

PROJECT TITLE	STATE	AGENCY	PROJECT SUMMARY	AMOUNT
Aquatic Connectivity and Flood Resilience in VA: Replacing the Quantico Creek Culvert in Dumfries	VA	FWS	The project, will reconnect fragmented rivers in Virginia contributing to the recovery of species of endangered freshwater mussels and species of endangered fish, and restoration of Federal trust species. The socioeconomic benefit of these projects is estimated at \$14.8M and includes improved flood resilience in multiple Virginia communities impacted by Hurricane Sandy.	\$330,750
Aquatic Connectivity and Flood Resilience: Pond Lily Dam Removal, West River, New Haven, CT	CT	FWS	The project will increase capacity of the local coastal riverine habitat to withstand storms by eliminating the hazard of Pond Lily Dam's likely failure and restore a Federal public asset by promoting migratory fish passage of federally protected species. The project has a socioeconomic benefit estimated at \$1.3M	\$661,500
Aquatic Connectivity & Flood Resilience in NJ: Removing the Hughsville Dam in Pohatcong & Restoring the Wreck Pond Inlet and Dune in Sea Girt and Spring Lake	NJ	FWS	Flood resilience in NJ will be improved at two locations: removal of the Hughsville Dam reduces risk of dam failure and upstream flooding while protecting human safety and restoring Trust fish species access to 5 miles of habitat; and, a box culvert replacement provides for seasonal passage of fish in two miles of habitat, adds nesting habitat for piping plovers, and provides storm surge-dune protection for two towns. Total socioeconomic value estimated at \$3.5M.	\$3,050,000
Aquatic Connectivity and Flood Resilience in CT and RI: Removing the White Rock and Bradford Dams and Assessing the Potter Hill Dam Fishway on the Pawcatuck River & Removing the Shady Lea Mill Dam in North Kingstown	RI, CT	FWS	These projects will restore connectivity, enhance fish passage and reduce the risk of flooding during future storm events. The expectation is that 2 dams will be removed (and one fishway will be installed) on the Pawcatuck River in RI and CT, and one dam will be removed from the Mattatux River in south-central RI and a new natural riparian area will be created in the former impoundment. The socioeconomic benefit is estimated at over \$11M.	\$2,294,250
Aquatic Connectivity and Flood Resilience: West Britannia and Whittenton Dam Removals, Mill River, Taunton, MA Connectivity	MA	FWS	The purpose of this project is to remove two aging mill dams from the Mill River in Taunton, MA and increase the resiliency of natural and human infrastructure. The project will 1) open up 30 miles of high quality habitat for American eel and river herring, which are under consideration for federal listing; and 2) reduce the probability of flooding and eliminate the potential for catastrophic dam breaches posed by these obsolete dams.	\$650,000
Aquatic Connectivity and Flood Resilience in MD: Removing the Centreville Dam in Centreville and the Bloede Dam in Catonsville	MD	FWS	Flood resilience in MD will be improved at two locations: removal of the Centreville Dam reduces the threat of flooding to a nearby municipal building and restores access to 2 miles of American eel and river herring spawning habitat; removal of the Bloede Dam reduces flood risk and protects a municipal sewage line while restoring access to 9 miles of eel, herring and American shad habitat.	\$1,212,750
Aquatic Connectivity and Flood Resilience: Flock Process Dam Removal, Norwalk River, Norwalk, CT	CT	FWS	Removal of the Flock Process Dam, the first dam on the Norwalk River in Norwalk, CT eliminates dam failure risk, restores Federal Trust species, facilitates natural sediment transport and builds resilience in both upstream and downstream areas of the river and coastal areas to future flooding. The socioeconomic benefit of this project is estimated at \$1.75M	\$970,000
Aquatic Connectivity and Flood Resilience: Norton Mill Dam Removal, Jeremy River, Colchester, CT	CT	FWS	Norton Mill Dam removal will restore access to 17 miles of habitat with an estimated \$8.5M socioeconomic benefit; aging infrastructure damaged repeatedly by flooding and dam safety liability are eliminated protecting downstream property; Eastern Brook trout, Atlantic salmon, American eel and river herring benefit.	\$727,650
