



FEMA BRIC FY2022 Analysis of Nature-Based Solutions

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1. Summary

On Aug. 28, 2023, FEMA announced that [124 projects were selected](#) for the third annual Building Resilient Infrastructure and Communities (BRIC) national competition. The selections are based on the highest composite score until the funding amount available was reached. Due to the additional contributions provided by the Bipartisan Infrastructure Law and COVID-19 major disaster declarations, the total amount funded was \$2.133 billion for the national competition.

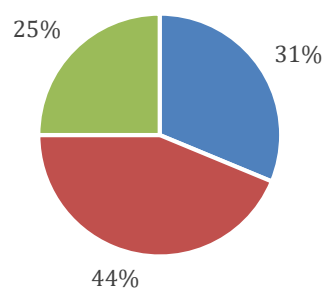
The selected competitive projects span across 38 states and the District of Columbia, 23 of which are first-time recipients of BRIC national competition funding. [FEMA asserts](#) that 64 of the 124 projects (52%) include nature-based solutions, spanning across 19 states, 69% of which are projects for Economically Disadvantaged Rural Communities (EDRC) or disadvantaged communities.

[FEMA defines nature-based solutions](#) (NBS) as “sustainable environmental management practices that restore, mimic, and/or enhance nature and natural systems or processes and support natural hazard risk mitigation as well as economic, environmental, and social resilience efforts.” FEMA provides examples including, but not limited to, “restoration of grasslands, rivers, floodplains, wetlands, dunes, and reefs; living shorelines; soil stabilization; aquifer storage and recovery; and bioretention systems.” Applicants that incorporate nature-based solutions can receive up to 10 points (out of 115) in the [Technical Criteria](#) evaluation.

Filtering for projects FEMA tagged as “Nature Based Solutions,” there are 64 out of 124 projects that FEMA identified as having nature-based project components, total funding equaling approximately \$1.01 billion. Please note that dollar amounts throughout this analysis are based on total project cost – there is no way to separate out the nature-based project components. These figures are compared to FY2021 where FEMA tagged 21 out of 53 projects as NBS, and FY2020 where FEMA tagged 18 out of 22 projects as NBS.¹

Based upon a best-judgement review of the BRIC FY2022 project summaries, 20 projects that FEMA tagged as nature-based solutions contain NBS as a primary or significant project

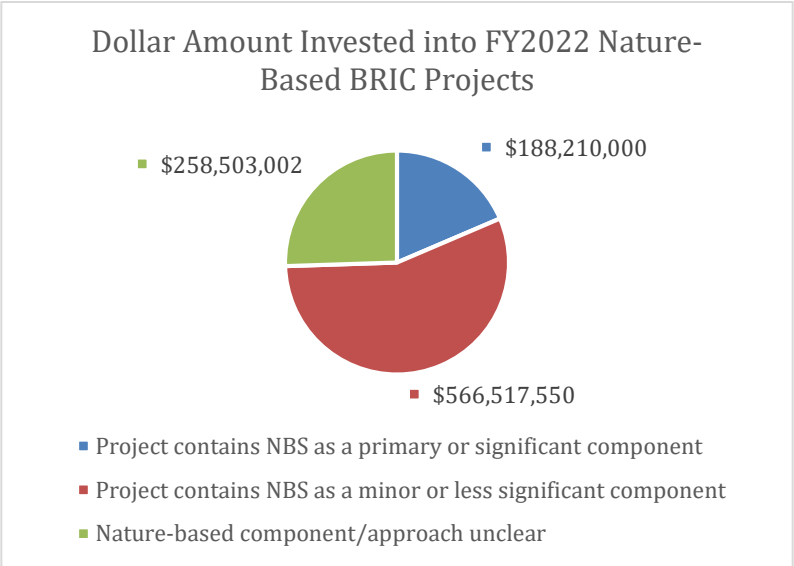
FY2022 Nature-Based BRIC Projects



- Project contains NBS as a primary or significant component
- Project contains NBS as a minor or less significant component
- Nature-based component/approach unclear

