve water quality and improve ecological functions, benefiting forest birds, waterfowl and aquatic species.
\$222,000

Mississippi River Trust Forested Wetland Restoration in the Lower Mississippi River Floodplain (multiple states)

Reforest and protect frequently flooded, marginal cropland on private lands through the adoption of Wetland Reserve Easements in the active floodplain of the Lower Mississippi River. Project will establish 7,500 acres of bottomland hardwood forest to expand and enhance habitat and improve water quality, benefiting the Louisiana black bear, swamp rabbit, forest birds, waterfowl and freshwater fish.
\$653,696

Office of Kentucky Nature Preserves Building Partnerships to Restore Woodlands and Improve Water Quality in the Cumberland Plateau (KY)

Restore shortleaf pine-oak and riparian forests and implement agricultural best management practices to improve wildlife habitat and water quality within the Cumberland Plateau region in Kentucky. Project will improve forest and farmland management on nearly 1,000 acres of public and private land, restore reclaimed mineland, and treat the invasive hemlock woolly adelgid to protect 5 miles of riparian forest, benefiting Indiana bats, northern bobwhite, and freshwater fishes and mussels.
\$237,997

LOUISIANA

Anthropocene Alliance Higher Ground: Green Infrastructure for Resilience (multiple states)

Convene six community-based organizations in disaster-prone neighborhoods to engage local partners to train volunteers and teach residents about nature-based practices and install six high visibility projects as a catalyst for broader implementation. Project will reach 600 community members and successes will be shared with peer flood survivors around the country through a network of 48 leaders in 22 states.
\$494,758

College of William and Mary Conserving Whimbrel Across the Western Atlantic Flyway (multiple states, Canada)

Expand on efforts to monitor declining whimbrel populations along the western Atlantic Flyway. Project will update the whimbrel conservation plan with whimbrel working group input, develop an index of reproductive performance and engage partners to establish a monitoring network, expand roost surveys during spring migration to improve protection at key sites, continue building an online shorebird roost registry, and make managers aware of roost locations to facilitate their protection.
\$99,374

Florida Agricultural and Mechanical University GIS Capacity and Training to Support Gulf-Wide Ecosystem Conservation and Restoration (AL, FL, LA, MS, TX)

Provide geographic information system (GIS) expertise and training in support of Gulf-wide ecosystem conservation and restoration programs and projects. Project will develop GIS layers and maps where Gulf Coast Ecosystem Restoration Council and Natural Resources Damage Assessment projects have been approved for planning and implementation by the U.S. Department of Agriculture.
\$300,000

Forest Landowners Association Restoring Longleaf Pine on Large-Acreage Private Lands (GA, LA, SC)

Establish 1,500 acres of longleaf pine and improve 4,500 acres of existing longleaf forest with prescribed fire on large-acreage private lands in Georgia, Louisiana and South Carolina. Project will address barriers to restoring longleaf pine on large-acreage private lands and provide technical and financial assistance to support planting and management, with a particular focus on restoring forest lands impacted by hurricanes Michael and Florence in Georgia and South Carolina.
\$200,000

Friends of Black Bayou Strategic Planning Retreat, Friends of Black Bayou, Black Bayou Lake National Wildlife Refuge (LA)

Conduct strategic planning to align the organization's vision and goals with the refuge system mission. Project will determine strategies for engaging the community, addressing conservation issues, and achieving organizational goals.
\$2,764

Friends of Louisiana Wildlife Refuges Peer-to-Peer Conference: "Building a Shared Knowledge Base" (LA, MS)

Host a Peer-to-Peer coaching event and convene eleven Friends groups at the Southeast Louisiana National Wildlife Refuges Complex Headquarters. Project will focus on increasing organizational capacity, enhancing communication between the public and refuge, and increasing volunteerism for participating Friends organizations.
\$14,790

Jefferson Parish Department of Environmental Affairs Bucktown Marsh Restoration and Living Shoreline Construction and Monitoring (LA)

Rebuild a one mile living shoreline and creating up to 70 acres of marsh, tidal creeks, and lagoons to restore water quality and ecological functions of the Lake Pontchartrain shoreline. Project will attenuate wave activity and protect the existing shoreline and levee from erosion and storm surge to mitigate impacts of future storms, and protect approximately 1,375 homes and critical infrastructure.
\$2,500,000

Lower Mississippi River Conservation Committee Restoring Hydrology and Monitoring Species Response in the Blackhawk Scar Lakes Ecosystem (LA)

Repair and replace water control structures to restore more natural hydrology and stream connectivity to 700 acres of floodplain habitat on the R.K. Yancey Wildlife Management Area in Louisiana. Project will monitor floodplain resource use by alligator gar and associated fish communities, monitor water quality improvements post-restoration, and engage private landowners to share lessons learned and floodplain management recommendations to improve fish and wildlife habitat.
\$400,000

Louisiana Wildlife and Fisheries Foundation

Monitoring Reintroduced Whooping Cranes to Establish a Self-Sustaining Population (LA, TX)
Study habitat use across various life stages of a whooping crane population that has been reintroduced into southwest Louisiana since 2011. Project will track and monitor juvenile whooping crane habitat use and home range and create range maps to help federal and state agencies develop management plans and recommendations for whooping cranes.

\$46,542

Louisiana Wildlife and Fisheries Foundation

Revising the Lower Mississippi Desired Forest Condition for Wildlife Report (multiple states)
Update the Lower Mississippi Valley Joint Venture's Desired Forest Condition for Wildlife report, which provides technical guidance to land managers on how to manage bottomland hardwood forests for the conservation of wildlife. Project will revise the report to integrate new science on the habitat needs of priority wildlife species, include updates from the Forest Resource Conservation Working Group, and add a section dedicated to the management of restored or young bottomland hardwood stands.

\$79,254

Manomet

Increasing On-the-Ground Capacity to Improve Shorebird Habitat (LA)
Increase on-the-ground capacity and technical assistance in support of the implementation of the Natural Resources Conservation Service Working Lands for Wildlife, Shorebirds in Louisiana Wetlands program. Project will bring 6,000 acres under improved management, targeting 75 producers through presentations, site visits, and conversations.

\$250,139

Mississippi River Trust

Forested Wetland Restoration in the Lower Mississippi River Floodplain (multiple states)
Reforest and protect frequently flooded, marginal cropland on private lands through the adoption of Wetland Reserve Easements in the active floodplain of the Lower Mississippi River. Project will establish 7,500 acres of bottomland hardwood forest to expand and enhance habitat and improve water quality, benefiting the Louisiana black bear, swamp rabbit, forest birds, waterfowl and freshwater fish.

\$653,696

Mississippi State University

Black Bear Monitoring in the Lower Mississippi Alluvial Valley (AR, LA, MS)

Monitor and collect baseline data on black bear movement, gene flow, and genetic isolation among five recovering populations within the Mississippi Alluvial Valley in Louisiana, Arkansas, and Mississippi. Project will help assess black bear response to bottomland hardwood restoration efforts and establish a regional black bear monitoring protocol by leveraging monitoring efforts in the three states, coordinating standardized protocols for sampling, and collaborating on analyses.

\$138,483

National Wild Turkey Federation

Enhancing Longleaf Habitat in West-Central Louisiana through Planting, Prescribed Fire, and Outreach

Establish or enhance 5,700 acres of longleaf pine to improve habitat for the Louisiana pine snake and red-cockaded woodpecker in west-central Louisiana, anchored by Fort Polk and Kisatchie National Forest. Project will provide financial assistance to plant new longleaf forests and enhance existing longleaf habitat with prescribed fire, as well as support landowner outreach and technical assistance through field days and development of forest management plans.

\$300,000

Reef Fish Conservation and Education Foundation

Engaging the Next Generation of Commercial Fishermen in the Gulf of Mexico (AL, FL, LA, MS, TX)

Develop a workforce training program to recruit and educate young fishermen for the commercial seafood harvesting sector. Project will engage fishery leaders from various fisheries across the Gulf of Mexico in face-to-face meetings to design and plan a young fishermen training program for the Gulf of Mexico and develop a review of similar programs around the United States.

\$25,835

Restore the Earth Foundation

Landscape-scale Restoration: A Green-Gray Approach to Gulf Coast Resiliency (LA)

Restore 4,000 acres of critical historic bald cypress forest at Pointe-aux-Chenes Wildlife Management Area in Montegut, Louisiana. Project will plant approximately 400,000 native trees to reduce vulnerability and increase protection from flood and storm risks for over 200,000 residents and habitat for native wildlife in the area.

\$2,614,998

Saltwater

Expanding and Improving the Use of Electronic Monitoring in the Gulf of Mexico Shrimp Trawl Fishery (multiple states)

Expand and improve the use of electronic monitoring in the Gulf of Mexico shrimp trawl fishery by installing electronic monitoring systems and collecting data on protected species interactions and red snapper bycatch volume and locations. Project will maximize the utility of the collected data for both fishery management and dealer verification of catch origin and sustainable fishing practices.

\$173,145

Stephen F. Austin State University

Monitoring Avian Response to Forest Management in the Lower Mississippi Alluvial Valley (AR, LA, MS, TX)

Develop a baseline inventory of bird species in bottomland hardwood restoration sites in the Lower Mississippi Alluvial Valley through the deployment of autonomous sound recorders. Project will compare baseline data to avian community metrics captured in bottomland hardwood forests at different successional stages to identify effective management activities used in forestry wildlife treatments and stages of stand development that need further treatments for maintaining desired forest conditions.

\$73,377

The Nature Conservancy

Restoring Forested Wetlands through a Wetland Reserve Enhancement Partnership (AR, LA, MS)

Restore and protect forested wetlands within high-priority areas in the Mississippi Alluvial Valley region of Arkansas, Mississippi, and Louisiana. Project will reforest 2,650 acres of marginal cropland, restore 600 acres of hydrologic wetland function and protect 3,300 acres with conservation easements, benefiting Louisiana black bear, swamp rabbits, waterfowl and neotropical migratory songbirds.

\$696,304

Water Institute of the Gulf

Assessing Wetland Restoration Alternatives in Port Fourchon (LA)

Use Louisiana Coastal Master Plan methods to design a nature-based approach for ecosystem restoration and community adaptation that utilizes dredged material from channel deepening to create and manage coastal wetlands. Project will work with partners to assess the possible benefits of a suite of restoration alternatives considering physical, ecological, and community metrics.

\$500,000

MAINE**Blue Planet Strategies****Reducing Entanglements of Critically Endangered Marine Life with Gear Tracking Technology (ME)**

Develop an innovative gear tracking technology to be tested in the New England groundfish fishery designed to track gear anchored at the sea floor connected by vertical line to surface buoys. Project will reduce entanglement of critically endangered marine life, reduce the amount of derelict gear and advance gear tracking technology.

\$231,000

Cape Cod Commercial Fishermen's Alliance Pre-Implementation of Electronic Monitoring in New England's Groundfish Fishery (MA, ME, NH, RI)

Advance electronic monitoring in New England's groundfish fishery by continuing operation of a successful pilot project and working with stakeholders to clarify standards and needs related to the technology. Project will engage 35 vessels to finalize electronic monitoring standards and ensure that data is effectively stored, shared, and used by regional stock assessment scientists and other data end users.

\$524,586

Gulf of Maine Research Institute Scaling Maximized Retention Electronic Monitoring in the Northeast Groundfish Fishery (MA, ME, NH, RI)

Expand the Maximized Retention Electronic Monitoring program by adding three to four vessels to the electronic monitoring fleet and refining in person dockside monitoring. Project will conduct outreach to vessels, assess the economic impacts of this programs previous years for fishermen, and continue review of collected electronic monitoring data.

\$405,000

Integrated Monitoring**Implementing Wireless Electronic Monitoring and Reporting Tools in New England (MA, ME, NH, RI)**

Expand broadband, wireless electronic reporting to high volume fishing vessels in New England, including ground fish vessels, limited access scallop vessels, and charter vessels. Project will demonstrate the scalability and transferability of wireless electronic monitoring technology and electronic reporting using broadband vessel monitoring system.

\$229,530

Maine Audubon Society Reconnecting Maine's Rivers Using Field Experience to Build Stream Restoration Capacity

Provide hands-on training to surveyors, civil engineers, municipal and state road professionals and engineering students that results in replacement road-stream crossings that reconnect previously blocked stream segments. Project will replace 24 poorly functioning culverts identified on priority public lands and roads, restore 2 miles of riparian forest and restore access to 36 miles of stream for native brook trout and Atlantic salmon and reduce flood hazard risk in Maine municipalities.

\$199,987

Maine Coast Fishermen's Association Piloting Electronic Monitoring in the Northern Gulf of Maine Scallop Fleet (ME)

Develop an electronic monitoring program for the northern Gulf of Maine scallop fleet to test the feasibility of electronic monitoring on small scallop vessels. Project will test the use of video recognition software for review, expand existing data collection to the Maine state water's fishery, and refine protocols for electronic monitoring in scallop fisheries.

\$95,811

Maine Coast Heritage Trust Bagaduce Watershed Fish Passage Restoration Project (ME)

Work at two sites in one town and watershed, identified as high value habitat for American eel, alewife, river herring, rainbow smelt, a variety of migratory birds and modeled former habitat for Atlantic salmon. Project will involve many partners and community members, who create a rock ramp nature-like fishway at one site, and construct fish passage improvements, dam repairs and public safety and education infrastructure at the second site.

\$250,000

Maine Coast Heritage Trust Restoring and Monitoring Fish Passage at Snows Brook in Sedgwick, Maine

Construct and monitor a fish restoration project using a community-driven approach in Sedgwick, Maine. Project will invest in construction and monitoring to enhance existing efforts by a community network to restore fish passage along a designated evacuation route and transportation artery, thus raising awareness of this and other restoration projects in the region.

\$490,000

Maine Coast Heritage Trust Snow Brook Fish Passage Restoration Project (ME)

Replace an aging highway culvert, which for decades has blocked all fish passage to 5.5 miles of stream and 155 acres of pond habitat. Project will provide access to the freshwater refugia and spawning habitat necessary to maintain sustainable populations of alewife and blueback herring, sea-run brook trout, eel, smelt and tomcod, indirectly providing increased food supply for and benefiting many birds, mammals and fish that feed on alewife and other species within this subwatershed of the Penobscot River watershed.

\$125,000

Manomet Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.

\$79,999

New England Marine Monitoring Integrating Artificial Intelligence Algorithms to Strengthen Electronic Monitoring (MA, ME, NH, RI)

Integrate existing artificial intelligence algorithms into electronic monitoring review, transmission, and storage workflows to reduce program costs. Project will advance the artificial intelligence used in the New England Groundfish electronic monitoring fisheries to automate catch accounting and streamline data storage thus addressing management priorities.

\$241,109

Project SHARE Enhancing Instream Habitat for Brook Trout and Salmon in Narraguagus River and Tributaries (ME)

Implement instream habitat restoration projects in Downeast Maine, specifically the Narraguagus River, Northern Stream and Third Lake Stream. Project will restore 4 miles of instream habitat to benefit Atlantic salmon and native brook trout using large woody material and engage 200 community members.

\$200,000

Town of Camden, Maine**Megunticook River Watershed Fish Passage and Flood Prevention Site Assessments and Design (ME)**

Develop a comprehensive plan to address fish passage, watershed connectivity barriers, flooding hazards, vulnerable infrastructure, and degraded stream and wetland habitat in the Megunticook River watershed. Project will include site assessment and alternatives analysis for six dams, and envisioning a sea wall where the river outlets to Camden Harbor.

\$139,000

Town of South Thomaston, Maine**Collection of Derelict Lobstering Gear in the Town of South Thomaston, Maine**

Facilitate a central collection bin for obsolete and derelict lobstering gear in the Town of South Thomaston, Maine, home to approximately 3,000 lobster harvesters. Project will recycle 55 tons of lobstering gear, including line, buoys, bait bags and plastic-coated metal traps, as well as gear from ground fishing, scalloping and clamming.

\$10,000

Wildlife Management Institute**Enhancing Forest Habitat for New England Cottontails, Golden-Winged Warbler and American Woodcock (multiple states)**

Enhance participation in Farm Bill programs by supporting habitat biologists and outreach specialists to interface with private landowners to provide young forest habitat for more than 50 Species of Conservation Need in New England. Project will develop forest management plans that utilize existing Best Management Practices, develop healthy diverse forest age classes, and protect riparian habitat values, improving management on 200 acres.

\$156,290

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

\$230,279

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.

\$297,289

Alliance for the Chesapeake Bay**Healthy Streams Farm Stewardship: Chesapeake Logperch 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 logperch.

\$487,837

Baltimore Green Space**Community Care of Urban Forest Patches: Preparing for Preservation in Baltimore (MD)**

Lead neighborhood efforts to plant perennials, shrubs, and trees and remove invasive plants and trash from three community forests in Baltimore City to help communities demonstrate their capacity to steward the land and strengthen native habitat and stormwater management functions. Project will engage 300 community members in educational programming and 100 volunteers in restoration activities to plant 38 trees and coordinate care on 3 acres.

\$48,067

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.

\$49,476

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

Draft and publish peer-reviewed literature summarizing the core set of lessons learned through the work of the Chesapeake Bay restoration partnership which are applicable to other watershed-based/partnership-based restoration efforts. Project will share the key lessons learned during the multi-decade, partnership-based, Chesapeake Bay restoration efforts, and will result in a multi-media series of "lessons learned" products.

\$25,316

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**

College of William and Mary, Virginia Institute of Marine Science**Using Mobile Applications to Turn Recreational Anglers into Community Scientists (MD, VA)**

Understand the success of the “eBird” application and explore how that approach could be adapted to engaging recreational anglers in community science. Project will determine the priorities and concerns recreational fishermen, fisheries managers, and fisheries scientists have regarding mobile applications, and use this input to begin developing an “eFish” application for community science based on this stakeholder input. **\$43,374**

Community Ecology Institute**Hickory Ridge Walkable Watershed Concept Plan Development for the Patuxent River Watershed (MD)**

Address stormwater management that brings key stakeholders and members of the community together with planners to develop a shared vision and set of priorities. Project will be a community-based concept plan that includes a network of stormwater management opportunity sites that focus on Patuxent River and Chesapeake Bay watershed restoration goals to address flooding and stormwater runoff, nutrient and sediment reduction, improving water quality, and improving access to community amenities. **\$49,949**

Delmarva Poultry Industry**Establishing a 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. **\$49,890**

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. **\$49,788**

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 year across the Greater Baltimore Wilderness Coalition territory, including Howard County, Baltimore County, and Baltimore City. **\$999,202**

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. **\$194,636**

Manomet**Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)**

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan. **\$79,999**

Metropolitan Washington**Council of Governments****River Herring Habitat Assessment for Oxon Run and Lower Beaverdam Creek (DC, MD)**

Evaluate river herring habitats upstream and downstream of the fish blockages and propose structures to provide passage for these blockages, monitor for the strength of river herring, and provide a brief study informational plan. Project will restore river herring access and use of high quality migratory stream habitat 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**

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 environmental concerns about excess nutrients to work together 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**

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**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**

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.

\$49,301

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

\$47,518

Shorivers**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 Dam Removal 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 dam removal and enables eDNA methods to be used to estimate run counts for long term population monitoring.

\$86,694

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.

\$49,699

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.

\$41,574

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

MASSACHUSETTS**Bridgewater State University****Restoring a Retired Cranberry Farm into an Atlantic White Cedar Wetland Habitat Complex (MA)**

Restore a 42 acre retired cranberry farm into a wetland complex dominated by Atlantic white cedar swamps and floodplains to provide habitat for native reptile and wetland plant species. Project will engage 50 local residents, 200 secondary school students and eight educators in educational outreach activities, as well as train four undergraduate students in restoration ecology.

\$49,621

Buzzards Bay Coalition**Marsh Island Salt Marsh Restoration Project in Fairhaven (MA)**

Remove historically placed dredged material to re-introduce tidal hydrology, and plant marsh vegetation. Project will create vital fish nursery habitat, enhance water quality, provide needed sandy material for nearby municipal coastal resilience projects, as well as build upon the significant investment over the past decade to improve water quality, expand fish passage, and permanently protect natural shorelines in Buzzards Bay.

\$2,000,000

Cape Cod Commercial Fishermen's Alliance**Developing a Crew Training Program for Young Fishermen in Cape Cod (MA)**

Develop a crew training program focused on safety and fishing skills to build capacity for the next generation of fishermen on Cape Cod. Project will prepare 60 to 80 participants with necessary knowledge for fisheries management, connect captains to competent crew members and promote fishing as a viable career path.

\$50,071

Cape Cod Commercial Fishermen's Alliance**Pre-Implementation of Electronic Monitoring in New England's Groundfish Fishery (MA, ME, NH, RI)**

Advance electronic monitoring in New England's groundfish fishery by continuing operation of a successful pilot project and working with stakeholders to clarify standards and needs related to the technology. Project will engage 35 vessels to finalize electronic monitoring standards and ensure that data is effectively stored, shared, and used by regional stock assessment scientists and other data end users.

\$524,586

City of Chicopee**Planning to Reduce Nitrogen Pollution and Improve Water Quality in Long Island Sound (MA)**

Prepare a study to identify low-cost improvements to reduce nitrogen pollution from a water pollution control facility in Chicopee, Massachusetts. Project will reduce effluent, a source of nitrogen pollution into Long Island Sound, by a minimum of 123,200 pounds annually. **\$14,738**

Cornell Cooperative Extension of Suffolk County

Implementing a Bycatch Avoidance Communication Network (MA, NH, NJ, NY, RI)
Expand the Bycatch Avoidance Communication Network to identify and report real-time bycatch of nine species, helping to avoid the implementation of restrictive management measures associated with this bycatch. Project will enhance the network by improving daily reporting rates, recruiting additional vessels to the network, and conducting five at-sea observer days to facilitate proper reporting. **\$57,621**

East Quabbin Land Trust**Finalizing Designs to Remove a Barrier to Brook Trout at Wheelwright Pond on the Ware River (MA)**

Complete final design and permitting for the removal of a significant barrier to aquatic organism passage at Wheelwright Pond on the Ware River in eastern Massachusetts. Project will set the stage for implementing the removal of the barrier and eventually reconnect 41 miles of upstream habitat, including 34 miles of high-quality eastern brook trout habitat, in a state-designated coldwater fishery resource. **\$89,995**

Eastern Research Group**Resilience Knowledge Capture and Transfer (MA)**

Identify and capture best practices and lessons learned from resilience practitioners and use them to develop learning products to help enhance the technical capacity of practitioners and decision makers so they may effectively implement resilience projects. Project will draw upon the knowledge base acquired from the implementation of a portfolio of large-scale resilience projects funded by NFWF, NOAA, and the DOI, and by documenting and sharing effective approaches for overcoming common challenges that have hindered project implementation in the past, project will result in more successful projects delivering greater impact that will be sustainable over the long-term. **\$190,933**

Fishing Partnership Support Services**Developing the Next Generation of Massachusetts Fishermen Through a Registered Apprentice Program**

Increase the fisheries workforce by training the next generation of professional fishermen. Project will utilize a four-week apprentice program registered with the state of Massachusetts to train the next generation of fishermen and improve safety, profitability, and conservation in the New England groundfish, scallop and lobster fisheries. **\$65,000**

Friends of the Assabet River National Wildlife Refuge**Peer-to-Peer Conference: "Creating Stronger and More Effective Friends Groups in Massachusetts"**

Host a Peer-to-Peer coaching event and convene five Friends groups at Assabet River National Wildlife Refuge. Project will focus on increasing organizational capacity, developing mechanisms for sharing resources and conservation practices, and increasing volunteerism for participating Friends organizations. **\$5,364**

Friends of Herring River**Permitting and Final Design for Herring River Tidal Restoration in Cape Cod (MA)**

Remove or replace man-made barriers to tidal flow to install an innovative tidal control infrastructure, which will allow tidal flow to be increased incrementally. Project will restore more than 890 acres of degraded former estuarine habitat and restore salt marsh and other native estuarine habitats throughout the river and its connected sub-basins, resulting in ecological and economic benefits to the region, Cape Cod Bay and the Gulf of Maine. **\$300,000**

Gulf of Maine Research Institute**Scaling Maximized Retention Electronic Monitoring in the Northeast Groundfish Fishery (MA, ME, NH, RI)**

Expand the Maximized Retention Electronic Monitoring program by adding three to four vessels to the electronic monitoring fleet and refining in person dockside monitoring. Project will conduct outreach to vessels, assess the economic impacts of this programs previous years for fishermen, and continue review of collected electronic monitoring data. **\$405,000**

Housatonic Valley Association**Developing a Municipal Culvert Cooperative to Improve Fish Passage in the Housatonic River (CT, MA)**

Create a municipal culvert cooperative that builds on years of road-stream crossing assessments and replacement planning work in the Housatonic River of western Massachusetts and northwest Connecticut. Project will complete 10 shovel-ready culvert designs and utilize two demonstration sites to show other municipalities best practices for stream restoration that benefit native brook trout and reduce flood hazard risks. **\$151,510**

Industrial Economics**Assessing the Socio-economic Impacts of Coastal and Emergency Resilience Projects (MA)**

Collect data on the core socio-economic metrics to measure and model the impact of about 60 projects funded through NFWF programs. Project will estimate the extent to which these resilience projects reduce the risk of flooding to communities from coastal storms, sea level rise, and nuisance flooding, and in the event of a significant flood event, determine the extent to which these resilience projects mitigated actual damage. **\$485,366**

Integrated Monitoring**Implementing Wireless Electronic Monitoring and Reporting Tools in New England (MA, ME, NH, RI)**

Expand broadband, wireless electronic reporting to high volume fishing vessels in New England, including ground fish vessels, limited access scallop vessels, and charter vessels. Project will demonstrate the scalability and transferability of wireless electronic monitoring technology and electronic reporting using broadband vessel monitoring system. **\$229,530**

Manomet**Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)**

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan. **\$79,999**

Mystic River Watershed Association**Creating a Trash Free Mystic River (MA)**

Enhance 66 acres of the Torbert Macdonald Park in the lower basin of the Mystic River by engaging 200 community volunteers, educating 10 teachers and providing stewardship opportunities to an additional 200 youths. Project will include land surveys to gather data on density of trash, removal and categorization of trash, and public events such as using canoes to keep urban waterways and riverfronts clean.
\$34,583

New Bedford Port Authority**Collection of Derelict Fishing Gear in New Bedford, Massachusetts**

Collect and recycle or convert to energy fishing gear from the Port of New Bedford, Massachusetts, the nation's most valuable commercial fishing port since 2001, home to approximately 350 commercial fishing vessels and 150 out-of-state fishing vessels. Project will recycle or convert to energy 86 tons of fishing gear, including nets and lobster pots.
\$9,696

New England Marine Monitoring**Integrating Artificial Intelligence Algorithms to Strengthen Electronic Monitoring (MA, ME, NH, RI)**

Integrate existing artificial intelligence algorithms into electronic monitoring review, transmission, and storage workflows to reduce program costs. Project will advance the artificial intelligence used in the New England Groundfish electronic monitoring fisheries to automate catch accounting and streamline data storage thus addressing management priorities.
\$241,109

Northern Middlesex**Council of Governments****Habitat Restoration and Trail and Park Visioning around Merrimack River (MA)**

Restore nearly 2 acres of degraded riverine habitat in a highly urbanized section of the Merrimack River. Project will engage 150 volunteers to remove invasive plants and replace with native flora of high habitat value and remove trash from 2 miles of riverfront for the benefit of riparian ecosystems and native bird species.
\$38,291

Rich Earth Institute**Deploying a Nitrogen Reclamation Project in the Long Island Sound Watershed — III (VT)**

Enhance the deployment of nitrogen reclamation technology in Windham County, Vermont, Franklin County, Massachusetts and Cheshire County, New Hampshire. Project will divert 150 pounds of nitrogen annually from entering the Connecticut River and downstream to Long Island Sound.
\$96,734

Springfield Water and Sewer Commission**Reducing Nitrogen into Long Island Sound at the Springfield Regional Wastewater Treatment Facility (MA)**

Install instruments to enhance nitrogen removal at the Springfield Regional Wastewater Treatment Facility in Springfield, Massachusetts. Project will eliminate 3,000 pounds of effluent total inorganic nitrogen annually that is currently loading from the plant into the Connecticut River and downstream to Long Island Sound.
\$290,385

The Trustees of Reservations**Using Salt Marsh Habitat Restoration for Resiliency (MA)**

Implement and monitor ditch remediation to restore salt marsh in Massachusetts' Great Marsh. Project will reverse salt marsh subsidence, reestablish and maintain high marsh habitat, improve coastal resilience and demonstrate ditch remediation as a viable and cost-effective restoration strategy at the landscape level.
\$217,931

Town of Chatham**Recycling Fishing Gear to Protect Fish and Wildlife and Reduce Derelict Fishing Gear in Chatham, Massachusetts**

Recycle previously used fishing gear from local fisherman in the Town of Chatham, Massachusetts, one of the biggest fishing communities on Cape Cod. Project will recycle or convert to energy 35 tons of fishing gear, including fishing rope, monofilament line, nets, heavy metal traps, light metal coated traps, dredges, nets, and buoys in order to protect fish and wildlife populations and reduce pollution during the peak beach season.
\$10,000

Town of Montague Planning Department**Green Infrastructure to Reduce Nitrogen Pollution at Montague Town Hall (MA)**

Construct green infrastructure in a paved lot near the Connecticut River in Turners Falls, Massachusetts. Project will prevent 77,882 gallons of polluted stormwater and 27 pounds of nitrogen from entering the Connecticut River and then downstream to Long Island Sound annually.
\$10,642

Town of Provincetown**Recovery and Recycling of Abandoned Fishing Gear in the Town of Provincetown (MA)**

Support the responsible recovery of abandoned fishing gear and limit offshore disposal practices in the lobster, sea scallop, groundfish, squid, mackerel and menhaden fisheries in Provincetown's MacMillian Pier, home to a fishing fleet of over 55 vessels. Project will collect approximately 70 tons of fishing gear, including lobster pots and cages, net, ropes, lines and chains.
\$12,000

Town of Rockport**Collection of Gear for Scallop, Lobster and Fishing Industries in the Town of Rockport (MA)**

Collect and recycle or convert to energy old, unused and broken fishing gear for the scallop, lobster and fishing industries in the Town of Rockport, Massachusetts. Project will recycle or convert to energy 4 tons of fishing gear and serve approximately 40 fishermen with the disposal of rope, monofilament line, nets, heavy metal traps, light metal plastic coated traps, dredges, nets and buoy.
\$11,904

Town of Scituate**Recover and Consolidate Fishing Gear in the Town of Scituate (MA)**

Work with the commercial fishing industry, volunteers, and Town of Scituate employees to recover and consolidate fishing gear in Cape Cod and Massachusetts Bays. Project will collect 54 tons of fishing gear, including plastic coated traps, heavy metal traps, heavy traps, nets, buoys, line, rope and monofilament nets.
\$10,000

Town of Wellfleet**Collection of Derelict Gear from Shellfish Aquaculture and Fishing Fleets in Wellfleet (MA)**

Collect derelict gear from shellfish aquaculture farmers and fishing fleets operating in Wellfleet, Massachusetts. Project will recycle or convert to energy 190 tons of aquaculture and fishing gear, including plastic nets, bags, buckets, metal cages, rebar, racks, zip-ties, buoys, wood frames, and rope, supporting the large aquaculture industry that employs 15 percent of Wellfleet's population and reducing beach and coastal pollution during the peak beach season.
\$3,900

Trout Unlimited**Restoring Instream Habitat and Engaging Private Landowners to Improve Fish Passage (MA, NY, VT)**

Restore instream and riparian forest habitat in priority locations based on previous outreach and training to private landowners, municipalities, and forestry professionals. Project will add large woody material to 5 miles of stream, restore 5 miles of adjacent riparian forest to create habitat for native brook and complete 90-percent designs for three aquatic barriers to be removed in the future.
\$133,842

Wildlife Management Institute

Enhancing Forest Habitat for New England Cottontails, Golden-Winged Warbler and American Woodcock (multiple states)
Enhance participation in Farm Bill programs by supporting habitat biologists and outreach specialists to interface with private landowners to provide young forest habitat for more than 50 Species of Conservation Need in New England. Project will develop forest management plans that utilize existing Best Management Practices, develop healthy diverse forest age classes, and protect riparian habitat values, improving management on 200 acres.
\$156,290

MICHIGAN**American Bird Conservancy****Providing Technical Assistance to Private Forestland Owners to Conserve At-Risk Bird Species (MI)**

Utilize Natural Resource Conservation Service incentive programs to assist landowners in the development of forest management plans to benefit at-risk bird species, and execute conservation practices on non-industrial private forestland in Michigan's Upper Peninsula and northern Lower Peninsula. Project will bring 1,000 acres of forestland under improved management to expand the availability of high-quality forest bird habitat across the landscape.
\$157,837

Arenac Conservation District**Restoring Wetland Habitat by Removing Invasive Phragmites in the Saginaw Bay Watershed (MI)**

Remove invasive phragmites from Saginaw Bay coastal wetlands previously treated and in surrounding wetlands that will receive initial treatment. Project will restore more than 1,500 acres by controlling invasive phragmites through an adaptive management strategy that uses pre- and post-treatment remote sensing and in-field monitoring.
\$530,099

Bat Conservation International**Enhancing Foraging Habitat for Bats Affected by White-Nose Syndrome in Michigan and Canada**

Improve survival of bats with white-nose syndrome (WNS) by enhancing their foraging efficiency in the fall, when bats accumulate critical fat reserves, and in spring, when bats are recovering from WNS. Project will use light and chemical attractants at seven sites in Michigan and Manitoba to concentrate insects near hibernacula in fall and spring to determine whether more insect prey improves survivability, with the goal of reducing the mortality rate from 71 percent to 30 percent.
\$249,995

City of Detroit**Restoring and Improving Habitat Connectivity in Historic Palmer Park (MI)**

Restore the aquatic habitat at Lake Frances in Detroit's Historic Palmer Park and connect it to Witherell Woods natural area. Project will restore more than 60 acres of habitat benefiting over 100 species of flora and fauna, improve public access and increase educational opportunities in unique natural areas rarely found in an urban setting.
\$300,000

City of Ecorse**Restoring Riparian Habitat and Improving Public Access at Ecorse Creek (MI)**

Engage an underserved community by raising awareness of natural resource assets and garner support for initiating the restoration of the Ecorse Creek watershed in Wayne County, Michigan. Project will restore 100 linear feet of riparian habitat, bring 3.88 acres of riparian corridor under management for invasive species and promoting native plant biodiversity, create safe public access to 3.7 miles of Ecorse Creek for kayaking or canoeing reach more than 3,300 community members and install an interpretive sign.
\$102,000

Clinton Conservation District**Increasing Farmer Participation in Conservation through Targeted Technical Assistance (MI)**

Increase farmer participation in conservation by implementing Natural Resource Conservation Service Farm Bill programs to do conservation planning and implement novel conservation practices in the Middle Grand River Watershed, Michigan. Project will hire a new technician to work with landowners to create and implement conservation management plans, bring 10,000 acres under improved management to improve soil and water quality and prevent 5,000 pounds of nitrogen runoff.
\$182,695

Columbus Township**Restoring and Improving Public Access to Columbus Township Roadside Park (MI)**

Build on the ongoing Belle river restoration project in Columbus Township, Michigan by planting native riparian species, controlling invasive species, restoring wetland habitat, and building public trails and fishing access. Project will re-vegetate 1,000 feet of riverbank, provide 0.2 acres of off-channel aquatic habitat, one paddle craft launch, and 1,500 feet of trails.
\$289,900

Conservation Resource Alliance**Improving Aquatic Organism Passage on the East Branch Maple River (MI)**

Restore fish passage barriers with channel spanning timber bridge structures, in-stream habitat and channel restoration to restore aquatic organism passage for brook trout, lake sturgeon, and other coldwater species, and improve degraded riparian habitat benefiting species such as the federally endangered Hungerford's crawling water beetle. Project will open 8 miles of stream, reduce sediment loading by 200 tons annually and rectify two passage barriers.
\$285,000

Conservation Resource Alliance**Reconnecting Blood Creek (MI)**

Fully restore connectivity on Blood Creek by opening the remaining 2.8 miles of stream for native fish passage. Project will replace existing culverts to improve water quality, increase spawning, rearing and refuge habitat, and restore hydrology and natural sediment movement.
\$64,000

Friends of Grand Rapids Parks**Improving Water Quality and Green Infrastructure through Urban Forestry (MI)**

Plant 1,500 diverse native and urban resilient trees in the Back Hills, Roosevelt Park, Burton Heights, Garfield Park and Alger Heights communities in Michigan to mitigate urban tree canopy losses, improve water quality and decrease stormwater runoff. Project will add 430,355 gallons of stormwater capacity annually and engage local low and middle-income communities.
\$249,506

Huron Pines Resource Conservation and Development Council**Implementing Nature-Based Solutions to Improve Water Quality (MI)**

Build community capacity to enable four coastal communities in Michigan to implement on-the-ground green infrastructure projects that have been identified and supported by city leaders and active community members. Project will add 500,000 gallons of stormwater storage annually and replace 0.4 acres of impervious surfaces with 0.7 acres of green infrastructure.
\$301,638

Huron Pines Resource Conservation and Development Council**Opening Coldwater Habitat for Brook Trout in the Pigeon River (MI)**

Improve fish passage to coldwater brook trout streams in the upper Pigeon River watershed by replacing four undersized road-stream crossings that are barriers to fish passage. Project will open 13 miles to benefit brook trout and other aquatic species by fully restoring habitat connectivity and a suite of other natural river processes.
\$146,763

Huron River Watershed Council**Improving Water Quality with Green Stormwater Infrastructure (MI)**

Design and install two green stormwater infrastructure projects in the City of Wixom, Michigan. Project will capture and infiltrate over 1.3 million gallons of runoff and reduce total phosphorus loading by 1.2 pounds annually, while improving base flow and dissolved oxygen in Norton Creek to better support diverse aquatic biota.