Aquatic Connectivity and Flood Resilience: Hyde Pond Dam Removal, Whitford Brook, Mystic, CT	CT	FWS	This project will remove the Hyde Pond Dam on Whitford Brook, a tributary of the Mystic River. It will restore fish passage to 4.1 stream miles and habitat for alewife, blueback herring and American eel, candidate species under the Endangered Species Act, and mitigate flooding risk downstream of the dam. The socioeconomic benefit is estimated at \$2M	\$551,250
Restoring resiliency to the Great Marsh, Parker River National Wildlife Refuge, Massachusetts	MA, ME	FWS	We will increase marsh of a 27,000 acre tidal marsh system by improving tidal channel hydrology, reducing marsh subsidence and retention of freshwater and controlling large outbreaks of invasive species through traditional and innovative measures. We will address issues of coupled natural-human environment by modeling impairment of tidal circulation posed by Plum Island Turnpike and taking appropriate actions to improve tidal function.	\$340,000

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Increasing Water Management Capability at Great Dismal Swamp National Wildlife Refuge to Enhance Its Resiliency for Wildlife and People	VA	FWS	To implement large-scale, hydrologic restoration and management to increase water storage of drained forested peatlands, which will create more resilient lands and communities to the effects of climate change (storms, wildfires, and drought). The project includes planning, implementation, and monitoring.	\$3,130,000
Living Shoreline-Oyster Reef Restoration and Construction at Chincoteague National Wildlife Refuge, Virginia	MD, VA	FWS	The US Fish and Wildlife Service, in partnership with the National Park Service, The Nature Conservancy, Virginia Department of Game and Inland Fisheries and the Virginia Marine Resources Commission, proposes to construct two living shoreline projects and two acres of oyster reefs on the Chincoteague National Wildlife Refuge that will help restore and rebuild the Refuge after impacts associated with Hurricane Sandy. The Chincoteague NWR Living Shorelines/Living Reefs project will also increase the resilience and capacity of certain Refuge infrastructure, i.e. Service and Beach roads, to withstand future storms with reduced damage.	\$553,425
Prime Hook National Wildlife Refuge Coastal Tidal Marsh /Barrier Beach Restoration	DE	FWS	The purpose of this project is to restore a highly damaged tidal salt marsh/barrier beach ecosystem within the former impounded wetland system on Prime Hook National Wildlife Refuge. This coastal wetland restoration will be guided by the results of an ongoing hydrodynamic modeling and alternatives analysis, and will provide ecosystem services and economic benefits to several adjacent and nearby communities in Delaware.	\$19,805,000
Protecting Property and Helping Coastal Wildlife: Enhancing Salt marsh and Estuarine Function and Resiliency for Key Habitats on Impacted Wildlife Refuges from Rhode Island to southern Maine	RI, ME, MA	FWS	We will increase coastal resilience to a changing climate for eight local communities, economies and wildlife that depend on healthy salt marsh ecosystems on over 400 acres in key coastal areas of Rhode Island, 50 acres in coastal Massachusetts and 50 acres in coastal Maine. We propose a variety of actions, including providing salt marsh shoreline protection, restoring hydrology, restoring maritime shrub lands adjacent to salt marshes, and instituting a monitoring/adaptive management program to protect salt marsh habitat for declining migratory birds and habitats at risk	\$4,150,000
Round Hill Salt Marsh Restoration Project	MA	FWS	This project will directly restore 11.6 acres of salt marsh functions and values lost for nearly 100 years due to historic filling. It will also protect and enhance the ecological integrity of the connected 70-acre Meadow Shores Marsh by enhancing the tidal inlet through which the tidal waters that sustain these marshes flow, and increase tidal flushing to the existing marsh. This will be accomplished by directly removing up to 75,000 cubic yards of fill material from the marsh, revegetating, and replacing the defunct wooden culvert beneath Ray Peck Drive with a larger, properly-sized culvert for unimpeded tidal exchange within the restored marsh.	\$2,277,000