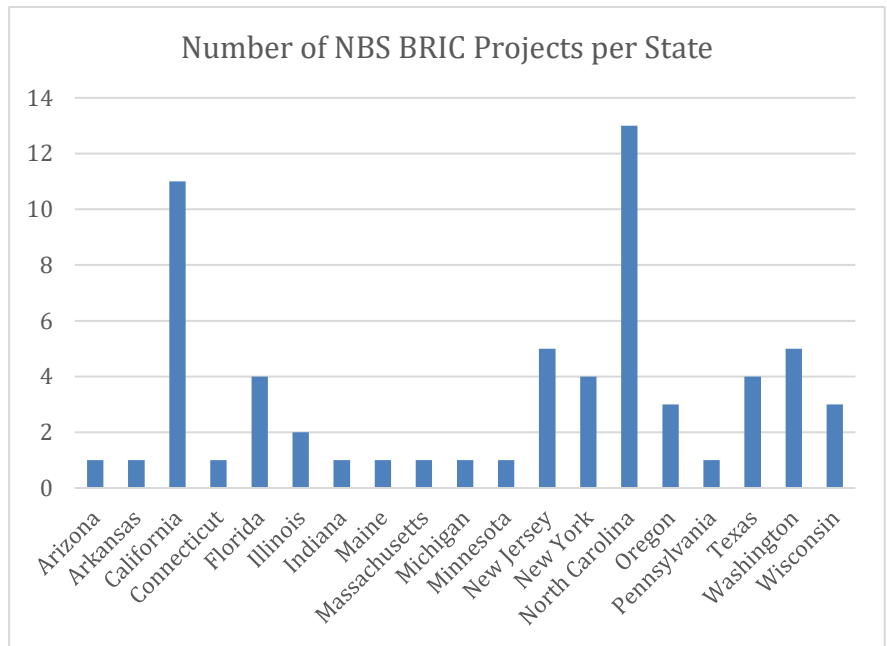
¹ See Emily Donahoe, *Funding Nature-Based Solutions through FEMA’s BRIC Program*, National Wildlife Federation, Last updated October 25, 2022, <https://blog.nwf.org/2022/09/funding-nature-based-solutions-through-femas-bric-program/>.

component, representing \$188,210,000. 28 projects FEMA tagged as nature-based solutions have NBS as a minor or less significant component, representing \$566,517,550. For 16 projects that FEMA tagged as nature-based solutions, the project description is unclear or very vague, making it difficult to understand the type and significance of the nature-based component, representing \$258,503,002.

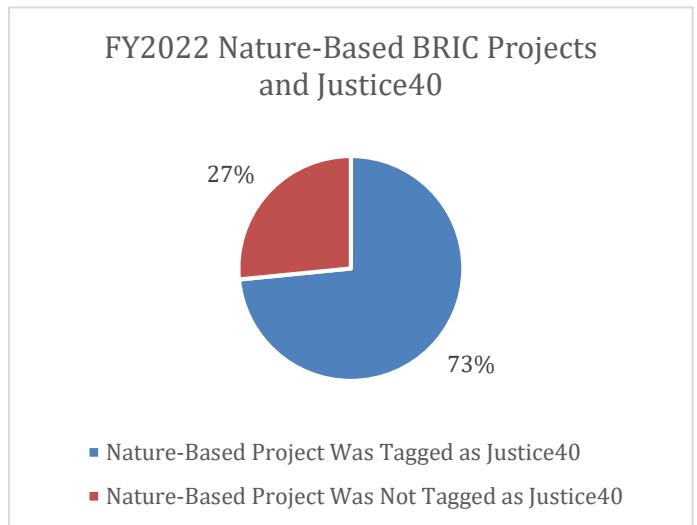


Projects that FEMA tagged as NBS are located in the following states:

- Arizona (1)
- Arkansas (1)
- California (11)
- Connecticut (1)
- Florida (4)
- Illinois (2)
- Indiana (1)
- Maine (1)
- Massachusetts (1)
- Michigan (1)
- Minnesota (1)
- New Jersey (5)
- New York (4)
- North Carolina (13)
- Oregon (3)
- Pennsylvania (1)
- Texas (4)
- Washington (5)
- Wisconsin (3)



47 out of 64 projects (approximately 73%) that FEMA tagged as NBS are identified as Justice40 projects.



