

**COMPENDIUM OF
FEDERAL NATURE-BASED
RESOURCES FOR
COASTAL COMMUNITIES,
STATES, TRIBES, AND
TERRITORIES**

APRIL 2022



**THE WHITE HOUSE
WASHINGTON**



White House Coastal Resilience Interagency Working Group

National Oceanic and Atmospheric Administration

Federal Emergency Management Agency

Department of Housing and Urban Development

Department of Defense

Army Corps of Engineers

Department of the Interior

Department of Transportation

Environmental Protection Agency

National Aeronautics and Space Administration

Department of Agriculture

AmeriCorps

Department of Homeland Security



Summary

At the coast, the impacts of climate change and more frequent and severe extreme weather events, along with sea level rise, erosion, and other stressors, are challenging—and in some cases, devastating—coastal communities, infrastructure, and the resources our economy depends on. The effects of ocean warming and sea level rise are threatening the natural and built environment, requiring strategic investments in mitigation measures that account for changing conditions. Our nation is guarding against the effects of the climate crisis by investing in resilience to climate change, through a focus on environmental justice and conservation.

Nature-based solutions are often defined as actions to protect, sustainably manage and restore natural or modified ecosystems (land, water, coastal, or ocean) that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits (e.g., coastal protection, reduced flooding, decreased heat-island effects).

The strategic and effective use of nature-based solutions plays an important role in addressing coastal resilience challenges. To aid in the use and implementation of nature-based solutions for coastal resilience, the Biden-Harris Administration has established the Coastal Resilience Interagency Working Group (IWG), one of five IWGs focused on priority extreme climate change events. The Coastal Resilience IWG is co-led by the White House Council on Environmental Quality (CEQ) and the National Oceanic and Atmospheric Administration (NOAA) and it works to coordinate and accelerate the federal government's efforts to increase resilience in the country's coasts and coastal communities that are impacted by climate change.

Nature-based solutions offer significant benefits, monetary and otherwise, often at a lower cost than more traditional infrastructure. To ensure that the advantages of infrastructure investments, including nature-based solutions, are received by historically disadvantaged and marginalized communities, the White House established the Justice40 Initiative. Justice40 is a whole-of-government effort that aims to deliver 40 percent of the overall benefit of federal investments in climate to disadvantaged communities. For nature-based solutions, these benefits include economic growth, green jobs, increased property values, and improvements to public health, including better disease outcomes and reduced injuries and loss of life.

There are many existing programs and funding sources for nature-based solutions that can target coastal resiliency. Notably, the Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act), a once-in-a-generation investment in our nation's infrastructure and competitiveness, includes \$50 billion for climate resiliency programs.

This compendium streamlines access to recommended federal resources and guidance on coastal green infrastructure, nature-based solutions, and habitat restoration that are available to assist coastal communities, states, tribes, and territories in evaluating, enabling, and investing in nature-based adaptation strategies.



| Abbreviation | Definition |
|---------------------|---|
| BIA | Bureau of Indian Affairs |
| BOEM | Bureau of Ocean Energy Management |
| BRIC | Building Resilient Infrastructure and Communities |
| CDBG | Community Development Block Grant |
| CoSMos | Coastal Storm Modeling System |
| CSO | Coastal States Organization |
| DOD | Department of Defense |
| DOT | Department of Transportation |
| EDA | Economic Development Administration |
| ELI | Environmental Law Institute |
| EPA | Environmental Protection Agency |
| FARG | Federal Adaptation and Resilience Group |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| HUD | Department of Housing and Urban Development |
| NFWF | National Fish and Wildlife Foundation |
| NOAA | National Oceanic and Atmospheric Administration |
| NPS | National Park Service |
| NRC | Naturally Resilient Communities |
| NRCS | Natural Resource Conservation Service |
| NSTC | National Science and Technology Council |
| NWF | National Wildlife Federation |
| RiskMAP | Risk Mapping, Assessment, and Planning |
| TNC | The Nature Conservancy |
| USACE | US Army Corps of Engineers |
| USDA | US Department of Agriculture |
| USFS | US Forest Service |
| USFWS | US Fish and Wildlife Service |
| USGCRP | US Global Change Research Program |
| USGS | US Geological Survey |



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| Agency | Title | Type | Link | Summary | Year |
|---|--|-------------------------|---|---|------|
| General Resources on Nature-Based Solutions and Green/Natural Infrastructure | | | | | |
| DOD/ USACE | Engineering with Nature: Supporting Mission Resilience and Infrastructure Value at Department of Defense Installations | Reference Report | https://ewn.ercd.dren.mil/wp-content/uploads/2021/10/ERDC-SR-21-9-ebook-web-release.pdf | Book on engineering with nature opportunities at DOD installations to reduce risk to natural hazards. | 2021 |
| DOT | Nature-Based Solutions for Coastal Highway Resilience: An Implementation Guide | Implementation Guidance | https://www.fhwa.dot.gov/environment/sustainability/resilience/ongoing_and_current_research/green_infrastructure/implementation_guide/fhwahep19042.pdf | Comprehensive guide on utilization of nature-based solutions for coastal highway resilience including technical fact sheets, planning and funding considerations, site assessment, engineering considerations, materials, construction, monitoring and maintenance information. Produced by the DOT FHWA. | 2019 |
| DOT | Nature-Based Solutions for Coastal Highway Resilience | Whitepaper | https://www.fhwa.dot.gov/environment/sustainability/resilience/ongoing_and_current_research/nature_based_solutions/fhwahep18037.pdf | White paper on utilization of nature-based solutions for coastal highway resilience. | 2018 |



| Agency | Title | Type | Link | Summary | Year |
|--------|--|------------------------------|---|--|-----------|
| DOT | Peer Exchange Summary Report - Nature-Based Solutions for Coastal Highway Resilience | Peer-Exchange Summary Report | https://www.fhwa.dot.gov/environment/sustainability/resilience/ongoing_and_current_research/green_infrastructure/coastal_highways/ | Report summarizing key takeaways from four regional peer exchanges conducted by FHWA on NBS for improving coastal highway resilience. This peer exchange summary provides a synthesis of: key examples of NBS; recommendations for successful planning and implementation; and challenges that can arise across planning, permitting, partnerships and engagement, engineering and design, and monitoring and maintenance. | 2018 |
| DOT | Nature-Based Solutions Pilot Reports | Report | https://www.fhwa.dot.gov/environment/sustainability/resilience/ongoing_and_current_research/green_infrastructure/ | Five reports describing FHWA's partnerships with state departments of transportation (DOTs) and others on five pilot projects to assess the potential for natural infrastructure to protect specific locations along coastal roads from climate change impacts such as sea level rise and storm surge flooding. | 2017/2018 |
| EPA | Watershed Planning and Green Infrastructure in State Hazard Mitigation Plans | Implementation Guidance | https://www.epa.gov/sites/default/files/2019-04/documents/final4_good_reasons_for_shmps_to_inc_gi_into_shmps_-_508.pdf | Guide on why including green infrastructure and watershed planning into hazard mitigation plans is important. | - |