Restoring Coastal Marshes in New Jersey National Wildlife Refuges	NJ, VA	FWS	Increase protection of communities along 60 miles of coastal New Jersey. Restore and enhance salt marshes as critical components of the green infrastructure supporting the communities, and protect the associated social, economic and recreational values of the New Jersey shore.	\$15,000,000
Dyke Marsh Restoration to Promote Resource Protection from Storm Response and Adaptation to Sea Level Rise	VA	NPS	Dyke Marsh is currently destabilized and is eroding at an accelerated rate during storm events, according to USGS, the shoreline is retreating 6 to 8 feet per year. Dyke Marsh will be restored as directed by Congressional legislation (Public Law 93-251) using proven methods for marsh reconstruction. Marsh restoration is needed to give resiliency to high storm surge and tidal events.	\$24,897,600
Hail Cove Living Shoreline Restoration, Eastern Neck National Wildlife Refuge	MD	FWS	Construct 4,000 feet of "living shoreline" that will stabilize a highly vulnerable shoreline at Eastern Neck National Wildlife Refuge and directly protect over 400 acres of high quality tidal marsh and submerged aquatic vegetation in the Chester River. This Green Infrastructure project will ensure that these habitats continue to provide ecosystem services to the human communities of the Chesapeake Bay.	\$1,550,000
Salt Marsh Restoration and Enhancement at Seatuck, Wertheim and Lido Beach National Wildlife Refuges, Long Island, NY	NY	FWS	Restore natural functions in damaged and degraded coastal salt marshes through an integrated approach that addresses tidal hydrology, surface water habitat, invasive species, living shoreline stabilization and sea level rise. Restoration of natural hydrology will increase resilience and decrease long-term vulnerability and risk from storm events.	\$11,093,000

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Muddy Creek Wetland Restoration Project	MA	FWS	The 55-acre Muddy Creek project site is a tidally-restricted estuary with fringing degraded tidal marshes. Objectives include enhancing coastal system resiliency through the restoration of a mix of estuarine and subtidal wetlands, improved water quality, and restoration of passage for diadromous fish. Restoration actions included the removal of twin undersized 3 ft. x 3 ft. stone culverts and replacement with a 94-ft. span bridge and open channel.	\$3,762,000
Gandy's Beach Shoreline Protection Project, Downe Township, Cumberland County, NJ	NJ	FWS	Protect and restore 337 acres of salt marsh and uplands on Gandy's Beach by constructing 4,000 feet of living shoreline and breakwater	\$880,000
MRPMD-05: Ferry Point, Nanticoke River – Pocomoke Sound Marsh Enhancement	MD	FWS	The USFWS and MD DNR will treat 2,000 acres of degraded wetlands on the Nanticoke River with herbicide to control Phragmites and restore natural hydrology to 600 acres of ditched and drained wetlands on Pocomoke Sound in the Chesapeake Bay watershed.	\$638,000
Fog Point Living Shoreline Restoration, Martin National Wildlife Refuge	MD	FWS	Construct 20,950 feet of "living shoreline" that will stabilize a highly vulnerable shoreline at Martin National Wildlife Refuge and directly protect over 1,200 acres of high quality tidal high marsh, submerged aquatic vegetation, and clam beds. This Green Infrastructure project will ensure that these fisheries resources will continue to provide economic benefits to the fishing communities directly connected to MNWR: Ewell, Tylerton, and Rhodes Point, on Smith Island.	\$9,000,000
Increase Resilience of Beach Habitat at Pierce's Point, Reed's Beach, and Moore's Beach, New Jersey	NJ	FWS	This project will create berm structures to protect, retain, and promote sand re-nourishment in an area that is critical for high-risk species that use these habitats. Restoration of the habitat is necessary to maintain the beaches for horseshoe crab spawning, for the thousands of individual shorebirds that feed on the eggs during migration, and to create resiliency to future storm events	\$1,650,000