\$122,257

International Wildlife Refuge Alliance**Building Organizational Capacity Prior to the Opening of the Refuge Gateway (MI)**

Provide training for the organization's staff and volunteers, purchase donor management software, and update educational materials for Detroit River International Wildlife Refuge. Project will increase organizational capacity and knowledge of conservation prior to the opening of the Refuge Gateway.

\$22,786

Kalamazoo Nature Center**Restoring Prairie Fen Wetland and Upland Habitat by Managing Invasive Species (MI)**

Support land managers in the removal and management of invasive species in Southwest Michigan's Kalamazoo River watershed to restore prairie fen wetland habitats. Project will remove invasive species, reintroduce historical fire regimes, conduct annual monitoring and perform outreach activities to restore 1,500 acres of wetland.

\$137,427

Loyola University Chicago**Enhancing Biodiversity and Habitat Complexity in Cheboygan Marsh (MI)**

Restore and enhance biodiversity and habitat complexity in the Cheboygan Marsh-Duncan Bay Great Lakes coastal wetland complex by removing invasive cattail from 92 acres. Project will increase diversity of plants, amphibians, macroinvertebrates, fish, and birds within the coastal wetland complex, and result in the removal of 1,850 pounds of elemental phosphorus and 12,125 pounds of elemental nitrogen from the Great Lakes ecosystem.

\$185,215

Macomb County, Michigan**Restoring Riparian Habitat to Increase Biodiversity and Divert Runoff (MI)**

Restore 1.35 miles of riparian habitat along the Sterling Relief and Red Run drains in Macomb County, Michigan. Project will increase habitat complexity and biodiversity, connect new and existing habitat corridors, benefit native pollinators, plant 475 trees, 2,500 shrubs and 4,000 native pollinator plugs, develop a mile long waterfront trail, and capture and infiltrate an estimated 200,000 gallons of urban stormwater runoff per year.

\$300,000

Michigan Department of Natural Resources**Saginaw Bay Rock Habitat and Sediment Transport Reef (MI)**

Develop preliminary designs to restore critical reef spawning habitat, allowing for sediment transport and dispersing excessive wind/wave action in the bay to reduce flooding, erosion, sedimentation. Project will improve habitat for walleye, lake whitefish, lake trout, and other fish populations.

\$118,550

Michigan Trout Unlimited**Adding Woody Habitat Structures to Improve Habitat for Brook Trout (MI)**

Add varied types of woody habitat in areas of the Upper Manistee River with a documented lack of habitat heterogeneity and quality wood to improve habitat for brook trout and macroinvertebrates. Project will install 50 woody structures and restore 7 miles of stream.

\$150,000

National Wildlife Federation**Utilizing Detroit's Public Spaces to Create Habitat and Build Diverse, Resilient Communities (MI)**

Create high quality public green spaces while increasing community resiliency, public engagement, and stewardship in Detroit to install three large-scale GSI projects and six smaller rain gardens. Project will engage hundreds of community members through installation days, workshops, and garden tours and will divert more than 600,000 gallons of storm water annually.

\$290,000

Pollinator Partnership**Improving Pollinator Habitat Connectivity in the Midwest and Great Lakes Flyway (AR, IL, MI, MN, WI)**

Develop and expand a regional seed collection network program in the Midwest and Great Lakes region to support monarch butterflies, rusty patched bumble bees and other declining pollinator species. Project will improve more than 5,000 acres of pollinator habitat, collect 50 pounds of milkweed seed, collect 50 pounds of nectar plant seed, and propagate 2,000 milkweed and 1,000 nectar species seedlings.

\$74,971

St. Suzanne Cody Rouge Community**Resource Center****Supporting Green Stormwater Infrastructure in Detroit Faith Communities (MI)**

Support a network of churches in northwest Detroit, Michigan to maintain existing bioretention practices and install new green stormwater practices. Project will use Michigan native plants to capture water from a combined 18,600 square feet of surfaces and engage community youths in environmental education.

\$50,000

The Nature Conservancy**Design and Permitting for the North Maumee Bay Bottomlands Restoration (MI)**

Develop final design of a 75 acres restoration of emergent marsh and shrub-scrub peninsula in North Maumee Bay, Monroe County, Michigan to reduce inundation affecting infrastructure and improving water quality in areas receiving runoff from agricultural activities. Project will refine existing engineering plans, monitor baseline site conditions, and continue communication with permitting officials to complete design and permitting.

\$192,936

Trout Unlimited**Brook Trout Monitoring and Evaluation for Sustain our Great Lakes (multiple states)**

Conduct an evaluation to understand brook trout response, including abundance, young of year, multiple life stages, and effective breeders, to the improved access to and quality of habitat. Project will track progress towards the Great Lakes Business Plan stream habitat related goals.

\$292,650

Trout Unlimited**Conservation Assessment of Brook Trout and Planning and Impact Tool Development in the Great Lakes Region (multiple states)**

Conduct a broad-scale assessment of existing brook trout population viability within the U.S. portion of the Great Lakes watershed that will build off of and be compatible with the analysis and associated tools developed for NFWF's Mid-Atlantic/Northeast region. Project will assist NFWF in identifying conservation needs and priority investment areas throughout the basin and associated tools will enable NFWF to develop and measure population-based recovery goals over time across multiple NFWF landscapes, particularly the Northeast and Great Lakes.

\$126,967

Trout Unlimited**Reconnecting Cold-Water Stream Habitat in the Western Upper Peninsula of Michigan (MI)**

Improve aquatic connectivity, restore habitat in cold-water streams and increase watershed resiliency in the Western Upper Peninsula of Michigan. Project will rectify three fish passage barriers, open 21 miles of stream and restore 10 miles of instream habitat.

\$255,000

MINNESOTA**Friends of Crane Meadows National Wildlife Refuge****Constructing a Sedge Meadows Observation Deck at Crane Meadows National Wildlife Refuge (MN)**

Construct an educational kiosk, install a granite trail, and build an observation deck overlooking the last intact sedge meadow in Minnesota. Project will educate visitors about the importance of sedge meadows and provide hands-on experiences at Crane Meadows National Wildlife Refuge for students from eight local schools.

\$14,600

Monarch Joint Venture**Developing and Implementing a Monitoring and Evaluation Program for the Monarch Butterfly and Pollinators Conservation Fund (MN)**

Develop and implement an evaluation plan of NFWF's Pollinator Fund investment sites, including citizen science monitoring. Project will provide a formal report detailing NFWF's contribution to monarch habitat throughout the central flyway.

\$170,000

Pollinator Partnership**Improving Pollinator Habitat Connectivity in the Midwest and Great Lakes Flyway (AR, IL, MI, MN, WI)**

Develop and expand a regional seed collection and native plant materials network program in the Midwest and Great Lakes region to support monarch butterflies, rusty patched bumble bees and other declining pollinator species. Project will improve more than 5,000 acres of pollinator habitat, collect 50 pounds of milkweed seed, collect 50 pounds of nectar plant seed, and propagate 2,000 milkweed and 1,000 nectar species seedlings.

\$74,971

Prairie Enthusiasts**Increasing Technical Assistance to Engage Landowners in Pollinator Conservation (IA, IL, MN, WI)**

Create two landowner-focused staff positions and develop an outreach and technical assistance program in the upper Midwest to implement recovery plans for the monarch butterfly, Karner blue butterfly, and rusty patched bumble bee. Project will identify and engage private working landowners to carry out pollinator habitat restoration and management projects, bringing 3,000 acres under improved management and restoring 2,000 acres of habitat.

\$245,508

Trout Unlimited**Brook Trout Monitoring and Evaluation for Sustain our Great Lakes (multiple states)**

Conduct an evaluation to understand brook trout response, including abundance, young of year, multiple life stages, and effective breeders, to the improved access to and quality of habitat. Project will track progress towards the Great Lakes Business Plan stream habitat related goals.

\$292,650

MISSISSIPPI**Anthropocene Alliance****Higher Ground: Green Infrastructure for Resilience (multiple states)**

Convene six community-based organizations in disaster-prone neighborhoods to engage local partners to train volunteers and teach residents about nature-based practices and install six high visibility projects as a catalyst for broader implementation. Project will reach 600 community members and successes will be shared with peer flood survivors around the country through a network of 48 leaders in 22 states.

\$494,758

Ducks Unlimited**Enhancing Hydrology and Restoring Forests in the Lower Mississippi Alluvial Valley (AR, MS)**

Restore and enhance bottomland hardwood forests and wetlands on public and private lands within the Delta of Arkansas and Mississippi. Project will restore hydrology, enhance existing forests, and reforest areas to impact a total of 2,590 acres, benefiting migratory waterfowl, Louisiana black bear and other forested wetland-dependent species.

\$375,000

Florida Agricultural and Mechanical University**GIS Capacity and Training to Support Gulf-Wide Ecosystem Conservation and Restoration (AL, FL, LA, MS, TX)**

Provide geographic information system (GIS) expertise and training in support of Gulf-wide ecosystem conservation and restoration programs and projects. Project will develop GIS layers and maps where Gulf Coast Ecosystem Restoration Council and Natural Resources Damage Assessment projects have been approved for planning and implementation by the U.S. Department of Agriculture.

\$300,000

Land Trust for the Mississippi Coastal Plain Educational Outdoor Laboratories and Hydrology Restoration on the Tchoutacabouffa River (MS)

Create a restored green space for scientific and educational activities for the community that will ultimately improve ecological health and water quality. Project will restore the hydrology of a 9-acre pond, plant 75 trees, remove invasive plants on 4 acres, and engage 136 volunteers in restoration projects and 250 students at educational field days.

\$40,000

Louisiana Wildlife and Fisheries**Foundation****Revising the Lower Mississippi Desired Forest Condition for Wildlife Report (multiple states)**

Update the Lower Mississippi Valley Joint Venture's Desired Forest Condition for Wildlife report, which provides technical guidance to land managers on how to manage bottomland hardwood forests for the conservation of wildlife. Project will revise the report to integrate new science on the habitat needs of priority wildlife species, include updates from the Forest Resource Conservation Working Group, and add a section dedicated to the management of restored or young bottomland hardwood stands.

\$79,254

Mississippi Commercial Fisheries United**Developing a Strategic Framework for Permit Banking in the Gulf of Mexico Reef Fish Fishery (MS)**

Develop a strategic framework to advance permit and quota banking opportunities for Mississippi fishing communities in the Gulf of Mexico reef fish fishery. Project will develop a tool that could increase the capacity of individual fishermen and fishing businesses while helping to retain access to fisheries.

\$69,284

Mississippi Forestry Foundation**Partnering to Restore and Enhance Longleaf in Mississippi**

Establish 325 acres of longleaf pine and enhance an additional 4,000 acres of longleaf habitat with prescribed fire and thinning in south Mississippi. Project will coordinate restoration and outreach activities across multiple partners, engage private landowners through educational workshops, and provide technical and financial assistance to landowners to plant longleaf pine seedlings, implement prescribed burning, and remove mid-story hardwoods to improve habitat for gopher tortoise.

\$122,496

Mississippi River Trust

Forested Wetland Restoration in the Lower Mississippi River Floodplain (multiple states)

Reforest and protect frequently flooded, marginal cropland on private lands through the adoption of Wetland Reserve Easements in the active floodplain of the Lower Mississippi River. Project will establish 7,500 acres of bottomland hardwood forest to expand and enhance habitat and improve water quality, benefiting the Louisiana black bear, swamp rabbit, forest birds, waterfowl and freshwater fish.

\$653,696

Mississippi State University

Black Bear Monitoring in the Lower Mississippi Alluvial Valley (AR, LA, MS)

Monitor and collect baseline data on black bear movement, gene flow, and genetic isolation among five recovering populations within the Mississippi Alluvial Valley. Project will help assess black bear response to bottomland hardwood restoration efforts and establish a regional black bear monitoring protocol by leveraging monitoring efforts, coordinating standardized protocols for sampling, and collaborating on analyses.

\$138,483

National Audubon Society

2020 Guy Bradley Award
- Federal Winner (MS)

Retired Agent in Charge Tom Chisdock from the U.S. Fish and Wildlife Service is the federal level recipient of the 2020 Guy Bradley Award. The Pascagoula River Audubon Center is the beneficiary organization of his \$2,500 award.

\$2,500

Reef Fish Conservation and Education Foundation

Engaging the Next Generation of Commercial Fishermen in the Gulf of Mexico (AL, FL, LA, MS, TX)

Develop a workforce training program to recruit and educate young fishermen for the commercial seafood harvesting sector. Project will engage fishery leaders from various fisheries across the Gulf of Mexico in face-to-face meetings to design and plan a fisheries management training program for the Gulf of Mexico and develop a review of similar programs around the United States.

\$25,835

Stephen F. Austin State University

Monitoring Avian Response to Forest Management in the Lower Mississippi Alluvial Valley (AR, LA, MS, TX)

Develop a baseline inventory of bird species in bottomland hardwood restoration sites in the Lower Mississippi Alluvial Valley through the deployment of autonomous sound recorders. Project will compare baseline data to avian community metrics captured in bottomland hardwood forests at different successional stages to identify effective management activities used in forestry wildlife treatments and stages of stand development that need further treatments for maintaining desired forest conditions.

\$73,377

The Nature Conservancy

Restoring Bottomland Hardwood Forests in the Yazoo River Basin (MS)

Restore 1,000 acres of bottomland hardwood forests on marginal agricultural lands in the Yazoo River Basin of the Lower Mississippi Alluvial Valley. Project will restore habitat for Louisiana black bear, swamp rabbits and waterfowl, while improving water quality through sediment and nutrient reduction.

\$225,000

The Nature Conservancy

Restoring Forested Wetlands through a Wetland Reserve Enhancement Partnership (AR, LA, MS)

Restore and protect forested wetlands within high-priority areas in the Mississippi Alluvial Valley (MAV) region of Arkansas, Mississippi, and Louisiana. Project will reforest 2,650 acres of marginal cropland, restore 600 acres of hydrologic wetland function and protect 3,300 acres with conservation easements, benefiting Louisiana black bear, swamp rabbits, waterfowl and neotropical migratory songbirds.

\$696,304

Trout Unlimited

Engaging Landowners in Water Quality and Wildlife Habitat Farm Bill Programs (IA, IL, MN, WI)

Restore cold-water streams and watersheds in the Driftless Area, creating habitat practices for fish, shorebirds, amphibians, reptiles and other aquatic biota. Project will improve management on 525 acres, restore 30 miles of stream, prevent 9,000 tons of sediment and 4 tons of nutrient pollution from entering the system annually.

\$199,961

MISSOURI**Anthropocene Alliance**

Higher Ground: Green Infrastructure for Resilience (multiple states)

Convene six community-based organizations in disaster-prone neighborhoods to engage local partners to train volunteers and teach residents about nature-based practices and install six high visibility projects as a catalyst for broader implementation. Project will reach 600 community members and successes will be shared with peer flood survivors around the country through a network of 48 leaders in 22 states.

\$494,758

Louisiana Wildlife and Fisheries Foundation

Revising the Lower Mississippi Desired Forest Condition for Wildlife Report (multiple states)

Update the Lower Mississippi Valley Joint Venture's Desired Forest Condition for Wildlife report, which provides technical guidance to land managers on how to manage bottomland hardwood forests for the conservation of wildlife. Project will revise the report to integrate new science on the habitat needs of priority wildlife species, include updates from the Forest Resource Conservation Working Group, and add a section dedicated to the management of restored or young bottomland hardwood stands.

\$79,254

Mississippi River Trust

Forest and Wetlands Restoration and Management in the Mississippi River Basin (KY, MO, TN)

Restore and enhance privately owned upland, riparian and bottomland hardwood forests through technical and financial assistance within the Mississippi River Basin in Kentucky, Missouri and Tennessee. Project will engage private landowners to implement conservation practices on 3,000 acres to improve forest health, reduce forest fuels, improve water quality and improve ecological functions, benefiting forest birds, waterfowl and aquatic species.

\$222,000

Mississippi River Trust

Forested Wetland Restoration in the Lower Mississippi River Floodplain (multiple states)

Reforest and protect frequently flooded, marginal cropland on private lands through the adoption of Wetland Reserve Easements in the active floodplain of the Lower Mississippi River. Project will establish 7,500 acres of bottomland hardwood forest to expand and enhance habitat and improve water quality, benefiting the Louisiana black bear, swamp rabbit, forest birds, waterfowl and freshwater fish.

\$653,696

MONTANA

American Bird Conservancy

Advancing Grassland Bird Conservation through Landowner Outreach (MT, SD)
Promote educational opportunities and land stewardship activities in the Northern Great Plains by offering workshops and providing conservation technical assistance, developing conservation plans, and assisting private landowners in enrolling in Farm Bill programs. Project will enhance landowner knowledge of grassland conservation and soil health, implement sustainable wildlife-compatible management across the project area, and restore and improve management practices on 3,500 acres.
\$188,813

Chippewa Cree Tribe of the Rocky Boy's Reservation

Improving Grassland Habitat on the Rocky Boy's Indian Reservation (MT)
Enhance, protect and preserve the natural resources on the Rocky Boy's Indian Reservation in north-central Montana while protecting the rights of all tribal members, promoting sustainability, and providing for economic opportunity and education. Project will improve grassland connectivity and restore habitat by altering grazing management, using prescribed burning and modifying 19 miles of fencing.
\$220,000

Clark Fork Coalition

Water Transaction Development in the Clark Fork River Basin (MT)
Identify, implement and monitor water transactions in the Clark Fork basin of Montana. Project will improve stream flows and aquatic habitat conditions for native trout.
\$179,776

Climate Conservation

Building Resilience with the Aaniiih and Nakoda Nations (MT)
Increase ecological resilience in the Little Rockies by applying adaptive management techniques to restore ponderosa pine forests and protect irreplaceable cultural sites. Project will restore 300 acres and engage 450 community members through collaborative learning and outreach to encourage the community and regional leaders to prioritize adaptive management across all programs, with forest restoration serving as a visible example of resilience and opportunity.
\$261,470

Montana Department of Natural Resources and Conservation

Support for Water Transfers to Instream Flows (MT)
Assist organizations developing water transactions with review and coordination of project proposals. Project will efficiently process instream flow water right change applications to legally protect instream water acquired through water right transactions.
\$46,410

Montana Fish, Wildlife and Parks Collaborating with Landowners on Black-footed Ferret Conservation on Private Working Lands (MT)

Work with landowners to eliminate human-caused mortality of prairie dogs on private working lands in southeast Montana to maintain a stable food supply for black-footed ferret populations. Project will maintain habitat and introduce black-footed ferrets on 4,500 acres.
\$285,055

Montana Fish, Wildlife and Parks

Employing an Integrated Weed Management Approach to Restore Big Game Wintering Habitat (MT)
Implement an Integrated Weed Management approach to enhance elk, mule deer, and pronghorn habitat on Montana's Rocky Mountain Front. Project will improve forage quantity and quality on more than 260,000 acres of big game winter range.
\$299,958

Montana State University

Filling Demographic Information Gaps for the Declining McCown's Longspur (MT)
Identify population limiting factors for the McCown's longspur and the actions needed to slow and reverse the population decline. Project will assess high-priority information gaps on the breeding and migratory demographics of longspurs using native mixed-grass prairie, fallow fields and planted crop lands in northeastern Montana and restore 1,000 acres of marginal cropland to native grassland cover.
\$194,064

National Audubon Society

Increase Collaboration of Sagebrush Conservation (multiple states)
Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stakeholders and host field tour events that elevate on-the-ground conservation.
\$29,636

National Wildlife Federation

Approaches to Mitigate Fencing for Wildlife Movement (MT)
Improve habitat conditions through restoration, conservation and modifying fencing to improve movement and survival for pronghorn and other ungulates. Project will coordinate fence mitigation efforts in southwest Montana and guide landscape-level mitigation efforts.
\$83,040

Prickly Pear Land Trust

Conserving Private Grasslands through an Agricultural Land Easement Coordinator (MT)
Build on past success by sustaining the Agricultural Land Easement Coordinator position that is shared between the Montana Association of Land Trusts and the Natural Resource Conservation Service to facilitate coordination between the entities and increase the number of volunteer conservation easements on private land in Montana. Project will bring 60,000 acres under permanent conservation easements.
\$234,282

Ranchers Stewardship Alliance

Enhancing and Protecting Grasslands through Technical Assistance for Ranchers (MT)
Coordinate between the ranching and conservation communities in Blaine, Phillips and Valley counties, Montana, offering a suite of technical and financial tools for landowners. Project will improve management on 5,700 acres of grassland habitat to maintain a core grazing landscape.
\$298,888

Rocky Mountain Bird Observatory

Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)
Implement a network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.
\$250,000

Rocky Mountain Bird Observatory

Monitoring Grassland Bird Population Responses to Investments in the Northern Great Plains (MT, ND, NE, SD, WY)
Continue evaluating the impacts of NFWF-funded conservation easement and grazing management projects on priority grassland bird species in the Northern Great Plains. Project will compare density, population size, and trend of priority grassland birds between NFWF projects and controls within the Northern Great Plains region.
\$372,899

The Nature Conservancy**Expanding the Candidate Conservation Agreement with Assurances Program to Protect Grasslands (MT)**

Expand the Candidate Conservation Agreement with Assurances program to enter into voluntary agreements with landowners to conserve habitat for greater sage-grouse and multiple grassland bird species in the Missouri-Milk River Grasslands. Project will improve 26 miles of fencing to wildlife-friendly specifications, restore 5 acres of riparian habitat and improve management on 50,000 acres.
\$142,178

The Nature Conservancy**Increasing the Pace and Scale of Sagebrush and Mesic Habitat Restoration (MT)**

Increase the pace and scale of sagebrush habitat restoration in mesic seeps and streams in southwest Montana by developing a systematic, basin-scale inventory of mesic sites, funding a conservation coordinator position and advancing on-the-ground projects to restore habitats for sagebrush-obligate species. Project will implement a robust monitoring program, restore 150 acres of habitat on public lands and install 200 structures to improve hydrology on 15 acres of mesic habitat.
\$60,133

The Trust for Public Land**Conserving Habitat Connectivity in Kootenai Forestlands with a Permanent Conservation Easement (MT)**

Place a permanent conservation easement on nearly 30,000 acres of critical wildlife habitat, prime fisheries and highly productive timberland near the City of Libby in Lincoln County, Montana. Project will conserve habitat and landscape-scale connections for big game winter range and migration corridors, public access to outdoor recreation, protect clean drinking water for nearby communities, and sustain local jobs in the timber and outdoor recreation industries.
\$300,000

Trout Unlimited**Restoring, Reconnecting and Protecting Instream Flow in the Upper Clark Fork Basin (MT)**

Develop water right leases and transactions that work to augment streamflow and critical habitat for native trout species, including bull trout and westslope cutthroat trout, throughout the Clark Fork River basin, Blackfoot River and Bitterroot River subbasins. Project will reconnect key tributaries to their mainstems and restore chronically dewatered stream reaches.
\$124,034

U.S. Department of the Interior, Bureau of Land Management, Miles City Field Office**Improving Habitat Connectivity for Pronghorn and Mule Deer by Modifying Fences (MT)**

Facilitate pronghorn and mule deer movement and reduce neonatal mortality on Bureau of Land Management lands throughout eastern Montana. Project will modify 14 miles of fence in big-game winter ranges to wildlife friendly specifications.
\$50,000

World Wildlife Fund**Restoring Grasslands on Private Lands (MT)**

Recruit and implement restoration projects and to collect soil carbon data to monitor changes in ecosystem function at restoration sites on private lands in Blaine, Phillips and Valley counties in Montana. Project will restore more than 3,622 acres of marginal cropland to grassland.
\$266,206

World Wildlife Fund**Securing Black-Footed Ferret Populations Through Sylvatic Plague Mitigation (MT, SD)**

Establish a population of black-footed ferrets protected from sylvatic plague in the Missouri-Milk River Grasslands, Montana and central South Dakota. Project will improve the status of 20 black-footed ferrets at two reintroduction sites, recover prairie dog habitat lost to sylvatic plague at a third site, and set the stage to establish a new ferret population on private lands.
\$271,946

NEBRASKA**Pheasants Forever****Incentivizing Grassland Habitat Restoration on Private Working Lands in the Sandhills (NE)**

Provide incentives to landowners to enhance wildlife habitat on working lands in the Eastern Nebraska Sandhills by removing invasive cedar, improving grazing infrastructure and restoring habitat with prescribed fire. Project will improve management on 48,922 acres of private working lands, benefiting both cattle and wildlife.
\$75,837

Rocky Mountain Bird Observatory**Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)**

Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.
\$250,000

Rocky Mountain Bird Observatory**Monitoring Grassland Bird Population Responses to Investments in the Northern Great Plains (MT, ND, NE, SD, WY)**

Continue evaluating and quantifying the impacts of NFWF-funded conservation easement and grazing management projects on priority grassland bird species in the Northern Great Plains. Project will compare density, population size, and trend of priority grassland birds between NFWF projects and controls within the Northern Great Plains region.
\$372,899

Sandhills Task Force**Improving Grassland Habitat by Addressing Invasive Eastern Red Cedar Infestations (NE)**

Improve grassland bird and wildlife habitat in Nebraska's Sandhills on privately owned land by controlling eastern red cedar infestations and improving grazing systems. Project will use prescribed fire, mechanical treatment, remove seed sources and install watering locations to improve 10,000 acres and increase rangeland resiliency for drought and future cedar invasion.
\$300,000

NEVADA**Lincoln County Conservation District****Installing Beaver Dam Analogs to Restore Wilson Creek's Wetland and Sagebrush Habitat (NV)**

Restore Wilson Creek's historic wetland value by constructing beaver dam analogs out of pinyon and juniper trees to raise the water table and restore sagebrush landscape. Project will install 100 beaver dam analogs and plant sedge and willow clippings along the creek bank to aid stabilization.
\$82,359

National Audubon Society**Increase Collaboration of Sagebrush Conservation (multiple states)**

Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stake holders and host field tour events that elevate on-the-ground conservation.
\$29,636

Paradise Sonoma Conservation District**Installing Drainage Structures to Restore Stream and Wet Meadow Hydrology (NV)**

Work across public and private boundaries in local streams, seasonal springs and drainages to restore and improve hydrology in meadow and mesic systems in north central Nevada. Project will restore 100 acres of mesic habitat by installing 170 low-tech restoration structures, including beaver dam analogs, rock dams, rock Zuni bowls, post vanes and rock baffles.

\$27,500

State of Nevada**Removing Invasive Pinyon and Juniper to Conserve Mule Deer Winter Range (NV)**

Restore winter ground in the Ruby Mountains, south of Elko, Nevada by treating invasive pinyon and juniper trees with a combination of hand-thinning, mastication, weed abatement and seeding. Project will restore 1,100 acres of habitat for mule deer.

\$200,000

The Regents of the University of California**Headstarting Tortoises and Raven Predation Pressure on Tortoise Recruitment (CA, NV)**

Utilize radio-telemetry to track head-started Mojave desert tortoises that have been released in the wild to estimate size-dependent survival and use lifelike tortoise models and camera traps to evaluate the role of raven predation in size-dependent tortoise mortality. Project will use collected information to gauge the effectiveness of desert tortoise head-starting as a recovery tool and to understand the role that ravens play in limiting survival and recruitment of young tortoises into declining desert tortoise populations.

\$299,658

Trout Unlimited**Lahontan Cutthroat Trout Core Grant 2020 (CA, OR, NV)**

Address the needs identified in the Lahontan Cutthroat Trout (LCT) Business Plan. Project will provide partner coordination, science guidance, and field crew activities, including LCT expansion, hybridization management/assessment, barrier retrofitting and design, and eDNA monitoring.

\$582,702

Truckee Meadows Parks Foundation**Truckee Meadows Nature Study Area and Wetland Restoration (NV)**

Restore 40 acres of a decommissioned golf course to return it to a wetland, riparian and upland system and nature study area in Reno, Nevada. Project will engage 150 volunteers to restore 5 acres of emergent wetland, 27 acres of wet meadow, and 8 acres of upland through invasive species removal, plant 200 trees in riparian areas and provide 500 community member opportunities for recreation and public education.

\$30,000

Walker Basin Conservancy**Water Acquisitions Grant No. 2 (NV)**

Acquire Willow Stay Ranch II, LLC (Alton and Susan Anker). Project will purchase 2,626 acre-feet of water to aid in the goal of restoring Walker Lake to a 12,000 total dissolved solids level.

\$8,580,000

Western Rivers Conservancy**Conserving Habitat for Sage-grouse and Restoring Hydrology for Lahontan Cutthroat Trout (NV, OR)**

Restore greater sage-grouse habitat, reintroduce a metapopulation of Lahontan cutthroat trout and habitat connectivity to the greater sagebrush landscape on Disaster Peak Ranch, straddling the Nevada-Oregon border. Project will permanently conserve the Disaster Peak Ranch, bringing 3,345 acres under improved management and restoring improved hydrology in the mesic areas of the ranch.

\$100,668

NEW HAMPSHIRE**Androscoggin River Watershed Council****Removing Barriers to Fish Passage in Three Priority Headwater Streams to Benefit Brook Trout (NH)**

Restore aquatic organism passage in the Stearns Brook subwatershed of northeast New Hampshire by removal of barriers to passage for eastern brook trout in three high-quality headwater streams, Clay Brook, the South Branch of Stearns Brook and Alder Brook. Project will replace three undersized culverts with bridges, reconnecting 6 miles of critical upstream cold water habitat in an area which is targeted as a priority by the New Hampshire Fish and Game Department.

\$135,020

Cape Cod Commercial Fishermen's Alliance**Pre-Implementation of Electronic Monitoring in New England's Groundfish Fishery (MA, ME, NH, RI)**

Advance electronic monitoring in New England's groundfish fishery by continuing operation of a successful pilot project and working with stakeholders to clarify standards and needs related to the technology. Project will engage 35 vessels to finalize electronic monitoring standards and ensure that data is effectively stored, shared, and used by regional stock assessment scientists and other data end users.

\$524,586

Connecticut River Watershed Council**Implementing an Innovative Approach to Restore Forests on Upper Connecticut River (NH, VT)**

Restore healthy riparian forests and floodplains in tributaries of the Upper Connecticut River in New Hampshire and Vermont that provide important habitat for freshwater mussels, fish, birds and pollinators. Project will implement an innovative, 10 acre floodplain restoration from an old hay field and restore 3 miles of riparian forest to improve water quality and benefit native brook trout, wood turtle, rusty blackbird and other aquatic and riparian species.

\$174,214

Connecticut River Watershed Council**Restoring Riverbanks to Reduce Nitrogen (NH)**

Install bioengineered streambank stabilization and riparian restoration projects in Coos and Cheshire counties, New Hampshire. Project will eliminate 80 pounds of nitrogen annually flowing into the Connecticut River downstream to Long Island Sound.

\$280,769

Cornell Cooperative Extension of Suffolk County**Implementing a Bycatch Avoidance Communication Network (MA, NH, NJ, NY, RI)**

Expand the Bycatch Avoidance Communication Network to identify and report real-time bycatch of nine species, helping to avoid the implementation of restrictive management measures associated with this bycatch. Project will enhance the network by improving daily reporting rates, recruiting additional vessels to the network, and conducting five at-sea observer days to facilitate proper reporting.

\$57,621

Greater Lovell Land Trust**Developing a Watershed Management Plan for the Upper Saco River to Improve Water Quality (NH)**

Develop a watershed-based management plan for Kearsarge Brook in the Saco River that will outline strategies to protect source water and address water quality impairment identified by the New Hampshire Department of Environmental Services. Project will result in a community-supported and data-driven plan that meets the criteria for Natural Resource Conservation Service National Water Quality Initiative standards and the Environmental Protection Agency Clean Water Act Section 319 program requirements.

\$115,206

Gulf of Maine Research Institute**Scaling Maximized Retention Electronic Monitoring in the Northeast Groundfish Fishery (MA, ME, NH, RI)**

Expand the Maximized Retention Electronic Monitoring program by adding three to four vessels to the electronic monitoring fleet and refining in person dockside monitoring. Project will conduct outreach to vessels, assess the economic impacts of this programs previous years for fishermen, and continue review of collected electronic monitoring data.

\$405,000

Integrated Monitoring**Implementing Wireless Electronic Monitoring and Reporting Tools in New England (MA, ME, NH, RI)**

Expand broadband, wireless electronic reporting to high volume fishing vessels in New England, including ground fish vessels, limited access scallop vessels, and charter vessels. Project will demonstrate the scalability and transferability of wireless electronic monitoring technology and electronic reporting using broadband vessel monitoring system.

\$229,530

Maine Coast Fishermen's Association**Piloting Electronic Monitoring in the Northern Gulf of Maine Scallop Fleet (ME)**

Develop an electronic monitoring program for the northern Gulf of Maine scallop fleet to test the feasibility of electronic monitoring on small scallop vessels. Project will test the use of video recognition software for review, expand existing data collection to the Maine state water's fishery, and refine protocols for electronic monitoring in scallop fisheries.

\$95,811

New England Marine Monitoring**Integrating Artificial Intelligence Algorithms to Strengthen Electronic Monitoring (MA, ME, NH, RI)**

Integrate existing artificial intelligence algorithms into electronic monitoring review, transmission, and storage workflows to reduce program costs. Project will advance the artificial intelligence used in the New England Groundfish electronic monitoring fisheries to automate catch accounting and streamline data storage thus addressing management priorities.

\$241,109

New Hampshire Fish and Game Department**Annual Coastal Lobster Trap Cleanup (NH)**

Collect and recycle or convert to energy derelict lobster traps through an annual collection event in partnership with the New Hampshire Fish and Game Department, commercial harvesters, municipalities, and volunteers. Project will recycle or convert to energy 30 tons of lobster traps, utilizing disposal bins at Rye and Hampton Harbors.

\$4,995

**New Hampshire Fish and Game Department
Gear Collection in Seabrook (NH)**

Provide a reliable and cost-free solution for the disposal of damaged and derelict fishing gear to benefit coastal waterways, recreational parks, and marine habitats. Project will recycle or convert to energy 30 tons of fishing gear, primarily consisting of metal lobster traps, and distribute educational materials to the local fishing community to encourage participation.

\$9,999

Rich Earth Institute**Deploying a Nitrogen Reclamation Project in the Long Island Sound Watershed — III (VT)**

Enhance the deployment of nitrogen reclamation technology in Windham County, Vermont, Franklin County, Massachusetts and Cheshire County, New Hampshire. Project will divert 150 pounds of nitrogen annually from entering the Connecticut River and downstream to Long Island Sound.

\$96,734

The Nature Conservancy**Forest Management Practices (NH)**

Develop and implement a collaborative forest management decision support tool for creating forest and riparian habitat management plans. Project will create at least four forest management plans and two demonstration sites to implement forest management practices on blocks larger than 10,000 acres and improve management on 150 acres to benefit forest birds, including wood thrush and American woodcock.

\$165,218

Town of Hampton**Site Assessment and Preliminary Designs to Mitigate Flooding in Hampton (NH)**

Conduct a site assessment of chronic high tide and episodic coastal storm-based flooding in barrier beach neighborhoods along the harbor-side of the Hampton-Seabrook Estuary. Project will provide conceptual recommendations for flood mitigation strategies and select high-priority strategies to restore natural hydrology and improve estuarine salt marsh habitat.

\$185,800

Wildlife Management Institute**Enhancing Forest Habitat for New England Cottontails, Golden-Winged Warbler and American Woodcock (multiple states)**

Enhance participation in Farm Bill programs by supporting habitat biologists and outreach specialists to interface with private landowners to provide young forest habitat for more than 50 Species of Conservation Need in New England. Project will develop forest management plans that utilize existing Best Management Practices, develop healthy diverse forest age classes, and protect riparian habitat values, improving management on 200 acres.

\$156,290

NEW JERSEY**American Littoral Society****Improving Habitat Quality for Horseshoe Crab and Red Knot in Cape May County (NJ)**

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.

\$486,658

American Littoral Society**Improving the Resiliency of Horseshoe Crab and Shorebird Habitat (NJ)**

Improve the resiliency of 0.34 linear miles (5.8 acres) of important horseshoe crab spawning and red knot foraging beach habitat at Fortescue beach located in Downe Township, New Jersey by creating up to 1,200 linear feet of hybrid living reef breakwaters that will minimize sand loss during winter storms. Project will engage eight local partners, 250 volunteers and reach 2,500 people through our existing outreach programs to include horseshoe crab tagging and re-sighting.

\$500,000

American Littoral Society**Managing Anthropogenic Disturbances to Migratory Shorebirds in Delaware Bay (NJ)**

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.

\$86,700

American Littoral Society**Pocket Park Green Stormwater Infrastructure in the Cohansey Watershed (NJ)**

Improve stormwater retention potential of a stormwater "pocket park" by installing tree trenches and increase the permeability of the park's compacted soils with the use of deep rooted, native grasses. Project will reduce paved impervious surfaces and improve management of 30 pounds per year of total suspended solids in runoff that flows directly into Indian Field Branch.