| Agency | Title | Type | Link | Summary | Year |
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| EPA | Green Infrastructure Modeling Toolkit | Tool | https://www.epa.gov/water-research/green-infrastructure-modeling-toolkit | Website from EPA featuring tools and resources like innovative models, tools, and technologies for communities to manage water runoff in urban and other environments. The resources in this toolkit incorporate green or a combination of green and gray infrastructure practices to help communities manage their water resources in a more sustainable way, increasing resilience to future changes. | 2021 |
| EPA | Tools, Strategies and Lessons Learned from EPA Green Infrastructure Technical Assistance Projects | Report | https://www.epa.gov/sites/default/files/2016-01/documents/gi_tech_asst_summary_508final1010515_3.pdf | Report from EPA summarizing practical, successful solutions to inspire city managers, community leaders and engaged citizens looking to design their community space for better health, abundant water resources, and improved quality of life. | 2015 |
| EPA | EPA Green Infrastructure Resources | Broader Resource | https://www.epa.gov/green-infrastructure | Website on EPA's green infrastructure highlighting a variety of tools, resources, and partnerships. | - |
| FEMA | Compiled Resources on Future Conditions and Nature-based Solutions | Broader Resource | https://www.fema.gov/sites/default/files/2020-08/fema_bric-and-nature-based-solutions_resource-materials_July_2020.pdf | Table outlining available resources for FEMA's BRIC program. | 2020 |



| Agency | Title | Type | Link | Summary | Year |
|--------|--|-------------------------|---|--|------|
| FEMA | Building Community Resilience with Nature-Based Solutions: A Guide for Local Communities | Implementation Guidance | https://www.fema.gov/sites/default/files/documents/fema_riskmap-nature-based-solutions-guide_2021.pdf | Guidebook to utilizing nature-based solutions for hazard mitigation describing: what are nature-based solutions, what is the business case for using them, planning and policy considerations, implementation considerations, and federal funding opportunities, produced by FEMA RiskMAP for BRIC. | 2021 |
| HUD | Green Infrastructure and the Sustainable Communities Initiative | Report | https://www.hud.gov/sites/documents/GREENINFRASTRUCTSCIPDF | Report sharing the green infrastructure best practices and outputs of HUD grantees under the HUD Sustainable Communities Initiative grant programs as part of HUD's commitment under the Green Infrastructure Collaborative. These profiles present a high-level snapshot of the grantees' green infrastructure work and link to other resources with more detailed information on plans and projects. | 2011 |
| HUD | Navigating Federal Funding for Green Infrastructure and Nature-Based Solutions | Training Webinar | https://www.hudexchange.info/trainings/courses/navigating-federal-funding-for-green-infrastructure-and-nature-based-solutions1/ | Training webinar hosted by the Green Infrastructure Federal Collaborative federal agencies discussed funding and technical assistance opportunities that advance the implementation of green infrastructure and nature-based solutions. | 2021 |



| Agency | Title | Type | Link | Summary | Year |
|--------|--|---------------------------------|---|---|------|
| NOAA | Fast Facts on Natural Infrastructure | Fact Sheet | https://coast.noaa.gov/sites/fast-facts/natural-infrastructure.html | NOAA Digital Coast webpage displaying quick facts, figures, statistics, benefits, and examples of nature-based solutions. | - |
| NOAA | Guide to Assessing Green Infrastructure Costs and Benefits for Flood Reduction | Implementation Guidance | https://coast.noaa.gov/data/digitalcoast/pdf/gi-reduce-flooding.pdf | Guidebook featuring an overview of types of green infrastructure used to reduce flooding with benefits, limitations and maintenance outlined for each, planning considerations for green infrastructure projects, tips on estimating storage potential and costs, and additional resources. | 2015 |
| NOAA | Green Infrastructure Protective Services Animation | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/gi-animation.html | Video explaining green infrastructure—what it is and how it protects communities from coastal storm impacts. The video also provides information about actions communities can take to reap the benefits from this nature-based storm protection technique. | - |
| NOAA | Nature-Based Solutions for Coastal Hazards: The Basics | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/nbs-basics.html | NOAA Digital Coast self-guided online module to identify a community’s coastal hazard issues, ecosystem services that can reduce hazard impacts, and green infrastructure practices that can provide those services, and develop the beginnings of a community green infrastructure plan. | - |



| Agency | Title | Type | Link | Summary | Year |
|--------|--|---------------------------------|---|--|------|
| NOAA | Nature-Based Solutions for Coastal Hazards | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/green.html | NOAA Digital Coast training to prepare coastal planners and managers for implementing green or natural infrastructure projects to reduce coastal natural hazards in their communities. | - |
| NOAA | Green Infrastructure Effectiveness Database | Database | https://coast.noaa.gov/digitalcoast/training/gi-database.html | Database of literature sources from NOAA containing information on the effectiveness of green infrastructure to reduce the impacts of coastal hazards, such as inundation and erosion from tropical storms and cyclones, more frequent precipitation events, and sea level rise. | 2021 |
| NOAA | Green Infrastructure Mapping Guide | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/gi-mapping.html | NOAA Digital Coast self-guided online module to learn a process for mapping green infrastructure priorities using spatial data and consider climate and hazard impacts. | - |
| NOAA | Green Infrastructure Peer-to-Peer Case Studies | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/ | Case studies that illustrate community implementation of green infrastructure and lessons learned along with way. | - |
| NOAA | How to Map Open Space for Community Rating System Credit | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/crs.html | Tool that walks communities through interactive steps to map their existing and potential open space for credit through FEMA's Community Rating System. | - |