Recommendations for the Future

National Wildlife Federation (NWF) is encouraged by the increased interest in NBS, and is very supportive of FEMA's recent amendment to the forthcoming FY2023 Technical Criteria announced in the [FY2023 Notice of Funding Opportunities](#). This amendment introduces a tiered point system for the evaluation of nature-based solutions, categorizing them into "neighborhood or site-scale" and "watershed or landscape-scale" projects. This refinement to the Technical Criteria, complemented by an increase in points for "watershed or landscape-scale" projects, are welcome developments and NWF looks forward to the upcoming implementation of these changes in future BRIC cycles.

In future rounds of the BRIC national competition, NWF recommends that all public-facing project descriptions should provide sufficient detail to clarify any specific nature-based project activities. Clarified descriptions will support enhanced understanding and transparency around which project components result in nature-based solutions points.

2. Detailed Analysis

20 projects that FEMA tagged as NBS (representing \$188,210,000) appear to have NBS as a primary or significant project component.

- [Illinois: City of Harvey Stormwater Management Project](#)
 - Funding Amount: \$5.07 million
 - Project Description: This project will build a 23-acre-foot stormwater detention basin with native wetland plants and storm sewers to protect 108 structures from future flooding.
 - Nature-based solutions included:
 - Stormwater detention basin with native wetland plants
 - Justice40: Tagged as a Justice40 project
- [Illinois: DePue Wastewater Treatment Plant Rebuild](#)
 - Funding Amount: \$23 million
 - Project Description: To mitigate future flood risks, this project will include the construction of a new wastewater treatment plant outside of the floodway and floodplain. The old plant will be demolished and left as open space. North-south levee sections will be leveled and become riparian habitat.
 - Nature-based solutions included:
 - Levee removal
 - Riparian habitat restoration
 - Justice40: Tagged as a Justice40 project
- [Indiana: Mars Hill Flood Control Improvement District Project](#)
 - Funding Amount: \$6.22 million
 - Project Description: To mitigate future flood losses, this project will remove 653 parcels from the Special Flood Hazard Area of the 100-year floodplain. The project will also include greening, stream naturalization, and bank stabilization.
 - Nature-based solutions included:
 - Buyouts, greening, stream naturalization
 - Bank stabilization
 - Justice40: Tagged as a Justice40 project
- [Maine: Saco Water Resource Recovery Project](#)
 - Funding Amount: \$9.39 million
 - Project Description: To mitigate future flood risk, this project will build a new wastewater treatment facility at a higher elevation. The project also involves enhancing the Riverwalk Trail, adding green space, and using nutrient removal technology.
 - Nature-based solutions included:
 - Enhancing recreational trails
 - Adding green space
 - Justice40: Not tagged as a Justice40 project
- [New Jersey: City of Hoboken Southwest Park Expansion Project](#)
 - Funding Amount: \$6.24 million
 - Project Description: This project will involve the expansion of the Southwest Resiliency Park and address flooding with underground detention, pumping, and green infrastructure features.