Parkers Tidal Restoration Project	MA	FWS	The Parkers Tidal Restoration Project will restore natural tidal hydrology to a 219-acre estuarine system (tidal river and coastal salt pond) through replacement of a tidally-restrictive bridge with a larger span structure, and enhance diadromous fish passage through replacement of two underperforming fish passage structures. The project will improve coastal system function and resiliency, and improve diadromous fish passage.	\$3,718,000
Topographic Surveys: Lidar Elevation Data	CT, DE, MA, MD, NC, NJ, NY, PA, RI, VA	USGS	Continue the collection of topographic lidar elevation data to support the assessment, recovery, and mitigation requirements for priority watershed and ecosystem analyses in the Hurricane Sandy impact area that were not fully addressed with the first round of funding.	\$4,050,000
GS2-5A Evaluating Ecosystem Resilience: Assessing wetland ecosystem functions and processes in response to Hurricane Sandy impacts	CT, DE, MA, MD, NC, NJ, NY, RI, VA	USGS	This project will produce wetland impact assessments to understand, as early as possible, how northeastern Atlantic coastal wetland resources have been changing in terms of their extent and ecological structure and function, how they were changed by Hurricane Sandy, and how to use that information to inform remediation and conservation efforts.	\$1,240,000
A Stronger Coast: Three USFWS Region 5 multi-National Wildlife Refuge projects to increase coastal resilience and preparedness	CT, DE, MA, ME, NJ, NY, RI, VA	FWS	This proposal will identify trends and vulnerabilities in over 70 miles of shoreline at 12 National Wildlife Refuges (NWR), integrity and resiliency status of over 30,000 acres of tidal salt marsh at 10 NWRs, and migratory waterbird population status in at least 10 National Wildlife Refuges. These projects directly benefit over 40 coastal communities in 8 states by supporting high quality storm surge and erosion protection, infrastructure protection, commercial and recreational fisheries production, hunting, bird-watching, boating, and local tourism.	\$2,060,000
GS2-3A: Enhance Storm Tide Monitoring, Data Recovery, and Data Display Capabilities	CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA	USGS	This project will increase the ability of the U.S. Geological Survey (USGS) to recover recorded storm surge time-series data in a more timely and efficient manner, implement a coastal and near inland fixed-place storm surge network, and establish rapid response capabilities for targeted monitoring.	\$2,200,000

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GS2-3B: Storm Surge Science Evaluations to Improve Models, Vulnerability Assessments, and Storm Surge Predictions	CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA	USGS	The results of this project are intended to support existing storm-surge modeling efforts by other agencies and universities. Resilient platforms for storm surge and wave measurements will be established along several transects from edge of water through beach and wetland to near-coast environments to monitor storm processes and assess inundation potential. The effectiveness of differing landscapes, built and natural, in mitigating storm impacts will be defined and mapped, and data will be delivered to improve storm-surge models.	\$1,500,000
Evaluate ecological impacts of breaching on estuarine habitats	NY	NPS	Hurricane Sandy created a breach through Fire Island National Seashore. The breach provides an extraordinary opportunity to evaluate ecological responses to inform breach management decisions at Fire Island and to inform future breach management decisions within the the mid-Atlantic region and elsewhere. This project will collect and synthesize information on the components of the Bay-estuary that rapidly response to the new breach (water quality, plankton) and those components that are longer to respond (fish communities).	\$900,000
Linking Coastal Processes and Vulnerability – Assateague Island Regional Study (GS2-2C Assateague)	DE, MD, NY, VA	USGS	This project involves mapping of the regional geologic framework and describing the physical processes governing the evolution of the Delmarva coastal system, which includes Assateague Island. We will produce actionable information for improving the resilience of coastal habitat and infrastructure to future storms and sea-level rise.	\$4,000,000