| Agency | Title | Type | Link | Summary | Year |
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| NOAA/ BOEM | Ocean Report Web Tool | Tool | https://coast.noaa.gov/digitalcoast/tools/ort.html | Web-based, report-centric tool from NOAA and BOEM that provides coastal and ocean planners with a high-level analysis for their custom-drawn area of interest. It provides summary statistics and infographics for six main topics: general information, energy and minerals, natural resources and conservation, oceanographic and biophysical, transportation and infrastructure, and economics and commerce. | - |
| NOAA/ EPA | Coastal & Waterfront Smart Growth | Training and Learning Resources | https://coastalsmartgrowth.noaa.gov/welcome.html | Tools, techniques, and case studies regarding resiliency options for coastal & waterfront communities. | 2009 |
| NPS | Planning Tools for Green Infrastructure | Training and Learning Resources | https://www.nps.gov/articles/000/c2-nps-planning.htm | Planning tools for utilizing green infrastructure. | 2021 |
| NPS | Coastal Adaptation Strategies Handbook | Broader Resource | https://irma.nps.gov/D ataStore/Reference/Profile/2239245 | Handbook from NPS that captures current understanding of a rapidly developing field as it relates to coastal parks; identifies tools and strategies; provides examples of approaches that the NPS as an agency and individual parks are using to address coastal vulnerabilities and climate change impacts; and provides policy and decision-making guidelines. | 2016 |



| Agency | Title | Type | Link | Summary | Year |
|--------|--|-------------------------|---|---|---------------|
| NSTC | Research Needs for Coastal Green Infrastructure | Report | https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/NSTC/cgies_research_agenda_final_082515.pdf | Report from NSTC outlining the needs for prioritized federal research to support the integration of green infrastructure into resilience and risk reduction planning, and decision making. | 2015 |
| USACE | International Guidelines on NNBF for Flood Risk Management | Implementation Guidance | https://ewn.ercdc.dren.mil/?page_id=5630 | USACE International Guidelines on natural and nature-based solutions for Flood Risk Management | 2021 |
| USACE | Engineering with Nature: Atlas | Reference | https://ewn.ercdc.dren.mil/?page_id=4174 | USACE Atlas 1 and 2 of Engineering with Nature principles and practices in action through illustrations and descriptions of a combined 118 constructed projects around the world. Fifty of these projects were built by USACE at sites across the country. | 2018/ 2021 |
| USACE | Engineering with Nature: Project Mapper | Tool | https://ewn.ercdc.dren.mil/?page_id=2549 | Website featuring a map developed by the USACE to provide case studies of water resource projects that incorporate sustainability or supplemental environmental or social benefits into their design in addition to the primary navigation, shore protection, or other civil works project purpose. In addition to EWN project sites, ProMap also incorporates Working with Nature (WwN) and EcoShape case studies. | - |



| Agency | Title | Type | Link | Summary | Year |
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| USACE | Use of Natural and Nature-based Features (NNBF) for Coastal Resilience | Report | https://hdl.handle.net/11681/19336 | Report on uses of natural and nature-based features for coastal resilience. | 2015 |
| USACE | Natural Infrastructure Opportunities Tool | Tool | https://www.arcgis.com/apps/MapSeries/index.html?appid=18079f5b628b4a7bb52acbe089d80886 | Online tool from USACE outlining available resources for natural infrastructure projects including the movement and content of dredged material through placement area capacities, dredging plans, and sediment characteristic descriptions and help to identify beneficial use and infrastructure opportunities. | - |
| USDA | Compendium of Adaptation Approaches | Implementation Guidance | https://www.fs.usda.gov/ccrc/climate-projects/adaptation-approaches | Compendium of adaptation approaches to help natural resource managers and landowners identify actions for responding to climate change, produced by the USDA USFS. | - |
| USDA | Identification, Mitigation, and Adaptation to Salinization on Working Lands in the U.S. Southeast | Reference | https://www.climatehubs.usda.gov/index.php/hubs/southeast/topic/saltwater-intrusion-and-salinization-coastal-forests-and-farms | Reference website from USDA with report on identifying, mitigating, and adapting to salinization on working agricultural lands, with additional resources to learn more about salt water inundation, sea level, rise and adaptation strategies. | 2021 |



| Agency | Title | Type | Link | Summary | Year |
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| Climate Adaptation Resources to Inform Nature-Based Solution Projects | | | | | |
| NOAA | Climate Resilience Toolkit | Broader Resource | https://toolkit.climate.gov/ | Comprehensive NOAA website/toolkit providing resources, tools, and studies on resilience, climate science, and adaptation. | 2021 |
| USDA | Climate Change Resource Center | Broader Resource | https://www.fs.usda.gov/ccrc/ | Website on USDA climate resource center with regionally and topically specific resources. | - |
| USDA | Conservation Webinar Portal | Training and Learning Resources | https://conservationwebinars.net/ | Conservation webinar portal with resources on upcoming trainings and current resources on land and resource management. | - |
| USDA | Climate Adaptation Actions for Urban Forests and Human Health | Training and Learning Resources | https://www.climatehubs.usda.gov/hubs/northern-forests/topic/climate-adaptation-actions-urban-forests-and-human-health | USDA Hub which describes diverse actions that address climate change in urban forest management, while recognizing the fundamentally interconnected nature of human health and well-being. This flexible resource synthesizes a wide range of peer-reviewed research, evidence-based reports, and emerging best practices on climate change adaptation, urban forest management, and human health impacts. | - |



| Agency | Title | Type | Link | Summary | Year |
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| USDA and partners | The Adaptation Workbook | Training and Learning Resources | https://adaptationworkbook.org/ | Workbook from USDA with adaptation strategies and approaches applicable to land stewardship and conservation in rural and urban areas. | - |
| Funding, Financing, and Valuing Nature-Based Solution Projects | | | | | |
| NOAA | Economic Guidance for Coastal Management Professionals | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/econ-guidance.html | NOAA Digital Coast training which provides information about a benefits-cost analysis, economic impact analysis, cost-effectiveness analysis, and more. Understanding these basics will help participants identify the appropriate approach and the data needed. | 2021 |
| NOAA | Economic Valuation Self-Guided Module and Associated Guidance Documents | Training and Learning Resources | http://coast.noaa.gov/digitalcoast/training/econ-decisions.html | NOAA Digital Coast training to provide information about benefit-cost analysis, economic impact analysis, and cost-effectiveness analysis, and to identify further data needed. | 2021 |
| NOAA | Funding and Financing Coastal Resilience Webinars | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/funding-webinars.html | NOAA Digital Coast learning products that provide audiences with the recordings, panel highlights, and resources from webinars on financing coastal resilience projects, including nature-based solutions. | - |