\$95,632

Borough of Barnegat Light

Collection of Fishing Gear and Public Outreach in the Borough of Barnegat Light (NJ)
Collect fishing nets and materials and provide outreach to the fishing community in the Borough of Barnegat Light in New Jersey, home to a large commercial fishing industry. Project will recycle or convert to energy approximately three tons of fishing gear.
\$10,000

Cornell Cooperative Extension

Implementing a Bycatch Avoidance Communication Network (MA, NH, NJ, NY, RI)
Expand the Bycatch Avoidance Communication Network to identify and report real-time bycatch of nine species. Project will enhance the network by improving daily reporting rates, recruiting additional vessels to the network, and conducting five at-sea observer days to facilitate proper reporting.
\$57,621

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

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.
\$200,000

Delaware State University

Developing Risk Assessment Framework for Atlantic Sturgeon (DE, NJ, PA)
Provide 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.
\$312,129

Delaware State University

Identifying Environmental Drivers of American Eel Emigration in the Delaware River (DE, NJ, NY, PA)
Model the outmigration of adult, silver-phase American eel in 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, informing conservation and management of American eel in impounded systems where passage and increased mortality are key concerns.
\$225,177

Friends of the Heinz Refuge at Tinicum

Developing a Marketing Plan for Delaware Valley Friends Organizations (DE, NJ, PA)
Develop a marketing plan to build membership for John Heinz National Wildlife Refuge at Tinicum, Bombay Hook National Wildlife Refuge, and Edwin B. Forsythe National Wildlife Refuge. Project will raise awareness of the participating Friends organizations and their conservation value to acquire and maintain active members and volunteers.
\$13,200

Groundwork Hudson Valley

Walkkill-Saw Mill Riparian Restoration Partnership (NJ, NY)
Improve riparian conditions along two tributaries to the Hudson River by restoring 7 acres of habitat. Project will engage 50 youths and 300 volunteers and create 15 jobs for students recruited from Yonkers public schools to revegetate the riparian corridor with 1,000 willow species, sycamores, silver maples, dogwood shrubs and button bushes and to remove invasive vines on 2 acres.
\$49,574

Manomet

Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)
Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.
\$79,999

Mercer County Park Commission

Installation of a Living Shoreline and Enhancing Public Access in Roebling Park (NJ)
Implement a restoration effort at Roebling Park in Hamilton, New Jersey to secure eroded shoreline, preserve Native American artifacts, and reintroduce freshwater mussels. 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.
\$150,000

**Musconetcong Watershed Association
Habitat Management and Restoration in the Musconetcong Watershed (NJ)**

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.
\$224,999

Musconetcong Watershed Association

Push Back the Lawn — Incentivizing Landowners to Protect their Streams (NJ)
Simplify and incentivize riparian buffers by conducting a community-based initiative within the Lower-Middle Musconetcong Watershed. Project will establish new or improved riparian buffers along 2 miles of the Musconetcong River through targeted outreach and planning with public and private river and tributary front landowners in the Watershed.
\$175,000

NY/NJ Baykeeper

Determining Design Alternatives for A Nature-based Approach to Coastal Community Protection at Naval Weapons Station Earle (NJ)
Stabilize the shoreline around U.S. Naval Weapons Station Earle to protect the surrounding community and enhance the coastal habitat. Project will conduct a preliminary design and site assessment focused on performing a coastal engineering evaluation to determine the most suitable design alternatives for a nature-based approach to the protection of coastal communities.
\$154,744

National Wildlife Federation

Delaware River Basin Urban Wildlife Community Engagement Program (DE, NJ, NY, PA)
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.
\$499,999

New Jersey Audubon Society

Implementing Agricultural Best Management Practices in the Kirkwood Cohansey Aquifer — IV (NJ)
Minimize agricultural impacts to water resources in the Kirkwood Cohansey Cluster geography of the Delaware River Watershed Initiative by targeting preserved farms and those with a diversity of crop types through the Healthy Land and Waters Grant program. Project will address key stressors to the Kirkwood Cohansey aquifer from agricultural and forested landscapes by implementing 250 acres of best management practices and 5 acres of wetland restoration.
\$159,108

New Jersey Audubon Society

Restoring Atlantic White-Cedar in the Maurice River and Rancocas Creek Watersheds (NJ)
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. **\$94,823**

New Jersey Audubon Society

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

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. **\$114,740**

New Jersey Conservation Foundation

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

Conduct baseline monitoring data, perform engineering studies, design spillways and recreational access trails along the Burrs Mill Branch of the Rancocas River. Project will design a plan to protect 438 acres of land on a former cranberry farm, resulting in water quality improvements and creation of exemplary passive recreational opportunities. **\$146,996**

New Jersey Department of Transportation Using Dredged Material to Enhance Marsh at Edwin B. Forsythe National Wildlife Refuge (NJ)

Restore and improve 30 acres of previously storm damaged Good Luck Point Marsh using the technique of Sediment Enrichment. Project will use dredged material to enhance the saltmarsh environment and habitat allowing for the natural sediment to remain in the estuarine system, feeding the marsh and replenishing loss from erosion and sea-level rise. **\$2,000,000**

North Jersey RC&D Area

Implementing Data-Driven Agriculture Conservation Practices (NJ)

Increase implementation of agricultural best management practices in the Lower-Middle Musconetcong watershed in the New Jersey Highlands Cluster geography of the Delaware River Watershed Initiative. Project will utilize environmental data to target technical and financial assistance toward conservation practice implementation on over 1,000 acres, achieving the greatest positive impact on water quality. **\$249,810**

Partnership for the Delaware Estuary

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

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. **\$178,028**

Pinelands Preservation Alliance

Addressing Flooding and Stormwater in Burlington County (NJ)

Provide homeowners and municipalities with expert advice and financial assistance to create rain gardens and other nature-based infrastructure projects that capture polluted stormwater and prevent it from entering lakes and rivers. Project will reach 1,000 community members and 500 volunteers and offer a technical assistance workshop where Rutgers University engineers will design rain gardens for homeowners and municipalities will get one-on-one assistance and designs for large-scale projects. **\$204,000**

Princeton Hydro

South River Ecosystem Restoration and Flood Resiliency Enhancement Project (NJ)

Conduct an ecosystem restoration site assessment and design for 165 acres of tidal marshes and transitional forest in New Jersey's Raritan River Watershed, which will provide high quality habitat for fish, resident birds, and migratory species. Project will result in an engineering plan sheet with a permit-ready design to reduce coastal inundation and erosion along 2.5 miles of shoreline for neighboring flood-prone communities and enhance breeding and/or foraging habitat for 10 state-listed threatened and endangered avian species. **\$249,635**

Stockton University

Derelict Blue Crab Trap Recycling Event for New Jersey Bays

Provide recycling and energy production services for the disposal of derelict blue crab traps from New Jersey coastal bays at a one-week event at the Stockton University Maine Field Station. Project will recycle or produce energy from up to 500 blue crab traps, providing both direct and indirect economic benefits to commercial industry partners in New Jersey. **\$1,650**

Sussex County Municipal Utilities Authority-Walkkill River Watershed Management Group

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

Restore and enhance 10 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. **\$70,116**

The Nature Conservancy

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

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 benefiting resident and migratory fish species, reconnecting 15.8 miles of stream and improving the overall ecological function of the Paulins Kill watershed. **\$498,797**

U.S. Department of the Interior, Fish and Wildlife Service

Tidal Marsh Restoration at Reeds Beach (NJ)

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. **\$50,000**

Wildlife Management Institute

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

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. **\$199,982**

NEW MEXICO

Conservation Science Global

Pollinators for Rare Plants in New Mexico (NM)

Research the 10 rare plants that occur in New Mexico that are threatened by habitat fragmentation and landscape change.

Project determine pollinators for each of the plants, whether the pollinators are a limiting factor in successful seed set for the plants, and what the resource requirements for the pollinators are, in order to generate management plans for these pollinators.

\$90,000

Middle Rio Grande Conservancy District Water Conservation Pilots and Habitat Restoration to Sustain Agriculture and Species in the Middle Rio Grande (NM)

Improve riparian and aquatic habitat at up to four outfall sites where conveyed water re-enters the Rio Grande, execute irrigation efficiency pilot projects on up to five lateral diversions, and implement a late-season forbearance native water leasing pilot beginning in the 2020 irrigation year. Project will provide Rio Grande silvery minnow with refuge and spawning habitat, with focus on low flow critical periods.

\$1,000,000

National Audubon Society

Activating a Community for the Middle Rio Grande (NM)

Empower local river stewards to restore and enhance riparian habitat in the Middle Rio Grande for birds and people. Project will recruit 125 community members, students and teachers to plant 200 native trees, shrubs and plants on 6 acres of riparian habitat and engage 11,000 people in storytelling through digital media.

\$25,000

New Mexico Association of Conservation Districts

Modifying Fences to Improve Habitat Connectivity for Ungulates (NM)

Improve fencing to wildlife-friendly specifications to provide permeability into historic winter range habitat for pronghorn, elk and mule deer in the Taos Plateau. Project will modify or remove 20 miles of fencing.

\$153,818

New Mexico Association of Conservation Districts

Pronghorn Restoration in the Southeast Plains: II (NM)

Expand ongoing efforts to restore grassland habitat and facilitate broader pronghorn movement throughout its historic range within Lincoln, Chaves and Eddy counties, New Mexico. Project will modify 40 miles of fence and remove mesquite across 13,000 acres of grassland in historic pronghorn antelope habitat.

\$246,534

New Mexico Department of Game and Fish Rio Chama Aquatic Habitat Restoration (NM)

Improve instream habitat and channel function for resident fish species, including Rio Grande chub, brown trout, and rainbow trout, and enhance riparian health for several associated wildlife species. Project will increase fish passage and riparian health and function through channel shaping and revegetation.

\$100,000

Pheasants Forever

Coordinating Range Wildlife Conservation in the Lesser Prairie Chicken Range (CO, KS, NM, OK, TX)

Work with private landowners and other partners to implement on-the-ground riparian habitat restoration across the lesser prairie chicken range. Project will enroll landowners into voluntary contracts that will restore or improve management on 30,000 acres of southwestern grassland habitat.

\$101,436

Rio Puerco Alliance

Brazos River and Tributaries Wetland and Stream Restoration (NM)

Restore Encinado Creek to provide access to the floodplain, and minimize bank erosion and a narrowing width/depth ratio. Project will prevent erosion, raise the water table, and spread water as sheet flow, lowering stream temperatures, reducing runoff and creating improved habitat for the threatened and endangered species that live in the project area.

\$151,684

Rocky Mountain Bird Observatory

Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)

Implement a network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.

\$250,000

Rocky Mountain Bird Observatory

Monitoring Wintering Grassland Birds in the Chihuahuan Desert — IV (NM)

Apply a rigorous sampling protocol to estimate the density of wintering grassland birds in the Chihuahuan Desert, including Sprague's pipits and chestnut-collared longspurs. Project will implement a previously-developed monitoring program to produce baseline estimates of wintering bird populations and evaluate the impact of ongoing grassland restoration investments.

\$230,000

The Trust for Public Land

Protection of Cañon Ciruela for Incorporation into the Sabinoso Wilderness (NM)

Work with the Bureau of Land Management to acquire the 8,914 acre Cañon Ciruela property in eastern New Mexico as an addition to the Sabinoso Wilderness. Project will significantly increase the size of the Wilderness, support habitat for numerous species, and improve public access.

\$450,000

Trout Unlimited

Rio Chama/San Antonio Rio Grande Cutthroat Trout Restoration (NM)

Advance cutthroat conservation objectives outlined in the 2013 Rio Grande Cutthroat Trout Conservation Strategy, a multi-partner document intended to ensure Rio Grande cutthroat persistence throughout its range. Project will entail partner coordination, site characterization, project prioritization, and project implementation in the possible locations of Nabor and East Wolf Creeks, and Rio Brazos in the upper Rio Chama basin, and in several streams in the Rio San Antonio basin, all in northern New Mexico.

\$96,059

University of Oklahoma

Developing Tools to Advance Grassland Bird Wintering Habitat Management Practices (CO, NM, OK, TX)

Expand on an existing framework studying the wintering ecology of longspurs and other grassland birds in the Great Plains using species distribution modeling, automated radio telemetry biologging, and weather radar analysis. Project will develop tools to improve field grassland bird surveys to more accurately estimate abundance and habitat usage, and to improve grazing management regimes to best advance bird conservation.

\$138,145

NEW YORK

Academy of Natural Sciences of Drexel University

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

Study the diversity and functioning of headwater streams, their potential resilience, and the species in their watersheds that are vulnerable to human activities and 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.

\$327,500

Atlantic Marine Conservation Society
Secure Marine Mammal Tissue Sample Archive
Purchase a equipment to house marine mammal tissue samples. Project will replace a specialized ultra-low freezer that is failing to preserve the region's archived samples.
\$14,564

Bronx River Alliance
Project Water DROP: Detecting River Outfalls and Pollutants (NY)
Monitor water quality along the entire Bronx River in the Bronx and Westchester County, New York. Project will improve water quality and management of the Bronx River downstream to Long Island Sound by identifying and addressing sources of illicit pollution and informing the update to the watershed-scale Bronx River Intermunicipal Watershed Plan.
\$49,232

Chesapeake Bay Commission
Lessons Learned from Decades of Experiences of the Chesapeake Bay Program Partnership (multiple states)
Draft and publish peer-reviewed literature summarizing the core set of lessons learned through the work of the Chesapeake Bay restoration partnership which are applicable to other watershed-based/partnership-based restoration efforts. Project will share the key lessons learned during the multi-decade, partnership-based, Chesapeake Bay restoration efforts, and will result in a multi-media series of "lessons learned" products.
\$25,316

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

Citizens Campaign Fund for the Environment
Developing a Long Island Sound Student Action Plan (NY)
Deliver an educational program about challenges to restoration and protection of the health and living resources Long Island Sound at four high schools on Long Island, New York. Project will deliver a shared Student Action plan for the Sound.
\$65,500

City Island Oyster Reef
Viva La Sound! Cultivating Community and Environmental Stewardship on City Island in the Bronx (NY)
Host a public environmental awareness program kicking off with "Viva la Sound," a Long Island Sound appreciation festival followed by educational workshops for adults, students and teachers at City Island, Bronx, New York. Project will provide the community with environmental education about the importance of protecting City Island's shoreline and the Long Island Sound through the lens of oyster restoration and clean water initiatives.
\$8,361

Connecticut Fund for the Environment
A Watershed Plan for the Hutchinson River, Westchester County (NY)
Develop a watershed plan for the Hutchison River watershed, Westchester County, New York. Project will ensure that restoration and protection strategies are identified that address watershed resilience to flooding and storms and local and Long Island Sound water quality.
\$200,000

Cornell Cooperative Extension of Suffolk County
Implementing a Bycatch Avoidance Communication Network (MA, NH, NJ, NY, RI)
Expand the Bycatch Avoidance Communication Network to identify and report real-time bycatch of nine species, helping to avoid the implementation of restrictive management measures associated with this bycatch. Project will enhance the network by improving daily reporting rates, recruiting additional vessels to the network, and conducting five at-sea observer days to facilitate proper reporting.
\$57,621

Cornell Cooperative Extension of Suffolk County
Reducing Discard Mortality in the Recreational Atlantic Striped Bass Fishery (NY)
Conduct outreach and education in the recreational Atlantic striped bass fishery on proper fish handling and fishing methods in order to reduce discard mortality in Long Island, New York waters. Project will target recreational anglers through fishing groups, charter boats, and fishing expos to offer education on techniques to lower discard mortality in the recreational Atlantic striped bass fishery.
\$78,797

Cortland County Soil and Water Conservation District
Improving Fish Passage and Restoring Riparian Habitat along Grout Brook and Vigil Creek (NY)
Improve and enhance stream and riparian habitat to benefit fish, wildlife and water quality by completing four stream corridor and riparian habitat enhancement projects to protect and improve important brook trout habitat in Cortland County, New York. Project will prevent more than 530 pounds of sediment and nutrients from entering local waterways annually, rectify four fish passage barriers, and open 6 miles of stream.
\$275,000

Delaware River Basin Commission
Improving Water Resources Management in the Delaware River Basin via Data Access (DE, NJ, NY, PA)
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.
\$200,000

Delaware State University
Identifying Environmental Drivers of American Eel Emigration in the Delaware River (DE, NJ, NY, PA)
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, informing conservation and management of American eel in impounded systems where passage and increased mortality are key concerns.
\$225,177

Frank Melville Memorial Foundation
Installation of Nitrogen Removing Biofilter at Frank Melville Memorial Park (NY)
Install an innovative on-site wastewater treatment system in the Frank Melville Memorial Park in Setauket, New York. Project will provide a visible proof-of-concept to inform wider use of efficient low-cost residential treatment system with the promise to decrease nitrogen pollution into the ground and surface waters of local bays, harbors, streams and rivers that flow into Long Island Sound.
\$29,987

Friends of the Upper Delaware River

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

\$405,478

Groundwork Hudson Valley

Wallkill-Saw Mill Riparian Restoration Partnership (NJ, NY)

Improve riparian conditions along two tributaries to the Hudson River by restoring 7 acres of habitat pursuant to management strategies outlined in the National Wildlife Refuge's Comprehensive Conservation Plan. Project will engage 50 youths and 300 volunteers and create 15 jobs for students recruited from Yonkers public schools to revegetate the riparian corridor with 1,000 willow species, sycamores, silver maples, dogwood shrubs and button bushes and to remove invasive vines on 2 acres.

\$49,574

Henry L. Ferguson Museum

Stakeholder Engagement and Planning for Eelgrass Protection on Fishers Island (NY)

Deliver an education and engagement program to stakeholder communities presenting scenarios for eelgrass protection at Fishers Island, New York. Project will secure and integrate community feedback about strategies to best protect this important coastal habitat of Long Island Sound.

\$44,798

Highstead

A Partnership Approach to Watershed Restoration and Community Engagement (CT, NY)

Restore 10 acres of urban watershed habitat and prevent 1,200 pounds of trash from entering waterways in efforts to improve watershed, wildlife and community health. Project will engage 2,100 community members, volunteers and students in stewardship opportunities and reach 10,000 people through outreach events, workshops, and online communications with information, opportunities for action and exchange of best practices in watershed restoration.

\$49,525

Manomet

Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.

\$79,999

National Audubon Society

Be a Good Egg: Share the Shore with Shorebirds — IV (NY)

Expand the "Be a Good Egg," environmental education program in the Long Island Sound watershed of New York. Project will increase support for coastal conservation and engage people in actions that help shorebirds thrive in important coastal habitats of the Sound.

\$47,564

National Audubon Society

Identifying Forest Blocks and Implementing Strategies to Improve Habitat for Birds (NY, VT)

Improve forest management practices through Audubon's Woods, Wildlife, and Warblers program and continue to work with family forest owners, professional foresters and industry in the Lake Champlain and Upper Hudson watersheds in New York and Lake Champlain Basin in Vermont. Project will restore 450 acres of young forest habitat and 1,000 acres of late successional habitat to benefit American woodcock, golden-winged warbler, black-throated blue warbler, and wood thrush.

\$200,000

National Audubon Society

Planning to Enhance Coastal Resiliency with Tidal Marsh Restoration at Sunken Meadow Park (NY)

Conduct a site assessment and develop a preliminary design to restore salt marsh at Sunken Meadow State Park, New York. Project will set the stage to improve marsh habitat for saltmarsh sparrow and other wildlife and buffer the park and nearby communities from storms and sea-level rise.

\$175,409

National Audubon Society

Restoration and Management of Shorebird Habitats along the Atlantic Coast (NY, NC, SC)

Manage and protect shorebird habitats to reduce threats, and develop plans and permits needed to restore habitat at key sites that support 25 percent of North Carolina's nesting American oystercatchers. Project will protect and manage shorebird habitat at 40 sites across three states and will secure permitting to restore shorebird habitat at two sites that will increase habitat quality and flyway connectivity.

\$179,999

National Audubon Society

Removing Infrastructure to Restore Tidal Marsh to the Mastic Beach Coastline (NY)

Restore priority coastal habitat in a flood-prone area of the Town of Brookhaven to benefit priority bird species and other wildlife, reduce flooding, and better protect inland areas from rising sea levels and storm events. Project will remove portions of a coastal road that regularly floods due to sea-level rise and restore the area to tidal marsh habitat, contributing to a larger ongoing multi-faceted coastal retreat and floodplain restoration on the 7,600 acre Mastic Beach/Shirley peninsula.

\$244,288

National Audubon Society

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

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.

\$250,000

National Wildlife Federation

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

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.

\$499,999

New York City Audubon Society

Community Science and Restoration for a Wildlife-friendly City (NY)

Restore 3 acres of Jamaica Bay coastline to support bird and horseshoe crab habitat with a native plant meadow, fishing line disposal bins and educational signage. Project will provide shorebird migration data, support state and region-wide horseshoe crab conservation, enhance a total of 15 acres of habitat and involve 775 youths and adults in hands-on conservation.

\$50,000

New York State Office of Parks, Recreation, and Historic Preservation**Restoring Coastal Wetland Habitat via Invasive Species Management (NY)**

Improve habitat structure through invasive species control and native plant restoration in coastal wetlands in the Lake Ontario Watershed. Project will restore more than 80 acres of wetland habitat to protect rare and significant elements, manage invasive species, and reduce shoreline erosion.
\$352,113

Science Museum of Long Island**Green Infrastructure at the Leeds Pond Preserve and Science Museum to Improve Water Quality in Long Island Sound (NY)**

Design and install a green infrastructure demonstration at the 36 acre Leeds Pond Preserve, home of the Science Museum of Long Island, that borders both Manhasset Bay and Leeds Pond in Plandome Manor, New York. Project will prevent 2.6 million gallons of polluted stormwater from entering Manhasset Bay and Long Island and demonstrate to people visiting the museum how the various types of green infrastructure controls and reduces stormwater runoff.
\$46,021

SUNY Maritime College**Boogie Down to the Sound,****A Celebration of Long Island Sound — II (NY)**

Host the Boogie Down to the Sound, a two-day hands-on, on-the-water event at SUNY-Maritime College, Throggs Neck, New York. Project will build awareness and connect up to 1,000 students and community residents to Long Island Sound.
\$9,025

The Trust for Public Land**A Green Schoolyard at PS 107X: Providing Community Green Space and Improving Water Quality (NY)**

Construct green infrastructure on a playground at Public School 107X in the Bronx, New York. Project will enhance community outdoor recreational green space and capture 2.7 million gallons of polluted stormwater annually before it flows into the Bronx River and Long Island Sound.
\$242,372

The Whaling Museum Society**Sound Effects: A Public Conservation Education Program — III (NY)**

Deliver a public education series with hands-on learning and conservation-based activities to inform people about the effects of pollution on Long Island Sound. Project will teach 300 adult, family, and elementary school age audiences about actions they can take to improve the health of the Sound.
\$9,940

Town of Brookhaven**Long Island Sound Environmental Education Series (NY)**

Provide a Long Island Sound environmental education series in the Town of Brookhaven, New York. Project will reach 550 community members, increasing knowledge and engagement of the public in the protection and restoration of Long Island Sound and its coastal ecosystem.
\$8,799

Trout Unlimited**Brook Trout Monitoring and Evaluation for Sustain our Great Lakes (multiple states)**

Conduct an evaluation to understand brook trout response, including abundance, young of year, multiple life stages, and effective breeders, to the improved access to and quality of habitat. Project will track progress towards the Great Lakes Business Plan stream habitat related goals.
\$292,650

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.
\$41,574

Rockaway Waterfront Alliance**Restoring the Rockaway Waterfront Dunes (NY)**

Develop a comprehensive site assessment and preliminary design to enhance and restore 7 miles of coastal dunes along New York City's Atlantic shoreline. Project will transform the shoreline into an extensive, biodiverse and habitat-rich dune system to recognize the importance of biodiversity and monitoring while preparing the community and its dune system for sea level rise.
\$372,299

The Nature Conservancy**Establishing a Freshwater Preserve at Follensby Pond (NY)**

Establish the first known whole-catchment freshwater preserve in the United States at Follensby Pond, located in the heart of New York's Adirondack Park. Project will protect intact ecosystems and landscapes while providing new recreational access to the 14,700-acre property.
\$650,000

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**Conservation Assessment of Brook Trout and Planning and Impact Tool Development in the Great Lakes Region (multiple states)**

Conduct a broad-scale assessment of existing brook trout population viability within the U.S. portion of the Great Lakes watershed that will build off of and be compatible with the analysis and associated tools developed for NFWF's Mid-Atlantic/Northeast region. Project will assist NFWF in identifying conservation needs and priority investment areas throughout the basin and associated tools will enable NFWF to develop and measure population-based recovery goals over time across multiple NFWF landscapes, particularly the Northeast and Great Lakes.
\$126,967

Trout Unlimited**Restoring Instream Habitat and Engaging Private Landowners to Improve Fish Passage (MA, NY, VT)**

Restore instream and riparian forest habitat in priority locations based on previous outreach and training to private landowners, municipalities, and forestry professionals. Project will add large woody material to 5 miles of stream, restore 5 miles of adjacent riparian forest to create habitat for native brook and complete 90-percent designs for three aquatic barriers to be removed in the future.
\$133,842

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.
\$171,118

Village of Sea Cliff, New York

Hempstead Harbor 2021 Water Quality Monitoring Program — XIII (NY)
Conduct water quality monitoring in Hempstead Harbor, Nassau County, New York. Project will inform management of Hempstead Harbor an embayment of Long Island Sound.
\$75,000

Waterfront Alliance

Sound In! Community Estuary Days on the Bronx Shores of Long Island Sound (NY)
Deliver educational programs and festivals about Long Island Sound in the Bronx, New York. Project will build on existing partnerships with grassroots organizations in underserved urban neighborhoods to increase awareness of Long Island Sound and knowledge about what can be done to restore it.
\$30,000

Western New York Land Conservancy
Restoring and Enhancing Wetlands at the Margery Gallogly Nature Sanctuary (NY)
Restore coastal wetlands and adjacent riparian and upland habitats at the Margery Gallogly Nature Sanctuary in New York. Project will improve 90 acres of habitat for populations of species of conservation need, including nesting birds, migratory waterfowl and spawning fish.
\$100,000

Western New York Land Conservancy
Treating Invasive Species along the Niagara River Gorge (NY)
Build on a previously successful grant to monitor and conduct follow-up control activities on invasive plant species on habitat that was previously restored along the Niagara River Gorge. Project will control invasive species on 115 acres which will result in increased nesting songbird diversity and a 90 percent reduction in invasive cover.
\$150,000

Wildlife Management Institute

Enhancing Forest Habitat for New England Cottontails, Golden-Winged Warbler and American Woodcock (multiple states)
Enhance participation in Farm Bill programs by supporting habitat biologists and outreach specialists to interface with private landowners to provide young forest habitat for more than 50 Species of Conservation Need in New England. Project will develop forest management plans that utilize existing Best Management Practices, develop healthy diverse forest age classes, and protect riparian habitat values, improving management on 200 acres.
\$156,290

Wyoming County Soil and Water Conservation District

Improving Fish Passage by Removing the Pike Dam in the Genessee River Basin (NY)
Remove a barrier to aquatic organism passage on Wiscoy Creek in the Genessee River Watershed, and replace it with a grade-control structure that will restore fish passage and enhance aquatic habitat. Project will open and restore 25 miles of stream to benefit brook trout.
\$125,000

NORTH CAROLINA**Cape Fear Resource**

Conservation and Development
Enhancing Aquatic Connectivity, Resiliency and Flood Capacity in the Black River Watershed (NC)
Complete the engineering, design and replacement of two culverts for the purpose of enhancing up to 2 miles of stream habitat within the lower Black River basin to improve aquatic connectivity, resiliency and flood capacity for local coastal communities and fish habitat. Project will improve drainage in these areas and decrease the likelihood of overbank flooding and road overtopping during storm events.
\$500,000

Carteret County Shore Protection Office

Building Adaptive Shorelines for Resilient Coastal Communities (NC)
Construct living shorelines to naturally stabilize and protect 3,800 linear feet of eroding estuarine shorelines at two important project sites within Carteret County. Project will enable the communities of Beaufort and Down East to enhance existing resilient infrastructure, and it will protect commercially and recreationally important fish, shellfish, submerged aquatic vegetation habitat and the largest colony of nesting royal terns in North Carolina.
\$1,513,500

City of Wilmington, North Carolina

Clear Run Branch Drainage Improvement and Stream Restoration (NC)
Construct a stable stream channel that can safely accommodate high flows from upstream development during storms and alleviate flooding along the channel. Project will improve wildlife habitat and decrease flood risk through stream and floodplain restoration or enhancement of 7.5 acres of floodplain habitat and 5,900 feet of stream channel.
\$1,410,345

College of William and Mary

Conserving Whimbrel Across the Western Atlantic Flyway (multiple states, Canada)
Expand on efforts to monitor declining whimbrel populations along the western Atlantic Flyway. Project will update the whimbrel conservation plan with whimbrel working group input, develop an index of reproductive performance and engage partners to establish a monitoring network, expand roost surveys during spring migration to improve protection at key sites, continue building an online shorebird roost registry, and make managers aware of roost locations to facilitate their protection.
\$99,374

Conservation Trust for North Carolina

Seeding Resilience Through Restoration and Education in Princeville (NC)
Design and implement nature-based stormwater interventions and related educational features to increase flood resilience and awareness along the Tar River in eastern North Carolina. Project will engage the town's 1,000 citizens, implement 16,500 square feet of green stormwater best management practices to treat 75,684 square feet of impervious surfaces, create 3,000 feet of new trails and plant thousands of native plants, while providing a visible educational and recreational resource at the hub of the community.
\$200,000

Haywood Waterways Association

Cultivating River Stewards of the French Broad Basin (NC)
Conduct riparian buffer improvements and site-specific and media-based education efforts to diverse audiences throughout the five watersheds of the French Broad River basin. Project will engage 130 community members in live-staking workshops, 350 students in educational programming and 150 volunteers in the removal of invasive species on 5 acres and plant native species on riparian habitat.
\$35,635

Manomet

Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)
Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.
\$79,999

N.C. Department of Agriculture and Consumer Services**Restoring Longleaf Pine and Bottomland Hardwood Forest in the Bladen Lakes Region (NC)**

Plant 491 acres of longleaf pine and enhance an additional 8,400 acres of existing longleaf forest with prescribed fire and thinning on public and private lands in the Bladen Lakes region of North Carolina, increasing habitat for red-cockaded woodpecker. Project will train landowners and professionals to conduct prescribed burns on longleaf forests, enroll landowners in the Red-Cockaded Woodpecker Safe Harbor Program, and develop management plans to improve bottomland hardwood forest habitat.
\$148,000

National Audubon Society**Improving Natural Infrastructure in Currituck Sound (NC)**

Complete a comprehensive marsh site assessment in Currituck Sound, North Carolina to determine optimal locations, techniques and design for restoring and fortifying existing marsh. Project will generate a design plan at one to three of the highest priority sites in order to increase community resilience to flooding, sea level rise, storms, and other coastal challenges.
\$95,807

National Audubon Society**Restoration and Management of Shorebird Habitats along the Atlantic Coast (NY, NC, SC)**

Manage and protect shorebird habitats to reduce threats, and develop plans and permits needed to restore habitat at key sites that support 25 percent of North Carolina's nesting American oystercatchers. Project will protect and manage shorebird habitat at 40 sites across three states and will secure permitting to restore shorebird habitat at two sites, which will increase habitat quality and flyway connectivity.
\$179,999

**N.C. Department of Environmental Quality
Overcoming Local Barriers to Implementation and Getting to Shovel Readiness (NC)**

Establish an incentive-based state framework which will support comprehensive local community resilience planning and build upon an existing vulnerability assessment and knowledge base that will help strengthen ecosystems at the Rachel Carson Reserve. Project will protect the Town of Beaufort and result in several shovel-ready projects that increase the resilience of natural resources and coastal communities in North Carolina.
\$1,141,047

N.C. Department of Natural and Cultural Resources**Brunswick Town Fort Anderson Shoreline Restoration Project (NC)**

Install a living shoreline to protect 1,000 linear feet along the Brunswick Town/Ft. Anderson State Historic Site by attenuating wave action and mitigating erosion. Project will protect and provide salt marsh and oyster habitat, and safeguard the site's historical resources.
\$2,002,500

**North Carolina Coastal Federation
Marine Debris Removal for Habitat Improvement in North Carolina**

Address marine debris generated by Hurricane Florence in North Carolina coastal waterways. Project will remove 40-44 abandoned and derelict vessels that have been prioritized by state and federal agencies based on their current impact to wildlife and habitats.
\$645,557

**North Carolina Coastal Federation
Protecting Education Infrastructure, Critical State Roadways and Estuarine Habitats with Living Shorelines (NC)**

Install three large-scale living shorelines that will protect important community infrastructure as well as restore and protect vital salt marsh and oyster habitat in Bogue Sound and the White Oak River. Project will result in a total of 3,518 linear feet of saltwater marsh living shorelines, protecting and restoring a total of more than 23 acres of salt marsh, oyster and upland habitat.
\$2,719,349

The Nature Conservancy**Onslow Bight Longleaf Pine Ecosystem Restoration — V (NC)**

Restore and enhance 35,000 acres of longleaf pine habitat on public and private lands in the Onslow Bight region of eastern North Carolina. Project will increase prescribed burning through a burn crew to assist partners with longleaf management, complete aerial ignition burns to improve safety and effectiveness, remove invasive species, and monitor Bachman's sparrow response to habitat restoration.
\$300,000

The Nature Conservancy**Restoring Longleaf Pine Habitat in the North Carolina Sandhills**

Implement prescribed burning and longleaf habitat restoration on 44,000 acres of public and private lands within the Sandhills region of North Carolina, which encompasses Fort Bragg and Uwharrie National Forest. Project will support burn crews to increase burning capacity and assist with mid-story control and other management, improving habitat for Bachman's sparrow, red-cockaded woodpecker, and northern bobwhite.
\$299,999

The Nature Conservancy**Restoring Pocosin Hydrology to Improve Flood Resiliency and Wildlife Habitat (NC)**

Restore hydrologic conditions across a prioritized 7,500-acre area of drained headwater pocosin wetlands on the southern portion of Angola Bay Game Land. Project will produce a finalized design and install restoration infrastructure that will enable managers to effectively control drainage levels, providing community flood resilience benefits in the Northeast Cape Fear River floodplain while enhancing pocosin wetland habitat.
\$820,644

Town of Duck**North Duck Village Living Shoreline (NC)**

Construct 1,100 linear feet of sheetpile sill and restore eroded wetlands along the shoreline of Currituck Sound. Project will create a more resilient coastal edge, improve coastal habitat, and protect the adjacent sidewalk, bike lane, and Duck Road that serve as the primary transportation artery along the Northern Outer Banks.
\$384,011

**USS North Carolina Battleship Commission
Shoreline Restoration and Tidal Wetland Creation at the Battleship North Carolina (NC)**

Restore 800 linear feet of estuarine intertidal shoreline and create approximately 2 acres of intertidal estuarine marsh habitat within a North Carolina Significant Natural Heritage Area. Project will remove and reconnect 2 acres of existing parking lot to the Cape Fear River, resulting in 2 acres of tidal wetland creation to build resilience against future storms and sea level rise.
\$1,250,000

**Wake Soil and Water Conservation District
Advancing Soil Health through Best Management Practice Adoption and Installation (NC)**

Provide technical field assistance to farmers, provide training on the benefits of cover crops and grazing cover and encourage long-term adoption of best management practices (BMPs) that improve soil health in Wake County, North Carolina. Project will improve wildlife and aquatic habitats and benefit both above and below ground ecosystems by implementing BMPs on 500 acres that prevent 2,000 tons of sediment and 5.5 tons of nutrient pollution from entering the system annually.
\$95,820

University of Georgia Research Foundation**Development of a Planted Longleaf Pine Growth and Yield Model for the Southeast (AL, FL, GA, NC, SC)**

Create a new growth and yield model system for longleaf pine that will allow more accurate growth projections for landowners considering longleaf pine reforestation who may have timber management objectives. Project will establish, document and measure permanent plots in planted unthinned longleaf pine stands on cut-over sites in the southeast United States, and the data will be used to calibrate a growth and yield model for multiple factors for longleaf pine.

\$243,999

NORTH DAKOTA**National Audubon Society****Increase Collaboration of Sagebrush Conservation (multiple states)**

Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stake holders and host field tour events that elevate on-the-ground conservation.

\$29,636

Rocky Mountain Bird Observatory**Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)**

Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.

\$250,000

Rocky Mountain Bird Observatory**Monitoring Grassland Bird Population Responses to Investments in the Northern Great Plains (MT, ND, NE, SD, WY)**

Continue evaluating the impacts of NFWF-funded conservation easement and grazing management projects on priority grassland bird species in the Northern Great Plains. Project will compare density, population size, and trend of priority grassland birds between NFWF projects and controls within the Northern Great Plains region.

\$372,899

OHIO**American Farmland Trust****Technical Assistance for Soil Health (OH)**

Build holistic soil health management systems through targeted one-on-one technical assistance on farms in Mercer, Van Wert and Paulding counties in Ohio. Project will utilize technical assistance to benchmark current management, develop continuous improvement plans and implement soil health management practices on 8,000 acres of farmland.

\$599,528

Anthropocene Alliance**Higher Ground: Green Infrastructure for Resilience (multiple states)**

Convene six community-based organizations in disaster-prone neighborhoods to engage local partners to train volunteers and teach residents about nature-based practices and install six high visibility projects as a catalyst for broader implementation. Project will reach 600 community members and successes will be shared with peer flood survivors around the country through a network of 48 leaders in 22 states.

\$494,758

Cleveland Metroparks**Cleveland Harbor Eastern Embayment Resilience Study (OH)**

Develop a comprehensive plan to address lack of in-water and nearshore habitat in the eastern embayment in the City of Cleveland. Project will evaluate existing conditions to examine potential for the beneficial re-use of local dredge materials to create natural habitat.

\$125,000

Friends of Ottawa National Wildlife Refuge**Anglers of Tomorrow: Increasing Access at Ottawa National Wildlife Refuge (OH)**

Host fishing events for military veterans and people living with disabilities, build a fishing trail, and create a parking space at Ottawa National Wildlife Refuge. Project will increase accessible facilities at the refuge, expand the number of fishing participants, and raise awareness of the Friends group.

\$13,485

Pheasants Forever**On-Farm Sustainability Through Conservation Agronomy Approaches (OH)**

Increase conservation capacity by leveraging a network of agronomists to accelerate farmer conservation practice adoption aligned with state and federal water priorities and programs throughout Ohio. Project will create one technical assistance position to target 200 landowners and agriculture retail partners to create solutions for both farm profitability and natural resource conservation.

\$252,024

Temple University, of The Commonwealth System of Higher Education**Using Polyethylene Glycol to Control the Fungus that Causes White-Nose Syndrome in Bats (OH, PA)**

Treat and monitor hibernation sites used by little brown bats and other species to test the effectiveness of polyethylene glycol 8000 to suppress the fungus that causes white-nose syndrome. Project will conduct field trials at three control and three treatment hibernacula in Ohio and Pennsylvania, evaluate the effects on non-target flora and fauna, and strive to reduce the fungal infection rate by 50 percent.