- Nature-based solutions included:
 - Resiliency park expansion
 - Green infrastructure features
- Justice40: Not tagged as a Justice40 project
- [New Jersey: Seaside Park Wave Energy Dissipation/Erosion Control Project](#)
 - Funding Amount: \$2.06 million
 - Project Description: This project plans to restore the shoreline, constructing a dune system, and implementing wave dissipation measures such as oyster reef breakwaters. This project will include a natural barrier called HESCO baskets. The project also ensures public access to the beach through pedestrian walkways over the dunes.
 - Nature-based solutions included:
 - Shoreline restoration
 - Dune restoration
 - Oyster reef breakwaters
 - Justice40: Tagged as a Justice40 project
- [New York: New York City Department of Environmental Protection Corona East Cloudburst Hub Project](#)
 - Funding Amount: \$49.99 million
 - Project Description: To mitigate chronic flooding and extreme rainfall events, this project will install a nature-based and climate-adaptive drainage solution in the Corona neighborhood of Queens. This solution will involve porous pavement and asphalt. The project will also include constructing subsurface and surface storage.
 - Nature-based solutions included:
 - Nature-based and climate adaptive drainage solution
 - Porous pavement and asphalt
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Fayetteville Russel-Person Street Bridge and Stream Improvement Project](#)
 - Funding Amount: \$15.40 million
 - Project Description: To mitigate pluvial and fluvial flooding, this project will use green and gray infrastructure solutions to protect the downtown area. This project will replace three existing bridges and add stream enhancements for floodplain management and stream restoration, including adding native riparian-adapted species along 4,000 feet of Blounts Creek.
 - Nature-based solutions included:
 - Stream restoration
 - Planting native riparian-adapted species
 - Justice40: Tagged as a Justice40 project
- [North Carolina: High Point Inner-City Rehabilitation, Restoration and Enhancement](#)
 - Funding Amount: \$7.46 million
 - Project Description: This project will rehabilitate sewer infrastructure, install three stormwater basins to capture runoff and stabilize streams. The project will also restore 3,170 feet of Richland Creek and create native riparian buffers. The project aims to reconnect the downtown project area to the floodplain.
 - Nature-based solutions included:
 - Stream restoration

- Native riparian buffers
 - Reconnecting the floodplain
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Surry County Flood Mitigation Project in the Yadkin Valley](#)
 - Funding Amount: \$1.89 million
 - Project Description: This project will relocate the Memorial Park Sewer pump out of the 100-year floodway and floodplain and stabilize the Dutchman Creek to protect the wastewater treatment effluent pipe. Once the old pump station is removed, it will be revegetated to provide natural protection against rising waters during storms.
 - Nature-based solutions included:
 - Utility removal and revegetation to provide natural protection
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Town of Benson Driving Branch Stream Restoration Project](#)
 - Funding Amount: \$2.18 million
 - Project Description: This project involves stream restoration and roadway improvements to a 375-foot section of Driving Branch. The project will daylight the stream channel and excavate a floodplain bench to enhance stream stability, flood flow storage, and riparian habitat.
 - Nature-based solutions included:
 - Stream restoration
 - Enhance riparian habitat
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Upper Yadkin River Floodplain Resiliency Initiative for Town of Jonesville](#)
 - Funding Amount: \$7.21 million
 - Project Description: This project will include streambank stabilization and restoration efforts to protect the streambank and reconnect the river to the floodplain to provide flood protection to the Greenway Trail.
 - Nature-based solutions included:
 - Streambank stabilization
 - Stream restoration
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Wilkesboro Cub Creek Restoration Using Green Infrastructure](#)
 - Funding Amount: \$1.27 million
 - Project Description: This project will create vegetated buffers and soft bioengineered stream banks to restore the floodplain capacity of Cub Creek and add open space and greenways for recreational benefits to residents. The project will involve native planting to restore a 3,800-foot area and a riparian buffer to protect wastewater infrastructure.
 - Nature-based solutions included:
 - Stream restoration
 - Open space
 - Greenways
 - Native planting
 - Justice40: Tagged as a Justice40 project
- [Oregon: City of Portland Tree Planting for Heat Mitigation](#)
 - Funding Amount: \$2 million