| Agency | Title | Type | Link | Summary | Year |
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| NOAA | Funding and Financing: Options and Considerations for Coastal Resilience Projects | Implementation Guidance | https://coast.noaa.gov/data/digitalcoast/pdf/financing-resilience.pdf | Outlines a wide variety of funding opportunities for coastal resilience projects, with an eye toward opportunities for nature-based solution projects. | 2021 |
| NOAA | Economic Valuation of Shoreline Protection within the Jacques Cousteau NERR | Technical Memo | https://coastalscience.noaa.gov/data_reports/economic-valuation-shoreline-protection-within-jacques-cousteau-national-estuarine-research-reserve/ | Technical memo from NOAA focused on the ecosystem of coastal habitats (e.g., seagrass beds, marshes, and coastal forests), which operate as natural infrastructure, and can benefit coastal communities, other types of human development, and economic activity by reducing the impacts of coastal hazards. | 2017 |
| NOAA | Nature-Based Solutions: Benefits, Costs, and Economic Assessments | Training and Learning Resources | https://coast.noaa.gov/digitalcoast/training/gi-practices-and-benefits.html | Series of quick references on green infrastructure practices and benefits, installation and maintenance costs, and tips for conducting an economic assessment. | - |
| <h2 style="text-align: center;">Coastal Hazards and Coastal Change Resources to Inform Nature-Based Solution Projects</h2> | | | | | |
| EPA | Clearinghouse for Environmental Finance | Funding Resource Hub | https://www.epa.gov/waterfinancecenter/water-finance-clearinghouse | The Water Finance Clearinghouse provides a database with more than \$10 billion in water funding sources and over 550 resources to support local water infrastructure projects, including stormwater/green infrastructure funding. | - |



| Agency | Title | Type | Link | Summary | Year |
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| NOAA | Coastal Flood Exposure Mapper | Tool | https://coast.noaa.gov/digitalcoast/tools/flood-exposure.html | Interactive map from NOAA that helps communities see where people, places, and natural resources are exposed to flood hazards and where natural areas can provide protection. | - |
| NOAA | Coastal Change Analysis Land Cover Atlas | Tool | https://coast.noaa.gov/digitalcoast/tools/lca.html | Online data viewer for user-friendly access to coastal land cover and land cover change information. The tool summarizes general change trends (such as forest losses or new development) and provides tables, maps, and reports to enhance communication and decision-making. | - |
| USDA | Hurricane Preparation and Recovery Commodity Guides | Tool | https://www.climatehubs.usda.gov/index.php/hubs/southeast/topic/hurricane-preparation-and-recovery-southeast-us | Interactive tool to help producers remain resilient and productive in the face of this threat, the USDA Southeast Climate Hub, along other USDA agencies and university extension experts, developed the following guides to help you prepare for and recover from hurricane events. | - |
| USGS | Coastal Storms - Prediction of Flooding Now and Into the Future | Training and Learning Resources | https://wim.usgs.gov/geonarrative/cch-floodfut/ | Story map on future of coastal flooding and USGS CoSMoS tool. | - |



| Agency | Title | Type | Link | Summary | Year |
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| USGS | National Shoreline Change - Exploring Shoreline Positions of the United States From the 1800s To the Present | Training and Learning Resources | https://wim.usgs.gov/gconarrative/cch-shline/ | Story map of national shoreline change and data highlights of USGS data. | - |
| USGS | Real-time Forecasts of Coastal Change | Training and Learning Resources | https://wim.usgs.gov/gconarrative/cch-rtstorms/ | Story map of real-time forecast of coastal change and hazards. | - |
| USGS | USGS Coastal Change Hazards Portal | Tool | https://marine.usgs.gov/coastalchangehazardsportal/ui/item/JoDCAjXG | Map application on the USGS Coastal Hazards Portal with info on specific hurricanes, extreme storms, sea level rise, and shoreline change. | 2021 |
| USGS | Sea-Level Change: An Interactive Guide to Global and Regional Sea Level Rise Scenarios for the United States | Tool | http://arcg.is/1He0Tz | Story map from USGS on sea level change, featuring regional and global sea level rise scenarios. | - |
| Guidance on Nature-Based Coastal Habitat Restoration | | | | | |
| Ameri Corps | Impact Evaluation on WA Conservation Corps Restoration Methods | Report | https://americorps.gov/sites/default/files/document/2018_10_25_WAStateDeptofEcologyWAConservationCorpsImpactEvaluationReport_19ES208650_Report2_Revised_508_ORE.pdf | Report from the AmeriCorps Evidence Exchange that evaluates techniques to improve plan survival and reduce invasive species, including in coastal areas. | - |



| Agency | Title | Type | Link | Summary | Year |
|-------------|---|----------------------------------|---|--|------|
| Ameri Corps | Impact Evaluation on EarthCorps Restoration Methods | Report | https://americorps.gov/evidence-exchange/impact-evaluation-report-earthcorps-restoration-methods | Report from the AmeriCorps Evidence Exchange that evaluates techniques to improve plan survival and reduce invasive species, including in coastal areas. | - |
| NOAA | Monitoring and Evaluation for Restoration Projects | Monitoring & Evaluation Guidance | https://www.fisheries.noaa.gov/national/habitat-conservation/monitoring-and-evaluation-restoration-projects | Website with guidance on restoration, monitoring, evaluation, and feedback for habitat restoration projects. Website managed by the NOAA Fisheries Restoration Center. | 2021 |
| NOAA | Restoration Atlas | Map | https://www.fisheries.noaa.gov/resource/map/restoration-atlas | An interactive map that helps users find habitat restoration projects by habitat type, location, or congressional district. | - |
| NOAA | Science-Based Restoration Monitoring of Coastal Habitat Volume 1 (2003): Framework for Monitoring Plans Under the Estuaries and Clean Water Act of 2000 | Monitoring & Evaluation Guidance | https://repository.library.noaa.gov/view/noaa/439 | Monitoring framework from NOAA that provides technical assistance, outlines necessary steps, and provides useful tools for the development and implementation of sound scientific monitoring of coastal restoration efforts. | 2003 |