Resilience of the Tidal Marsh Bird Community to Hurricane Sandy and Assessment of Restoration Efforts	CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA	FWS	We will: 1) assess the damage caused by Hurricane Sandy to the plant and bird communities of the tidal marsh for Species of Greatest Conservation Need (SGCN), 2) assess the success of tidal marsh restoration efforts conducted under Hurricane Sandy mitigation funding, 3) describe tidal marsh resilience to storm events, 4) improve the level of Scientific Uncertainty for Hurricane Sandy's Chain of Consequences as currently judged by the DOI Strategic Sciences Group – Operational Group Sandy (SSG-OGS), and 5) validate the Intervention Values previously assigned to possible post-storm actions by the SSG-OGS.	\$1,573,950
Linking Coastal Processes and Vulnerability – Fire Island Regional Study (GS2-2B FireIsland)	NY	USGS	Building on extensive scientific knowledge of the Long Island barrier island system evolution and behavior, this project will fill crucial knowledge and data gaps required to develop models that predict change and vulnerability caused by to storms, climate (sea-level rise), and human activities on management-relevant time scales	4,800,000
Estuarine physical response to storms (GS2-2D EstuarinePhysicalResponse)	DE, MD, NJ, NY, VA	USGS	We will measure and model estuarine and adjacent wetland sediment responses to Hurricane Sandy and future storms in two large Atlantic lagoonal estuaries. Evaluations of sediment transport, geomorphic change, circulation, wetland stability, and stratigraphic history will support development of models of storm impacts on estuarine health, vulnerability of adjacent communities, and sustainability of restored and natural wetlands	\$2,200,000
Barrier Island and Estuarine Wetland Physical Change Assessment (GS2-2A Wetland Physical Assessment)	DE, MD, NJ, VA	USGS	Project will measure estuarine and barrier island wetland physical change (marsh shoreline and interior) using data sets derived from remote sensing, aerial imagery, lidar, water-level gages, and sediment cores to develop a comprehensive impact assessment of Assateague Island and the associated estuarine shoreline. Resulting data will support development of a combined shoreline and wetland forecast of coastal vulnerability to future storm events, expanding the applicability of available USGS regional and national tools to include marsh/wetland shorelines	\$1,350,000
Submerged Marine Habitat Mapping: A foundation for enhancing resilience to coastal storms and other climate change drivers	MA, MD, NJ, NY	NPS	Submerged marine areas are the dominant habitat type of Northeast Region coastal parks, especially those directly impacted by Sandy, yet knowledge of these valued habitats is lacking. This project will produce maps and inventories of submerged marine areas that depict bathymetry, sediment, geomorphology, ecological habitats and archeological resources. Without this information, park managers cannot effectively identify and design adaptation strategies (e.g., habitat restoration, marine reserves) that will enhance the ability of marine ecosystems to withstand major coastal storms, other climate drivers, and human-induced stressors	\$2,400,000

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Decision Support for Hurricane Sandy Restoration and Future Conservation to Increase Resiliency of Beach Habitats and Beach-Dependent Species in the Face of Storms and Sea Level Rise	CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA	FWS	Coordinated effort by Landscape Conservation Cooperative (LCC) partners to integrate existing data, models and tools with foundational data and assessments of both the impacts of Hurricane Sandy and the immediate response to guide decisions about where to conduct what beach restoration, management and conservation actions to sustain ecological function, habitat suitability for wildlife and ecosystem services including flood abatement in the face of storm impacts and sea level rise	\$1,750,000