\$178,724

The Nature Conservancy**Restoring Riparian, Wetland and Forest Habitat along the Grand River (OH)**

Restore coastal, riparian, wetland and forest habitats in the Grand River Corridor and Northeast Ohio Coastal areas to improve habitats for native plants and wildlife. Project will restore 714 acres and improve habitat resiliency by controlling invasive species.

\$226,692

Trout Unlimited**Brook Trout Monitoring and Evaluation for Sustain our Great Lakes (multiple states)**

Conduct an evaluation to understand brook trout response, including abundance, young of year, multiple life stages, and effective breeders, to the improved access to and quality of habitat. Project will track progress towards the Great Lakes Business Plan stream habitat related goals.

\$292,650

Trout Unlimited**Conservation Assessment of Brook Trout and Planning and Impact Tool Development in the Great Lakes Region (multiple states)**

Conduct a broad-scale assessment of existing brook trout population viability within the U.S. portion of the Great Lakes watershed that will build off of and be compatible with the analysis and associated tools developed for NFWF's Mid-Atlantic/Northeast region. Project will assist NFWF in identifying conservation needs and priority investment areas throughout the basin and associated tools will enable NFWF to develop and measure population-based recovery goals over time across multiple NFWF landscapes, particularly the Northeast and Great Lakes.

\$126,967

OKLAHOMA**Pheasants Forever**

Coordinating Range Wildlife Conservation in the Lesser Prairie Chicken Range (CO, KS, NM, OK, TX)

Work with private landowners and other partners to implement on-the-ground riparian habitat restoration across the lesser prairie chicken range. Project will enroll landowners into voluntary contracts that will restore or improve management on 30,000 acres of southwestern grassland habitat.
\$101,436

Rocky Mountain Bird Observatory
Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)

Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.
\$250,000

The Learning Center at the Euchee Butterfly Farm

Increasing and Improving Native Seed Resources for Pollinator Habitat Restoration (OK)

Improve seed bank volume and species diversity to increase the quantity and quality of monarch and pollinator habitat restoration in Oklahoma. Project will increase plant identification training to improve the efficiency of target species harvesting, expedite seed processing and storage and produce 20,000 native nectar and milkweed plants to be planted on tribal lands.
\$74,816

University of Oklahoma

Developing Tools to Advance Grassland Bird Wintering Habitat Management Practices (CO, NM, OK, TX)

Expand on an existing framework studying the wintering ecology of longspurs and other grassland birds in the Great Plains using species distribution modeling, automated radio telemetry biologging, and weather radar analysis. Project will develop tools to improve field grassland bird surveys to more accurately estimate abundance and habitat usage, and to improve grazing management regimes to best advance bird conservation.
\$138,145

OREGON

Crook County Soil and Water Conservation District

Conserving Sage-Grouse Habitat (OR)
Provide technical assistance to benefit greater sage-grouse in Crook and Deschutes counties, Oregon. Project will develop nine site-specific plans for bringing 300,000 acres under improved management.
\$71,958

Crooked River Watershed Council
Improving Irrigation Efficiency and Water Quality in the Crooked River Basin (OR)

Implement conservation projects that will result in measurable change on instream flows and water quality in the Lower Crooked River watershed in Oregon. Project will bring 1,500 acres under improved management, targeting 1,400 producers and landowners.
\$119,488

Deschutes River Conservancy
Deschutes Basin Streamflow Restoration (OR)

Restore stream flow in Oregon's Deschutes Basin through water transactions. Project will improve habitat and water quality for native fish, including salmon and federally listed steelhead trout.
\$224,999

Family Water Alliance

Collaboration to Identify Projects along the Klamath River Basin (CA, OR)

Identify projects within the Klamath Basin Watershed to improve delivery of water to fish and farms. Project will include ecosystem restoration, water supply enhancement, and collaboration from multiple stakeholder groups.
\$10,000

National Audubon Society
Increase Collaboration of Sagebrush Conservation (multiple states)

Coordinate communication between stakeholders to elevate dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stake holders and host field tour events that elevate on-the-ground conservation.
\$29,636

Nez Perce Tribe

Increase Flow Restoration Efforts in the Nez Perce Tribal Geographies (ID, OR, WA)

Increase flow restoration efforts in the Nez Perce tribal geographies. Project will increase tribal capacity to coordinate with other groups developing water transactions within the broad geography of ceded lands, and also enable the Tribe to propose transactions uniquely linked to tribal relationships, tribal treaty rights, and tribal sovereignty.
\$15,000

Oregon Department of Fish and Wildlife

Decreasing Wildlife-Vehicle Collisions along U.S. Highway 97 to Conserve Mule Deer Populations (OR)

Install exclusionary structures to direct mule deer and elk to newly constructed wildlife underpass along U.S. Highway 97 between miles 178 and 183 in central Oregon. Project will improve public safety and reduce wildlife-vehicle collisions by installing 10 miles of fencing, reconnecting 75 miles of a migration corridor.
\$187,069

Oregon Department of Fish and Wildlife
Real-Time Instream Flow Assessment of Transactions (OR)

Develop a real-time instream flow tracking system to ensure that Columbia Basin Water Transactions Program transactions are monitored and enforced through an automated program. Project will increase instream flows by ensuring stakeholders are immediately aware when legally protected senior instream flows are not being met and regulation or management adjustments are necessary.
\$28,529

Oregon Water Resources Department
Water Transaction Coordination and Monitoring (OR)

Provide assistance to Oregon Qualified Local Entities on water transactions for proposed streamflow restoration projects, including instream transfers, instream leases, and allocations of conserved water. Project will ensure the conditions specified in final orders are monitored and when necessary enforced through regulation to protect all instream flows.
\$50,000

Pacific States Marine Fisheries Commission
Integrated Fisheries Restoration and Monitoring Plan for the Klamath River (CA, OR)

Complete a final draft of the Integrated Fisheries Restoration and Monitoring Plan for the Klamath River. Project will convene a series of work sessions and produce a revised version of the Klamath Plan.
\$200,000

Sustainable Northwest

Pacific Northwest Forest Collaboratives and Indian Tribes Restoration Initiative (OR, WA)

Partner with Indian tribes and forest collaboratives to implement and monitor fuels and wildfire risk reduction projects with forest restoration and wildlife habitat enhancement on three Pacific Northwest landscapes. Project will improve rural and indigenous community protection against fire and restore forests, resulting in more than 430,000 acres managed for strategic fuel reductions and long-term conservation outcomes in Oregon and Washington.
\$349,470

The Trust for Public Land**Spence Mountain Conservation (OR)**

Work with Klamath Trails Alliance, Klamath County, and other federal, state and local partners to acquire the 7,500-acre Spence Mountain property in southern Oregon. Project will protect critical fish and wildlife habitat from subdivision and fragmentation, including shoreline habitat for threatened and endangered species of fish, winter range for black-tailed deer, and bird habitat for species traveling along the Pacific Flyway.

\$435,000

Trout Unlimited**Lahontan Cutthroat Trout Core Grant 2020 (CA, OR, NV)**

Continue to address the needs identified in the Lahontan Cutthroat Trout (LCT) Business Plan. Project will provide partner coordination, science guidance, and field crew activities, including LCT expansion, hybridization management/assessment, barrier retrofitting and design, and eDNA monitoring.

\$582,702

U.S. Department of Agriculture,**U.S. Forest Service****Riparian Restoration and Steelhead Recovery at Camp Creek (OR)**

Protect riparian habitat to allow full expression of streamside and floodplain vegetation through enclosure fencing along designated critical habitat for Mid-Columbia River summer steelhead. Project will allow streamside sedges and grasses to grow to over 30 inches, and protect native hardwoods shrubs, increasing critical shade to cool existing water temperatures.

\$105,374

Umatilla County Soil and Water**Conservation District****Technical Assistance for Producers in the Lower Umatilla Basin Groundwater Management Area (OR)**

Administer soil health education and outreach, provide technical assistance to producers, and monitor outcomes in the Lower Umatilla Basin Groundwater Management Area in Oregon. Project will increase awareness, implementation and technical assistance in conservation practices for producers, targeting 1,300 producers to prevent 1,200 tons of sediment, 54 tons of phosphorus and 123 tons of nitrogen runoff from entering the system annually.

\$134,910

Western Rivers Conservancy**Conserving Habitat for Sage-grouse and Lahontan Cutthroat Trout (NV, OR)**

Restore greater sage-grouse habitat, reintroduce Lahontan cutthroat trout and habitat connectivity to the greater sagebrush landscape on Disaster Peak Ranch, straddling the Nevada-Oregon border. Project will permanently conserve the Disaster Peak Ranch, bringing 3,345 acres under improved management and restoring improved hydrology in the mesic areas of the ranch.

\$100,668

PENNSYLVANIA**Academy of Natural Sciences of Drexel University****Evaluating Headwater Biodiversity and Resilience to Inform Conservation in the Delaware Basin (NY, PA)**

Study the diversity and functioning of headwater streams, their potential resilience, and the species in their watersheds that are vulnerable to human activities and 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.

\$327,500

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

\$230,279

Alliance for the Chesapeake Bay Healthy Streams Farm Stewardship: Chesapeake Logperch 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 logperch.

\$487,837

Alliance for the Chesapeake Bay**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 that enters Lancaster City's combined sewer overflow system.

\$200,000

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.

\$49,998

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 Octoraro Reservoir: Continued Plain Sect Conservation Action (PA)**

Achieve pollutant reductions in subwatersheds contributing to drinking water supplies in the Octoraro 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 Octoraro 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

American Bird Conservancy**Restoring Dynamic Forest Structure for Priority Birds in the Delaware River Watershed — IV (PA)**

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.

\$362,136

American Bird Conservancy**Restoring Dynamic Forest Structure to Improve Wildlife Habitat for Birds in the Pennsylvania Wilds**

Improve forest management planning and habitat management within the Pennsylvania Wilds region where forest health is limited by a lack of age class diversity and structural complexity. Project will deploy both timber harvests and non-commercial methods to create or enhance 450 acres of young forest habitat, 500 acres of mature forest habitat and 400 acres of late successional habitat to support the entire reproductive cycle of golden-winged warbler, cerulean warbler and wood thrush.

\$175,000

Audubon Society of Western Pennsylvania Louisiana Waterthrush Community Conservation in Buffalo Creek (PA)

Restore a mile of riparian buffer, deliver a series of informal and formal educational programs, and host recycling and household hazardous waste collection events to support clean streams and healthy forests in Buffalo Creek. Project will educate 540 students and 1,290 adults, plant 520 trees, 220 shrubs, and 430 perennials, remove 5 acres of invasive species, prevent 289,800 pounds of waste from entering waterways and monitor 30 sites.

\$31,857

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

Berks County Conservation District**Implementation of Best Management Practices and Riparian Restoration on Irish Creek Farm (PA)**

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.

\$132,500

Berks Nature**Implementing Agricultural Best Management Practices in the Middle Schuylkill Cluster (PA)**

Install whole-farm agricultural best management practices on farms located in priority focus areas within the Middle Schuylkill Cluster geography of the Delaware River Watershed Initiative. Project will play a role in a larger watershed approach addressing a critical mass of agriculture restoration initiatives by managing 614 acres with best management practices, resulting in an estimated 24,210 pounds of nitrogen reduced annually.

\$250,000

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

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.

\$49,986

Brandywine Conservancy**Water Quality Interventions in the Brandywine-Christina Watershed (PA)**

Restore water quality in the Delaware River Watershed by implementing water-quality improvement projects that include innovative nutrient reduction practices, and watershed-scale water quality interventions. Project will build on prior success to implement traditional and innovative best management practices known to improve water quality resulting in improved management.

\$100,000

Brandywine Red Clay Alliance**Dam Removal on Brandywine Creek (PA)**

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.

\$57,182

Bucks County Conservation District**Water Quality Best Management Practices at Lake Luxembourg (PA)**

Convert the 17-acre Conservation Pool of Lake Luxembourg in Bucks County, Pennsylvania to regional stormwater best management practices. 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 benefiting herptile and avian species.

\$250,000

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.

\$406,224

Chesapeake Bay Commission

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

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

Chesapeake Bay Foundation

Accelerating Riparian Forest Buffer Implementation in Priority Pennsylvania Counties

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. **\$975,926**

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 Conservancy

Precision Conservation Partnership Implementing a Regional Restoration Plan in Central Pennsylvania

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**

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**

Chester County Conservation District

Agricultural Best Management Practice Operation and Maintenance Initiative (PA)

Provide education, technical assistance, and financial assistance for agricultural best management practices within the Brandywine-Christina and Schuylkill Highlands of the Delaware River. Project will implement at least 42 best management practices, including grassed waterways and roof runoff on an estimated 12 farms. **\$324,450**

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 polluted runoff and increase of wetland habitat. **\$200,000**

CRC Watersheds

Watershed Restoration and Habitat Improvement (PA)

Improve habitat for fish and wildlife and increase opportunities for recreation and education in up to 10 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. **\$82,100**

Cumberland County

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**

Delaware River Basin Commission

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

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. **\$200,000**

Delaware River City Corporation

Building Bridesburg Riverfront Park (PA)

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. **\$160,036**

Delaware Riverkeeper Network

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

Evaluate limestone sand additions to the strip-mined headwaters of Big Creek Pennsylvania. Project will re-introduce native brook trout to the currently fishless watershed, piloting long-term strategies to maintain water quality and ecological health. **\$94,798**

Delaware State University

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

Provide 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. **\$312,129**

Delaware State University

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

Model the outmigration of adult, silver-phase American eel in 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, informing conservation and management of American eel in impounded systems where passage and increased mortality are key concerns. **\$225,177**

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

Friends of the Heinz Refuge at Tinicum

Developing a Marketing Plan for Delaware Valley Friends Organizations (DE, NJ, PA)
Develop a marketing plan to build membership for John Heinz National Wildlife Refuge at Tinicum, Bombay Hook National Wildlife Refuge, and Edwin B. Forsythe National Wildlife Refuge. Project will raise awareness of the participating Friends organizations and enhance their efforts to acquire and maintain active members and volunteers.
\$13,200

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

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, develop scientific support for future stream restoration projects.
\$405,478

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. Project will stabilize stream banks and reduce sediment discharge to Kreutz Creek.
\$200,000

Indiana University of Pennsylvania Research Institute

Restoring Large Forest Blocks in State Parks For Key Bird Species in the Laurel Highlands (PA)
Restore multiple forest age classes and habitat complexity for key bird species in large forest blocks in two state parks in south central Pennsylvania, which serve as anchors in a network of forested lands in the region. Project will write comprehensive forest management plans for more than 33,000 acres of forest and implement habitat management practices that benefit golden-winged warbler, cerulean warbler and wood thrush while also monitoring population responses.
\$199,896

John Bartram Association

Youth Stewardship and Community Recreation Access on the Tidal Schuylkill River (PA)
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.
\$258,367

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

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.
\$494,347

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

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

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

Lower Allen Township**Sheepford East Detention Basin Retrofit Project (PA)**

Address nonpoint source pollution through local, watershed-based planning by retrofitting an existing dry detention basin in the Sheepford Crossings residential neighborhood in Mechanicsburg, Pennsylvania. Project will retrofit the existing basin, which handles a total drainage area of 55 acres, into a bioretention facility.
\$131,625

Lower Merion Conservancy**Improving Wildlife Habitat and Water Quality along the Cynwyd Heritage Trail (PA)**

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.
\$223,830

Manheim Borough

Memorial Park Stream Restoration (PA)
Implement riparian buffers and stream bank stabilization for a 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

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

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

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 environmental concerns about excess nutrients to work together 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

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

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 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

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

National Audubon Society

Implementing a Landscape-Scale Approach to Managing Private Forestlands for Birds and Resilience (PA)
Implement strategic, landscape-scale forest conservation to benefit forest birds on private lands in Pennsylvania through financial incentives provided by the American Forest Foundation's Family Forest Carbon Program. Project will restore 900 acres of mature forest habitat for wood thrush, 225 acres of late successional forest habitat for cerulean warblers and enroll 20 landowners in habitat management on their lands that will also facilitate carbon sequestration.
\$183,419

National Audubon Society

The River Unites Us: Bird Conservation Across the Delaware River Watershed (DE, NY, PA)
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.
\$250,000

National Wildlife Federation

Delaware River Basin Urban Wildlife Community Engagement Program (DE, NJ, NY, PA)
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.
\$499,999

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

Partnership for the Delaware Estuary

Designing Living Shorelines Alternatives in the Delaware Estuary (PA)
Address issues of coastal resilience and water quality to enhance the benefits in freshwater tidal zone. Project will design an innovative living shoreline approach incorporating freshwater mussels for a high-priority area of erosion on the banks of the Schuylkill River at the Fairmount Water Works in Philadelphia.
\$125,000

Partnership for the Delaware Estuary

Developing the Mussels for Clean Water Initiative to Enhance Habitat and Water Quality (DE, NJ, PA)
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.
\$178,028

Penn Township**Stream Restoration along Chiques Creek (PA)**

Partner with a private landowner to restore an eroded stream channel that conveys stormwater to a tributary to Chiques Creek by stabilizing eroded stream banks, installing in-stream fish habitat structures, and planting a native riparian forest buffer. Project will achieve a portion of the township's required pollutant reductions through stream restoration and native forest riparian buffers. *\$200,000*

**Pennsylvania Fish and Boat Commission
Improving Public Access and Recreation in the Pennsylvania Portion of the Delaware River**

Improve public access and recreation by providing grants to public entities and nonprofit groups for the planning, acquisition, development, expansion and rehabilitation of public boating facilities located in the Pennsylvania portion of the Delaware River Watershed. Project will ensure that boaters in the Delaware River watershed have safe, clean and updated boating facilities. *\$200,000*

Pennsylvania State University**Advancing Conservation-Based Estate Planning with Private Forest Landowners (PA)**

Advance conservation-based estate planning through a targeted workshop series to increase awareness and implementation of evolving legal and financial tools to achieve conservation-based estate planning in Pennsylvania. Project will implement outreach to estate planning attorneys, financial planners and consulting foresters. *\$79,987*

Pennypack Ecological Restoration Trust**Fulmor Heights Green Stormwater Infrastructure — I (PA)**

Facilitate a phased plan to manage stormwater runoff, eroded creek-side slopes, and repurpose a degraded stream corridor into a biodiverse and sustainable landscape along Pennypack Creek. Project will connect the three largest landowners in the focus area through water quality improvement projects, reducing sediment load by nearly 2,400 pounds per year. *\$183,199*

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*

Schuylkill River Development Corporation**Bartram's Mile Fishing Pier Rehabilitation (PA)**

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. *\$50,000*

Springettsbury Township**Waste Water 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. *\$499,920*

Stroud Water Research Center**Agricultural Best Management Practices and Buffers in Chester County Focus Areas (PA)**

Implement agricultural best management practices and forested buffers in the Brandywine-Christina Cluster of the Delaware River Watershed Initiative. Project will treat at least 1,516 acres with agricultural best management practices, including stormwater runoff controls for barnyards, mushroom compost processing areas, and grassed waterways on five to seven farms. *\$249,606*

TeamAg**Agriculture Runoff Water Quality Improvement in Salisbury Township (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*

Temple University, Of The Commonwealth System of Higher Education**Using Polyethylene Glycol to Control the Fungus that Causes White-Nose Syndrome in Bats (OH, PA)**

Treat and monitor hibernation sites used by little brown bats and other species to test the effectiveness of polyethylene glycol 8000 to suppress the fungus that causes white-nose syndrome. Project will conduct field trials at three control and three treatment hibernacula in Ohio and Pennsylvania, evaluate the effects on non-target flora and fauna, and strive to reduce the fungal infection rate by 50 percent. *\$178,724*

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

Construct a rain garden, bioretention facility, and a bioswale, which will remove over 7,000 pounds annually of sediment from the streams. Project will contribute to implementing projects that correspond with Terre Hill Borough's Pollution Reduction Plan. *\$73,000*

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.
\$41,574

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.
\$274,298

Trout Unlimited

Testing a Methodology for Monitoring Eastern Brook Trout Restoration Response in the Cross Fork Watershed (PA)

Develop a methodology and conduct eastern brook trout population response monitoring in the Cross Fork Creek watershed, the largest drainage in the Kettle Creek watershed in Pennsylvania. Project will replace one culvert, opening 8.5 miles of previously inaccessible stream habitat and improve 1,500 feet of dirt and gravel road to reduce sedimentation and improve water quality, and then will monitor brook trout population response.
\$139,987

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

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

Western Pennsylvania Conservancy
Assessing Eastern Brook Trout Patches to Determine Future Actions that Improve Connectivity (PA)

Assess population status and habitat condition within previously identified eastern brook population patches in the Mid-Upper Allegheny River and Pennsylvania Wilds focal geographies to determine the most appropriate restoration actions to improve aquatic connectivity. Project will assess at least five patches by completing 100 electrofishing surveys, reconnect at least two priority patches through culvert replacement and restore 1.5 miles of forested riparian buffer to reduce sedimentation.
\$186,863

Wildlands Conservancy

Penrose Swamp Acquisition (PA)

Facilitate the acquisition of the 2,700-acre Penrose Swamp property Carbon and Luzerne counties. 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.
\$99,957

Wildlife Management Institute

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

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.
\$199,982

Wissahickon Valley Watershed Association
Green Stormwater Infrastructure at Overlook Elementary School (PA)

Install green stormwater infrastructure to better manage stormwater volume and filtration prior to discharge to the Sandy Run. Project will facilitate high-visibility improvements on school district properties to concurrently implement water quality improvements and allow for hands on environmental education at the schools.
\$50,000

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

RHODE ISLAND

Cape Cod Commercial Fishermen's Alliance
Pre-Implementation of Electronic Monitoring in New England's Groundfish Fishery (MA, ME, NH, RI)

Advance electronic monitoring in New England's groundfish fishery by continuing operation of a successful pilot project and working with stakeholders to clarify standards and needs related to the technology. Project will engage 35 vessels to finalize electronic monitoring standards and ensure that data is effectively stored, shared, and used by regional stock assessment scientists and other data end users.
\$524,586

Cornell Cooperative Extension
of Suffolk County

Implementing a Bycatch Avoidance Communication Network (MA, NH, NJ, NY, RI)
Expand the Bycatch Avoidance Communication Network to identify and report real-time bycatch of nine species, helping to avoid the implementation of restrictive management measures associated with this bycatch. Project will enhance the network by improving daily reporting rates, recruiting additional vessels to the network, and conducting five at-sea observer days to facilitate proper reporting.
\$57,621

Gulf of Maine Research Institute
Scaling Maximized Retention Electronic Monitoring in the Northeast Groundfish Fishery (MA, ME, NH, RI)

Expand the Maximized Retention Electronic Monitoring program by adding three to four vessels to the electronic monitoring fleet and refining in person dockside monitoring. Project will conduct outreach to vessels, assess the economic impacts of this programs previous years for fishermen, and continue review of collected electronic monitoring data.
\$405,000

Integrated Monitoring

Implementing Wireless Electronic Monitoring and Reporting Tools in New England (MA, ME, NH, RI)

Expand broadband, wireless electronic reporting to high volume fishing vessels in New England, including ground fish vessels, limited access scallop vessels, and charter vessels. Project will demonstrate the scalability and transferability of wireless electronic monitoring technology and electronic reporting using broadband vessel monitoring system.

\$229,530

Manomet

Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.

\$79,999

New England Marine Monitoring

Integrating Artificial Intelligence Algorithms to Strengthen Electronic Monitoring (MA, ME, NH, RI)

Integrate existing artificial intelligence algorithms into electronic monitoring review, transmission, and storage workflows to reduce program costs. Project will advance the artificial intelligence used in the New England Groundfish electronic monitoring fisheries to automate catch accounting and streamline data storage thus addressing management priorities.

\$241,109

Partnership for Providence Parks

Conservation and Recreation in Rhode Island

Restore 2 acres of habitat to promote conservation efforts of New England cottontail while reaching over 900 youths with schoolyard habitat implementation and outdoor programs. Project will engage more than 2,000 people in outdoor experiences, including fishing and birding programs.

\$48,306

Rhode Island Department of Environmental Management

Improve Coastal Resiliency at Quonochontaug Pond and Breachway (RI)

Assess 49 acres of breachway, shoreline and adjacent landscape at Quonochontaug Salt Pond to develop preliminary designs that incorporate green infrastructure and ecologically enhanced shoreline into the gray infrastructure that exists. Project will be a permit-ready, 60-percent site design with coastal adaptation elements that provide improved resiliency.

\$75,000

Trout Unlimited

Assessing Brook Trout Populations and Aquatic Barrier Status in the Big River Management Area (RI)

Conduct an inventory of native brook trout populations, a water temperature study and a fisheries barrier assessment within the Big River Management Area located in central Rhode Island. Project will produce a report that will summarize the status of brook trout populations, distribution of water temperatures and prioritize future implementation efforts to enhance brook trout habitat and protect water quality within the 22 miles of mapped streams.

\$89,958

Wildlife Management Institute

Enhancing Forest Habitat for New England Cottontails, Golden-Winged Warbler and American Woodcock (multiple states)

Enhance participation in Farm Bill programs by supporting habitat biologists and outreach specialists to interface with private landowners to provide young forest habitat for more than 50 Species of Conservation Need in New England. Project will develop forest management plans that utilize existing Best Management Practices, develop healthy diverse forest age classes, and protect riparian habitat values, improving management on 200 acres.

\$156,290

SOUTH CAROLINA

City of Charleston

Church Creek Habitat Restoration and Flood Protection Project (SC)

Implement nature-based solutions and green infrastructure to protect critical infrastructure in and around the Church Creek Basin, promote community resilience around the basin and in surrounding communities, and enhance ecosystem services and hydrological function. Project will complete 33 acres of floodplain restoration, 2.5 miles of instream restoration, 28.5 acres of land restoration, and 29.5 acres of wetland restoration.

\$1,345,000

City of Charleston

Renaturalizing the Church Creek Drainage Basin (SC)

Develop an engineering and design plan, strengthen stakeholder participation, test outreach and educational opportunities, and complete necessary permitting to restore natural floodplain function. Project will steer and direct next steps to institutionalize a training program that would result in the proliferation of renaturalization as an effective resiliency strategy in a broad geographic area far beyond the project site.

\$125,000

City of Charleston, South Carolina

Johns Island Restoration Plan To Improve Flood Resiliency (SC)

Reduce barriers to coastal resiliency by producing a preliminary floodplain restoration planning framework that will integrate ecological function to increase the overall resiliency of Johns Island's communities, fish and wildlife. Project will evaluate how and where stream naturalization, floodplain protection and enhancement, wetland restoration/creation, and other nature-based infrastructure can be used to mitigate current and likely future flood risk on the island.

\$117,500

City of North Charleston

North Charleston Restoration for Resiliency (SC)

Conduct Restoration Master Planning for three waterways, with parallel goals of reducing flood risk and restoring habitat. Project will advance three site-level concepts to 30 percent design and explore the potential for design-build delivery of the projects to be initiated alongside other local efforts.

\$200,000

Charleston County Parks and Recreation Department

Fishing Pier Installation at Sol Legare Boat Landing (SC)

Install a fishing pier at Sol Legare Boat Landing, a popular fishing facility located on James Island. Project will enable the public to have increased access to shore-based saltwater fishing and crabbing on the Stono River and will contribute to the quality of life for residents of Charleston County.

\$102,870

Chesterfield County Soil and Water Conservation District

Expanding Longleaf Pine Restoration in the South Carolina Sandhills Region

Establish and improve 1,600 acres of longleaf pine forest on public and private lands in Chesterfield and Darlington counties, South Carolina, which will benefit northern bobwhite, Bachman's sparrow, and southern hognose snake. Project will utilize geospatial data to improve outreach to high-priority landowners, provide technical and financial assistance to private landowners to restore and maintain longleaf pine, and increase prescribed burning capacity with a burn specialist.

\$299,000

College of William and Mary

Conserving Whimbrel Across the Western Atlantic Flyway (multiple states, Canada)
Expand on efforts to monitor declining whimbrel populations along the western Atlantic Flyway. Project will update the whimbrel conservation plan with whimbrel working group input, develop an index of reproductive performance and engage partners to establish a monitoring network, expand roost surveys during spring migration to improve protection at key sites, continue building an online shorebird roost registry, and make managers aware of roost locations to facilitate their protection.
\$99,374

Forest Landowners Association

Restoring Longleaf Pine on Large-Acreage Private Lands (GA, LA, SC)
Establish 1,500 acres of longleaf pine and improve 4,500 acres of existing longleaf forest with prescribed fire on large-acreage private lands in Georgia, Louisiana and South Carolina. Project will address barriers to restoring longleaf pine on large-acreage private lands and provide technical and financial assistance to support planting and management, with a particular focus on restoring forest lands impacted by hurricanes Michael and Florence in Georgia and South Carolina.
\$200,000

Georgia Tech Research

Coastal Wetland Restoration and Community Resiliency in West Ashley, City of Charleston (SC)
Deliver at least 90 percent complete engineering design plans for the restoration and conservation of approximately 293 acres of tidal marshes in flood prone areas of the West Ashley Resilience Hub, in Charleston, South Carolina. Project will engage governmental and non-governmental agencies, stakeholder and community members in planning workshops to develop engineering and design plans as well as citizen science initiatives.
\$219,395

Kiawah Conservancy

Informed Scenario Planning For Community-Wide Resilience Strategy Building on Kiawah Island (SC)
Address barriers to coastal resilience by engaging stakeholders within the community to reach a consensus on the use of nature-based solutions to increase resilience to flooding and natural hazards for both human and wildlife communities. Project will engage stakeholders in scenario planning, and discuss the use of nature-based solutions within the barrier island community.
\$125,924

Manomet

Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)
Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.
\$79,999

National Audubon Society

Restoration and Management of Shorebird Habitats along the Atlantic Coast (NY, NC, SC)
Manage and protect shorebird habitats to reduce threats, and develop plans and permits needed to restore habitat at key sites that support 25 percent of North Carolina's nesting American oystercatchers. Project will protect and manage shorebird habitat at 40 sites across three states and will secure permitting to restore shorebird habitat at two sites.
\$179,999

National Wild Turkey Federation

Responsible Recreation – National Wild Turkey Federation (SC)
Further the Responsible Recreation initiative by deploying a social media ad campaign, producing a series of informational videos and implementing a digital radio campaign. Project also will explore a dedicated website for the initiative.
\$500,000

The Longleaf Alliance

Longleaf Pine Restoration and Red-Cockaded Woodpecker Recovery (SC)
Restore, enhance and conserve more than 5,000 acres of longleaf pine and bottomland hardwood forest to benefit the federally endangered red-cockaded woodpecker in South Carolina's coastal plain. Project will provide landowner outreach and financial assistance for longleaf establishment, prescribed burning, and working forest conservation easements, as well as translocation of red-cockaded woodpeckers to state lands and private properties.
\$292,000

The Longleaf Alliance

South Lowcountry - ACE Basin Longleaf Ecosystem Restoration Partnership — VI (SC)
Establish 850 acres of longleaf pine and enhance an additional 5,000 acres of existing longleaf habitat with prescribed fire and mid-story hardwood removal on public and private lands within the South-Lowcountry and ACE Basin in South Carolina. Project will conserve working forests with conservation easements and restore populations of gopher tortoises by hatching and releasing up to 100 juvenile tortoises on restored habitat.
\$286,000

The Nature Conservancy

Linking Healthy Longleaf Pine Forest Management and Carbon Data for Landowner Benefit (SC)
Utilize data from an innovative longleaf pine carbon monitoring project in coastal South Carolina to better understand carbon uptake from healthy managed longleaf pine forests. Project will conduct a workshop to inform 25 landowners about carbon markets, create an informative brochure for continued use with landowners and partners, and communicate carbon sequestration data findings to professionals across the Southeast.
\$99,285

University of Georgia Research Foundation

Development of a Planted Longleaf Pine Growth and Yield Model for the Southeast (AL, FL, GA, NC, SC)
Create a new growth and yield model system for longleaf pine that will allow more accurate growth projections for landowners considering longleaf pine reforestation who may have timber management objectives. Project will establish, document and measure permanent plots in planted unthinned longleaf pine stands on cut-over sites in the southeast United States, and the data will be used to calibrate a growth and yield model for multiple factors for longleaf pine.
\$243,999

University of South Carolina

Assessing and Protecting a Critical Whimbrel Nocturnal Roost Site at Deveaux Bank (SC)
Improve understanding of Deveaux Bank, South Carolina, the largest known whimbrel nocturnal roost site during northward migration. Project will utilize emerging technologies to gather information on whimbrel migratory and foraging behavior at Deveaux Bank that will help inform future management decisions and conservation efforts.
\$84,418

SOUTH DAKOTA**American Bird Conservancy**

Advancing Grassland Bird Conservation through Landowner Outreach (MT, SD)
Promote educational opportunities and land stewardship activities in the Northern Great Plains by offering workshops and providing conservation technical assistance, developing conservation plans, and assisting private landowners in enrolling in Farm Bill programs. Project will enhance landowner knowledge of grassland conservation and soil health, implement sustainable wildlife-compatible management across the project area, and restore and improve management practices on 3,500 acres.
\$188,813

Lower Brule Sioux Tribe

Conserving Pronghorn and Black-Footed Ferret Populations on the Lower Brule Indian Reservation (SD)

Modify fences to improve passage and habitat connectivity for pronghorn and continue efforts to conserve prairie dogs and recover black-footed ferrets on the Lower Brule Indian Reservation in South Dakota. Project will increase tribal capacity, improve 15 miles of fencing, and mitigate threats from sylvatic plague on 1,800 acres of black-footed ferret habitat.

\$295,201

National Audubon Society

Achieving Grassland Conservation by Providing Technical Assistance to Landowners (SD)

Improve existing grassland habitat health and establish 5-10 year conservation agreements with landowners through the South Dakota Prairie Management Toolbox which provides cost-share and technical assistance for woody species removal, prescribed fire, and grazing infrastructure. Project will bring 10,000 acres under improved management and restore 1,500 acres of habitat.

\$331,951

National Audubon Society

Increase Collaboration of Sagebrush Conservation (multiple states)

Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stake holders and host field tour events that elevate on-the-ground conservation.

\$29,636

Pheasants Forever

Responsible Recreation – “The Uplands are Open” (SD)

Encourage that outdoor recreation activities continue in a safe and responsible manner following CDC guidelines, while also encouraging our public lands remain open whenever and wherever possible. Project will focus on public upland properties and utilize a full suite of online communication tools.

\$300,000

Rocky Mountain Bird Observatory

Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)

Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird’s sparrow, Sprague’s pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.

\$250,000

Rocky Mountain Bird Observatory

Monitoring Grassland Bird Population Responses to Investments in the Northern Great Plains (MT, ND, NE, SD, WY)

Continue evaluating and quantifying the impacts of NFWF-funded conservation easement and grazing management projects on priority grassland bird species in the Northern Great Plains. Project will compare density, population size, and trend of priority grassland birds between NFWF projects and controls within the Northern Great Plains region.

\$372,899

South Dakota State University

Identifying Native Grassland Habitat to Inform and Prioritize Conservation Investments (SD)

Complete an ongoing assessment currently underway to identify native, undisturbed, land tracts within priority grassland regions of western South Dakota to determine the extent of known tillage history to better inform and prioritize future conservation investments. Project will establish a publicly available baseline inventory of the potential extent of native grassland habitats in western South Dakota for the benefit of all endemic grassland species and communities.

\$299,509

World Wildlife Fund

Securing Black-Footed Ferret Populations Through Sylvatic Plague Mitigation (MT, SD)

Establish a population of black-footed ferret protected from sylvatic plague in the Missouri-Milk River Grasslands, Montana and central South Dakota. Project will improve the status of 20 black-footed ferrets at two reintroduction sites, recover prairie dog habitat lost to sylvatic plague at a third site, and set the stage to establish a new ferret population on private lands.

\$271,946

TENNESSEE**Ducks Unlimited**

Outreach and Education for Responsible Outdoor Recreation (TN)

Deploy creative communication and outreach tools that seizes on opportunities to foster safe and responsible outdoor activities while strengthening support for fish and wildlife conservation and public conservation.

\$300,000

Heights Community Development Corporation

Right-of-Way Restoration and Maintenance in the Wolf River Watershed (TN)

Improve water quality in the Wolf River watershed by removing invasive plants, trash and debris and installing bioswales that will act as nature-based infrastructure on 8 miles of urban roadways. Project will mobilize 450 volunteers as well as engage 220 students and 10 teachers to accomplish these outcomes which will prevent 20,000 pounds of trash and debris entering the river each year.

\$46,640

Louisiana Wildlife and Fisheries Foundation

Revising the Lower Mississippi Desired Forest Condition for Wildlife Report (multiple states)

Update the Lower Mississippi Valley Joint Venture’s Desired Forest Condition for Wildlife report, which provides technical guidance to land managers on how to manage bottomland hardwood forests for the conservation of wildlife. Project will revise the report to integrate new science on the habitat needs of priority wildlife species, include updates from the Forest Resource Conservation Working Group, and add a section dedicated to the management of restored or young bottomland hardwood stands.

\$79,254

Mississippi River Trust

Forest and Wetlands Restoration and Management in the Mississippi River Basin (KY, MO, TN)

Restore and enhance privately owned upland, riparian and bottomland hardwood forests through technical and financial assistance within the Mississippi River Basin in Kentucky, Missouri and Tennessee. Project will engage private landowners to implement conservation practices on 3,000 acres to improve forest health, reduce forest fuels, improve water quality and improve ecological functions, benefiting forest birds, waterfowl and aquatic species.