| Agency | Title | Type | Link | Summary | Year |
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| NOAA | Science-Based Restoration Monitoring of Coastal Habitat Volume 2 (2005): Tools for Monitoring Coastal Habitats | Monitoring & Evaluation Guidance | https://coastalscience.noaa.gov/data_reports/science-based-restoration-monitoring-of-coastal-habitats-volume-two-tools-for-monitoring-coastal-habitats/ | Monitoring framework from NOAA that provides technical assistance, outlines necessary steps, and provides useful tools for the development and implementation of sound scientific monitoring of coastal restoration efforts. | 2005 |
| NOAA/USFWS | Restoration Webinar Series | Training and Learning Resources | https://nctc.fws.gov/topic/online-training/webinars/restoration.html | Webinar series from the National Conservation Training Center (hosted by NOAA and USFWS) on specific nature-based projects from urban wetlands to oyster reef implementation. | 2021 |
| USDA | Coastal Zone Soil Survey | Fact Sheet | https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1369610.pdf | Fact sheet discussing the Coastal Zone Soil Survey and why it is important, featuring photos of oyster cultivation, produced by USDA NRCS. | 2020 |
| USDA | Soil Survey Web Tool | Tool | https://casoilresource.lawr.ucdavis.edu/gmap/ | Interactive map allows you to explore USDA-National Cooperative Soil Survey data for locations throughout the U.S. | - |
| USGS/USFWS | Monitoring Habitat Restoration Projects: U.S. Fish and Wildlife Pacific Region Partners | Monitoring Guidance | https://pubs.usgs.gov/tm/tm2a11/pdf/tm2a11.pdf | Guide on techniques and methods for monitoring habitat restoration projects from USFWS programs. | 2011 |



| Agency | Title | Type | Link | Summary | Year |
|---|--|---------------------------------|---|--|------|
| Nature-Based Solutions in Barrier Island and Island Environments | | | | | |
| NFWF/ USACE/ USGS | Alabama Barrier Island Restoration Assessment | Tool | https://cesamusace.maps.arcgis.com/apps/MapSeries/index.html?appid=ea29cd4e1f3b432e8c520df3fb7a9f8b | Interactive tool to depict an Alabama barrier island restoration project from USACE, USGS, and NFWF. | - |
| NPS | Coastal and Barrier Network Geomorphological Monitoring Protocol | Monitoring Guidance | https://irma.nps.gov/D ataStore/DownloadFile /649620 | Protocols for shoreline monitoring for coastal and barrier NPS shorelines. | 2010 |
| NPS | Fire Island National Seashore Breach Management Plan/EIS | Management Plan | https://parkplanning.nps.gov/documentsList.cfm?projectID=58824 | Planning and monitoring resources and protocols from NPS for management of Fire Island. | - |
| USFWS/ USGS | Impacts of Sediment Removal from and Placement in Coastal Barrier Island Systems | Fact sheet | https://www.fws.gov/cbra/documents/FAQs-USGS-FWS-Coastal-Barrier-Report.pdf | Question and answer report on impacts of sediment removal in coastal barrier island systems, outlining the 5 key findings of the report, prepared by USGS and USFWS. | 2021 |
| USGS | Research Monitoring of Barrier Islands | Training and Learning Resources | https://wim.usgs.gov/geonarrative/cch-bi/ | Story map on barrier islands. | - |
| USGS/ USFWS | Impacts of Sediment Removal from and Placement in Coastal Barrier Island Systems | Report | https://pubs.er.usgs.gov/publication/ofr20211062 | Report on the impact of sediment removal and placement in the Coastal Barrier Island System from USGS and USFWS. | 2021 |



| Agency | Title | Type | Link | Summary | Year |
|--|---|------------------|---|--|------|
| <h2 style="text-align: center;">Beach Nourishment and Sediment Removal Resources to Inform Nature-Based Solution Projects</h2> | | | | | |
| BOEM | Economic and Geomorphic Comparison of Sand for Coastal Restoration Projects | Report | https://espis.boem.gov/final%20reports/BOEM_2020-035.pdf | Report comparing nearshore and offshore sand for utilization in coastal restoration projects. | 2020 |
| BOEM | BOEM Marine Minerals Overview | Fact Sheet | https://www.boem.gov/sites/default/files/documents/newsroom/factsheets/BOEM-FactSheet-Marine-Minerals_1.pdf | Fact sheet BOEM's approach, tools and programs critical to outer continental shelf non-energy marine mineral management which are key to coastal restoration projects. | 2021 |
| BOEM | BOEM Marine Minerals Program | Fact Sheet | https://www.boem.gov/sites/default/files/documents/marine-minerals/MMP-Factsheet-FastFacts.pdf | Fact sheet on BOEM Marine Minerals program and why and how non-energy marine minerals are important and managed. | 2020 |
| BOEM | Marine Minerals Information System (MMIS) | Fact Sheet | https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/MMIS-Factsheet.pdf | Fact sheet on BOEM's Marine Mineral Information System, available tools, how it works, who utilizes it and information it can provide. | - |
| BOEM | Marine Mineral Studies | Broader Resource | https://www.boem.gov/marine-mineral-studies | Website from BOEM on marine mineral studies and locally specific efforts. | - |



| Agency | Title | Type | Link | Summary | Year |
|----------------|--|-------------------------|---|---|------|
| BOEM | BOEM Marine Minerals Information Systems (MMIS) | Tool | https://mmis.doi.gov/BOEMMMIS/ | Interactive tool from BOEM that provides public access to data and information relevant to offshore mineral resources throughout the United States, including sand/sediment resources for Coastal Resilience and Stewardship, Infrastructure Protection, Ecosystem Restoration, and Habitat Creation. | - |
| NPS | Beach Nourishment Guidance | Implementation Guidance | https://irma.nps.gov/D ataStore/DownloadFile /455109 | Technical guidance by NPS for beach nourishment including tools for resource managers to interface with partners that are completing technical designs and outlines best management practices that can be utilized to avoid or minimize potential adverse impacts. | - |
| USACE/ BOEM | USACE Sand Availability and Needs Determination (SAND) | Tool | https://www.sad.usace.army.mil/Portals/60/siteimages/SACS/508%20SAND_FINAL_Report_15Sep_CC.pdf?ver=0m6wxMybXbFmX_UJdid1kg%3D%3D | Tool that quantifies sand needs and available sand resources for current Southeast beach nourishment projects for the next 50 years. | - |