Provide Support for the Science and Resilience Center at Jamaica Bay	NY	NPS	Working with the Rockefeller Foundation, the City of New York and other public and private entities this project will support the participation of the NPS and other DOI agencies (e.g., USGS) in a recently established top-tier, internationally-recognized, university-based center -- the Science and Resilience Center of Jamaica Bay. The Center will develop innovative approaches and test emerging techniques that will enhance our understanding of resilience in the urban, coastal ecosystems with a focus on Jamaica Bay, a unit of Gateway National Recreation Area. Targeted science efforts will provide major benefits to society by developing information and tools to better manage coastal resources, better predict the impact of climate change on urban ecosystems, and enhance the ability to respond to major catastrophic events such as Hurricane Sandy, contaminant spills, etc. Carefully chosen and supported university partnerships can stretch scarce investment funding.	\$3,600,000
GS2-5D Forecasting Biological Vulnerabilities: Building and delivering data visualization, multiscale datasets, and models of reduced biological systems resilience to future storms in support of informed natural-resource decisionmaking	CT, DE, MD, NC, NJ, NY, RI, VA	USGS	This project will provide a Web-based application to deliver habitat model outputs, which will provide decisionmakers with useful, credible data when determining the best use of restoration and recovery resources. This project will provide access to existing models and support the development and provision of two new models and associated data for application.	\$1,025,000
Acquire high-resolution elevation data to improve storm surge forecasting and mitigation planning	MD, NJ, NY, VA	NPS	The goal of this project is to acquire baseline, ground-based, high resolution bathymetric and terrestrial topographic data and information required to aid in developing highly accurate and precise models (inundation, storm surge, coastal change, climate change, sea level rise, etc.) that can be incorporated into future resiliency planning efforts for coastal parks in the Northeast Region. This project will acquire high-resolution elevation data for key park areas identified by park managers and planners, and seamless topographic surfaces will be developed across the landwater interface for those critical areas.	\$3,000,000
Coastal Barrier Resources System Comprehensive Map Modernization - Supporting Coastal Resiliency and Sustainability following Hurricane Sandy	CT, DE, MA, MD, NJ, NY, RI, VA	FWS	This project is for the comprehensive modernization of the official maps of the John H. Chafee Coastal Barrier Resources System (CBRS) along the North Atlantic coast.	\$5,000,000
Building a predictive model for submerged aquatic vegetation prevalence and salt marsh resiliency in the face of Hurricane Sandy and sea level rise	CT, DE, MD, NJ, NY, RI, VA	FWS	To fully understand how climate change and severe storms affect saltmarsh ecosystems, the unique submerged aquatic vegetation (SAV) complex and the species that exclusively use them (e.g. Atlantic brant), it is important to build predictive models for SAV prevalence pre and post-Sandy as well as in future sea-level rise scenarios for improved management of saltmarsh management and resiliency. To accomplish this broad goal, this project will address 5 objectives that will provide DOI agencies with information on salt marsh and SAV beds that were most negatively impacted by Hurricane Sandy to improve future management plans for increasing the resiliency of coastal habitats.	\$217,000
Decision Support for Hurricane Sandy Restoration and Future Conservation to Increase Resiliency of Tidal Wetland Habitats and Species in the Face of Storms and Sea Level Rise	CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA	FWS	Coordinated effort by Landscape Conservation Cooperative (LCC) partners to integrate existing data, models and tools with foundational data and impact assessments to guide decisions about where to conduct tidal marsh restoration, conservation and management to sustain ecological values, ecosystem services, habitat suitability and resiliency of tidal marshes and marsh species in the face of storm impacts, sea level rise and other stressors	\$2,200,000
Ohmsett Wind and Storm Surge Damage Prevention	NJ	BSEE	The Ohmsett facility is critical to BSEE's mission of protecting the environment through oil spill response research testing, and responder training. This project will address the facility's known vulnerabilities and will prevent or limit damage caused by future storms.	\$4,000,000