- Project Description: To mitigate extreme heat impacts in urban heat islands, this project will plant 10,500 trees over three years.
- Nature-based solutions included:
 - Tree planting
- Justice40: Not tagged as a Justice40 project
- [Pennsylvania: Bethlehem Infrastructure Project – Easton Avenue Flood Mitigation](#)
 - Funding Amount: \$3.05 million
 - Project Description: To mitigate flooding, this project will increase stormwater detention storage and install bioretention or rain garden improvements. The project will also improve soil conditions and incorporate native plant species.
 - Nature-based solutions included:
 - Bioretention
 - Rain gardens
 - Native planting
 - Justice40: Not tagged as a Justice40 project
- [Texas: Mission Lateral Regional Detention Facility](#)
 - Funding Amount: \$1.37 million
 - Project Description: To mitigate flooding impacts, this project will implement a regional stormwater detention facility. The project will preserve wetlands, maintain greenspace, and open access to recreational areas.
 - Nature-based solutions included:
 - Stormwater detention
 - Wetland conservation
 - Greenspace
 - Justice40: Tagged as a Justice40 project
- [Washington: Graveyard Spit Dynamic Revetment and Dune Restoration](#)
 - Funding Amount: \$12.87 million
 - Project Description: To mitigate tidal impacts, this project will construct a natural dune and cobble berm to restore and protect the area.
 - Nature-based solutions included:
 - Dune restoration
 - Justice40: Tagged as a Justice40 project
- [Washington: Acquisition of Valley Brook Mobile Home Park and Floodplain Reconnection](#)
 - Funding Amount: \$10 million
 - Project Description: To mitigate flooding impacts, 41 structures will be acquired and demolished. 40 families will be given holistic relocation support. The project will include restoring the floodplain to its natural function and create habitat for salmon.
 - Nature-based solutions included:
 - Acquisition, demolition, and floodplain restoration
 - Habitat enhancement
 - Justice40: Not tagged as a Justice40 project
- [Washington: Construction of Jones Setback Levee](#)
 - Funding Amount: \$15.54 million
 - Project Description: To mitigate flooding impacts, the project will build a nature-based setback levee. This project will mitigate flood risks, restore floodplain

- connectivity to about 50 acres, and functionally lift wetlands and improve natural riverine functions.
- Nature-based solutions included:
 - Levee setback
 - Floodplain restoration
- Justice40: Not tagged as a Justice40 project
- [Washington: Shaw and Wide Hollow Creeks Flood Control Project](#)
 - Funding Amount: \$6 million
 - Project Description: To mitigate flooding impacts, this project will remove more than 200 structures located in the floodplain and/or floodway, eliminate/reduce road closures, augment stream crossings, and remove 6,500 feet of non-native trees. The creek channel will be restored to its historic location and include native plantings.
 - Nature-based solutions included:
 - Property acquisition, demolition, and stream restoration
 - Native planting
 - Justice40: Tagged as a Justice40 project

28 projects FEMA tagged as NBS (representing \$566,517,550) have minor or less significant nature-based elements incorporated into the projects.

- [Arkansas: Danville School District Safe Room](#)
 - Funding amount: \$2.51 million
 - Project Description: To protect students from severe wind and tornado events, Danville plans to build a multi-purpose safe room next to the elementary school. The project will include permeable pavement.
 - Nature-based solutions included:
 - Permeable pavement
 - Justice40: Tagged as a Justice40 project
- [California: City of Auburn Fire Department Community Hardening for Wildfire Project](#)
 - Funding Amount: \$17.34 million
 - Project Description: To mitigate wildfire impacts, particularly in its Wildland Urban Interface (WUI) areas, the project will reduce hazardous fuels, use native plants for defensible space, and use ignition-resistant construction to protect 2,000 homes and critical infrastructure in at-risk neighborhoods.
 - Nature-based solutions included:
 - Native plantings for defensible space
 - Justice40: Not tagged as a Justice40 project
- [California: Napa County's Community-Wide Comprehensive Wildfire Mitigation Program](#)
 - Funding Amount: \$37.50 million
 - Project Description: To mitigate wildfire hazards, the project will include defensible space creation or ignition-resistant construction, and hazardous fuels reduction. The project will install fire-resistant vegetation.
 - Nature-based solutions included:
 - Fire resistant vegetation
 - Justice40: Tagged as a Justice40 project
- [California: City of Riverbank Recycled Water and Water Supply Resiliency Project](#)
 - Funding Amount: \$50 million
 - Project Description: To mitigate drought conditions, the project will expand capacity at water treatment facilities and retrofit existing wastewater treatment facilities.
 - Nature-based solutions included:
 - Recharging groundwater using the city's existing ponds
 - Recycling water to agricultural users
 - Enhances natural benefits of recharge from the Stanislaus River
 - Justice40: Tagged as a Justice40 Project
- [California: City of Santa Cruz Pump Station Mitigation Project](#)
 - Funding Amount: \$11.25 million
 - Project Description: To mitigate severe floods, this project includes the hardening of Pump Station Number One and the construction of a new pump station.
 - Nature-based solutions included:
 - Riparian restoration
 - Tree planting
 - Justice40: Tagged as a Justice40 project
- [California: City of Shafter's Nature-Based Drought Mitigation Project](#)