\$222,000

Mississippi River Trust

Forested Wetland Restoration in the Lower Mississippi River Floodplain (multiple states)
Reforest and protect frequently flooded, marginal cropland on private lands through the adoption of Wetland Reserve Easements in the active floodplain of the Lower Mississippi River. Project will establish 7,500 acres of bottomland hardwood forest to expand and enhance habitat and improve water quality, benefiting the Louisiana black bear, swamp rabbit, forest birds, waterfowl and freshwater fish.
\$653,696

Pheasants Forever

Accelerating Forest Restoration and Management in the Cumberland Plateau (TN)
Increase private landowner technical assistance in the Cumberland Plateau region of Tennessee to restore and enhance forest and freshwater habitats. Project will engage 450 landowners to establish or enhance more than 1,000 acres of shortleaf pine-oak and riparian forest and implement best management practices on 350 acres of agricultural land to improve forest habitat and water quality, benefiting northern bobwhite and prairie warbler, as well as freshwater fishes and mussels.
\$261,579

Tennessee Aquarium

Increasing Adoption of Soil Health Practices on the Cumberland Plateau (TN)
Reduce soil degradation and runoff by implementing no-till and other soil health practices on vegetable farms in Bledsoe, Rhea, and Sequatchie counties, Tennessee. Project will engage 100 private landowners and producers through field days and a demonstration video to implement environmentally sustainable and profitable farming practices on 150 acres, which will improve water quality and protect and improve habitat for the laurel dace, Tennessee dace, and many other freshwater fish.
\$90,000

Tennessee Department of Agriculture Expanding Prescribed Fire Implementation on the Cumberland Plateau — II (TN)

Expand prescribed burning on public and privately owned shortleaf pine forests in the Cumberland Plateau of Tennessee to benefit birds such as Bachman's sparrow, prairie warbler and northern bobwhite. Project will support a prescribed fire strike team that will implement at least 1,500 acres of prescribed burning.
\$230,000

TEXAS**American Bird Conservancy Implementing Best Management Practices for Pollinator Habitat Restoration (TX)**

Support on-the-ground implementation of site-specific land management practices to increase the quality, quantity, and connectivity of habitat for monarch butterflies and pollinators in southern Texas. Project will restore 500 acres of degraded habitat within the core area of the monarch's migratory route by incentivizing landowners for conducting pre-approved land management practices to restore degraded habitat back to suitable habitat for monarchs, pollinators and grassland birds.
\$75,000

Anthropocene Alliance Higher Ground: Green Infrastructure for Resilience (multiple states)

Convene six community-based organizations in disaster-prone neighborhoods to engage local partners to train volunteers and teach residents about nature-based practices and install six high visibility projects as a catalyst for broader implementation. Project will reach 600 community members and successes will be shared with peer flood survivors around the country through a network of 48 leaders in 22 states.
\$494,758

Austin Area Urban League Building Equitable Futures for Our Communities Program (TX)

Create opportunities for individuals to attain sufficient knowledge, skills, resources, and self-efficacy to enable them to become Resiliency Ambassadors. Project will provide educational programming on preparedness to 196 community members and offer youth Environmentalist Ambassador jobs to 20 collegiate students who will have access to capacity building education before they are eligible to act as Career Services Ambassadors within the local community.
\$300,000

Borderlands Research Institute-Sul Ross State University Marfa and Marathon Grassland Habitat Enhancement for Migratory Birds and Pronghorn — III (TX)

Conduct brush management activities in the Marfa and Marathon grasslands to improve grassland health and habitat for pronghorn and grassland birds. Project will conduct brush management on 4,000 acres of brush-invaded grassland using herbicide treatments, as well as implement fence modifications to promote pronghorn movements.
\$246,759

City of Houston

Urban Prairie Project (TX)
Integrate principles of resilience within an affordable housing development that consists of two components: restoring a prairie ecosystem and developing a green corridor within existing gas line easement for community growth. Project will reach 200 community members, restore up to 8 acres of land and serve as a demonstration for how best to integrate green stormwater infrastructure and incorporate an urban prairie ecosystem that prepares the community to be more resilient.
\$400,000

College of William and Mary Conserving Whimbrel Across the Western Atlantic Flyway (multiple states, Canada)

Expand on efforts to monitor declining whimbrel populations along the western Atlantic Flyway. Project will update the whimbrel conservation plan with whimbrel working group input, develop an index of reproductive performance and engage partners to establish a monitoring network, expand roost surveys during spring migration to improve protection at key sites, continue building an online shorebird roost registry, and make managers aware of roost locations to facilitate their protection.
\$99,374

Florida Agricultural and Mechanical University GIS Capacity and Training to Support Gulf-Wide Ecosystem Conservation and Restoration (AL, FL, LA, MS, TX)

Provide geographic information system (GIS) expertise and training in support of Gulf-wide ecosystem conservation and restoration programs and projects. Project will develop GIS layers and maps where Gulf Coast Ecosystem Restoration Council and Natural Resources Damage Assessment projects have been approved for planning and implementation by the U.S. Department of Agriculture.
\$300,000

Friends of the Wildlife Corridor Reforesting the La Sal del Rey Tract at Lower Grande Valley National Wildlife Refuge (TX)
Plant seedlings and reforest 20 acres of a previously farmed field in the La Sal del Rey Tract of the Lower Rio Grande Valley National Wildlife Refuge. Project will engage community members and 750 school children in a four-day planting event that supports opening the Sal del Rey Tract to hunting in 2021, doubling youth hunting opportunities on the refuge.
\$15,000

Gulf Coast Bird Observatory**Studying Migrant and Resident Populations of Loggerhead Shrike to Inform Conservation (TX)**

Study habitat affiliations for both migrant and resident loggerhead shrikes present on the Texas Gulf Coast to determine if migrant individuals are using sub-optimal wintering habitat. Project will perform genetic and stable isotope analyses on shrike feathers collected during banding to compare bird origin and habitat quality.

\$92,359

Houston Wilderness**Restoring Riparian Habitat Along the Port of Houston Ship Channel (TX)**

Reforest riparian areas by planting 10,000 targeted, native tree species with high air pollution and water absorption capabilities along 25 miles of the Port of Houston Ship Channel. Project will restore and improve management on 180 acres to benefit a multitude of migratory and resident birds.

\$100,000

Katy Prairie Conservancy**Enhancing Grassland Conservation for Wildlife Habitat in the Katy Prairie (TX)**

Create and enhance grassland habitat, enhance landscape connectivity for wildlife migration and ensure the health of the landscape by aiding with regional flood control in the Katy Prairie of Waller County, Texas. Project will bring 200 acres under improved management and restore 145 acres of grassland to benefit multiple declining bird species of concern.

\$94,631

Louisiana Wildlife and Fisheries**Foundation****Monitoring Reintroduced Whooping Cranes to Establish a Self-Sustaining Population (LA, TX)**

Study habitat use across various life stages of a whooping crane population that has been reintroduced into southwest Louisiana since 2011. Project will track and monitor juvenile whooping crane habitat use and home range and create range maps to help federal and state agencies develop management plans and recommendations for whooping cranes.

\$46,542

Manomet**Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)**

Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009 to 2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.

\$79,999

Mote Marine Laboratory**Using Electronic Monitoring for Sustainability in the Gulf of Mexico Reef Fish Fishery (FL, LA, TX)**

Expand electronic monitoring in the Gulf of Mexico reef fish fishery to address fisheries management objectives by monitoring for catch and bycatch, improving data management, and enhancing usability. Project will build on more than four years of electronic monitoring system improvements and comprehensive data collection to advance implementation of electronic monitoring as a Gulf-wide priority.

\$500,292

Pheasants Forever**Coordinating Range Wildlife Conservation in the Lesser Prairie Chicken Range (CO, KS, NM, OK, TX)**

Work with private landowners and other partners to implement on-the-ground riparian habitat restoration across the lesser prairie chicken range. Project will enroll landowners into voluntary contracts that will restore or improve management on 30,000 acres of southwestern grassland habitat.

\$101,436

Pheasants Forever**Farm Bill Program Delivery and Support to Improve Water Quality within the Colorado River Watershed (TX)**

Increase technical assistance capacity to accelerate delivery of voluntary Farm Bill conservation programs and practices that address water quantity and quality, as well as wildlife habitat, within the Colorado River watershed in Texas. Project will improve partners' ability to deliver technical assistance to Texan landowners for wildlife and natural resource conservation.

\$150,474

Pheasants Forever**Providing Technical Assistance to Landowners Conducting Habitat Restoration for Grassland Birds (TX)**

Build off previously successful work in southeast Texas by continuing support for a range and wildlife conservationist to increase technical assistance capacity. Project will hold workshops and field days for 400 landowners to restore 5,000 acres of working grassland bird habitat, bring 2,000 acres under improved management and develop 35 management plans.

\$36,506

Pheasants Forever**Providing Technical Assistance for Landowners Using Prescribed Fire to Benefit Monarch Habitat (TX)**

Provide technical assistance to private working lands through the development of a landscape-scale partnership that will educate and train private landowners and land managers in the use of prescribed fire to enhance habitat for monarchs and other pollinators on central Texas. Project will restore 6,600 acres of habitat, develop 30 conservation plans and facilitate 18 workshops reaching 500 landowners.

\$300,000

Reef Fish Conservation and Education Foundation**Engaging the Next Generation of Commercial Fishermen in the Gulf of Mexico (AL, FL, LA, MS, TX)**

Develop a workforce training program to recruit and educate young fishermen for the commercial seafood harvesting sector. Project will engage fishery leaders from various fisheries across the Gulf of Mexico in face-to-face meetings to design and plan a young fishermen training program for the Gulf of Mexico and develop a review of similar programs around the United States.

\$25,835

Rocky Mountain Bird Observatory**Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)**

Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.

\$250,000

Saltwater**Expanding and Improving the Use of Electronic Monitoring in the Gulf of Mexico Shrimp Trawl Fishery (multiple states)**

Expand and improve the use of electronic monitoring in the Gulf of Mexico shrimp trawl fishery by installing electronic monitoring systems and collecting data on protected species interactions and red snapper bycatch volume and locations. Project will maximize the utility of the collected data for both fishery management and dealer verification of catch origin and sustainable fishing practices.

\$173,145

Stephen F. Austin State University
Monitoring Avian Response to Forest Management in the Lower Mississippi Alluvial Valley (AR, LA, MS, TX)

Develop a baseline inventory of bird species in bottomland hardwood restoration sites in the Lower Mississippi Alluvial Valley through the deployment of autonomous sound recorders. Project will compare baseline data to avian community metrics captured in bottomland hardwood forests at different successional stages to identify effective management activities used in forestry wildlife treatments and stages of stand development that need further treatments for maintaining desired forest conditions.
\$73,377

Texas A&M AgrLife Research
Salinity Tolerance of Texas Hornshell (TX)
 Study the salinity tolerance of Texas hornshell and identify potential locations for its reintroduction or reaches for habitat restoration. Project will provide a better understanding of habitat requirements for Texas hornshell by examining the effects of salinity tolerance for multiple life stages.
\$189,868

Texas A&M Forest Service
Longleaf Pine Restoration and Management (TX)
 Engage private landowners through education, outreach, and technical and financial assistance to restore, enhance, and conserve 1,000 acres of longleaf pine and bottomland hardwood forest in East Texas. Project will reach landowners through workshops and county landowner association meetings, and promote stewardship planning, prescribed burning, and other forest management practices, benefiting northern bobwhite, Swainson's warbler, and game species such as wild turkey.
\$181,971

Texas General Land Office
Swan Lake Marsh Restoration (TX)
 Restore approximately 80 acres of coastal marsh complex within Swan Lake in Galveston County, Texas by utilizing dredged materials to increase intertidal elevations to support marsh habitats and reduce the risk of coastal flooding. Project will protect critical port infrastructure, important aquatic nursery and wildlife habitat, and protect adjacent coastal prairies.
\$3,000,000

Texas Rice Industry Coalition for the Environment
Restoring Wetland and Prairie Habitat at the Anahuac National Wildlife Refuge (TX)
 Restore habitat for grassland birds, butterflies, other pollinator species and mammals on the Anahuac National Wildlife Refuge in Chambers County, Texas. Project will create and restore 490 acres of year-round freshwater wetland and native prairie habitat.
\$27,300

Texas Water Trade
Groundwater Leasing Program to Restore Comanche Springs (TX)
 Demonstrate the feasibility of restoring Comanche Springs through a groundwater leasing program. Project will evaluate using voluntary market transactions to reduce pumping in the Edwards-Trinity aquifer to support the reintroduction of Comanche Springs pupfish and Pecos gambusia.
\$300,050

Texas Water Trade
Protecting Continuous Flows on the Headwaters of the Colorado River (TX)
 Provide landowner outreach and technical assistance within the Llano, Pedernales and San Saba sub-basins of the Texas Colorado River. Project will increase landowner enrollment in programs benefiting threatened freshwater mussels species.
\$189,293

The Nature Conservancy
Monitoring and Habitat Enhancement at Diamond Y Spring Preserve (TX)
 Monitor and enhance aquatic species and habitats at Diamond Y Spring Preserve. Project will map habitats and establish fish monitoring, evaluate breeding success of species, including Leon Springs pupfish, Pecos gambusia, and others, map vegetation and monitor hydrology to determine restoration potential, update the preserve's conservation plan, and initiate selected habitat management and restoration actions.
\$197,893

U.S. Department of the Interior, U.S. Fish and Wildlife Service, Texas Fish and Wildlife Conservation Office
Restoration of the Phantom Spring Ciénega (TX)
 Restore the Phantom Spring Ciénega to maintain habitat for Pecos gambusia, Comanche Springs pupfish and other endangered aquatic species. Project will remove all of the existing water control features that are no longer functioning and deepen the ciénega to eliminate the need for pumping all together, exploring alternative plans as necessary.
\$30,139

University of Oklahoma
Developing Tools to Advance Grassland Bird Wintering Habitat Management Practices (CO, NM, OK, TX)
 Expand on an existing framework studying the wintering ecology of longspurs and other grassland birds in the Great Plains using species distribution modeling, automated radio telemetry biologging, and weather radar analysis. Project will develop tools to improve field grassland bird surveys to more accurately estimate abundance and habitat usage, and to improve grazing management regimes to best advance bird conservation.
\$138,145

UTAH

Mountain Island Ranch
Restoring Wet Meadow Habitat on Mountain Island Ranch along the Little Dolores River (CO, UT)
 Improve wet meadow habitat and forage along the Little Dolores River in Western Colorado to benefit Gunnison sage-grouse, elk, mule deer, wild turkeys, and waterfowl; restore stream flows and improve water quality; improve soil health; and increase drought resilience. Project will install 170 beaver dam analogues and Zeedyk structures, remove invasive vegetation and alter grazing patterns to restore 240 acres of wet meadow habitat.
\$175,500

National Audubon Society
Increase Collaboration of Sagebrush Conservation (multiple states)
 Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stakeholders and host field tour events that elevate on-the-ground conservation.
\$29,636

Utah Division of Wildlife Resources
Reducing Human-Wildlife Conflicts with Ungulates Migrating through Salt Lake and Utah Counties (UT)
 Reduce vehicle collisions along State Route 73 by fencing sections of the road and improving habitat conditions within the migration corridor along the west side of Utah Lake that have become infested with invasive cheatgrass. Project will restore 195 acres of habitat and reduce wildlife-vehicle collisions by nearly 60 percent.
\$90,275

West Box Elder Conservation District
Creating and Improving Wet Meadow and Grassland Habitat along Grouse Creek (UT, ID)
 Improve and create wet meadow and grassland habitat for wildlife, promote aquatic habitat protection, and expand water developments to limit cattle use of riparian areas in Grouse Creek in Box Elder County, Utah. Project will bring 3,000 acres under improved management and restore hydrology on more than 500 acres of mesic habitat.
\$215,303

VERMONT

Connecticut River Watershed Council
Implementing an Innovative Approach to Restore Forests on Upper Connecticut River (NH, VT)

Restore healthy riparian forests and floodplains in tributaries of the Upper Connecticut River in New Hampshire and Vermont that provide important habitat for freshwater mussels, fish, birds and pollinators. Project will implement an innovative, 10-acre floodplain restoration from an old hay field and restore 3 miles of riparian forest to improve water quality and benefit native brook trout, wood turtle, rusty blackbird and other aquatic and riparian species.
\$174,214

Essex County Natural Resources Conservation District**Planning for Cover Cropping to Reduce Nitrogen (VT)**

Develop a cover cropping species mix and planting strategy and methods for monitoring reductions in nitrogen from farm runoff in Essex County, Connecticut. Project will create a robust on-farm planting strategy to reduce nitrogen into the Connecticut River and downstream to Long Island Sound.
\$24,521

Friends of Nulhegan Basin Fish and Wildlife Refuge**Maintaining Access to Silvio O. Conte National Fish and Wildlife Refuge (VT)**

Re-deck the primary access bridge to the Nulhegan Bay Division of Silvio O. Conte National Fish and Wildlife Refuge. Project will provide continued public access to the refuge for hunting, fishing, and other outdoor recreation activities while raising awareness of conservation and increasing the volunteer base.
\$4,000

National Audubon Society**Identifying Forest Blocks and Implementing Strategies to Improve Habitat for Birds (NY, VT)**

Improve forest management practices through Audubon's Woods, Wildlife, and Warblers program and continue to work with family forest owners, professional foresters and industry in the Lake Champlain and Upper Hudson watersheds in New York and Lake Champlain Basin in Vermont. Project will restore 450 acres of young forest habitat and 1,000 acres of late successional habitat to benefit American woodcock, golden-winged warbler, black-throated blue warbler and wood thrush.
\$200,000

Rich Earth Institute**Deploying a Nitrogen Reclamation Project in the Long Island Sound Watershed — III (VT)**

Enhance the deployment of nitrogen reclamation technology in Windham County, Vermont, Franklin County, Massachusetts and Cheshire County, New Hampshire. Project will divert 150 pounds of nitrogen annually from entering the Connecticut River and downstream to Long Island Sound.
\$96,734

Trout Unlimited**Restoring Instream Habitat and Engaging Private Landowners to Improve Fish Passage (MA, NY, VT)**

Restore instream and riparian forest habitat based on previous outreach and training to private landowners, municipalities, and forestry professionals. Project will add large woody material to 5 miles of stream, restore 5 miles of adjacent riparian forest to create habitat for native brook and complete 90 percent designs for three aquatic barriers to be removed in the future.
\$133,842

Vermont Association of Conservation Districts**Planning for Pocket Wetland Restoration to Prevent Nitrogen Pollution from Farms (VT)**

Develop 14 watershed plans to identify high-priority areas to restore pocket wetlands in agricultural fields in Vermont's Connecticut River Basin. Project will ultimately restore freshwater wetlands and enable greater reduction in nitrogen loading from nonpoint source runoff from the Connecticut River downstream to Long Island Sound.
\$49,925

Vermont Land Trust**Incentivizing Ecological Restoration on Vermont Farmland**

Produce ecological assessments and riparian/wetland restoration plans for 12 farmland conservation projects and an associated plan for a market-based financing model in the Connecticut River Watershed, Vermont. Project will develop a strategy for incentivizing on-farm projects to reduce nitrogen along the Connecticut River and downstream to Long Island Sound.
\$199,478

Vermont Land Trust**Restoring Riparian Forests, Instream Habitat and Wetlands (VT)**

Design and implement a suite of forest, stream and agricultural practices in the heavily agricultural basins of Vermont's two largest lakes, Champlain and Memphremagog, as part of the Headwaters to Lakeshore Initiative. Project will restore 10 miles of riparian forest with a 50 foot buffer, restore a mile of instream habitat and 100 acres of wetland.
\$137,650

Wildlife Management Institute**Enhancing Forest Habitat for New England Cottontails, Golden-Winged Warbler and American Woodcock (multiple states)**

Enhance participation in Farm Bill programs by supporting habitat biologists and outreach specialists to interface with private landowners to provide young forest habitat for more than 50 Species of Conservation Need in New England. Project will develop forest management plans that utilize existing Best Management Practices, develop healthy diverse forest age classes, and protect riparian habitat values, improving management on 200 acres.
\$156,290

VIRGINIA

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 restoration study design, and develop protocol testing and data generation at two to four restoration sites at varying stages of installation.
\$230,279

Alliance for the Chesapeake Bay**Expanding the Woodland Stewardship Network Program in the Blue Ridge (VA)**

Expand the Woodland Stewardship Network into the Blue Ridge geography of Virginia by building at least two additional networks of private landowners with forest management plans that will improve management on privately owned, non-industrial forestland. Project will create management plans for 1,000 acres of forest and improve management of 150 acres to benefit golden-winged and cerulean warblers.
\$50,000

Canaan Valley Institute**Restoration of Aquatic Connectivity and Riparian Corridor Habitat Enhancement (VA)**

Restore aquatic connectivity and reduce sedimentation through riparian corridor enhancement to benefit the hellbender, freshwater mussels and fish in the Upper Tennessee River Basin in southwestern Virginia. Project will remove one fish passage barrier, open 5 miles of stream, construct 2 miles of livestock exclusion fencing, restore 3 miles of riparian forest buffer, establish 10 hellbender nest sites, and utilize environmental DNA sampling.
\$155,588

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 Commission

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

Draft and publish peer-reviewed literature summarizing the core set of lessons learned through the work of the Chesapeake Bay restoration partnership which are applicable to other watershed-based/partnership-based restoration efforts. Project will share the key lessons learned during the multi-decade, partnership-based, Chesapeake Bay restoration efforts, and will result in a multi-media series of "lessons learned" products.

\$25,316

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.

\$490,372

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.

\$227,467

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

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 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

Conserving Whimbrel Across the Western Atlantic Flyway (multiple states, Canada)

Expand on efforts to monitor declining whimbrel populations along the western Atlantic Flyway. Project will update the whimbrel conservation plan with whimbrel working group input, develop an index of reproductive performance and engage partners to establish a monitoring network, expand roost surveys during spring migration to improve protection at key sites, continue building an online shorebird roost registry, and make managers aware of roost locations to facilitate their protection.

\$99,374

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.

\$49,310

College of William and Mary, Virginia
Institute of Marine Science

Test and Implement Commercial Grade Biodegradable Hinges on Dungeness Crab Traps (AK, VA, WA)

Employ commercial-grade biodegradable hinges on Dungeness crab traps to minimize adverse impacts when the traps become derelict. Project will test the durability of the hinges in both the active fishery utilizing watermen and in a simulated derelict trap mode to ensure the function as needed to be functional for fishermen and protect marine ecosystems.

\$130,579

College of William and Mary, Virginia Institute of Marine Science

Using Mobile Applications to Turn Recreational Anglers into Community Scientists (MD, VA)
Understand the success of the “eBird” application and explore how that approach could be adapted to engaging recreational anglers in community science. Project will determine the priorities and concerns recreational fishermen, fisheries managers, and fisheries scientists have regarding mobile applications, and use this input to begin developing an “eFish” application for community science.
\$43,374

Daniel Hall

2020 Guy Bradley Award - State Winner
\$2,500 was awarded to the 2020 Guy Bradley Award state level recipient, Sergeant Daniel Hall from the Virginia Department of Game and Inland Fisheries.
\$2,500

Delmarva Poultry Industry

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 (PMT) and Phase 3 Watershed Implementation Plans across Delmarva, thereby helping to meet regional water quality and healthy watershed goals.
\$49,890

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.
\$499,168

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 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.
\$238,024

James River Association

Reconnecting Fish Migratory Pathways (VA)
Facilitate the removal and replacement of a culvert on Flowerdew Hundred creek in the James River watershed that acts as a critical barrier to fish passage. Project will target American Shad and river herring and achieve the outcome of restoring aquatic connectivity for these native anadromous fish.
\$70,000

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.
\$94,154

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

Manomet

Coordinating American Oystercatcher Recovery on the Atlantic Coast (multiple states)
Provide coordination of the American oystercatcher recovery initiative and actionable change based on lessons learned from 2009-2019 and reduce the impact of predators and human disturbance on populations of breeding shorebirds along the U.S. Atlantic coast. Project will contribute substantially to the goals of the Atlantic Flyway Business Plan.
\$79,999

Middle Peninsula Planning District Commission

Creating Coastal Resiliency through Living Shoreline Strategies (VA)
Assist homeowners in Mathews County through the Fight the Flood program to design, permit, install and monitor living shorelines that meet Federal Emergency Management Agency storm event standards. Project will survey locations for living shorelines in targeted locations on the East River and the North River.
\$219,410

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

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.
\$301,227

The Nature Conservancy

Assessing and Mitigating American Oystercatcher Predation Impacts (VA)
Identify causes of chick loss to inform existing predator management activities at critical nesting sites for American oystercatcher on the Atlantic coast of Virginia. Project will increase oystercatcher reproductive output and help avoid population reversal in the most important American oystercatcher breeding area in the flyway.
\$29,992

The Nature Conservancy

Building Oyster Reefs and Enhanced Saltmarsh Habitat in Wachapreague (VA)
Build and monitor oyster reefs with two types of oyster substrate adjacent to an eroding salt marsh to enhance and protect the seaside town of Wachapreague, VA. Project will further engage the town of Wachapreague and similar communities protected by the Virginia coastal bay system in nature-based solutions to increase resilience in this vulnerable area as well as benefit people and wildlife.
\$804,878

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.
\$49,699

The Nature Conservancy

Propagating and Restoring Native Freshwater Mussel Species in the Upper Clinch River (VA)
Restore populations of three native freshwater mussels species by propagating them, raising them to a suitable size for release into the wild and introducing them into suitable historic habitat in the Virginia portion of the Clinch River in southwestern Virginia. Project will release 100,000 native mussels considered ecosystem engineers that are currently under-represented in the river, with the goal of raising overall mussel assemblage densities beyond 10 mussels per square meter.
\$199,787

The Potomac Conservancy

Growing Native Tree Initiative (MD, VA)
Connect disparate native tree planting efforts in the Potomac Watershed and build a network of volunteers increasing the number of native seeds collected and market existing native tree planting opportunities. Project will convene the coalition, build a website that will consolidate community engagement opportunities, and expand seed collection drop off sites, nursery sites, and community-led seed events.
\$47,518

Trout Unlimited

Sediment Reductions Through Collaborative Technical Assistance in Virginia Headwaters
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.
\$949,142

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.
\$41,574

Trout Unlimited

Responsible Recreation Outreach (VA)
Collaborate with partners in the outdoor recreation community to promote responsible fishing during the pandemic. Project will include a digital and print media campaign.
\$300,000

Virginia Polytechnic Institute

Installing Hellbender Nest Boxes as a Restoration Strategy (VA)
Install hellbender nest boxes in Copper Creek, VA in the second phase of an effort to restore limited hellbender shelter and nesting habitat on private land that will lead to increased survival and reproduction. Project will install 60 nest boxes for hellbenders, repeatedly monitor species response and produce behavior change in 12 households with agricultural property on the river.
\$116,474

Winrock International Institute of Agriculture Development

Methods and Protocols for Calculating Carbon Sequestration Benefits (VA)
Develop methods, protocols and a tool that NFWF staff and grantees can use to calculate the total greenhouse gas emissions avoided and/or sequestered annually as a result of NFWF-funded projects (i.e. the annualized carbon benefit). Project will use selected methods and protocols to estimate the carbon benefits of 35 Acres for America projects and 100-125 additional projects that are representative of the NFWF portfolio, and will develop a "carbon calculator" tool and train NFWF staff to use it.
\$118,830

WASHINGTON**College of William and Mary, Virginia Institute of Marine Science**

Test and Implement Commercial Grade Biodegradable Hinges on Dungeness Crab Traps (AK, VA, WA)
Employ commercial-grade biodegradable hinges on dungeness crab traps to minimize adverse impacts when the traps become derelict. Project will test the durability of the hinges in both the active fishery utilizing watermen and in a simulated derelict trap mode to ensure the function as needed to be functional for fishermen and protect marine ecosystems.
\$130,579

Columbia Land Trust

Acquisition of Mount Adams-Klickitat Canyon Forest (WA)
Conserve the 9,900-acre Mount Adams-Klickitat Canyon Forest through fee acquisition. Project will protect critical habitat for 36 federally and state-listed wildlife species or species of concern, as well as ensure the canyon's role as a central link in a wildlife migration and dispersal corridor that connects 2 million acres of federal and tribal protected habitat to the north with tens of thousands of acres of state and private conservation lands to the south.
\$500,000

Fieldwork Communications

Nationwide Communication on Fisheries Electronic Technologies and Fisheries Information Systems (WA)
Develop and execute nationwide communication strategy for electronic monitoring and reporting technologies and modernization of the U.S. fisheries data systems. Project will develop communication materials and engage a network of stakeholders using digital platforms and social media to advance electronic monitoring and reporting technologies.
\$152,982

Friends of Willapa National Wildlife Refuge
Overlook and Outdoor Classroom for Willapa National Wildlife Refuge (WA)
Construct an overlook at Willapa National Wildlife Refuge. Project will provide an outdoor classroom for environmental education, increase accessible facilities, and raise awareness of the Friends group.
\$15,000

Kwiaht: Center for the Historical Ecology of the Salish Sea
Determining if Salish Sea Northern Anchovy can be Alternative Prey for Chinook Salmon (WA)
Assess the role of northern anchovy in Chinook diets as a possible alternative to their declining prey base. Project will sample and monitor Chinook salmon and forage fish around the San Juan Islands to determine whether increasing stocks of northern anchovy are a viable prey alternative or a competitor to current prey biomass.
\$27,916

Lower Columbia Estuary Partnership
Steigerwald Flood Risk Reduction and Floodplain Restoration for Salmonids and Lamprey (WA)
Reconfigure a 5.5-mile levee system to reconnect 960 acres of historic floodplain habitat, fish passage and establish native vegetation along a section of the lower Columbia River. Project will improve rearing habitat for salmon, steelhead, and lamprey; re-establish unobstructed fish passage to a 7 square mile watershed; reduce flood risk to an industrial park, municipal wastewater treatment plant, and private residences; and improve recreation opportunities.
\$1,987,219

Mid Sound Fisheries Enhancement Group
Restoring Shorelines to Increase Prey Availability for Southern Resident Killer Whales (WA)
Engage Central Puget Sound residential landowners to restore forage fish and juvenile salmon habitat using innovative outreach strategies and technical and financial incentives. Project will focus on restoring beach habitat to increase the prey availability for Southern Resident killer whales.
\$141,020

Mountains to Sound Greenway Trust
Issaquah Creek Riparian Restoration at Lake Sammamish State Park (WA)
Engage community members, volunteers, and AmeriCorps members to continue and expand ecological restoration efforts within the U.S. Fish and Wildlife Service's Lake Sammamish Urban Wildlife Refuge Partnership. Project will undertake 10 new acres of restoration, support restoration on more than 40 acres, plant 4,000 native trees and shrubs, engage more than 200 volunteers, and connect with 100 youths through the organization's outdoor environmental education program.
\$50,000

National Audubon Society
Increase Collaboration of Sagebrush Conservation (multiple states)
Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stake holders and host field tour events that elevate on-the-ground conservation.
\$29,636

Nez Perce Tribe
Increase Flow Restoration Efforts in the Nez Perce Tribal Geographies (ID, OR, WA)
Increase flow restoration efforts in the Nez Perce tribal geographies. Project will increase tribal capacity to coordinate with other groups developing water transactions within the broad geography of ceded lands, and also enable the Tribe to propose transactions uniquely linked to tribal relationships, tribal treaty rights, and tribal sovereignty.
\$15,000

Nooksack Salmon Enhancement Association
Whatcom Stream Stewards Program (WA)
Restore 15 acres of riparian habitat to improve water quality and habitat for Chinook salmon, bull trout and steelhead in Puget Sound and Whatcom County. Project will engage five local resource management partners and 2,000 volunteers to plant 5,000 trees and remove 6 acres of invasive vegetation.
\$32,404

Pheasants Forever
Increasing Regional Capacity for Mule Deer Conservation (WA)
Increase organizational capacity to assist in developing and implementing conservation and restoration projects, promoting Natural Resource Conservation Service programs and building robust regional partnerships.
\$274,596

Port of Bellingham
Recycling Used Gill and Seine Nets in the Port of Bellingham (WA)
Collect and recycle or convert to energy used gill and seine nets in the Port of Bellingham, Washington, home to the second largest commercial fishing fleet in Washington State. Project will recycle or convert to energy 15 tons of fishing gear through a partnership with local recyclers, providing a safe and environmentally friendly option for local fisherman to dispose of their used nets.
\$9,850

Port of Grays Harbor
Collection of Fishing Gear and Public Outreach at Westport Marina (WA)
Collect and recycle or convert to energy retired crab, shrimp, tuna, oyster, salmon, and whiting affiliated fishing gear at Westport Marina, in Westport, Washington. Project will collect and recycle or convert to energy nearly 40 tons of fishing gear, serving 170 resident vessels and hundreds of transient seasonal vessels, while program outreach will educate fisherman and the public on the value and impact of recycling fishing gear.
\$8,293

Quileute Tribe
Restoring Thunder Field to Address Erosion and Enhance Salmonoid Habitat (WA)
Finalize engineering designs that address erosion and avulsion threats at Thunder Field to enhance salmonid habitat along 5.5 miles of river channel and associated floodplains, wetlands, and riparian habitat on the Quillayute River. Project will reduce channel migration and erosion using large wood and earthen structures to protect riparian, upland and stream habitat for wildlife.
\$169,127

SR3 SeaLife Response, Rehabilitation and Research
Monitoring the Nutritional Health of Southern Resident Killer Whales for Management (WA)
Use unmanned aerial systems to monitor the body condition, growth and pregnancy rates of Southern Resident killer whales. Project will relay nutritional health and effects on reproductive success to management to facilitative adaptive management of fisheries harvest, salmon restoration efforts, and medical interventions.
\$159,996

Sustainable Northwest
Pacific Northwest Forest Collaboratives and Indian Tribes Restoration Initiative (OR, WA)
Partner with Indian Tribes and Forest Collaboratives to implement and monitor fuels and wildfire risk reduction projects with forest restoration and wildlife habitat enhancement on three Pacific Northwest landscapes. Project will improve rural and Indigenous community protection against fire and restore forests, resulting in more than 430,000 acres managed for strategic fuel reductions and long-term conservation outcomes in Oregon and Washington.
\$349,470

The Whale Museum

Increasing Boater Awareness on Regulations to Protect Southern Resident Killer Whales (WA)
Establish clear messaging to communicate new rules for recreational boaters near Southern Resident killer whales. Project will support the creation of key messaging and design and generation of materials that will help the communities using the Puget Sound and Salish Sea region to understand and comply with recently released regulations.
\$79,345

The Whale Museum

Modeling Movement and Distribution of Killer Whales in the Salish Sea (WA)
Conduct analysis of 42 year dataset to establish models that relate Southern Resident killer whale movement to biotic and abiotic factors such as salmon returns, temperature and depth. Project will develop a baseline model of temporal and spatial killer whale use in the Salish Sea that can be used to overlay threats for improved management action.
\$21,519

Trout Unlimited

Elevating Instream Flow Enhancement in the Methow and Okanogan Basins - Colville (WA)
Identify, prioritize and develop water transactions in the Methow and Okanogan subbasins of Washington working in collaboration with the Confederated Tribes of the Colville Reservation. Project will increase habitat and instream flow in priority tributaries and will build capacity for working with agricultural landowners on conservation projects that will benefit Pacific salmon, steelhead and their habitat.
\$79,740

Trout Unlimited

Hydrologic Flow Restoration in the Yakima, Entiat, and Wenatchee Basins (WA)
Identify, prioritize and develop projects with willing water right holders in the Entiat, Yakima and Wenatchee subbasins of Washington to complete significant instream flow enhancements to priority streams and tributaries. Project will improve tributary instream habitat to benefit listed salmon and other fish species and their habitats.
\$221,624

U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Northwest Fisheries Science Center
Monitoring Distribution, Habitat Use, and Prey Selection of Southern Resident Killer Whales (WA)

Conduct boat-based surveys for Southern Resident killer whales in the coastal waters of Washington. Project will determine whale distribution, habitat use, and prey selection to fill data gaps for managers about population use of this lesser understood coastal habitat.
\$197,935

Washington Department of Ecology

Restoring Graveyard Spit to Prevent Coastal Erosion in Willapa Bay (WA)
Develop the final engineering designs and permitting for the construction of a nature-based dune and cobble berm to restore and protect Graveyard Spit along the northern entrance to Willapa Bay, Washington. Project will halt the ongoing loss of the spit and the vulnerable back-barrier estuary, while also protecting community infrastructure that is threatened by coastal erosion and sea level rise.
\$240,504

Washington Department of Fish and Wildlife

Provide Streamflow Monitoring and Water Transaction Support (WA)
Provide stream monitoring and technical assistance to all Washington state Qualified Local Entities on prioritization, identification, and development of water right transactions. Project will provide review on monitoring plans to ensure that stream flow and, where appropriate, biological monitoring are incorporated into project monitoring plans.
\$112,017

Washington Water Trust

Stream Flow Restoration to Benefit Salmon, Steelhead and Trout in the Columbia Basin (WA)
Restore fish-critical streams in the Columbia River Basin by implementing instream flow acquisitions in the Methow, Yakima, Wenatchee, Klickitat, and White Salmon River basins. Project will benefit ESA-listed Chinook salmon and steelhead.
\$135,000

Washington Water Trust

Stream Flow Restoration to Benefit Salmon, Steelhead and Trout in the Columbia Basin, Colville (WA)
Restore fish-critical streams in the Columbia River Basin by implementing instream flow acquisitions in the Okanogan, Wenatchee, and Methow watersheds. Project will continue its partnership with the Confederated Tribes of the Colville Reservation to benefit ESA-listed steelhead, spring Chinook, and bull trout.
\$99,296

Washington Water Trust

Stream Flow Restoration to Benefit Salmon, Steelhead and Trout in the Columbia Basin, Umatilla (WA)
Restore fish-critical streams in the Columbia River Basin by implementing instream flow acquisitions in the Walla Walla basin. Project will continue its partnership with the Confederated Tribes of the Umatilla Reservation to benefit ESA-threatened summer steelhead and bull trout.
\$117,975

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.
\$350,630

Chesapeake Bay Commission

Lessons Learned from Decades of Experiences of the Chesapeake Bay Program Partnership (multiple states)
Draft and publish peer-reviewed literature summarizing the core set of lessons learned through the work of the Chesapeake Bay restoration partnership which are applicable to other watershed-based/partnership-based restoration efforts. Project will share the key lessons learned during the multi-decade, partnership-based, Chesapeake Bay restoration efforts, and will result in a multi-media series of "lessons learned" products.
\$25,316

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

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**

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. **\$41,574**

Trout Unlimited**Linking Stream Habitat on Public and Private Lands in the Upper Greenbrier River to Benefit Brook Trout (WV)**

Expand the footprint of the Upper Greenbrier River Watershed restoration efforts from the headwaters located on public lands in the Monongahela National Forest to the downstream watersheds dominated by private lands, in one of the largest identified eastern brook trout patches on the river. Project will install 3 miles of livestock exclusion fencing, restore 6 miles of riparian forest buffer and implement best management practices for sediment reduction on 200 acres. **\$95,414**

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. **\$476,470**

WISCONSIN**City of Port Washington****Implementing Green Stormwater Infrastructure Improvements in City of Port Washington (WI)**

Provide flood storage and improve water quality through implementation of green infrastructure within the Sauk Creek watershed, Wisconsin. Project will enhance wet meadow habitat by installing vegetative swales and native vegetation, adding nearly 1.5 million gallons of stormwater storage annually. **\$400,000**

Crossroads at Big Creek**Transforming a Patchwork of Rural Lands into Wildlife Habitat (WI)**

Manage ecological trajectories to transform a patchwork of past rural and agricultural lands into reconnected, thriving, high-quality forest and meadow habitat at Big Creek estuary in Wisconsin. Project will restore 125 acres of habitat, control invasive species, and improve habitat connectivity and resilience. **\$189,438**

Harbor District**Improving Shoreline Habitat and Public Accessibility in Downtown Milwaukee (WI)**

Improve habitat in downtown Milwaukee, ensuring public accessibility will accompany waterfront development, to improve shoreline habitat. Project will plant 50 trees and restore downtown shoreline habitat to benefit fish, waterfowl, insects, and macroinvertebrates by naturalizing portions of dock walls and providing native vegetation. **\$254,500**

Hunger Task Force**Restoring Prairie Habitat and Engaging the Community to Increase Native Wildlife (WI)**

Restore prairie habitat along the Root River in Franklin, Wisconsin to increase habitat availability for wildlife, improve habitat connectivity, increase native species competition, decrease runoff and increase critical populations of rusty patched bumble bee and other species. Project will restore 20 acres of prairie 12 of which are crop land being converted back to prairie, and 8 of which will restore remnant prairie habitat. **\$107,140**

Lake County Forest Preserve District Coastal Dune and Swale Habitat (IL, WI)

Maintain and enhance previous restoration efforts through continued, targeted use of the invasive plant strike team to identify, map and eradicate or contain invasive species in Lake County, Illinois and Kenosha County, Wisconsin. Project will restore and retreat 200 acres of high-quality coastal dune and swale habitat which provides habitat for three federally and 63 state-protected species. **\$250,000**

Milwaukee Public Schools**Designing and Constructing Green Stormwater Infrastructure on Milwaukee Schoolyards (WI)**

Conduct detailed design, permitting and construction of green infrastructure at five Milwaukee schoolyards to address stormwater needs. Project will plant 57 trees, build more than 87,000 acres of greenspace, remove 11,500 acres of impervious surface and add 4 million gallons of stormwater storage annually. **\$625,000**

Milwaukee Public Schools**Stormwater Management Green Infrastructure at Milwaukee Schoolyards (WI)**

Design and construct green infrastructure projects, including asphalt removal, porous pavement installation, bioswales and rain gardens at five Milwaukee schoolyards on 11 acres to address local stormwater needs. Project will plant 57 trees, engage 2,335 students and 175 teachers in stormwater based curriculum and the development of outdoor classrooms and engage 50 volunteers through site maintenance opportunities. **\$50,000**

Neighborhood House of Milwaukee Building Green Stormwater Infrastructure to Reduce Pollution and Engage Youth in Conservation (WI)

Replace old infrastructure on Milwaukee's near west side with green infrastructure components focused on conserving and improving water resources and reducing sewer overflows that impact the Menomonee River. Project will add more than 7,000 gallons of stormwater storage with green stormwater infrastructure and use the green infrastructure components as learning tools for an environmental education program. **\$75,000**

Ozaukee County**Enhancing Habitat Restoration Benefits through Invasive Species Management in Ozaukee County (WI)**

Support continued improvements to the native local ecology within 14 ecologically diverse Ozaukee County parks, natural areas and environmentally sensitive lands, by controlling aquatic, coastal, and terrestrial invasive vegetation on habitat that was previously restored and treated for invasive species. Project will restore 250 acres through invasive species management, reforestation through native tree and shrub plantings, and stream, wetland and prairie restoration. **\$150,000**

Pollinator Partnership**Improving Pollinator Habitat Connectivity in the Midwest and Great Lakes Flyway (AR, IL, MI, MN, WI)**

Expand a regional seed collection and native plant materials network program in the Midwest and Great Lakes region to support monarch butterflies, rusty patched bumble bees and other declining pollinator species. Project will improve more than 5,000 acres of pollinator habitat, collect 50 pounds of milkweed seed, collect 50 pounds of nectar plant seed, and propagate 2,000 milkweed and 1,000 nectar species seedlings.