| Agency | Title | Type | Link | Summary | Year |
|---|---|----------------------------------|---|--|------|
| Nature-Based Coral and Oyster Reef Resources | | | | | |
| EPA/ NOAA | Green Infrastructure for Coral Conservation | Fact Sheet | https://www.coris.noaa.gov/activities/projects/watershed/private_green_infrastructure.pdf | Fact sheet outlining at a high level the importance of utilizing green infrastructure to protect corals, actions to be taken on individual properties and resources to learn more, produced by EPA and NOAA Coral Reef Conservation Program. | 2021 |
| NOAA | Oyster Habitat Restoration Monitoring and Assessment Handbook | Monitoring & Evaluation Guidance | http://www.oyster-restoration.org/wp-content/uploads/2014/01/Oyster-Habitat-Restoration-Monitoring-and-Assessment-Handbook.pdf | Handbook on oyster habitat restoration monitoring and assessment from NOAA, including universal monitoring metrics, variables, ancillary monitoring consideration, and metrics for success. | 2014 |
| NOAA | Coral Reef Restoration Monitoring Guide: Methods to Evaluate Restoration Success from Local to Ecosystem Scales | Monitoring Guidance | https://repository.library.noaa.gov/view/noaa/27135 | Technical memo guidance for coral reef restoration and monitoring, including methodologies to measure success of restoration effort. | 2020 |
| USGS | A Geological Perspective on the Degradation and Conservation of Western Atlantic Coral Reefs | Implementation Guidance | https://pubmed.ncbi.nlm.nih.gov/27029403/ | Peer reviewed USGS article on the geological degradation and conservation of coral reefs. | 2016 |



| Agency | Title | Type | Link | Summary | Year |
|--------|--|---------------------------------|---|--|------|
| USGS | A Framework for Identifying and Characterizing Coral Reef “Oases” against a Backdrop of Degradation | Monitoring Guidance | https://doi.org/10.1111/1365-2664.13179 | Framework from USGS for coral reef managers to identify and manage coral "oases" among degraded corals. | 2018 |
| USGS | Rigorously Valuing the Potential Coastal Hazard Risk Reduction Provided by Coral Reef Restoration in Florida and Puerto Rico | Report | https://pubs.er.usgs.gov/publication/ofr20211054 | Report from USGS that aims to value the Potential Coastal Hazard Risk Reduction Provided by Coral Reef Restoration in Florida and Puerto Rico. | 2021 |
| USGS | The Role of U.S. Coral Reefs in Coastal Protection | Training and Learning Resources | https://wim.usgs.gov/geonarrative/cch-reefprot/ | Story map highlighting the protection coral reef systems give to coastal communities. | - |

Nature-Based Living Shoreline and Dune Resources

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|------|---|-------------------------|---|--|------|
| NOAA | Guidance for Considering the Use of Living Shorelines | Implementation Guidance | https://www.habitatblueprint.noaa.gov/wp-content/uploads/2018/01/NOAA-Guidance-for-Considering-the-Use-of-Living-Shorelines_2015.pdf | Guidance for considering the use of living shorelines, including policy considerations and what types of support NOAA provides for living shorelines. | 2015 |
| NOAA | Working with Nature: A Guide to Native Plants for New York’s Great Lakes Shorelines | Implementation Guidance | https://seagrant.sunysb.edu/Images/Uploads/PDFs/GreatLakes-ShorelinePlantsGuide.pdf | Guide for utilizing native plants on NY's great lake shorelines, including integrating them into nature-based solution projects, produced by NY Sea Grant. | - |



| Agency | Title | Type | Link | Summary | Year |
|---|--|-------------------------|---|---|------|
| NOAA | NOAA Living Shorelines Project Map | Map | https://www.habitatblu.eprint.noaa.gov/storymap/ls/index.html | Story map outlining NOAA's Living shoreline projects across the US. | 2020 |
| USDA | Plant Materials Technical Note: Coastal Shoreline and Dune Restoration | Implementation Guidance | https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/stpmctn10670.pdf | Technical report on coastal shoreline and dune restoration, featuring technique guidance and vegetation guidance, produced by USDA NRCS. | 2011 |
| USDA | Native Plants for Coastal Dune Restoration: What When and How for Florida | Implementation Guidance | https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/flpmspu7474.pdf | Technical report on the utilization of native plants for coastal and dune restoration in Florida, produced by USDA NRCS. | 2007 |
| USDA | Plants for Coastal and Shoreline Protection and Restoration | Implementation Guidance | https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/plantsanials/?cid=STELPRDB1044304 | Website featuring multiple regional and locally specific technical resources and information on plants useful for coastal stabilization. | - |
| Nature-Based Solutions in Wetlands and Estuaries | | | | | |
| NOAA | Planning for Sea Level Rise in the Northeast: Considerations for the Implementation of Tidal Wetlands Habitat Restoration Projects | Implementation Guidance | https://repository.library.noaa.gov/view/noaa/4016 | Guide for understanding sea level rise impacts on tidal wetlands and for incorporating sea level rise into tidal wetland habitat restoration projects in the Northeast. | 2011 |



| Agency | Title | Type | Link | Summary | Year |
|-------------------------|--|-------------------------|---|--|------|
| NOAA | Sea Level Rise Viewer Marsh Migration Data | Tool | https://coast.noaa.gov/digitalcoast/tools/slr.html | Interactive tool from NOAA that helps planners see where marshes may migrate due to sea level rise and where you can conserve inland areas to help facilitate migration. | - |
| NOAA/ USGS/ USFWS | Federal Interagency Nature-like Fishway Passage Design Guidelines for Atlantic Coast Diadromous Fishes | Implementation Guidance | https://repository.library.noaa.gov/view/noaa/28919 | Technical memo on Federal Interagency Nature-like Fishway Passage Design Guidelines for Atlantic Coast Diadromous Fishes, produced by NOAA, USGS and USFWS. | 2016 |
| USDA | Climate Adaptation Tools for Wetland Conservation and Management | Implementation Guidance | https://www.climatehubs.usda.gov/hubs/northern-forests/topic/climate-adaptation-tools-wetland-conservation-and-management | Website featuring USDA Climate Adaptation Tools for Wetland Conservation and Management. | - |
| USFWS | Salt Marsh Sediment Augmentation to Combat Sea-Level Rise | Implementation Guidance | https://www.fws.gov/story/salt-marsh-sediment-augmentation-project | Website on a USFWS salt marsh sediment augmentation project in Seal Beach, CA, with resources on related trainings. | 2019 |
| USGCRP | Second State of the Carbon Cycle Report, Chapter 15 Tidal Wetlands and Estuaries | Whitepaper | https://carbon2018.globalchange.gov/chapter/15/ | Coastal chapter within USGCRP report on the state-of-the-science assessment of the carbon cycle in North America and its connection to climate and society. | 2018 |