\$74,971

Root-Pike Watershed Initiative Network**Restoring Forest-Wetland Habitat for the Rusty Patched Bumble Bee (WI)**

Restore prairie, woods, and wetland habitat within the Pike River Watershed to benefit populations of the rusty patched bumble bee and other pollinators in Wisconsin. Project will remove invasive species, improve water quality and improve public recreation by restoring nearly 30 acres of habitat.

\$50,105

Sheboygan County**Restoring Riparian and Wetland Habitat (WI)**

Protect and enhance ecological integrity of stream and coastal wetland habitat in the Amsterdam Dunes Preserve on the western shore of Lake Michigan by decreasing bank erosion reducing sediment and nutrient runoff, increasing aquatic and terrestrial habitat availability, restoring hydrologic function and controlling invasive species. Project will restore 21 acres of wetland habitat and 0.35 miles of riparian habitat.

\$230,000

The Prairie Enthusiasts**Engage Landowners in Pollinator Conservation (IA, IL, MN, WI)**

Create two landowner-focused staff positions and develop an outreach and technical assistance program in the upper Midwest to implement recovery plans for the monarch butterfly, Karner blue butterfly, and rusty patched bumble bee. Project will identify and engage private working landowners to carry out pollinator habitat restoration and management projects, bringing 3,000 acres under improved management and restoring 2,000 acres of habitat.

\$245,508

Trout Unlimited**Brook Trout Monitoring and Evaluation for Sustain our Great Lakes (multiple states)**

Conduct an evaluation to understand brook trout response, including abundance, young of year, multiple life stages, and effective breeders, to the improved access to and quality of habitat. Project will track progress towards the Great Lakes Business Plan stream habitat related goals.

\$292,650

Trout Unlimited**Conservation Assessment of Brook Trout and Planning and Impact Tool Development in the Great Lakes Region (multiple states)**

Conduct a broad-scale assessment of existing brook trout population viability within the U.S. portion of the Great Lakes watershed that will build off of and be compatible with the analysis and associated tools developed for NFWF's Mid-Atlantic/Northeast region. Project will assist NFWF in identifying conservation needs and priority investment areas throughout the basin and associated tools will enable NFWF to develop and measure population-based recovery goals over time across multiple NFWF landscapes, particularly the Northeast and Great Lakes.

\$126,967

Trout Unlimited**Engaging Landowners in Water Quality and Wildlife Habitat Farm Bill Programs (IA, IL, MN, WI)**

Restore cold-water streams and watersheds in the Driftless Area, creating habitat practices for fish, shorebirds, amphibians, reptiles and other aquatic biota. Project will improve management on 525 acres, restore 30 miles of stream, prevent 9,000 tons of sediment and 4 tons of nutrient pollution from entering the system annually.

\$199,961

Trout Unlimited**Reconnecting Coldwater Habitat and Monitoring Brook Trout Response (WI)**

Replace at least seven barriers to aquatic organism passage in and adjacent to the Chequamegon-Nicolet National Forest, reconnecting at least 30 miles of coldwater habitat. Project will survey brook trout population dynamics and movement at project sites before and after construction and reconnect important brook trout habitat in northern Wisconsin's Lake Michigan watershed.

\$345,107

Village of Elm Grove**Converting the Underwood Creek Culvert in Elm Grove into an Ecologically Restored Stream (WI)**

Convert an enclosed culvert on Underwood Creek in downtown Elm Grove into a bio-engineered channel with natural hydraulic function, improved fish passage and restored riparian habitat. Project will rectify one fish passage barrier to improve stream ecology with the added benefits of increased recreational value and improved stormwater management.

\$300,000

Wisconsin Department of Natural Resources**Restoring Ecological Function and Reducing Invasives on State Natural Areas (WI)**

Conduct ecological restoration through a combination of prescribed fire, selective tree thinning, brush mowing, invasive species control, and revegetation on high-conservation-value state natural areas and surrounding landscapes in Wisconsin's Lake Michigan Watershed. Project will restore 1,800 acres on public and private properties to form protective buffers around quality habitats to expand available habitat and habitat diversity, control invasives, and improve connectivity.

\$228,570

Woodland Dunes Nature Center and Preserve**Restoring Riparian and Coastal Wetland Habitat in the Woodland Dunes Nature Center and Preserve (WI)**

Restore degraded riparian and coastal wetland habitat in the Woodland Dunes Nature Center and Preserve in Wisconsin. Project will improve 33 acres of habitat by restoring hardwood swamp canopy cover, controlling invasive species and developing a plan for realigning and naturalizing Forget Me Not Creek, a tributary to Lake Michigan.

\$191,001

WYOMING**Greater Yellowstone Coalition****Improving Connectivity by Promoting Safe Passage of Ungulates through Dry Piney Wildlife Habitat (WY)**

Secure roadway safety for humans and wild animals by constructing a series of crossings, fencing and related improvements near Dry Piney Creek on U.S. Highway 189 in southwest Wyoming. Project will construct 29 miles of fencing to guide wildlife to safe crossings and significantly decrease the number of wildlife-vehicle collisions.

\$122,081

National Audubon Society**Increase Collaboration of Sagebrush Conservation (multiple states)**

Strategically coordinate internal and external communication between a wide range of stakeholders committed to improving communications about the sagebrush ecosystem to elevate not only individual efforts but also the larger dialog about the value and need for sagebrush conservation. Project will bring 100 acres of sagebrush habitat under improved management, develop media resources for community stakeholders and host field tour events that elevate on-the-ground conservation.

\$29,636

Rocky Mountain Bird Observatory
Implement a Radio Telemetry Network in the Great Plains and Chihuahuan Desert to Monitor Grassland Birds (multiple states)

Implement a collaborative network of automated radio telemetry stations throughout the Great Plains and Chihuahuan Desert to monitor the annual cycle of grassland birds, including Baird's sparrow, Sprague's pipit and chestnut-collared longspur. Project will initiate this effort by holding webinars to recruit and train partners and develop a plan to track grassland birds across the region, install telemetry stations to track focal species, and deploy tags on focal species.

\$250,000

Rocky Mountain Bird Observatory
Monitoring Grassland Bird Population Responses to Investments in the Northern Great Plains (MT, ND, NE, SD, WY)

Continue evaluating and quantifying the impacts of NFWF-funded conservation easement and grazing management projects on priority grassland bird species in the Northern Great Plains. Project will compare density, population size, and trend of priority grassland birds between NFWF projects and controls within the Northern Great Plains region.

\$372,899

Sheridan County Weed and Pest
Eradicating Invasive Medusahead and Ventenata Grasses to Conserve Sagebrush Habitat (WY)

Protect sagebrush communities with long-term management of invasive grasses by engaging new communities, ensuring efficient communication across jurisdictional boundaries, and targeting prioritized treatment areas in northeastern Wyoming. Project will eradicate medusahead and ventenata on more than 5,000 acres.

\$250,000

Sublette County Conservation District
Providing Technical Assistance for Landowners to Conduct Mesic Restoration on Working Lands (WY)

Provide tools for landowners to adopt low-tech restoration technologies for mesic habitat restoration and launch a program that delivers funding assistance for project implementation. Project will build resilience and restore critical mesic habitats in semi-arid sagebrush rangelands benefiting both wildlife and livestock on working lands.

\$143,106

The Nature Conservancy
Restoring Mesic Habitat and Providing Technical Assistance for Federal and State Implementers (WY)

Study stream morphology and vegetation changes in response to the installation of beaver dam analogues and rock structures for mesic restoration. Project will install more than 200 structures, bring 1,100 acres under improved management and provide training on mesic structure installation to Federal and State staff implementing these techniques in Wyoming.

\$98,271

Trout Unlimited

Snake River Cutthroat Trout Fish Passage Restoration in Spread Creek — IV (WY)

Support native fisheries conservation by National Forest and National Park Service managers by addressing impacts of irrigation on native fish passage. Project will eliminate entrainment of native fish, including Snake River cutthroat trout and bluehead suckers into the Spread Creek irrigation system and ensure unimpeded migration between the Snake River and upper Spread Creek.

\$60,000

Wyoming Game and Fish Department
Restoring Habitat and Improving Connectivity in the Thunder Basin Grasslands (WY)

Benefit sage-grouse, pronghorn, and other sagebrush and grassland obligates by addressing encroaching juniper, modifying fences to wildlife friendly specifications, and re-planting native sagebrush on a post-wildfire site within the Thunder Basin Grasslands. Project will restore 600 acres of habitat, improve 12 miles of fencing and conserve eight sage-grouse leks.

\$250,000

Wyoming Game and Fish Department
Restoring Native Grassland and Sagebrush Habitat to Benefit Ungulates (WY)

Restore native grassland and sagebrush habitat southwestern Wyoming by treating and removing invasive species to benefit ungulate species. Project will improve 19 miles of fencing and restore more than 3,500 acres of habitat.

\$249,000

U.S. TERRITORIES

AMERICAN SAMOA

Ridge to Reefs

Implementing Green Infrastructure Solutions in the Faga'alu and Vatia Watersheds, (AS)

Implement three green infrastructure projects across two priority watersheds; Vatia and Faga'alu in American Samoa. Project will train the watershed coordinator and local partners in restoration site selection, design and implementation to focus on reduction of nutrients from piggeries and septic systems and sediment associated with a quarry.

\$85,000

San Diego State University Research Foundation

Evaluating Sediment Mitigation in Faga'alu (AS)

Conduct a comprehensive evaluation of sediment mitigation activities in Faga'alu Watershed, American Samoa. Project will combine existing data sets with fieldwork to quantify the impact of mitigation on sediment load, sediment sources based on geochemical composition, and benthic cover at a priority coral reef site.

\$83,211

U.S. Department of the Interior, U.S. Fish and Wildlife Service
Identifying Seabird Nesting Areas on Tutuila Island (AS)

Survey up to 30 locations across Tutuila Island, American Samoa for Tahiti petrel and other montane seabirds. Project will deploy passive acoustic song meters from January through March 2020, along with trail cameras to evaluate seabird activity and to detect the presence and activity of nonnative mammalian predators; acoustic data will be analyzed to provide information about where birds are concentrated and inform focused on-the-ground searches.

\$24,911

University of California - Santa Barbara
Measuring the Impacts of Herbivorous Fish on Coral Reefs to Better Inform Reef Management (AS)

Fill knowledge gaps regarding the relationship between herbivorous fish biomass and coral reef condition and how this relationship impacts the resilience of coral reefs in American Samoa. Project will identify species that both prevent macroalgae from increasing and remove macroalgae once abundant to prioritize species and inform fisheries management options.

\$61,608

GUAM

The University of Guam

Developing a Genetic Toolkit to Assess Stress Levels in Coral Reefs (GU)

Develop a genetic toolkit to detect, identify and quantify stress before the onset of physical symptoms in two of the most common and important coral species on Guam. Project will help reef managers identify reefs under stress, pinpoint the causative stressors, and target resilient individuals to propagate for restoration actions.

\$118,779

The University of Guam

Restoring Staghorn Corals and Ecosystem Services on Reef Flats in Guam, Micronesia

Upscale current staghorn restoration efforts in Guam, Micronesia. Project will undertake additional research to develop needed best practices that assist restored coral community adaptation to projected future climate conditions.

\$848,872

NORTHERN MARIANA ISLANDS

CNMI Office of Planning and Development Enhancing Wetlands and Corals Resilience in Saipan's Priority Management Watershed (CNMI)

Build community resilience in Saipan's most populated priority management watershed through wetland and coral reef restoration. Project will restore 2.5 acres of wetlands and one acre of coral reefs benefiting over 250 species, including endangered as well as economically important species, and establish a pipeline of projects to reduce flooding and pollutant runoff and increase community resiliency.

\$1,679,215

Mariana Islands Nature Alliance

Removal of Marine Debris from Typhoon Yutu in Coastal Areas of Saipan and Tinian (CNMI)

Assess, remove and dispose of marine debris from Typhoon Yutu, in Tinian Harbor. Project will remove marine debris to prevent further damage to coral reef and other sensitive coastal habitats.

\$2,467,302

Pacific Coastal Research and Planning

Removal of the Derelict Fishing Vessel Lady Carolina from the Reef in Saipan Lagoon (CNMI)

Remove and properly dispose of the derelict fishing vessel Lady Carolina from the coral reef in the Saipan Lagoon. Project will remove and dispose of the vessel broken up by Typhoon Yutu to prevent further damage to the reef and allow it to recover.

\$1,500,000

Pacific Coastal Research and Planning Shoreline Stabilization and Enhancement Plan for the Beach Road Pathway (CNMI)

Develop a Shoreline Master Plan for a highly used 6-mile portion of Saipan's western coast. Project will produce a comprehensive management plan as well as select one project for further development and implementation.

\$248,903

PUERTO RICO

Marine Applied Research Center

Identifying Coral Reef Restoration Priorities in Puerto Rico Based on Resilience Factors (PR)

Generate information on spatial variation in the resilience and vulnerability of the coral reefs in Puerto Rico to rising environmental stressors. Project will develop maps that represent resilience, vulnerability, and opportunities for restoration and recovery to help prioritize conservation efforts.

\$79,903

Protectores de Cuencas

Using Habitat Restoration, Expansion and Creation to Protect and Adapt Critical Infrastructure (PR)

Assess and design fringing reef to restore and expand mangrove habitats at nearshore areas adjacent to PR-250. Project will use engineering with nature approaches to restore, expand and create habitats that reduce flood risks and dynamically adapt to sea level rise while increasing essential fish habitats, as well as provide education and recreation opportunities.

\$118,867

Sociedad Ambiente Marino

Restoring the three-dimensional structure of hurricane-impacted coral reefs in Puerto Rico

Restore the three-dimensional structure across of coral reefs that were severely damaged by hurricanes Irma and Maria. Project will use a multi-method restoration approach that combines the outplanting of artificial coral colonies created with emerging 3D printing technology with multispecies outplants composed of morphologically complex branching and massive corals.

\$1,645,187

SymbioSeas

Identifying Priority Sites for Reef Restoration in Saipan (CNMI)

Develop a framework for identifying, prioritizing candidate sites to implement coral reef restoration in Saipan. Project will assess restoration need, restoration feasibility, and likelihood of short and long-term coral survivorship.

\$249,972

The Ocean Foundation

Planning a Collaborative Sustainable Seafood Strategy in Puerto Rico

Promote locally caught fish and plan a social marketing campaign to raise awareness about local fish markets, local sustainable seafood, and underutilized species thus creating new access to markets for Puerto Rico's fishermen. Project will engage industry stakeholders and develop an outreach plan to facilitate access and commercialize sustainable products.

\$26,000

The Ocean Foundation

Tracking Habitat Use and Movement of Atlantic Leatherbacks in the Northern Caribbean (PR, USVI)

Investigate the nesting population dynamics of leatherback sea turtles within and between the beaches of St. Croix and Puerto Rico. Project will monitor turtle movements using satellite tags through the nesting season to understand if populations are declining or shifting use of Caribbean beaches.

\$19,888

University of Puerto Rico at Aguadilla Strengthening Puerto Rico's Natural Coastal Systems Through Ecological Restoration, Education and Community Engagement (PR)

Restore and monitor damaged coastal dunes using environmental education to engage local community. Project will strengthen coastal resilience to mitigate future storms, floods and other natural hazards; achieve ecological conservation and biodiversity through dune restoration and monitoring; and educate and engage the population using the Latino Earth Partnership, a 10-step restoration education process and citizen science program.

\$852,080

U.S. VIRGIN ISLANDS

The Ocean Foundation

Tracking Habitat Use and Movement of Atlantic Leatherbacks in the Northern Caribbean (PR, USVI)

Investigate the nesting population dynamics of leatherback sea turtles within and between the beaches of St. Croix and Puerto Rico. Project will monitor turtle movements using satellite tags through the nesting season to understand if populations are declining or shifting use of Caribbean beaches.

\$19,888

UNITED STATES AND INTERNATIONAL
FISCAL YEAR 2020 CONSERVATION INVESTMENTS

CANADA

Bat Conservation International
Enhancing Foraging Habitat for Bats Affected by White-Nose Syndrome in Michigan and Canada
 Improve survival of bats with white-nose syndrome by enhancing their foraging efficiency. Project will use light and chemical attractants at seven sites in Michigan and Manitoba to concentrate insects near hibernacula in fall and spring to determine whether more insect prey improves survivability, with the goal of reducing the mortality rate from 71 percent to 30 percent.
\$249,995

College of William and Mary
Conserving Whimbrel Across the Western Atlantic Flyway (multiple states, Canada)
 Expand on efforts to monitor declining whimbrel populations along the western Atlantic Flyway. Project will update the whimbrel conservation plan, develop an index of reproductive performance, expand roost surveys during spring migration to improve protection at key sites, continue building an online shorebird roost registry, and make managers aware of roost locations to facilitate their protection.
\$99,374

Halton Region Conservation Foundation
Improving Brook Trout, Atlantic Salmon and American Eel Habitat (Canada)
 Improve riparian habitat for brook trout, Atlantic salmon, American eel, and other aquatic species in the Limestone Creek in Ontario, Canada through strategic woody debris removal. Project will install 2 miles of instream habitat improvements, plant a mile of native riparian vegetation, remove an undersized culvert, open 1.5 miles of stream, and stabilize 50 feet of eroding creek bank.
\$90,750

Nature Conservancy of Canada
Restoring Wetland Hydrology and Controlling Invasive Phragmites on Pelee Island (Canada)
 Improve ecological health of wildlife and habitat on Pelee Island in Lake Erie by restoring wetland hydrology, treating invasive phragmites and restoring native vegetation. Project will restore 62 acres of wetland and 20 acres of upland habitat.
\$100,000

Ocean Wise Conservation Association
Bioaccumulation of Contaminants in Southern Resident Killer Whale Food Web (Canada)
 Analyze priority contaminants of concern data from sediment, salmon and killer whales to assess habitat quality, bioaccumulation and the relative health risks of Southern Resident killer whales. Project will inform chemical regulations and best practices to reduce the exposure of Southern Resident killer whales to contaminants.
\$132,740

Saskatchewan Stock Growers Association
Increasing Grassland Connectivity (Canada)
 Engage livestock producers to conserve and restore native prairies that benefit pronghorn and multiple grassland bird species in southwest Saskatchewan. Project will restore 90 acres of cultivated grasslands, bring 82,000 acres under improved management and modify 12 miles of fencing.
\$300,000

LATIN AMERICA AND THE CARIBBEAN

BirdLife International
Sustaining Pink-Footed Shearwater Bycatch Reductions in Chilean Purse-Seine Fisheries
 Promote long-term reduction in pink-footed shearwater bycatch in Chilean purse seine fisheries. Project will build capacity through trainings for net manufacturers; engagement with fisheries compliance officers and through an open database of mitigation measures across the fleet.
\$297,398

Equilibrio Azul
Leatherback Bycatch Reduction in Ecuador
 Engage artisanal fishing communities of Ecuador to reduce bycatch of eastern Pacific leatherback sea turtles. Project will train fishermen on safe release techniques and explore market incentives for sustainable catch practices.
\$74,500

Grupo de Ecología y Conservación de Islas
Protecting Townsend's Shearwater in Mexico
 Protect the last stronghold of Townsend's shearwater and assess additional sites in the Revillagigedo Archipelago, Mexico. Project will develop a comprehensive monitoring plan; monitor shearwaters across the archipelago; and develop a feasibility study for the eradication of introduced European rabbit on Clarión Island.
\$260,000

Island Conservation
Coatimundi Control in Chile
 Complete coatimundi eradication on Isla Robinson Crusoe to protect the pink-footed shearwater. Project will empower local stakeholders, including park rangers, with the skills, knowledge, and tools to manage invasive mammals in the Juan Fernández Archipelago.
\$845,000

MarViva Foundation
Reduce Bycatch of Eastern Pacific Leatherbacks in Long Line Fisheries of Northern Chile
 Build local capacity to reduce at-sea mortality of leatherbacks in Chile. Project will train fishermen and local officials on safe turtle release techniques and pilot the use of circle hooks in northern long-line fisheries.
\$139,000

MPA Enforcement International
Enhancing Enforcement Capacity for Coral Reef Management in Saba, St. Eustatius and Montserrat
 Increase enforcement capacity for coral conservation in the Caribbean. Project will provide an enforcement assessment for Saba to identify critical gaps and conduct enforcement training for enforcement and management staff in the countries of Saba, St. Eustatius and Montserrat.
\$47,700

Oikonos - Ecosystem Knowledge
Conservation of the Pink-Footed Shearwater in Chile - III
 Advance conservation efforts for the IUCN-listed pink-footed shearwater through direct on-the-ground actions. Project will protect and monitor colonies on all three of known breeding islands, continue community-focused education and stewardship activities, and will build national capacity to reduce fishery-related mortality.
\$343,000

Pro Delphinus
Promoting Sustainable Fisheries in the Humboldt Current Region of Peru and Ecuador
 Reduce threatened species bycatch and mortality (sea turtles, small cetaceans, seabirds) at priority sites in the Humboldt current region. Project will promote safer gear, provide broad scale outreach, training and capacity building to promote sustainable gillnet fishing in Peru and Ecuador.
\$300,000

Wildlife Conservation Society
Improving Management of South Water Caye Marine Reserve through Technology-based Solutions (Belize)
 Utilize a spatial monitoring and reporting tool to improve biodiversity protection and sustainable livelihoods across the South Water Caye Marine Reserve in Belize. Project will assess management performance, build management capacity, promote compliance among fishers, and strengthen engagement of users in the reserve.
\$59,922

ASIA - INDONESIA

Indonesia Locally Managed Marine Area Foundation
Expanding Coral Reef Conservation to New Islands in Eastern Indonesia
 Create new networks of Locally Managed Marine Areas in Yapen and Numfor, Indonesia. Project will solidify capacity at 44 currently networked communities in order to direct resources into the new island communities of Yapen and Numfor conserving over 200,000 hectares of coral reef into conservation.
\$45,000

GULF ENVIRONMENTAL BENEFIT FUND

FISCAL YEAR 2020 PROJECT COMMITMENTS

In the wake of the 2010 Deepwater Horizon explosion and oil spill in the Gulf of Mexico, BP Exploration and Production, Inc. and Transocean Deepwater, Inc. each pled guilty to criminal violations of federal law. The plea agreements in those cases require BP and Transocean, among other things, to make certain monetary payments to NFWF that are designated to fund projects benefiting Gulf Coast natural resources injured as a result of the spill. NFWF has established the Gulf Environmental Benefit Fund to receive and administer these funds. Funding was committed to the following projects under the Gulf Environmental Benefit Fund during Fiscal Year 2020 in accordance with the terms of the plea agreements. Since its inception in 2013, NFWF has awarded nearly \$1.5 billion to projects in the Gulf States.

ALABAMA

Mobile Bay National Estuary Program, Marine Environmental Sciences Consortium

Lower Fish River Watershed Restoration
Address sediment and nutrient issues in the lower Fish River Watershed, a priority coastal watershed draining into Weeks Bay. Project activities will consist of planning, engineering and design, and permitting efforts to identify solutions for six tributaries. In addition, the project includes engineering and design, permitting, and construction of a tributary to the Fish River near the community of Marlow.
\$6,554,000

Mobile Bay National Estuary Program, Marine Environmental Sciences Consortium

Fowl River Watershed Restoration: Coastal Spits and Wetlands Project — I (Amendment)
Restore important coastal spits and wetlands within the lower reaches of Fowl River, which is a significant priority action identified in the recently completed Fowl River Watershed Management Plan, funded under a prior GEBF award. This project will fund engineering and design studies to develop a solution to stabilize and protect four priority in-river wetland spits and restore marshland throughout the intertidal portions of lower Fowl River. Amendment to add an adjacent 50-acre wetland area to the scope of work.
\$513,611

The Conservation Fund
Blackwater River South Tract Acquisition
Acquire and permanently protect 2,300 acres of coastal habitat at the confluence of the Blackwater and Perdido rivers. The subject tract includes four miles of frontage along both rivers, over 1,200 acres of wetlands, and a 90+ acre lake. Protection of the subject property will maintain water quality in the Perdido estuary and the living coastal and marine resources it supports.
\$5,212,000

Town of Dauphin Island
Restoration of the North Side of Dauphin Island — I (Amendment)
Complete engineering and design plans to fill borrow pits previously excavated for emergency barriers during the Deepwater Horizon response. The project will restore beach and marsh habitat on the north side of Dauphin Island to enhance the barrier island's resilience to future storms. Amendment to include engineering and design for marsh restoration in Graveline Bay.
\$575,000

United States Army Corps of Engineers, Mobile District
Little Dauphin Island Restoration Assessment
Study both nearshore and onshore restoration options for a future project to enhance and protect Little Dauphin Island. Included in the Bon Secour National Wildlife Refuge managed by the U.S. Fish and Wildlife Service, Little Dauphin Island is an important nesting and foraging area for several coastal bird species, including several imperiled shorebird species.
\$1,481,500

FLORIDA

Apalachee Regional Planning Council
Franklin County Living Shoreline
Create 20 acres of estuarine reef and facilitate the natural restoration of approximately 30 acres of intertidal marsh along Highway 98 in an effort to restore and protect this shoreline from erosion. This section of shoreline is vulnerable to damage from major storms and was damaged by Hurricane Michael in 2018.
\$8,312,000

Apalachicola Riverkeeper
Apalachicola River Slough Restoration — I
Restore the connection of three slough systems in the Apalachicola River watershed. River sloughs are important for transporting freshwater to floodplains and controlling the storage and release of freshwater and nutrients into the river and ultimately to Apalachicola Bay. In addition to restoring hydrologic connectivity on three sloughs, the project will also develop an Apalachicola River Slough Restoration Plan to further assess current conditions and quantify the benefits of implementing large-scale slough restoration in the lower Apalachicola River system.
\$5,357,000

Ducks Unlimited
MK Ranch Hydrologic Restoration
Restore wetland structure and function to the MK Ranch within the Apalachicola River Wildlife Environmental Area (ARWEA). MK Ranch comprises approximately 6,400 acres of expansive historic tidal marsh in the lower Apalachicola River Basin and acts as a filter and storage area for water flowing from upland sites to the tributaries of Lake Wimico and Apalachicola Bay. Previous unpermitted excavation activity severed the river from its floodplain, resulting in extensive loss and degradation of wetland habitat, resulting in diminished water quality and adverse ecological impacts in Apalachicola Bay.
\$21,997,000

Florida Fish and Wildlife Conservation Commission
Apalachicola Bay Oyster Reef Restoration — II
Implement up to 1,000 acres of oyster reef restoration in Apalachicola Bay. Restoration of oyster reefs in Apalachicola Bay is a priority conservation goal for the state of Florida, and this project will enhance resiliency in a fishery that once included more than 10,000 acres of reefs. This project also includes the development of oyster harvest management strategies for Apalachicola Bay and Suwanee Sound to ensure sustainability of the restored reefs.
\$20,057,000

Florida Fish and Wildlife Conservation Commission
Lake Wimico Acquisition and Management
Manage a 20,161 acre parcel that surrounds Lake Wimico, a shallow natural lake in southern Gulf County, that was acquired with GEBF funds in 2019. Preservation and management of the Lake Wimico parcel will protect water quality and freshwater flows into the Apalachicola River and Apalachicola Bay, enhancing the historic Apalachicola Bay oyster fishery.
\$1,500,632

Florida Fish and Wildlife Conservation Commission
Panhandle Dune Restoration
Restore and enhance up to 21 miles of degraded dune habitats across the Florida Panhandle. In areas where disturbance has created gaps, restoring the dunes will improve habitat functionality and resiliency.
\$2,310,000

Florida Fish and Wildlife Conservation Commission
St. Marks National Wildlife Refuge Saltmarsh Restoration — I
Complete engineering and design plans to restore up to 28 acres of saltmarsh habitat along the St. Marks River within the St. Marks National Wildlife Refuge and Wilderness Area. The project will restore saltmarsh habitat by removing remnant dredge spoil islands that consist of large crushed limestone piles. Permitting, design, and planning will evaluate beneficial use alternatives for crushed limestone, including the construction of bird nesting, artificial reefs, and oyster reef restoration in the St. Marks River and Apalachee Bay.
\$806,000

The Conservation Fund

Archie Carr National Wildlife Refuge Acquisitions
Acquire priority inholdings in the Archie Carr National Wildlife Refuge to protect critical sea turtle nesting habitat. The targeted tracts contain undeveloped beach and dune habitats that are utilized by the largest nesting population of loggerhead and green sea turtles in North America. Conservation of these tracts will protect available nesting habitat for use by sea turtles and will minimize fragmentation, address protected landscape gaps, and reduce the risk of additional coastal armoring.
\$4,507,000

MISSISSIPPI**Mississippi Department of Environmental Quality
Invasive Species Management on Coastal State Land — II**

Develop invasive species management activities to control and/or eradicate the invasive Amazonian Apple Snail in the lower Pascagoula estuary.
\$837,000

Mississippi Department of Environmental Quality

Oyster Restoration and Management — II
Deploy cultch material in several locations throughout the western Mississippi Sound as a pilot study to assess factors influencing oyster survivability. Oyster production and growth will be monitored to confirm the viability of identified locations for future large-scale oyster restoration efforts.
\$3,393,000

Mississippi Department of Environmental Quality

Reef Fish Assessment for Mississippi Coastal and Nearshore Waters: Restoration through Improved Data Collection and Management — IV
Complete the final phase of data collection efforts to assess reef fish populations in coastal Mississippi and nearshore Gulf of Mexico waters through biological, environmental, and fishery-dependent components that will provide necessary data to reduce scientific uncertainty around factors influencing red snapper and reef fish population structures.
\$3,622,000

TEXAS**Coastal Bend Bays and Estuaries Program
Mission River Land Acquisition**

Acquire and permanently protect 375 acres of critical coastal marsh habitat in the Mission River Delta, an estuary adjacent to Copano and Aransas Bays in the mid-coast of Texas. Acquisition of the proposed tract will expand and connect existing conservation areas to create a nearly 6,000 acre intact corridor for wildlife, including the endangered whooping crane and other coastal waterbirds.
\$600,000

Coastal Bend Bays and Estuaries Program

Nueces Delta Shoreline Erosion Protection
Construct 3,900 linear feet of breakwater to protect 650 acres of marsh habitat along the face of the Nueces Delta shoreline. The Nueces Delta is also important habitat for many bird species impacted by the spill, such as white pelicans, brown pelicans, reddish egrets, black skimmers, least terns, snowy plovers, and piping plovers. Construction of a living shoreline will enhance the bay and estuarine habitat and contribute to the protection and restoration of a large contiguous area of salt marsh which will benefit these estuarine species.
\$3,328,000

Ducks Unlimited

Mad Island Marsh Shoreline Protection
Strengthen and protect nearly 2 miles of the rapidly eroding banks of the Gulf Intracoastal Waterway within the Mad Island Wildlife Management Area. Construction of a 9,800-foot riprap breakwater will provide critical protection for nearly 370 acres of vulnerable coastal habitats including a freshwater lake, palustrine emergent wetlands, and coastal high marsh and prairie. The breakwaters will reduce rates of land loss from erosion and serve as a barrier and buffer from storm surge.
\$3,041,000

Galveston Bay Foundation

Chocolate Bay Wetland Habitat Acquisition
Acquire and permanently protect nearly 5,000 acres of coastal habitat on West Galveston Bay in Galveston and Brazoria counties. The subject property, the former Alatar Ranch, contains a wide array of coastal habitats: extensive coastal wetlands, tidal flats, and rare coastal prairie habitats, as well as 13 miles of frontage along coastal waterways. Permanent protection of this pristine stretch of Texas coast will preserve water quality and provide habitat for estuarine fisheries and wetland dependent wildlife including numerous coastal birds.
\$10,500,000

Galveston Bay Foundation

Matagorda Peninsula Acquisition
Acquire and permanently protect 1,100 acres along 1.4 miles of critical barrier island habitat on Matagorda Peninsula for inclusion in the newly established Matagorda Peninsula Coastal Management Area, owned and managed by Texas Parks and Wildlife Department.
\$2,426,000

Texas Agricultural Land Trust

East Matagorda Bay Land Conservation
Conserve 3,547 acres of coastal working lands in the mid coast of Texas through a perpetual conservation easement. The property has frontage along the Gulf Intracoastal Waterway near East Matagorda Bay and is composed of a suite of coastal marsh, prairie, and freshwater wetland habitats.
\$3,981,500

Texas General Land Office**Salt Bayou (McFaddin NWR) Beach and Ridge Restoration (Amendment)**

Restore the beach ridge system along the Gulf Coast within the McFaddin National Wildlife Refuge, between High Island and Sea Rim State Park on the Texas upper coast. This 17-mile beach ridge restoration project will complete restoration of 20 miles of coastline, protecting from erosion and salt water intrusion the largest estuarine marsh system in Texas. Amendment to cover pre-construction surveys and construction oversight.
\$676,883

Texas General Land Office**Swan Lake Marsh Restoration**

Restore nearly 80 acres of coastal marsh within Swan Lake, an embayment within the Galveston Bay system near Texas City. Restoration of the marsh complex within Swan Lake will provide an important aquatic nursery and wildlife habitat, protecting hundreds of acres of adjacent coastal marsh and prairie habitat for fishes, crabs, shrimp, and coastal birds.
\$5,000,000

Texas Parks and Wildlife Department**Dagger Island Restoration Project (Amendment)**

Construct a half-mile, nearshore breakwater and beneficially use dredge material to restore an island in order to protect approximately 5,236 acres of coastal habitat, including 2,630 acres of seagrass in Redfish Bay, an area adjacent to Corpus Christi Bay. Project also will restore approximately 28 acres of coastal wetland habitat and create oyster, invertebrate and fisheries habitat. Amendment to cover increased cost of construction.
\$98,118

Texas Parks and Wildlife Department**Enhancement of Buffalo Lake Marsh Complex**

Enhance management of nearly 2,000 acres of freshwater wetland habitat in the Buffalo Lake Marsh Complex to support migratory waterfowl, shorebirds, and waterbirds. Repairing damaged water control structures will prevent saltwater intrusion into the marsh complex and allow refuge staff to manage water levels. Additionally, construction of a new overflow spillway and an 850-foot levee will help protect the wetlands against flood events and allow for independent management of the wetland units which is key to providing appropriate habitat for shorebirds and waterbirds during the spring migration and breeding season.
\$450,000

IMPACT-DIRECTED ENVIRONMENTAL ACCOUNTS (IDEA)

FISCAL YEAR 2020 PROJECT COMMITMENTS

NFWF's IDEA department serves as a manager and trustee for funds arising from legal and regulatory actions involving natural resources and the environment. These funds originate primarily from court orders, settlements of legal cases, regulatory permits, licenses, and conservation and mitigation plans.

ALASKA**Iowa State University****Assessment of Avian Nest Survival: Does Human Disturbance Bias Our Estimates? (AK)**

Obtain the first true estimates of tundra nesting shorebird nest survival on Alaska's North Slope that are free of bias associated with human disturbance. Project will determine if prior efforts to assess nest survival were affected by human disturbance at nests, determine if basic ecological principles relating life-history traits and environmental factors to nest survival are correct, and develop best practices for accounting for human disturbance effects on nest survival in the future.

\$87,896

Federal Criminal Case

U.S. v. BP Exploration (Alaska) Inc.

Saint Mary's University of Minnesota**Addressing Critical Gaps in Wetland Information: Enhancing Proactive Growth and Conservation Management Decisions on Alaska's North Slope (AK)**

Fill critical geospatial information gaps related to wetland habitat in Alaska's North Slope. Project will utilize nationally compliant mapping standards and protocols to map approximately 10 million acres of private, state and Native lands.

\$293,557

Federal Criminal Case

U.S. v. BP Exploration (Alaska) Inc.;

U.S. v. Noble Drilling (U.S.) LLC

Southeast Alaska Land Trust**Huizer Fishing Access Site Interpretive Signage (AK)**

Design, produce and install interpretive signage at the Marjory and Edgar Huizer Fishing Access Site in Juneau, Alaska. Project will provide information about local wildlife and the importance of coastal ecosystems, and will educate readers about the benefits of land conservation.

\$1,840

Federal Criminal Case

U.S. v. Brannon Finney

University of Alaska Anchorage**Steller's Eider and Polar Bear Projects on Alaska's North Slope (AK)**

Support research on Alaska's North Slope related to Steller's eiders and their potential predators, as well as human interactions with polar bears. Project will allow for better management and conservation of the two species in the short term and will engage Alaska Native Science and Engineering Program students in the work.

\$39,902

Federal Criminal Case

U.S. v. Noble Drilling (U.S.) LLC

ARIZONA**Aquatic Consultants****Navajo Agricultural Products Industry Pond Drains (AZ, NM, UT)**

Install two gravity drains in grow out ponds on the Navajo Nation that will be used to raise endangered fishes for stocking into the San Juan River.

\$131,629

Mitigation**CALIFORNIA****Alpine Watershed Group****Hope Valley Restoration and Aquatic Habitat Enhancement Project — II & III (CA)**

Stabilize approximately 450 feet of eroding banks along the West Fork Carson River in lower Hope Valley and help improve aquatic habitat within two specific reaches. Project will help reduce erosion and sedimentation and provide shading at the two project sites.

\$360,912

State Civil Case**Audubon California****Lake Isabella Willow Flycatcher Restoration (CA)**

Continue restoration of 1,150 acres of southwestern willow flycatcher habitat to compensate for impacts of long-term operations of the Lake Isabella reservoir, in cooperation with the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service.

\$119,800

Mitigation**Cachuma Operation and Maintenance Board****South Side Erosion Control and Restoration Project at Quiota Creek Crossing 8 (CA)**

Reduce fine sediment transport and enhance stream water quality for southern California steelhead at a newly completed fish passage improvement project site at Quiota Creek in Santa Barbara County, California. Project will install a small settling basin in two intermittent drainages that are conveying fine sediments to the creek, install a culvert to reduce erosion potential, plant native coast live oaks near the settling basins, and hydro-mulch/seed all disturbed areas.

\$43,973

Federal Criminal Case

U.S. v. Wal-Mart Stores, Inc.

California Department of Fish and Wildlife**California Department of Fish and Wildlife Endowment - Topaz Solar Farm (CA)**

Perform long-term management of mitigation land in San Luis Obispo County, California.

\$421,023

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - Wister Pond Water Source (CA) Purchase water from Imperial Irrigation District to benefit Wister Pond in San Diego County, California.

\$45,744

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - Wister Pond Operation and Maintenance (CA)

Conduct long-term operation and maintenance of Wister Pond in San Diego County, California.

\$36,300

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - Burke-Robey (CA)

Perform long-term management of mitigation land in Humboldt County, California.

\$16,356

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - Hambro Acquisition (CA)

Perform long-term management of mitigation land in Del Norte County, California.

\$23,797

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - 2003 Kern River Exp Project (CA)

Perform long-term management of mitigation land in Kern and San Bernardino counties, California.

\$22,578

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - Borax Mine Overburden (CA)

Perform long-term management of mitigation land in Kern and San Bernardino counties, California.

\$37,978

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - Kern River Pipeline (CA)

Perform long-term management of mitigation land in Kern and San Bernardino counties, California.

\$14,328

Mitigation**California Department of Fish and Wildlife**

California Department of Fish and Wildlife Endowment - Mojave Projects LB (CA)

Perform long-term management of mitigation land in San Bernardino County, California.

\$12,128

Mitigation

California Department of Fish and Wildlife

California Department of Fish and Wildlife Endowment - North Baja Pipeline (CA)
Perform long-term management of mitigation land in Riverside and Imperial counties, California.

\$20,928

Mitigation

California Department of Fish and Wildlife

California Department of Fish and Wildlife Initial and Capital Account - Southern California Edison Tehachapi Renewable Transition Project Fremont Valley (CA)
Perform short-term management of mitigation land in Kern, Los Angeles, and San Bernardino counties, California.

\$65,564

Mitigation

California Department of Fish and Wildlife

Renewable Energy Action Team Initial and Capital Account - Catalina and Pacific Wind (CA)

Perform short-term management of mitigation land in Kern County, California.

\$51,671

Mitigation

California Department of Fish and Wildlife

Renewable Energy Action Team Initial and Capital Account - Catalina and Pacific Wind (CA)

Perform short-term management of mitigation land in Kern County, California.

\$9,745

Mitigation

California Department of Parks and Recreation

Montara State Beach Facility Improvement (CA)

Continue amenity improvements at Montara State Beach in San Mateo County, California, by constructing fully accessible restroom facilities. Project will accommodate the needs of shoreline visitors, improve public health and safety, and reduce maintenance costs.

\$80,000

Federal Civil Case,

U.S. v. M/V Cosco Busan, et al.

California Department of Parks and Recreation

California State Parks Endowment - Morro Shoulderband Snail Habitat Management (CA)

Perform long-term management of mitigation land in San Luis Obispo County, California.

\$11,903

Mitigation

California Department of Parks and Recreation

McGrath Restoration Activities - Year 8 (CA)
Continue restoration activities at McGrath Lake. Project will fund staff time and materials for dune restoration work and western snowy plover and California least tern management activities.

\$75,000

Federal Civil Case

U.S., et al. v. Berry Petroleum Company

California State University - Stanislaus

Tipton Kangaroo Rat Monitoring and Shrub Association Study in Unit 15 of Kern National Wildlife Refuge (CA)

Conduct Tipton kangaroo rat monitoring and a Tipton kangaroo rat shrub association study in Unit 15 of Kern National Wildlife Refuge to enhance management and conservation strategies for Tipton kangaroo rat and fulfill monitoring obligations.

\$3,945

Mitigation

California Trout

Scott River Emergency Water Transactions 2020 (CA)

Engage with water rights holders who are willing to lease their water rights to enhance flows in Miner, Sugar and Shackleford-Mill Creeks of the Klamath River Basin for the benefit of coho salmon.

\$58,369

Mitigation

California Trout

Parks Creek Fish Passage and Cardoza Ranch Efficiency Implementation Project (CA)

Initiate pre-project monitoring and implementation of the Parks Creek Fish Passage and Cardoza Ranch Efficiency Implementation Project. Project will evaluate and rate an existing real-time monitoring station in Parks Creek to manage the new point of diversion on the Shasta River, establish a monitoring program to document the changes in stream conditions due to project implementation, and build a new on-channel fish screen structure at the proposed point of diversion.

\$100,000

Mitigation

California Trout

Final Fish Passage Design for the I-5 and Metrolink Barriers in Trabuco Creek (CA)

Generate final design plans for a project that will restore fish passage for southern California steelhead under the Metrolink railroad bridge and nearby Interstate 5 bridge array on Trabuco Creek in the San Juan Creek watershed in Orange County, California. Project will help address one of the most significant threats to the recovery of endangered southern California steelhead.

\$596,302

Federal Criminal Case

U.S. v. Wal-Mart Stores, Inc.

Cass Gidley Marina - Sausalito Community Boating Center

Sausalito Community Boating Center - Expanding Public Recreation at Sausalito's Shoreline (CA)

Construct a recreational boating and paddling facility along the Sausalito, California, shoreline including an Americans with Disabilities Act accessible ramp, landing, and dock. Project will provide affordable and safe access to boats and the water, educational programs, a fishing dock, and a connection for residents to the local bay ecosystem.

\$175,000

Federal Civil Case

U.S. v. M/V Cosco Busan, et al.

CBEC Eco Engineering

Lower Feather River Restoration Project - Site Selection and Technical Support (CA)

Assist in selecting a preferred site for a potential aquatic resource mitigation project in Yuba County, California, titled "Lower Feather River Restoration Project" under the Sacramento District California In-Lieu Fee Program, and developing a conceptual plan for the selected site.

\$16,710

Mitigation

Central Coast Salmon Enhancement

Restoring Villa Creek Estuary - Final Designs, California Environmental Quality Act Clearance and Permitting (CA)

Complete final designs and permitting for a project that will return hydrologic function to the Villa Creek Estuary in San Luis Obispo County, California, and create refugia for sensitive species including federally listed tidewater goby and steelhead. Project will utilize completed 65-percent designs to achieve 100-percent designs, secure permits, secure shovel ready construction estimates, and conduct community and stakeholder outreach.

\$156,189

Federal Criminal Case

U.S. v. Wal-Mart Stores, Inc.

Central Coast Salmon Enhancement

Arroyo Grande Creek Stream Gauge Modification Implementation Project (CA)

Modify a concrete weir and construct a resting pool to restore reliable access to and improve 3.3 miles of critical southern California steelhead habitat in Arroyo Grande, California. Project will provide passage for both adult and juvenile life stages at low and high flows.

\$464,969

Federal Criminal Case

U.S. v. Wal-Mart Stores, Inc.

City of Oakland**Jack London Aquatic Center Non-Motorized Launch Dock Replacement (CA)**

Replace a low float non-motorized vessel launch dock at Jack London Aquatic Center in Oakland, California. Project will provide access to Oakland Estuary for recreational activities and community programs, as the dock is a popular fishing location and serves hundreds of youth and adults in kayaking, sailing, and rowing programs each year.

\$243,000

Federal Civil Case

U.S. v. M/V Cosco Busan, et al.

City of Santa Rosa**California Department of Fish and Wildlife Endowment - Airfield Neighborhood Park (CA)**

Perform long-term management of mitigation land in Sonoma County, California.

\$17,662

Mitigation

City of Sausalito**Dunphy Park Improvement and Native Plants Living Shoreline Project (CA)**

Complete improvements of Dunphy Park in Sausalito, California, by constructing recreational amenities and increasing accessibility. Project will prepare the park to serve as a resource against coastal flooding and sea level rise.

\$275,000

Federal Civil Case

U.S. v. M/V Cosco Busan, et al.

Coastal San Luis Resource**Conservation District****Nipomo Lupine Dune Protected Area Management (CA)**

Support management of the Nipomo Lupine Dune Protected Area Management project to protect and enhance naturally occurring populations of Nipomo lupine.

\$10,000

State Civil Case

Corvus Ecological Consulting**2020 Raven Monitoring, Removal and Management within Desert Tortoise Conservation Areas Chemehuevi Critical Habitat Unit (CA)**

Conduct research on the interaction between desert tortoises and common ravens in the Chemehuevi Critical Habitat Unit.

\$116,690

Mitigation

Corvus Ecological Consulting**2020 Raven Monitoring, Removal and Management within Desert Tortoise Conservation Areas Chuckwalla Bench Critical Habitat Unit (CA)**

Conduct research on the interaction between desert tortoises and common ravens in the Chuckwalla Bench Critical Habitat Unit.

\$35,076

Mitigation

Corvus Ecological Consulting**2020 Raven Monitoring, Removal and Management within Desert Tortoise Conservation Areas Joshua Tree National Park and Pinto Mountains Critical Habitat Unit (CA)**

Conduct research on the interaction between desert tortoises and common ravens in Joshua Tree National Park and the Pinto Mountains Critical Habitat Unit.

\$129,522

Mitigation

County of San Luis Obispo**Avila Beach Bob Jones Bike Path — III (CA)**

Conduct environmental review and engineering of a segment of the Bob Jones Pathway at Avila Beach, California. Project will result in the acquisition and restoration of at least 2 acres of biologically sensitive riparian habitat.

\$37.10

State Civil Case

Desert Tortoise Preserve Committee**Renewable Energy Action Team Endowment - Manzanita Wind (CA)**

Perform long-term management of mitigation land in Kern County, California.

\$11,530

Mitigation

East Bay Regional Park District**Bay Point Regional Shoreline Restoration - Transition Zone Planting (CA)**

Establish native plantings and enhance transition zone habitat. Project will plant approximately 1,125 plants in the upland-wetland transition zone at the Bay Point Regional Shoreline, located in unincorporated Contra Costa County, California.

\$105,000

Federal Criminal Case (multiple prosecutions)

East Bay Regional Park District**Encinal Beach Shoreline Recreation Improvements (CA)**

Complete public access improvements at Encinal Beach Park in Alameda, California, including linking trails and facilities; improving water access; upgrading accessibility of parking lots, trails, and beach access points; establishing native dune; restoring upland habitat; and reducing the frequency of inundation at high tide. Project will enhance the short- and long-term recreation opportunities at the park.

\$200,000

Federal Civil Case

U.S. v. M/V Cosco Busan, et al.

EcoVision Partners**Morro Shoulderband Survey (CA)**

Develop a survey methodology to estimate species presence and relative abundance for Morro shoulderband snail on conserved lands in Los Osos, an unincorporated community of San Luis Obispo County, California.

\$14,910

Mitigation

Eel River Watershed Improvement Group**Noisy Creek Habitat Accessibility (CA)**

Plant 65 red alder saplings, 19 black cottonwoods, and seven redwoods along 550 feet of Noisy Creek, a tributary to Hall Creek, tributary to the Mad River, in Humboldt County, California. Project will help improve stream conditions and fish passage by re-establishing a riparian corridor.

\$15,830

State Civil Case

Fagundes Agribusiness**California Department of Fish and Wildlife Initial and Capital Account - Cross Creek West**

Perform short-term management of mitigation land in Kings County, California.

\$17,070

Mitigation

Fletcher Ranch Road Properties**California Department of Fish and Wildlife Endowment - Mountain House Conservation**

Perform long-term management of mitigation land in Alameda County, California.

\$3,312

Mitigation

Friends of the Palo Alto Parks**Salt Marsh Trail Enhancement Project (CA)**

Create and install interpretive panels and interactive exhibits in the Palo Alto Baylands Preserve along the south shore of the San Francisco Bay Estuary. Project will help community members develop an appreciation and understanding of the marsh environment, increase recreational benefits for the community, and help transform over 2 miles of multi-use trails and an 850-foot boardwalk.

\$54,000

Federal Civil Case

U.S. v. M/V Cosco Busan, et al.

Full Frame Productions**California Endangered Species and Habitats: Educational Video Project Distribution Assistance (CA)**

Support the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service with the successful distribution of a series of educational and outreach videos that focus on California endangered species and habitats and assist the agencies with their engagement initiatives.

\$16,902

Federal Criminal Case

U.S. v. Wildlife Management, LLC

Full Frame Productions**California Endangered Species and Habitats Educational Video Projects (CA)**

Produce a series of educational and outreach videos that feature collaborative efforts to protect California endangered species and habitats. The videos will focus on the California tiger salamander, the Western snowy plover, the San Joaquin kit fox, and coho salmon.

\$7,716

Federal Criminal Case

U.S. v. Wildlife Management, LLC

Golden Gate Audubon Society**Pier 94 Wetland Restoration and Subtidal Expansion Pilot (CA)**

Increase biodiversity and protect the ecosystems of a partially restored wetland in San Francisco. Project will evaluate and monitor native oyster and eelgrass and generate a report with recommendations for future habitat restoration sites along the San Francisco Bay shoreline.

\$50,104

Federal Criminal Case

(multiple prosecutions)

Guadalupe-Nipomo Dunes Center**Guadalupe-Nipomo Dunes National Wildlife Refuge and Dune Complex Interpretive Video (CA)**

Develop a film to increase awareness and understanding of the Guadalupe-Nipomo Dunes Complex and the National Wildlife Refuge. Project will promote access to the Refuge and other public Dunes Complex lands.

\$63,809

State Civil Case

Guadalupe-Nipomo Dunes Center**Guadalupe-Nipomo Dunes Center Educational and Public Programs Coordinator Position (CA)**

Help support a full-time Educational and Public Programs Coordinator at the Guadalupe-Nipomo Dunes Center to coordinate school programs, field trips, afterschool programs, and public conservation and cultural events.

\$12,677

State Civil Case

Habitat Restoration Sciences**San Diego County Endowment - Greenhills Ranch (CA)**

Perform long-term management of mitigation land in San Diego County, California.

\$20,967

Mitigation

Habitat Restoration Sciences**California Department of Fish and Wildlife Endowment - JAL Preserve (CA)**

Perform long-term management of mitigation land in San Diego County, California.

\$12,905

Mitigation

Habitat Restoration Sciences**San Diego County Endowment - Jacumba Solar Open Space Preserve (CA)**

Perform long-term management of mitigation land in San Diego County, California.

\$7,811

Mitigation

Institute for Wildlife Studies**Non-lead Ammunition Outreach and Education (CA)**

Further California condor recovery efforts by providing non-lead ammunition outreach and education to hunters and ranchers throughout California. Project addresses the primary cause of mortality in condors.

\$103,389

Mitigation

Ironwood Consulting**Ivanpah Valley Tortoise Connectivity Study (CA)**

Conduct desert tortoise surveys as part of a study that analyzes demography, density, demographic connectivity, genetic connectivity, immune function, and habitat condition of desert tortoises in the Mojave Desert. Project will help provide land managers and planners insight into the impacts of development on the connectivity of desert tortoise populations.

\$213,379

Mitigation

J&D Basile**California Department of Fish and Wildlife Initial and Capital Account - Cross Creek East (CA)**

Perform short-term management of mitigation land in Tulare and Kings counties, California.

\$17,070

Mitigation

Koopmann Family Trust**California Department of Fish and Wildlife Endowment - Koopmann Preserve (CA)**

Perform long-term management of mitigation land in Alameda County, California.

\$10,981

Mitigation

Marin County Parks**Black Point Boat Launch Visitor Upgrades (CA)**

Install trash and recycling receptacles, picnic tables, a shade structure, bike racks, irrigated landscape plantings, and educational materials in an effort to upgrade visitor amenities at Black Point Boat Launch in Marin County, California. Project will create recreation opportunities for community members at the site beyond fishing and boating.

\$67,500

Federal Civil Case

U.S. v. M/V Cosco Busan, et al.

Marine Life Studies**Removing Derelict Crab Pots to Reduce Marine Wildlife Entanglement (CA)**

Remove derelict crab and spawn prawn pots from the Monterey Bay National Marine Sanctuary. Project will reduce potential entanglements of endangered marine wildlife and increase navigational safety for recreational and commercial boaters.

\$80,013

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.

Mendocino County Resource Conservation District**California Department of Fish and Wildlife Endowment - Willits Bypass (CA)**

Perform long-term management of mitigation land in Mendocino County, California.

\$592,278

Mitigation

Mid Klamath Watershed Council**Fish Passage and Woodloading (CA)**

Remedy a chronic fish passage issue at the mouth of China Creek by rerouting the channel across the active delta in a more desirable configuration using large wood. Project will install three to four wood structures within the stream channel above the mouth to add cover complexity, aid in gravel retention and sorting, and encourage floodplain connectivity downstream of the Upper Mid Klamath for the benefit of coho salmon.

\$36,840

Mitigation

Mojave Desert Land Trust**California Department of Fish and Wildlife - Renewable Energy Action Team Endowment - Hidden Valley**

Perform long-term management of mitigation land in San Bernardino and Imperial counties, California.

\$79,082

Mitigation

Mojave Environmental Holdings**California Department of Fish and Wildlife Endowment - Cuddeback-Kramer Preserve (CA)**

Perform long-term management of mitigation land in San Bernardino County, California.

\$52,967

Mitigation

National Fish and Wildlife Foundation**Kaweah/Tule Rivers Aquatic Resource Credit Purchase (CA)**

Purchase 0.64 Kaweah/Tule Rivers Aquatic Resource Credit from the National Fish and Wildlife Foundation's Sacramento District California In-Lieu Fee Program by the National Fish and Wildlife Foundation as the fiduciary administrator of the Sacramento District Wetlands Conservation Fund established by the U.S. Army Corps of Engineers, Sacramento District.

\$179,612

Mitigation

National Park Service

California Department of Fish and Wildlife - Renewable Energy Action Team Endowment - Mojave Milkweed (CA)

Perform long-term management of mitigation land in San Bernardino County, California.

\$2,775

Mitigation

Pacific Gas and Electric Company

Pacific Gas and Electric Company Bay Area Habitat Conservation Plan - (CA)

Fund contractors to secure conservation easements on lands within Santa Clara County to benefit *Coyote ceanothus*.

\$193,466

Mitigation

PCO

Pacific Gas and Electric Company Multiple Region Habitat Conservation Plan – Zayante Sandhills Conservation Bank Credit Purchase for Zayante Band Winged Grasshopper and Mount Hermon June Beetle (CA)

Purchase Zayante Band Winged Grasshopper credits and Mount Hermon June Beetle credits from the PCO Zayante Sandhills Conservation Bank to provide mitigation for Zayante Band Winged Grasshopper and Mount Hermon June beetle under the Pacific Gas and Electric Company Multiple Region Habitat Conservation Plan for threatened and endangered species.

\$1,229,222

Mitigation

Point Millerton Ranch

California Department of Fish and Wildlife Endowment - Point Millerton aka Tract 4870 (CA)

Perform long-term management of mitigation land in Madera County, California.

\$11,326

Mitigation

Prunuske Chatham

Herndon and Reedley College Tree Replanting – Pacific Gas and Electric Company San Joaquin Valley Habitat Conservation Plan (CA)

Plant over 3,000 trees for the fulfillment of the Master Streambed Alteration Agreement in the Pacific Gas and Electric Company San Joaquin Valley Habitat Conservation Plan.

\$191,107

Mitigation

San Mateo Resource Conservation District

Pacific Gas and Electric Company Bay Area Habitat Conservation Plan - San Bruno Mountain Butterfly Restoration (CA)

Fund the restoration of habitat as part of Pacific Gas and Electric Company's ongoing conservation goals related to butterfly species covered by the Pacific Gas and Electric Company Bay Area Habitat Conservation Plan. Project will fund the development and implementation of a site-specific plan.

\$15,000

Mitigation

San Mateo Resource Conservation District

Pacific Gas and Electric Company Bay Area Habitat Conservation Plan – San Bruno Mountain Lower West Peak Restoration (CA)

Release management reserve funds for funding of unrealized implementation, monitoring, or maintenance costs for the San Bruno Mountain Lower West Peak Restoration Project in San Mateo County.

\$18,216

Mitigation

Santa Barbara Zoo

Nest Management of Reintroduced Condors in Southern California (CA)

Further California condor recovery efforts in the Central District by monitoring California condor breeding and nesting. Project will support a dedicated field biologist who will be focused on a largely inland condor population whose nesting has been threatened primarily by microtrash, and who will provide critical support and minimize condor nestling mortality due to microtrash ingestion and other causes of nest failure.

\$99,994

Federal Criminal Case

U.S. v. Wal-Mart Stores, Inc.

Santa Paula Creek Mitigation Bank

California Department of Fish and Wildlife Endowment - Santa Paula Creek Mitigation (CA)

Perform long-term management of mitigation land in Ventura County, California.

\$4,166

Mitigation

Save the Redwoods League

Pacific Gas and Electric Company Multiple Region Habitat Conservation Plan Conservation - Andersonia Acquisition (CA)

Fund the acquisition of habitat lands, after which Pacific Gas and Electric Company will have rights to all mitigation values, including the right to develop a conservation easement on the property in partnership with Save the Redwoods League. Project will provide mitigation toward the Pacific Gas and Electric Company Multiple Region Habitat Conservation Plan conservation goal for northern spotted owl and marbled murrelet in Mendocino County, California.

\$3,566,500

Mitigation

Southern Sierra Research Station

Biological Studies in Support of Endangered Species Act Compliance for Routine and Long-term Operation of Isabella Dam and Reservoir in Kern County (CA)

Conduct southwestern willow flycatcher surveys, least Bell's vireo surveys, and brown-headed cowbird point count surveys and control in the U.S. Forest Service's South Fork Wildlife Area. Project will evaluate habitat suitability for the flycatcher and vireo as well as conduct nest monitoring.

\$64,334

Mitigation

Suisun Resource Conservation District

Future of the Salt Marsh Harvest Mouse and Other Native Wetland Species in the San Francisco Estuary (CA)

Address the lack of comprehensive recovery information for the salt marsh harvest mouse and other small mammals through a unified assessment and survey approach. Project will coordinate a team of experts to conduct the first single-season, estuary-wide survey to determine which areas are most resilient and summarize findings in population heat maps that will identify key areas to increase understanding of how and where we should focus recovery actions.

\$159,671

Federal Criminal Case

(multiple prosecutions)

Sundance Biology

Raven Nest Monitoring, Removal, and Management in Fremont-Kramer Critical Habitat Unit / Remote Egg Oiling Implementation in Fremont-Kramer Critical Habitat Unit (CA)

Conduct research on the interaction between desert tortoises and common ravens in the Fremont-Kramer Critical Habitat Unit.

\$179,477

Mitigation

Sundance Biology

Raven Nest Monitoring, Removal, and Management: Remote Egg Oiling Implementation on Transmission Line Towers - Fremont-Kramer Critical Habitat Unit (CA)

Conduct research on the interaction between desert tortoises and common ravens in the Fremont-Kramer Critical Habitat Unit.

\$63,740

Mitigation

Sundance Biology

Raven Nest Monitoring, Removal, and Management in Mojave National Preserve, Piute-Fenner and Ivanpah Critical Habitat Units / Remote Egg Oiling Implementation in Mojave National Preserve, Piute-Fenner and Ivanpah Critical Habitat Units (CA)

Conduct research on the interaction between desert tortoises and common ravens in the Mojave National Preserve, Ivanpah Critical Habitat Unit, and Piute-Fenner Critical Habitat Unit.

\$191,081

Mitigation

Sundance Biology

Raven Nest Monitoring, Removal, and Management: Remote Egg Oiling Implementation on Transmission Line Towers – Mojave National Preserve, Piute-Fenner and Ivanpah Critical Habitat Units (CA)

Research the interaction between desert tortoises and common ravens in the Mojave National Preserve, Ivanpah Critical Habitat Unit, and Piute-Fenner Critical Habitat Unit.

\$63,230

Mitigation

Sundance Biology

Raven Nest Monitoring, Removal, and Management in Ord-Rodman Critical Habitat Unit / Remote Egg Oiling Implementation in Ord-Rodman Critical Habitat Unit (CA)

Conduct research on the interaction between desert tortoises and common ravens in the Ord-Rodman Critical Habitat Unit.

\$149,625

Mitigation

Sundance Biology

Raven Nest Monitoring, Removal, and Management: Remote Egg Oiling Implementation on Transmission Line Towers - Ord-Rodman Critical Habitat Unit (CA)

Conduct research on the interaction between desert tortoises and common ravens in the Ord-Rodman Critical Habitat Unit.

\$51,455

Mitigation

Sundance Biology

Raven Nest Monitoring, Removal, and Management in Superior-Cronese Critical Habitat Unit and Fort Irwin's Southeast Conservation Area / Remote Egg Oiling Implementation in Superior-Cronese Critical Habitat Unit and Fort Irwin's Southeast Conservation Area (CA)

Conduct research on the interaction between desert tortoises and common ravens in the Superior-Cronese Critical Habitat Unit and Fort Irwin's Southeast Conservation Area.

\$179,477

Mitigation

Sundance Biology

Raven Nest Monitoring, Removal, and Management: Remote Egg Oiling Implementation on Transmission Line Towers - Superior-Cronese Critical Habitat Unit and Fort Irwin's Southeast Conservation Area (CA)

Conduct research on the interaction between desert tortoises and common ravens in the Superior-Cronese Critical Habitat Unit and Fort Irwin's Southeast Conservation Area.

\$78,390

Mitigation

Sundance Biology

Equipment for Techno-Tortoise Bait Stations and Variable Radius Point Counts (CA)

Purchase trail camera kits, Techno-Tortoise three-dimensional printed tortoise replicas, rangefinders, and other equipment necessary to carry out the first year of a 10-year effort to collect estimates of common raven predator pressure on the Mojave desert tortoise using a cost-effective approach.

\$24,357

Mitigation

Telonics

Radio-Collars for Peninsular Bighorn Sheep (CA)

Refurbish 35 radio-collars, including 29 very high frequency and six global positioning system radio-collars, with three years of satellite air service. Project will monitor peninsular bighorn sheep located in San Diego and Imperial counties, California.

\$19,644

Mitigation

The Land Conservancy

of San Luis Obispo County
Habitat Restoration for Recovery of Federally Listed Species at Black Lake Ecological Area (CA)

Restore wetland habitat within the main portion of coastal freshwater marsh that feeds Black Lake to recover federal and state endangered marsh sandwort and federal threatened and state species of special concern California red-legged frog. Project will fund wetland habitat restoration activities including sediment removal and re-contouring, hydrophytic vegetation management within the marsh, invasive species removal, and outplanting of marsh sandwort.

\$94,758

State Civil Case

The Land Conservancy

of San Luis Obispo County
Kathleen's Canyon Overlook Interpretive Opportunities and Visitor Service Amenities (CA)

Construct an interactive playground structure, including education elements to teach youth about local flora and fauna, at Kathleen's Canyon Overlook in Lower Black Lake Canyon Wetland Preserve.

\$15,000

State Civil Case

The Restoration Trust

Wetland Management of Bordoni Ranch (CA)

Perform long-term land management of Bordoni Ranch Mitigation Area in Solano County, California.

\$9,999

Mitigation

The Restoration Trust

The Restoration Trust - Roberts Ranch Endowment (CA)

Perform long-term land management of Roberts Ranch Mitigation Area in Alameda County, California.

\$9,291

Mitigation

Thomas K. Moss

California Department of Fish and Wildlife Endowment - Pletz Residence (CA)

Perform long-term management of mitigation land in Monterey County, California.

\$3,226

Mitigation

Transition Habitat Conservancy

California Department of Fish and Wildlife - Renewable Energy Action Team Endowment - Fremont-Kramer (CA)

Perform long-term management of mitigation land in San Bernardino County, California.

\$111,023

Mitigation

Trout Unlimited

Dutch Charlie Creek Instream Habitat Enhancement Project — I (CA)

Restore approximately 0.8 miles of high-priority salmonid recovery habitat in Dutch Charlie Creek by installing 59 pieces of large wood at 16 structure sites. Project will be the first phase of a larger overall effort where 2.17 total miles of high-priority salmon recovery habitat will be restored with instream large wood.

\$93,050

State Civil Case

Trout Unlimited

Gulch C Coho Salmon Fish Passage Improvement Project (CA)

Restore access for adult and juvenile coho salmon and steelhead trout to approximately 1.3 miles of habitat upstream of two culverted stream crossings and improve the geomorphic function of Gulch C at the confluence. Project will replace stream crossings with structures that meet state and federal agency fish passage requirements and will convey the 100-year flood with associated sediment and large wood.

\$50,000

State Civil Case

U.S. Department of the Interior,

U.S. Fish and Wildlife Service -

Kern National Wildlife Refuge

Endangered Species Habitat Management and Biological Monitoring in Unit 15 of Kern National Wildlife Refuge (CA)

Conduct habitat management, biological monitoring, and other management and maintenance in Unit 15 of Kern National Wildlife Refuge.

\$10,615

Mitigation

U.S. Department of Agriculture, Animal and

Plant Health Inspection Service, Wildlife

Services, National Wildlife Research Center

Raven Management for Desert Tortoise Protection (CA)

Conduct wildlife damage management activities to control ravens for the protection of the federally-listed desert tortoise in the Mojave and Colorado Deserts located within California.

\$81,700

Mitigation

Upper Salinas-Las Tablas Resource Conservation District

Carpinteria Salt Marsh Limonium duriusculum Removal Project (CA)
Reduce the population of invasive European Sea Lavender in the Carpinteria Salt Marsh within a one-acre site at the Estero Street entrance to the salt marsh. Project will clear habitat for the restoration of native salt marsh vegetation, specifically the endangered salt marsh bird's beak.
\$42,900
State Civil Case

Vollmar Natural Lands Consulting

Flying M Ranch Vernal Pool Preservation Project Development Plan (CA)
Develop a Project Development Plan for the Sacramento District California In-Lieu Fee Program mitigation project entitled, "Flying M Ranch, Vernal Pool Preservation Project, Southern Sierra Foothills Vernal Pool Service Area." Project will preserve vernal pool wetland resources and ensure long-term protection of the wetland resource functions and values of the project site in California.
\$85,627
Mitigation

Westervelt Ecological Services

California Department of Fish and Wildlife Endowment - Meridian Ranch Mitigation Bank (CA)
Perform long-term management of mitigation land in Butte County, California.
\$10,653
Mitigation

Westervelt Ecological Services

California Department of Fish and Wildlife Endowment – Maxwell Public Utility District (CA)
Perform long-term management of mitigation land in Colusa County, California.
\$13,439
Mitigation

Westervelt Ecological Services

U.S. Fish and Wildlife Service Endowment - Ferrari Ranch (CA)
Perform long-term management of mitigation land in Solano County, California.
\$17,742
Mitigation

Westervelt Ecological Services

California Department of Fish and Wildlife Endowment - Dutchman Creek Conservation Bank (CA)
Perform long-term management of mitigation land in Merced County, California.
\$14,794
Mitigation

Westervelt Ecological Services

U.S. Fish and Wildlife Service Endowment - PG&E Palermo (CA)
Perform long-term management of mitigation land in Butte, Yuba and Sutter counties, California.
\$6,850
Mitigation

Westervelt Ecological Services

California Department of Fish and Wildlife Initial and Capital Account - CD Hillman (CA)
Perform short-term management of mitigation land in Kern County, California.
\$30,180
Mitigation

Westervelt Ecological Services

California Department of Fish and Wildlife Initial and Capital Account - Cottonwood Creek (CA)
Perform short-term management of mitigation land in Tulare County, California.
\$18,375
Mitigation

Westervelt Ecological Services

California Department of Fish and Wildlife Initial and Capital Account - Alkali Flats Mitigation Site (CA)
Perform short-term management of mitigation land in Kern County, California.
\$10,385
Mitigation

Westervelt Ecological Services

Pacific Gas and Electric Company San Joaquin Valley Operations and Maintenance Habitat Conservation Plan – Grasslands Mitigation Bank Credit Purchase for Giant Garter Snake (CA)
Purchase two Giant Garter Snake Conservation Credits from the Westervelt Ecological Services Grasslands Mitigation Bank. Project will provide mitigation under the Pacific Gas and Electric Company San Joaquin Valley Operations and Maintenance Habitat Conservation Plan.
\$93,500
Mitigation

Westervelt Ecological Services

Pacific Gas and Electric Company Multiple Region Habitat Conservation Plan Conservation – Sutter Basin Conservation Bank Credit Purchase for Giant Garter Snake
Purchase 15 Giant Garter Snake Credits from the Westervelt Ecological Services Sutter Basin Conservation Bank. Project will provide mitigation for the giant garter snake under the Pacific Gas and Electric Company Multiple-Region Habitat Conservation Plan.
\$675,000
Mitigation

Westervelt Ecological Services

Pacific Gas and Electric Company Multiple Region Habitat Conservation Plan Conservation – Colusa Basin Mitigation Bank Credit Purchase for Giant Garter Snake (CA)
Purchase 15 Giant Garter Snake Credits from the Westervelt Ecological Services Colusa Basin Mitigation Bank. Project will provide mitigation for the giant garter snake under the Pacific Gas and Electric Company Multiple-Region Habitat Conservation Plan.
\$675,000
Mitigation

Westervelt Ecological Services

Grasslands Mitigation Bank Credit Purchase for Seasonal Wetlands (CA)
Purchase 3.08 Seasonal Wetland Credits from the Westervelt Ecological Services Grasslands Mitigation Bank under National Fish and Wildlife Foundation's Sacramento District California In-Lieu Fee Program. The credit purchase fulfills a compensatory mitigation obligation resulting from the Sacramento District California In-Lieu Fee Program's authorized sale of 3.08 Aquatic Resource Credits in the San Joaquin River Aquatic Resource Service Area.
\$28,052
Mitigation

WRA

Mendota Wetland Restoration Project Development Plan (CA)
Develop a Project Development Plan for the Sacramento District California In-Lieu Fee Program mitigation project entitled, "Mendota Wetland Restoration Project Development Plan" located in the Kings River Aquatic Resource Service Area. Project will preserve aquatic wetland resources and ensure long-term protection of the wetland resource functions and values of the project site in Fresno County, California.
\$376,740
Mitigation

Yurok Tribe

McGarvey Creek Coho Habitat Enhancement Using Beaver Dam Analogues (CA)
Increase salmonid rearing habitat capacity, watershed resiliency to climate change and drought, and our understanding of Beaver Dam Analogue performance and efficacy as a salmonid recovery tool. Project will conduct one year of monitoring and three-years of maintenance at Beaver Dam Analogue sites in McGarvey Creek, planning and design of at least one additional habitat enhancement site in McGarvey Creek, and reporting and stakeholder outreach.
\$106,460
Mitigation

Zoological Society of San Diego

Zoological Society of San Diego Unlawful Wildlife Trafficking Efforts (CA)
Purchase equipment to house live reptiles and reptile eggs confiscated through illegal wildlife trafficking matters in California. Project will provide support to efforts to rescue and care for unlawfully trafficked animals.