| Agency | Title | Type | Link | Summary | Year |
|--|---|------------------|---|---|------|
| USGS | Restoring Tides to Reduce Methane Emissions in Impounded Wetlands: A New and Potent Blue Carbon Climate Change Intervention | Report | https://doi.org/10.1038/s41598-017-12138-4 | Paper on restoring tides to reduce methane emissions in impounded wetlands from USGS: A New and Potent Blue Carbon Climate Change Intervention. | 2017 |
| USGS | Evaluating Tidal Saline Wetland Migration along the U.S. Gulf of Mexico | Broader Resource | https://pubs.er.usgs.gov/publication/ds969 | Study from USGS and USFWS that quantifies the potential for landward migration of tidal saline wetlands along the U.S. Gulf of Mexico coast under alternative future sea-level rise and urbanization scenarios. | 2015 |
| Select Nature-Based Solutions Resources from Non-Federal Entities | | | | | |
| BBVA | Recipes for a Flourishing Arctic | Report | https://www.biophilia-fbbva.es/en/publicaciones/whither-the-arctic-ocean-research-knowledge-needs-and-development-en-route-to-the-new-arctic-2/ | Publication from BBVA Foundation on natural-based solutions applied to the Arctic's governance, economy, legislation, and resource management. | 2021 |
| Cities of Service/ AmeriCorps | What Does Effective Engagement Look Like? Lessons from Resilience AmeriCorps | Report | https://citiesofservice.jhu.edu/resilience-ameri-corps-2/what-does-effective-engagement-look-like-lessons-from-resilience-ameri-corps/ | Document with lessons learned about partnerships and strategies to build community resilience, produced by Cities of Service and AmeriCorps. | - |



| Agency | Title | Type | Link | Summary | Year |
|--------|---|----------------------------|---|--|------|
| ELI | Nature-Based Mitigation Goals and Actions in Local Mitigation Plans | Study | https://www.eli.org/research-report/nature-based-mitigation-goals-and-actions-local-mitigation-plans | Study from ELI with results on a snapshot of nature-based practices that local governments may consider including in subsequent mitigation plan updates. | 2021 |
| ELI | Nature-Based Mitigation Goals and Actions in State and Tribal Hazard Mitigation Plans | Study | https://www.eli.org/research-report/nature-based-mitigation-goals-and-actions-state-and-tribal-hazard-mitigation-plans | Study from ELI with results on a suite of nature-based practices and model examples that can be used by states/tribes in mitigation plan updates. | 2021 |
| NRC | Using Nature to Address Flooding | Case Studies | http://nrcsolutions.org/ | Guide of nature-based solutions and included case studies of successful projects from across the country to help communities learn more and identify which nature-based solutions might work for them. | - |
| NFWF | Coastal Resilience Evaluation and Siting Tool (CREST) | Tool | https://resilientcoasts.org/#Home | Tool and guidance for coastal siting with regionally specific guidance. | - |
| NFWF | Third-Party Evaluations of NFWF Conservation Programs | Case Studies & Evaluations | https://www.nfwf.org/strategies-results/evaluating-our-results/third-party-evaluations | This collection of third-party evaluations includes projects that utilize NBS and provides examples of assessment that capture broader socioeconomic and ecological benefits. | - |



| Agency | Title | Type | Link | Summary | Year |
|-------------|--|-------------------------|---|---|------|
| NWF and CSO | Softening Our Shorelines: Policy and Practice for Living Shorelines Along the Gulf and Atlantic Coasts | Implementation guidance | http://nwf.org/softenin_gourshorelines/ | Guidance on policy and practice for implementing softened or natural shorelines across the US, produced by CSO and NWF. | - |
| NWF | Building Resilience through Natural Infrastructure | White Paper | https://www.nwf.org/-/media/Documents/PDFs/Press-Releases/2021/07-29-21_Building-Resilience-through-Natural-Infrastructure | An analysis of avenues and opportunities available to advance the use of nature-based solutions in FEMA and HUD programs. | 2021 |
| RAE | Coastal Restoration Toolkit | Toolkit | https://restoreyourcoast.org/ | RAE Toolkit on coastal restoration to help start a restoration project guided by problem aiming to address like flooding, coastal erosion, water quality, invasive species, or wildlife habitat loss. | - |
| TNC | Promoting Nature-Based Hazard Mitigation Through FEMA Mitigation Grants | Funding Guidance | https://www.nature.org/content/dam/tnc/nature/en/documents/Promoting-Nature-Based-Hazard-Mitigation-Through-FEMA-Mitigation-Grants-05-10-2021-LR.pdf | Guidance document is intended for stakeholders pursuing FEMA HMA grants for nature-based solutions to mitigate risks associated with flooding (riverine and coastal) and wildfire. | 2021 |



Federal Funding Programs for Nature-Based Solutions

The following federal programs are potential sources of support for coastal communities, States, Tribes, and Territories seeking to implement nature-based solutions. The programs encompass grant opportunities, loans, planning, design, construction and/or technical assistance.

Many existing programs now have an expanded opportunity to fund projects as a result of the Bipartisan Infrastructure Law's historic investment in the resiliency of our infrastructure to climate change, cybersecurity risks, and other hazards:

<https://www.whitehouse.gov/build/>



The EPA-led Green Infrastructure Federal Collaborative fosters engagement and cooperation between agencies that actively work to promote the implementation of green infrastructure. On November 2, 2021, members of the Green Infrastructure Federal Collaborative discussed funding and technical assistance opportunities that advance the implementation of green infrastructure and nature-based solutions. Attendees learned how federal programs are helping build vibrant and resilient communities with programs that support the design,

construction, and maintenance of green infrastructure. Breakout sessions hosted by Collaborative members provided attendees with the opportunity to pose questions and interact directly with relevant federal agencies. View the recording here: <https://youtu.be/nQCTK2jhckU>

Collaborative members developed the initial version of this funding list. They are working closely to align knowledge and resources to build capacity for green infrastructure implementation. To view more details, you can download the slides to the presentation:

https://www.epa.gov/system/files/documents/2021-11/navigating-federal-funding_green-infrastructure_508.pdf

Additional funding opportunities for green infrastructure projects may be accessed here:

<https://www.epa.gov/green-infrastructure/green-infrastructure-funding-opportunities>

These coordinated federal efforts provide a platform to publicize the multiple environmental, economic, and social benefits of green infrastructure. In addition, the Collaborative seeks to facilitate strategies that foster climate resilience and encourage the equitable implementation of green infrastructure in all communities.



| Agency | Program | Link | Bipartisan Infrastructure Law Supplemental Funding |
|--------|--|---|--|
| BIA | Tribal Climate Resilience Program | https://www.bia.gov/bia/ots/tribal-climate-resilience-program | \$216 million until expended |
| EDA | Public Works and Economic Adjustment Assistance Funds | https://www.eda.gov/funding-opportunities/ | - |
| EDA | American Rescue Plan Program: Economic Adjustment Assistance Funds | https://eda.gov/arpa/economic-adjustment-assistance/ | - |
| EPA | Overflow and Stormwater Grants (OSG) | http://www.epa.gov/cwsrf/sewer-overflow-and-stormwater-reuse-municipal-grants-program | - |
| EPA | Clean Water State Revolving Fund (CWSRF) | http://www.epa.gov/cwsrf | \$12.7 billion until expended |
| EPA | Water Infrastructure Finance and Innovation Act (WIFIA) ² | http://www.epa.gov/wifia | - |
| EPA | Section 319 Non-Point Source Grants | https://www.epa.gov/nps | - |
| EPA | Environmental Justice Small Grants | https://epa.maps.arcgis.com/apps/Cascade/index.html?appid=d426d553c4cc44a3af62bff7e175108e | - |
| EPA | Great Lakes Restoration Initiative (EPA) | https://glri.us/funding#grant-opps%C3%A2%E2%82%AC%E2%80%B9 | \$1 billion until expended |
| EPA | Green Streets, Green Jobs, Green Towns (G3) | https://www.epa.gov/G3 | - |
| EPA | Drinking Water State Revolving Fund | https://www.epa.gov/dwsrf | \$30.7 billion until expended |



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| EPA | Brownfields Grant Program | https://www.epa.gov/brownfields/overview-epas-brownfields-program | \$1.5 billion until expended |
| EPA | Superfund Redevelopment Program | https://www.epa.gov/superfund-redevelopment | \$3.5 billion until expended |
| EPA | Five Star and Urban Waters Restoration Grant Program | https://www.epa.gov/urbanwaterspartners/five-star-and-urban-waters-restoration-grant-program | - |
| EPA | Urban Waters Small Grants Program | https://www.epa.gov/urbanwaters/urban-waters-small-grants | - |
| EPA | Office of Sustainable Communities Greening America's Communities Program – Technical Assistance | https://www.epa.gov/smartgrowth/greening-americas-communities | - |
| FEMA | Building Resilient Infrastructure & Communities (BRIC) | https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/resources | \$1 billion until expended |
| FEMA | Flood Mitigation Assistance (FMA) Grant Program | https://www.fema.gov/flood-mitigation-assistance-grant-program | \$3.5 billion until expended |
| FEMA | Hazard Mitigation Grant Program (HMGP) | https://www.fema.gov/grants/mitigation/hazard-mitigation | \$500 million until expended |
| HUD | Community Development Block Grant (CDBG) | https://www.hudexchange.info/programs/cdbg/ | - |
| HUD | CDBG Section 108 | https://www.hudexchange.info/programs/section-108/ | - |
| HUD | CDBG-DR | https://www.hudexchange.info/programs/cdbg-dr/ | - |
| NOAA | National Estuarine Research Reserve System | https://coast.noaa.gov/funding/archive.html | \$77 million / 5 years |
| NOAA | Community Based Restoration Program Grants | https://www.fisheries.noaa.gov/grant/coastal-and-marine-habitat-restoration-grants | \$491 million / 5 years |



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| NOAA | National Coastal Zone Management Program | https://coast.noaa.gov/czm/about/ | \$207 million / 5 years |
| NOAA | National Coastal Resilience Fund | https://www.nfwf.org/programs/national-coastal-resilience-fund?activeTab=tab-1 | \$492 million / 5 years |
| USACE | Floodplain Management Services Program - Technical Assistance | https://www.nab.usace.army.mil/technical-services/ | - |
| USACE | Planning Assistance to States (PAS) | https://www.usace.army.mil/Missions/Civil-Works/Project-Partnership-Agreements/templates_pas/ | \$30 million until expended |
| USACE | Project Partnership Agreements (PPA) | https://www.usace.army.mil/Missions/Civil-Works/Project-Partnership-Agreements/templates_pas/ | - |
| USACE | Individually Authorized Feasibility Studies and Projects | https://planning.ercd.dren.mil/toolbox/project.cfm?Step=2 | - |
| USACE | Continuing Authorities Program (CAP) – including Small Flood Risk Management Projects, Beneficial Use of Dredged Material, Modification of Projects for the Environment | https://planning.ercd.dren.mil/toolbox/processes.cfm?Id=229&Option=Continuing Authorities Program (CAP). | \$465 million until expended |
| USACE | Tribal Partnership Program (TPP) | http://www.usace.army.mil/Missions/Civil-Works/Tribal-Nations/tribal_otherpolicies/ | - |
| USACE | Watershed Studies (Sec 729) | http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/WRRDA-7001-Proposals/ | - |
| USDA | Regional Conservation Partnership Program | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/ | - |
| USDA | Conservation Innovation Grants | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig/ | - |



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| USDA | Environmental Quality Incentives Program | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/ | - |
| USDA | Agricultural Conservation Easement Program (inc. Wetland Reserve Easements) | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/ | - |
| USDA | Conservation Stewardship Program | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp/ | - |
| USDA | National Water Quality Initiative | https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/initiatives/?cid=stelprdb1047761 | - |
| USDA | Conservation Reserve Program | https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-program/index | - |
| USDA | Farmable Wetland Program | https://www.fsa.usda.gov/programs-and-services/conservation-programs/farmable-wetlands/index | - |
| USDA | NRCS Health Forests Reserve Program | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/forests/ | - |
| USDA NRCS | Watershed and Flood Prevention Operations Program | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/wfpo/ | \$500 million until expended |
| USDA NRCS | Watershed Rehabilitation Program | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/wr/ | \$118 million until expended |
| DOD | Readiness and Environmental Protection Integration (REPI) Program | https://www.repi.mil/ | - |
| DOT | FHWA Surface Transportation Block Grants | https://www.fhwa.dot.gov/specialfunding/stp/ | \$72 billion / 4 years |



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| DOT | Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Grants and Formula Funding | https://www.transportation.gov/grants | \$8.7 billion / 4 years |
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