\$1,660

Federal Criminal Case

U.S. v. Estep

Zoological Society of San Diego

Head-starting Desert Tortoises and Understanding Juvenile Tortoise Habitat Requirements (CA)

Assist with the completion of an ongoing project involving head-starting the Mojave desert tortoise in Nevada and California. Project will involve conducting releases and post-release monitoring on approximately 145 juvenile head-started tortoises and evaluating effects of small mammal burrow density and vegetation community.

\$45,000

Mitigation

COLORADO**Advanced Telemetry Systems**

San Juan River Receiver Data Logger (CO)
Purchase a coded receiver data logger to track endangered fishes in the San Juan River.

\$5,830

Mitigation

Ecosystems Research Institute

San Juan River Habitat Assessment - II (CO)
Assess important habitats for endangered fishes in the San Juan River.

\$239,200

Mitigation

FISHBIO

San Juan River Waterfall Fish Capture and Transport Feasibility Assessment (CO)
Fund a trap and transport feasibility study at the base of a waterfall on the San Juan River.

\$50,000

Mitigation

Keller-Bliesner Engineering

Secondary Channel Habitat Maintenance for Native Fishes in the San Juan River (CO)
Perform habitat maintenance on secondary channels in the San Juan River for native fish.

\$29,110

Mitigation

State of Colorado**Department of Natural Resources**

Maybell Boat Ramp Realignment on the Yampa River (CO)
Support river access for multiple important Upper Colorado River Endangered Fish Recovery Program projects in the Yampa River.

\$20,778

Mitigation

U.S. Department of the Interior,**U.S. Fish and Wildlife Service - Region 2**

Nonnative Fish Management on San Juan River (CO)

Implement five years of nonnative fish management on the San Juan River in accordance with the San Juan River Basin Recovery Implementation Program.

\$150,361

Mitigation

CONNECTICUT**Cornell Cooperative Extension of Suffolk County**

Assessing and Removing Derelict Lobster Gear in Long Island Sound (CT)

Remove 3,640 derelict lobster pots from Long Island Sound using a specialized grapple system. Project will implement a program with local lobster fishermen to remove abandoned gear to reduce debris in the sound and ghost fishing impacts to the depleted Southern New England lobster stock.

\$50,000

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.

FLORIDA**Conservation Fisheries**

Okaloosa Darter Collection, Propagation, and Reintroduction (FL)

Fund the collection, propagation, and reintroduction of the threatened Okaloosa darter.

\$19,325

Mitigation

Matrix Design Group

College Pond Conceptual Design (FL)
Create an alternative conceptual design for an off-channel impoundment as part of a larger project for Okaloosa darter conservation.

\$5,000

Mitigation

Sea Turtle Conservancy

Eliminating Light Pollution on Ft. Lauderdale's Sea Turtle Nesting Beach (FL)

Conduct a program to assist beachfront property owners with retrofitting their lights to reduce sea turtle disorientation on high-priority nesting beaches. Project will help reduce sea turtle disorientation rates from nearby beach lighting to help prevent sea turtle mortality.

\$309,997

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.

HAWAII**Papahānaumokuākea Marine Debris Project**

Marine Debris Removal from Papahānaumokuākea Marine National Monument (HI)

Mitigate hazards to protected species and coral reef habitat of Papahānaumokuākea Marine National Monument through large-scale marine debris removal from the coral reefs and shorelines. Project will remove an estimated 240,000 pounds of derelict fishing gear and plastics, restoring 1,300 acres of coral reef habitat and 400 acres of shoreline habitat.

\$60,000

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.

Pulama Lanai

Kaheawa Wind Power Mitigation Lanai Hawaiian Petrel Protection — III (HI)

Expand ecosystem-level Hawaiian petrel colony management on the island of Lanai to improve reproductive success in areas that are currently under-protected from mammalian predators.

\$33,142

Mitigation

State of Hawaii,**Department of Land and Natural Resources**

Aquatic Resources On-line Violators Course Development (HI)

Preserve and protect coral reefs through the development of an aquatic resources on-line violators course.

\$9,628

Federal Criminal Case

U.S. v. Doorae Shipping, Co. LTD.

MARYLAND

College of William and Mary, Virginia Institute of Marine Science

Targeted "Hotspot" Removal of Derelict Blue Crab Traps (MD, VA)

Hire five commercial crabbers to remove derelict blue crab traps from areas of high commercial crabbing activity in Virginia and Maryland waters. Project will reduce bycatch mortality, help validate derelict crab trap density models, and increase subsequent blue crab harvest for commercial crabbers.

\$115,680

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.

MONTANA**River Design Group**

Lost Trail NWF Restoration (MT)

Provide support for project management and coordination for Lost Trail National Wildlife Refuge restoration stream and wetland design.

\$17,209

Mitigation

River Design Group

Swan River NWR Wetland Restoration (MT)
Fund professional services on the Swan River National Wildlife Refuge restoration project.
\$40,513
Mitigation

Swan Valley Connections

North American Wetlands Conservation Act Grant Writing Services (MT)
Fund grant writing services for the Swan River National Wildlife Refuge restoration project.
\$15,300
Mitigation

NEVADA

Brenneman, Melissa dba TopoWorks

Desert Tortoise Monitoring – Final Database Developer 2020 (NV)
Assist an ongoing Desert Tortoise Monitoring project in Nevada. Funds will be used to complete final data products for 2020 surveys by compiling collection databases, providing independent review, documenting corrections, adding new fields, and formatting.
\$6,843
Mitigation

Climate Conservation

Desert Tortoise Transportation Ecology Workshop (NV)
Facilitate the Center for Large Landscape Conservation in organizing and hosting a transportation ecology workshop in Clark County Wetlands Park, Las Vegas, Nevada to address issues and challenges encountered when attempting to implement installation of fencing and culverts to reduce desert tortoise road mortality, ensure population connectivity, and protect tortoise populations and habitat.
\$9,600
Mitigation

Climate Conservation

Desert Tortoise Workshop Survey (NV)
Design, implement, analyze, and summarize a survey of 100 respondents to assist in the planning and development of the Desert Tortoise Workshop organized by the Center for Large Landscape Conservation in Las Vegas, Nevada. The survey will help to guide the content of the workshop, as well as the post-workshop activities, based upon the responses from practitioners across the desert tortoise range states.
\$3,200
Mitigation

Ironwood Consulting

Ivanpah Valley Tortoise Connectivity Study (NV)
Conduct desert tortoise surveys as part of a study that analyzes demography, density, demographic connectivity, genetic connectivity, immune function, and habitat condition of desert tortoises in the Mojave Desert. Project will help provide land managers and planners insight into the impacts of development on the connectivity of desert tortoise populations.
\$213,379
Mitigation

Zoological Society of San Diego

Programming, Concept Design, and Conceptual Cost Estimating for a Desert Tortoise Recovery Center (NV)
Assist with programming, concept design, and conceptual cost estimating for a Desert Tortoise Recovery Center in Henderson..
\$25,588
Mitigation

NEW MEXICO

Advanced Telemetry Systems

San Juan River Coded Receiver Data Logger (NM)
Fund the purchase of a coded receiver data logger to track endangered fishes in the San Juan River.
\$5,830
Mitigation

Anglim’s Western Metal Works

Z-Habitat Steps (NM)
Fund the fabrication of metal steps to be used at the U.S. Fish and Wildlife Service’s National Fish Hatchery in Dexter, New Mexico.
\$2,077
Mitigation

Aquatic Consultants

Navajo Agricultural Products Industry Pond Drains (AZ, NM, UT)
Install two gravity drains in grow out ponds on the Navajo Nation that will be used to raise endangered fishes for stocking into the San Juan River.
\$131,629
Mitigation

Ecosystems Research Institute

San Juan River Habitat Assessment – II – (NM)
Assess important habitats for endangered fishes in the San Juan River.
\$239,200
Mitigation

FISHBIO

San Juan River Waterfall Fish Capture and Transport Feasibility Assessment (NM)
Fund a trap and transport feasibility study at the base of a waterfall on the San Juan River.
\$50,000
Mitigation

Keller-Bliesner Engineering

Secondary Channel Habitat Maintenance for Native Fishes in the San Juan River (NM)
Perform habitat maintenance on secondary channels in the San Juan River for native fish.
\$29,110
Mitigation

Lutgen & Associates dba Document Technologies

Printers for Fish Hatchery (NM)
Fund the purchase of printers for fish hatchery in Dexter, New Mexico.
\$1,453
Mitigation

Prairie AquaTech

Feed for Endangered Fish (NM)
Fund the purchase of feed for endangered fish down at Dexter, New Mexico. Project is part of a pilot study assessing the effects of Mercury on the reproductive success of Colorado pikeminnow.
\$1,364
Mitigation

U.S. Department of the Interior, U.S. Fish and Wildlife Service

Nonnative Fish Management on the San Juan River (NM)
Implement five years of nonnative fish management on the San Juan River in accordance with the San Juan River Basin Recovery Implementation Program.
\$150,361
Mitigation

U.S. Department of the Interior, U.S. Fish and Wildlife Service

San Juan River Recovery Actions (NM)
Contribute towards a San Juan River Recovery Implementation Program staff biologist to conduct recovery actions.
\$133,384
Mitigation

NEW YORK

Brooklyn Public Library

Local History and STEM Programming at Brooklyn Public Library (NY)
Expand community access to neighborhood’s oral history and archive collection, purchase of telescope for STEM programming.
\$2,722
Other

Connecticut Fund for the Environment

Adding Bronx River to Unified Water Study (NY)
Coordinate, distribute, and publicize the regional Long Island Sound Report Card over a three year budget cycle.
\$7,100
Other

Cornell Cooperative Extension of Suffolk County**Assessing and Removing Derelict Lobster Gear in Long Island Sound (NY)**

Remove 3,640 derelict lobster pots from Long Island Sound using a specialized grapple system. Project will implement a program with local lobster fishermen to remove abandoned gear to reduce debris in the sound and ghost fishing impacts to the depleted Southern New England lobster stock.

\$50,000

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.

Cornell Cooperative Extension of Suffolk County**Marine Meadows Eelgrass Restoration Initiative (NY)**

Conduct land-based opportunities for the public to participate in eelgrass restoration activities. Project will hold two marine meadows workshops resulting in the preparation of thousands of shoots of eelgrass for restoration planting at two restoration sites throughout Long Island, New York.

\$8,992

Federal Criminal Case

U.S. v. Parente

Council on the Environment dba GrowNYC**Public Training to Install New York City Rain Barrels and Rainwater Harvesting to Improve Community Water Quality (NY)**

Deliver workshops to teach how to install and maintain rain barrels provided by the New York City Department of Environmental Protection and install rainwater harvesting systems in public greenspace in West Harlem, New York. Project will increase successful public use of rain barrels and demonstrate the value of rainwater harvesting to reduce stormwater from streets, sidewalks, and roofs into local waterways.

\$21,400

Other

Fiorello H. LaGuardia Community College Foundation**Introduction of Herbaceous Plants To Raft Planter Boxes at North Henry Street Inlet (NY)**

Introduce herbaceous plants to raft planter boxes which are currently in place within the North Henry Street inlet in order to provide food for pollinator wildlife.

\$5,350

Other

Horticultural Society of New York**McGorrick Park Horticultural Maintenance (NY)**

Provide monthly horticultural maintenance at two sites in McGorrick Park, The Urban Oasis Garden, and the Pollinator Garden. Project activities will include weeding, pruning, removal of invasive plants, picking up trash, amending the soil, mulching, and watering in the designated garden areas.

\$11,000

Other

Hudson River Sloop Clearwater**Sloop Clearwater Sailing Classroom Program (NY)**

Provide students from the North River neighborhood in West Harlem with an environmental education classroom taking place on-board a 106-foot wooden replica of a traditional 17th century Dutch sloop. Project will increase students' awareness and appreciation of the Hudson River as a natural resource, and help them understand the connection between human behaviors and the health of the River.

\$17,722

Other

JB's Excavation Services**French Creek Wetland Restoration Project (NY)**

Fund the French Creek Wetland Restoration Project.

\$88,400

Mitigation

National Audubon Society**For the Birds! Pre-Recorded Lessons and Activities (NY)**

Deliver Audubon New York's For the Birds! to four classrooms at P.S. 31 Samuel F. Dupont School through seven pre-recorded lessons. The lessons will be delivered to approximately 100 third-grade students.

\$1,555

Other

National Audubon Society**Audubon New York's For the Birds!****Environmental Education Program (NY)**

Deliver environmental education programming to students grades six through eight at I.S. 303 Herbert S. Eisenberg School. Project will deliver five bird watching classes to students and offering three community bird walks to I.S. 303 students, faculty and their families.

\$7,916

Other

National Audubon Society**For the Birds! An Environmental Education Program (NY)**

Deliver youth and adult environmental education programs and hands-on stewardship activities for 350 people to learn about birds in Greenpoint, Brooklyn, New York. Project will provide an opportunity for residents to interact with natural resources in local parks and create direct connections to the natural world in their community.

\$13,830

Other

National Wildlife Federation**Greenpoint Schoolyard Habitats Project (NY)**

Partner with PS 31, PS 34, and MS 126 to complete schoolyard habitat enhancements that make the gardens more functional for classes and increase the overall biodiversity of the school grounds.

\$26,218

Other

National Wildlife Federation**Greenpoint Seed Kit Activities, Curriculum (NY)**

Support teachers and families from the four Greenpoint Eco-Schools (PS 31, PS 34, PS 110, and MS 126) while they teach and learn remotely during the Covid-19 outbreak.

\$53,612

Other

National Wildlife Federation**Manhattan Avenue Street End Park Garden Upgrades (NY)**

Upgrade Manhattan Avenue Street End Park in Greenpoint, Brooklyn, New York. Project will include the purchase of additional plants for the space and tools for volunteers and enhancement of the site as a habitat for wildlife.

\$10,762

Other

Neighbors Allied for Good Growth**Reusable Greenpoint: Bag Printing and Giveaway (NY)**

Purchase and print reusable bags to be distributed to Greenpoint residents.

\$7,500

Other

Neighbors Allied for Good Growth**Safe Soils In Greenpoint (NY)**

Fund the purchase of a handheld x-ray fluorescent analyzer that will allow for the analysis of soil samples for neighborhood residents. The analysis will allow for information to be relayed to residents regarding the concentration of lead and other heavy metals at their home.

\$9,280

Other

New York City Audubon Society**Community Wildlife Conservation in New York City (NY)**

Work with community partners to create diverse teams to conduct wildlife monitoring and coastal habitat enhancement projects in Jamaica Bay, Pelham Bay Park, Calvert Vaux Park, and Manhattan, New York. Project will enhance the capacity for environmental stewardship at a local level by engaging New York City residents, including minority and immigrant community members, directly in hands-on conservation.

\$7,096

Other

New York City Department of Parks and Recreation**Expansion of Coney Island Creek****Shorekeepers, Brooklyn (NY)**

Expand current coalition of volunteers who receive specialized training and resources to care for street trees and natural areas. Project will involve the public in debris clean-up and monitoring projects in the salt marsh and upland coastal maritime community.

\$7,916

Other

Newtown Creek Alliance

Newtown Creek SAMPLES Project — III (NY)
Continue weekly Newtown Creek water sampling program; funds would cover 2020 season.
\$7,336
Other

Newtown Creek Alliance

Environmental Education Public Events At Kingsland Wildflowers (NY)
Host three environmental education events and a mid-summer festival event at Kingsland Wildflowers. Project will provide community members with hands-on education about native plants, green roofs, and the ecological importance of both within an urban context.
\$18,590
Other

Newtown Creek Alliance

Newtown Creek Urban Ecology Education NC U³ Project (NY)
Deliver an urban environmental education curriculum focused on the ecology of Newtown Creek to students and support local stewardship projects in concert with schools in Long Island City, Queens, New York. Project will increase knowledge and awareness of Newtown Creek, a nearby community waterway, and its natural resources.
\$13,787
Other

North Brooklyn Community Boathouse

Greenpoint Public Paddle and Kayak Events (NY)
Hold a series of free walk-up paddle and kayak events in Greenpoint, Brooklyn, New York. Project will serve over 100 community members and will work to create a greater connection to waterways in the community.
\$46,228
Other

North Brooklyn Community Boathouse

North Brooklyn Community Boathouse Capacity Building (NY)
Fund institutional capacity building that will culminate in a workshop for board members and volunteer leaders. The purpose of the exercises is to re-envision and re-connect with the organization’s mission and revitalize the internal and external communications.
\$15,000
Other

Northwest Marine Technology

Coded-wire Tag Equipment Purchase (NY)
Fund the purchase of coded-wire tag equipment. Project will track Northern pike that are produced in wetland restoration projects to determine how they recruit to the adult population in out years.
\$25,360
Mitigation

Open Space Alliance For North Brooklyn

61 Franklin St. Community Garden Improvements and Workshops (NY)
Fund garden updates including building raised-beds, installing a hand washing station, and purchasing new tools and supplies. Workshops will also be conducted to educate the public on local ecology and sustainable and environmentally friendly practices.
\$7,500
Other

Open Space Alliance For North Brooklyn

Under the K Bridge Park Equipment and Celebration and OSA Capacity Building (NY)
Fund the purchase of equipment and a park opening celebration of the Under the K Bridge Park. The funds will also go towards institutional capacity building for Open Space Alliance for North Brooklyn.
\$56,475
Other

Panthera Corporation

Panthera Corporation “Tigers Forever” (NY)
Contribution towards Panthera’s Tigers Forever initiative. Project focuses on increasing tiger numbers worldwide.
\$4,800
Federal Criminal Case
U.S. v. Schlom et al.

PS 110K PTA

PS110 Garden Renovation Update (NY)
Install native trees, perennials, and ground covers in existing PS 110 garden. Project will also include an event to celebrate the garden.
\$21,295
Other

Rockaway Waterfront Alliance

Marine Conservation Corps Youth Service-Learning Program (NY)
Deliver an education and service learning program for youth ages 14 to 18 focused on marine conservation projects and involve community members in environmental stewardship in and around Jamaica Bay and the Rockaway Peninsula, New York. Project will restore 11.5 acres of degraded shoreline and collect 1,500 pounds of marine debris while increasing awareness and appreciation of coastal resources in the community.
\$7,100
Other

Rocking the Boat

Students Working On-the-Water to Restore Tidal Wetlands along the Bronx River (NY)
Engage students to enhance tidal wetlands and educate community members of all ages about the ecological value of the natural habitat to the Bronx River and Long Island Sound in Hunts Point, New York. Project will help develop an awareness of natural resources along a highly urbanized river and foster a community of local environmental stewards.
\$37,274
Other

The Wetland Trust

Bog Turtle Habitat Restoration (NY)
Fund restoration and monitoring for bog turtle habitat.
\$6,000
Mitigation

U.S. Army Corps of Engineers

Jamaica Bay, Plumb Beach, and Marine Park Feasibility Study (NY)
Fund a saltwater marsh feasibility study in Jamaica Bay, Plumb Beach, and Marine Park.
\$400,000
Other

U.S. Department of the Interior,

U.S. Fish and Wildlife Service
Restoration of Upper St. Lawrence River Muskellunge: Equipment Purchase (NY)
Update and expand the current capacity for culture at the Aquatic Research Lab at the Thousand Islands Biological Station in support of the muskellunge population recovery effort through the purchase of equipment.
\$6,861
Mitigation

U.S. Department of the Interior,

U.S. Fish and Wildlife Service
St. Lawrence Fish Enhancement, Mitigation, and Research Fund (NY)
Support fish enhancement, mitigation, and research projects in the St. Lawrence River.
\$552,151
Mitigation

Various Recipients

Musky Broodstock Collection Equipment Purchase (NY)
Fund the purchase of equipment to add in musky broodstock collection.
\$28,749
Mitigation

Various Recipients

Eel Bay Wetland Enhancement Project (NY)
Fund wetland restoration project in the Town of Orleans, Jefferson County, New York. Project will increase Northern pike spawning and nursery habitat, as well as increase the overall value of the wetland to benefit other wetland dependent species.
\$53,652
Mitigation

Wildlife Conservation Society

New York Aquarium Urban Naturalist Initiative
Train high school students as researchers and advocates to engage 650 community members in scientific data collection, clean-up efforts, and recreation along Coney Island Creek. Project will provide students with a seven-month Youth Naturalist internship with Wildlife Conservation Society’s New York Aquarium.
\$7,916
Other

NORTH CAROLINA**Conservation Fisheries****Preventing Extinction of the Carolina Madtom in North Carolina**

Enable captive breeding of Carolina madtom from the Neuse River basin and areas of the Tar River basin. Project will capture and hold live individuals from the Neuse River basin with the intent to breed them.

\$45,000

Federal Criminal Case

U.S. v. Duke Energy Carolinas;

U.S. v. Duke Energy Progress

Kris Bass Engineering**Roanoke River Habitat Restoration and Barrier Removal Planning (NC)**

Conduct a GIS and field assessment of barriers for aquatic species passage in the Roanoke River basin. Project will identify specific retrofit projects and provide needed information for eventual implementation.

\$29,997

Federal Criminal Case

U.S. v. Duke Energy Carolinas;

U.S. v. Duke Energy Progress

North American Marine Environment Protection Association**Education of Seafarers and Shoreside Personnel on the International Convention for the Prevention of Pollution from Ships Compliance in North Carolina**

Fund activities associated with educating seafarers in North Carolina about the International Convention for the Prevention of Pollution from Ships compliance.

\$1,500

Federal Criminal Case

U.S. v. Paccship (UK). LTD

North Carolina Wildlife Resources Commission**Magnificent Ramshorn Propagation and Restoration (NC)**

Establish at least one population of the magnificent ramshorn in the wild in eastern North Carolina. Project will support a biologist to propagate magnificent ramshorn, identify potential ponds for stocking, conduct habitat improvements, implement stocking, and conduct evaluations of stocking success.

\$75,000

Federal Criminal Case

U.S. v. Duke Energy Carolinas;

U.S. v. Duke Energy Progress

The Conservation Fund**Rocky and Deep Rivers Conservation Corridor (NC)**

Protect 317 acres along the Deep River, which will be added to the Deep River State Natural Area and Deep River State Trail. Project will preserve habitat for the federally endangered Cape Fear shiner.

\$370,000

Federal Criminal Case

U.S. v. Duke Energy Carolinas;

U.S. v. Duke Energy Progress

OHIO**The Nature Conservancy****Hemlock Woolly Adelgid Research in Ohio**

Fund research of hemlock woolly adelgid in Ohio.

\$10,000

Other

OREGON**MidCoast Watersheds Council****Lower Drift Creek Tidal Restoration Design — I (OR)**

Implement a restoration design project on an 80-acre site owned by the Siletz Bay National Wildlife Refuge located near Lincoln City, Oregon. Project will evaluate alternatives to remove fish passage barriers and enhance ecological processes to help coho salmon, other estuarine dependent species, and promote community resiliency.

\$57,020

Federal Criminal Case

(multiple prosecutions)

Oregon State University Foundation**Reference Database Expansion for Field and Laboratory Wood Species Identification (OR)**

Provide support for student research through the Wood Identification and Screening Center to further timber identification databases. Project will work to expand existing electronic wood species identification technologies XyloTron and Direct Analysis in Real Time Mass Spectrometry for field and laboratory wood species identification purposes.

\$8,300

Federal Criminal Case

U.S. v. Lumber Liquidators, Inc.

Trout Unlimited**Lalo Springs Fish Passage and Screening Project (OR)**

Improve fish passage and reduce entrainment near Lalo Springs in the Klamath Basin. Project will allow greater habitat access through the removal of a culvert and the addition of a series of hardened channels between existing pools. Project will also eliminate entrainment risk for suckers and redband trout by installing a fish screen on a pump intake along the Sprague River.

\$32,500

Mitigation

PENNSYLVANIA**Magnolia Land Partners****Enhancement and Protection of Bog Turtle and Bat Habitats (PA)**

Fund the enhancement and protection of bog turtle and bat habitats in Oley Township, Pennsylvania.

\$12,500

Mitigation

Various Recipients**Pennsylvania Wetlands Replacement (PA)**

Conduct wetland restorations on private lands, particularly in the Pocono Mountains region.

\$55,656

Mitigation

TEXAS**Ducks Unlimited****Anahuac National Wildlife Refuge (TX)**

Enhance wildlife habitat quality and wetland values of the Anahuac National Wildlife Refuge through installation of a fixed-crest rock weir structure near the mouth of Brushy Bayou along the Gulf Intracoastal Waterway. Project will reduce daily tidal energy, thus reducing marsh loss through erosion and saltwater intrusion, on approximately 500 acres of coastal emergent marsh.

\$200,000

Federal Criminal Case

U.S. v. Thome Ship Management PTE, LTD.

and Egyptian Tanker Company

Tom Smith Land Acquisition Consulting**Land Acquisition Support for Columbia Bottomlands (TX)**

Provide support in developing land acquisition opportunities for bottomland hardwood in the Texas Mid-Coast Refuge Complex.

\$33,458

Mitigation

U.S. Department of the Interior,**U.S. Fish and Wildlife Service, Region 2****U.S. Fish and Wildlife Service Southwest Region 2 Endowment - Houston Toad Captive Breeding Long-Term Support (TX)**

Support of a captive breeding program for federally endangered Houston toad.

\$30,810

Mitigation

UTAH**Advanced Telemetry Systems****San Juan River Coded Receiver Data Logger (UT)**

Fund the purchase of a coded receiver data logger to track endangered fishes in the San Juan River.

\$5,830

Mitigation

American Conservation Experience**American Conservation Experience Resource Fellowship (UT)**

Conduct work with Resource Associates and land managers on damaged habitat and arid land native vegetation restoration projects that benefit at-risk wildlife species. Project will focus on restoring and enhancing desert tortoise habitat in two National Conservation Areas of Utah.

\$100,000

Mitigation

American Conservation Experience

Desert Tortoise Habitat Restoration by Youth Crews on Public Lands in Southern Utah
Engage and employ youth to help restore habitat for the endangered Mojave Desert tortoise in the Beaver Dam Wash National Conservation Area and the Red Cliffs National Conservation Area. Project will focus on planting of native plants, re-seeding of damaged areas, implementation of arid land vegetation restoration and monitoring.
\$75,003
Mitigation

Aquatic Consultants

Navajo Agricultural Products Industry Pond Drains (AZ, NM, UT)
Install two gravity drains in grow out ponds on the Navajo Nation that will be used to raise endangered fishes for stocking into the San Juan River.
\$131,629
Mitigation

Ecosystems Research Institute

San Juan River Habitat Assessment – II (UT)
Assess important habitats for endangered fishes in the San Juan River.
\$239,200
Mitigation

Keller-Bliesner Engineering

Secondary Channel Habitat Maintenance for Native Fishes in the San Juan River (UT)
Perform habitat maintenance on secondary channels in the San Juan River for native fishes.
\$29,110
Mitigation

Ogden City

Ogden River Restoration (UT)
Provide support for Utah Conservation Crops Crews to conduct follow-up maintenance along the Ogden River. Project will benefit the Ogden River through planting of riparian and wetland plants to enhance the river corridor and surrounding area.
\$4,500
Federal Criminal Case
U.S. v. SC Utah Enterprises, LLC, d.b.a. A-One Salvage & Pic A Part

Providia Management Group

Stewart Lake Cattail Management (UT)
Fund cattail control in Stewart Lake, Utah.
\$40,000
Mitigation

**U.S. Department of the Interior,
U.S. Fish and Wildlife Service - Region 2
Nonnative Fish Management
on the San Juan River (UT)**

Implement five years of nonnative fish management on the San Juan River in accordance with the San Juan River Basin Recovery Implementation Program.
\$150,361
Mitigation

Utah State University

Survival Analysis of Desert Tortoises within the Red Cliffs Desert Reserve (UT)
Identify conservation objectives for the Mojave Desert Tortoise Upper Virgin River Recovery Unit, including maintaining self-sustaining populations and protecting and managing habitat to maintain the long-term viability of the tortoise population. Includes an assessment of a suite of desert tortoise population demographic measures including density, survival, and recruitment. Results will be used to update predictive models, such as population viability analysis, to accurately reflect the status of desert tortoise populations in Utah.
\$8,766
Mitigation

VIRGINIA**City of Roanoke Stormwater Division**

Polychlorinated Biphenyls Monitoring and Source Tracking in Roanoke City (VA)
Assess polychlorinated biphenyls in Roanoke's impaired waterways. Project will track and identify specific sections in the Roanoke River, Peter Creek, and Tinker Creek that serve as the dominant sources of polychlorinated biphenyls into the water column.
\$102,708
Federal Criminal Case
U.S. v. Duke Energy Carolinas;
U.S. v. Duke Energy Progress

**College of William and Mary, Virginia
Institute of Marine Science**

Targeted "Hotspot" Removal of Derelict Blue Crab Traps (MD, VA)
Hire five commercial crabbers to remove derelict blue crab traps from areas of high commercial crabbing activity in Virginia and Maryland waters. Project will reduce bycatch mortality, help validate derelict crab trap density models, and increase subsequent blue crab harvest for commercial crabbers.
\$115,680
Federal Criminal Case
U.S. v. Princess Cruise Lines, LTD.

Friends of the Rivers of Virginia

Lynch Park to Veteran's Park River and Stream Stabilization/Restoration Project, Town of Rocky Mount and Franklin County (VA)
Utilize natural channel design techniques and bank restoration best management practices to address the eroding river, stream banks, and streambed along the right bank of the Pigg River. Project will restore and stabilize the stream bed, stream, and river banks resulting in significantly reduced sedimentation, which will improve habitat for the federally endangered Roanoke logperch, the state-listed orangefin madtom, and other native aquatic species.
\$100,000
Federal Criminal Case
U.S. v. Duke Energy Carolinas;
U.S. v. Duke Energy Progress

Virginia Polytechnic Institute and State University

Peat Fire Vulnerability and Consequences in the Great Dismal Swamp NWR (VA)
Use available data, modeling methods, and new field data collection to provide a model to predict smoldering peat fire vulnerability over time and space and to provide assessments of ecosystem recovery and habitat following large-scale smoldering fires.
\$43,824
Other

WASHINGTON**Port of Bellingham**

Design and Engineering for the Gate 1 Pumpout Float and Pile Replacement (WA)
Remove and replace the Gate 1 pumpout float and piling system with a new gangway, concrete piling, and concrete floats. Project will remove the wooden floats and creosote piling and replace them with environmentally friendly new floats and piling.
\$97,435
Federal Criminal Case
U.S. v. Princess Cruise Lines, LTD.

Port of Friday Harbor

Harbor Marine Pollution Prevention (WA)
Construct a waterfront marine spill response facility and purchase a pumpout eco-barge. Project will create a program to quickly respond to oil spills and mitigate impacts to species harmed by contaminants habitats vital to orca and minke whales, harbor seals, sea lions, river otters, eagles, auklets and many more species.
\$400,000
Federal Criminal Case
U.S. v. Princess Cruise Lines, LTD.

The Longbranch Improvement Club

The Longbranch Marina Pumpout Station (WA)
Pursue permits and approvals required to start the design process for new construction of a boat pumpout station at the Longbranch Marina, Longbranch, Washington, located on the Filucy Bay of the Puget Sound. Project will provide a valuable service to the public recreational boaters while protecting the fragile shellfish environment.
\$82,500
Federal Criminal Case
U.S. v. Princess Cruise Lines, LTD.

Washington State Parks and Recreation Commission

Sucia Island Sewer Pump-out Station (WA)
Install a floating, independent sewer pump-out station in Fossil Bay located on Sucia Island. The station will be periodically emptied and the sewage transported upland to a sewage treatment facility.
\$87,500
Federal Criminal Case
U.S. v. Princess Cruise Lines, LTD.

WEST VIRGINIA

Allstar Ecology LLC

Spruce Mountain Bat Mitigation (WV)

Fund the support of bat mitigation on Spruce Mountain, West Virginia

\$9,540

Mitigation

The Wetland Trust

Columbia Pipeline Conservation Easement – Payment II (WV)

Columbia Pipeline Conservation easement payment for recordation of easement.

\$15,000

Mitigation

WYOMING

American Wind Wildlife Institute

American Wind Wildlife Institute Eagle Vehicle Strike Mitigation Model (WY)

Utilize field data to verify and update the American Wind Wildlife Institute vehicle strike model and construct and evaluate a Resource Equivalency Analysis of the updated vehicle strike model. Project work will reduce death, injury, and disturbances to golden eagles through vehicle strike mitigation modeling and construction of a resource equivalency analysis to further understand what may happen to golden eagle populations if not for fatal events.

\$142,524

Mitigation

Craighead Beringia South

Non-lead Ammunition Distribution Programs to Offset Golden Eagle Mortalities (WY)

In consultation with the Wyoming Game and Fish Department and U.S. Fish and Wildlife Service, distribute non-lead ammunition to hunters in specific hunting zones in Wyoming. Project will work towards creating a robust and defensible method to offset golden eagle mortality through the use of non-lead distribution programs and reduce golden eagle mortalities by lead poisoning.

\$255,775

Mitigation

Raptor View Research Institute

Estimating Natal Origins of Immature Golden Eagles killed on Wind Farms in Wyoming

Use stable hydrogen isotope analysis utilizing the weighed growing season average precipitation to reveal natal origins of immature golden eagles found as mortalities on wind farms in Wyoming.

\$6,939

Federal Criminal Case

U.S. v. Duke Energy Renewables, Inc.

Rocky Mountain Elk Foundation

Terry Creek Conservation Easement (WY)

Permanently protect 640 acres of essential golden eagle habitat in Wyoming. Project will protect key forage habitat in close proximity to a known nest location for golden eagles and along a known migration corridor for golden eagles through a conservation easement.

\$50,000

Mitigation

Wildlands Photography and Bio-Consulting Habitat Use, Movements, and Fate of Resident and Migrant Golden Eagles Over Two Major Wind Development Areas in Wyoming (WY)

Conduct satellite tagging of golden eagles on two major wind development regions in Wyoming. Project will substantially enhance data quality, ongoing analyses of risk assessments, seasonal and yearly variations in spatial uses of habitats by eagles, and the development of appropriate management/mitigation strategies to reduce wind development impacts on golden eagles.

\$137,670

Mitigation

NATIONWIDE

Southern Environmental Enforcement Network

Advanced Environmental Crimes Training Program

Develop and administer Advanced Environmental Crimes Training Program courses that provide classroom and practical instruction for advanced investigation techniques applicable to the investigation of environmental crimes.

\$211,051

Federal Criminal Case

U.S. v. Wal-Mart, Inc.

PUERTO RICO

National Wildlife Refuge Association

Leatherback Turtles Nesting Habitats Restoration in Puerto Rico

Restore nesting habitats for leatherback sea turtles in index beaches of Puerto Rico by reducing and preventing light pollution; restoring and enhancing the legal protection of nesting habitat; and reducing direct sources of mortality. Project will provide a significant reduction of disoriented turtles, road kills, poaching, predation, and an increase in successful nests and hatchling production.

\$1,187,371

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.

Puerto Rico Department of Natural and Environmental Resources

Puerto Rico Department of Natural and Environmental Resources Training and Gearing for Response to Marine Mammal Strandings

Strengthen the stranding response in Puerto Rico by training the personnel in the most current techniques and protocols for effective response to the different situations that could occur during a marine mammal-stranding event. Project will improve ability to conduct necropsies and preserve samples will increase our understanding of marine mammal health in Caribbean waters.

\$40,000

Federal Criminal Case

U.S. v. Princess Cruise Lines, LTD.



A yellowfin tuna swims
next to kelp growing
off California's coast.

ON THE FRONT COVER

Young bighorn sheep

ON THE BACK COVER

Painted bunting

PHOTOGRAPHY

Steve Perry (front cover,
bighorn sheep), Peter Brannon
(p. 2, snowy egret). All other
photos by Minden Pictures.



**NATIONAL HEADQUARTERS,
NORTHEASTERN AND
SOUTHERN REGIONAL OFFICES**

1133 15th Street, NW
Suite 1000
Washington, DC 20005
202-857-0166

CENTRAL REGIONAL OFFICE

8011 34th Avenue South
Suite 242
Bloomington, MN 55425
612-564-7286

**ROCKY MOUNTAIN
REGIONAL OFFICE**

1875 Lawrence Street
Suite 320
Denver, CO 80202
303-222-6482

WESTERN REGIONAL OFFICE

90 New Montgomery Street
Suite 1010
San Francisco, CA 94105
415-778-0999

nfwf.org