- Funding Amount: \$12.37 million
- Project Description: City of Shafter, the Shafter-Wasco Irrigation District, and the North Kern Water Storage District are partnering to store critical water supplies into the Kern Groundwater Basin, an existing natural aquifer. The project will also regrade approximately 200 acres of land to use as water storage and recharge basins. The project will also include infrastructure improvements to water import pipelines.
- Nature-based solutions included:
 - Storing water in an existing natural aquifer
 - Regrading land to use as water storage and basin recharge
- Justice40: Tagged as a Justice40 project
- [California: Rancho Palos Verdes Portuguese Mud/Landslide Community Infrastructure Resilience Project](#)
 - Funding Amount: \$23.33 million
 - Project Description: To mitigate landslide hazards, the project will stabilize the landslide area, including with groundwater extraction improvements, surface fracture in-filling, surface water improvements with natural swale and drainage systems, and installation of subsurface water extraction systems.
 - Nature-based solutions included:
 - Natural swale and drainage systems
 - Justice40: Not tagged as a Justice40 project.
- [California: Yuba County Climate Change Resiliency Project](#)
 - Funding Amount: \$29.66 million
 - Project Description: To mitigate flooding risk, this project will include additional levee embankments, construction of soil bentonite cutoff walls, and levee elevation. Riparian vegetation will also be installed to create wind-wave buffers.
 - Nature-based solutions included:
 - Riparian vegetation to create wind-wave buffers
 - Justice40: Tagged as a Justice40 project
- [Connecticut: Resilient Bridgeport Coastal Flood Defense System](#)
 - Funding Amount: \$47.58 million
 - Project Description: To mitigate coastal storm surge and rainfall events, this project will incorporate a storm surge protection barrier, a pump station, and bioswales and rain gardens.
 - Nature-based solutions included:
 - Bioswales
 - Rain gardens
 - Justice40: Tagged as a Justice40 project
- [Florida: Building Resiliency with Gray and Green Infrastructure in Broward and Miami-Dade Counties](#)
 - Funding Amount: \$49.64 million
 - Project Description: To mitigate flood hazards and saltwater intrusion, this project will enhance canal structure with a new forward pump, a tie back levee, elevated flood control gates, and a service bridge. The project will also enhance the Pickwick Lake's wetland and stormwater detention area, and add living shoreline features to reduce bank erosion, improve water quality, and aquatic habitat.
 - Nature-based solutions included:

- Wetland enhancement
 - Living shoreline
 - Justice40: Tagged as a Justice40 project
- [Florida: Improving Canal Systems using Gray and Green Infrastructure in Miami-Dade County](#)
 - Funding Amount: \$50 million
 - Project Description: This project will improve canal infrastructure and replace the pump station, convert gate opening systems, and build a salinity barrier. The project also includes building a 2-acre flow-through wetland to reduce local runoff and flooding
 - Nature-based solutions included:
 - Wetland creation
 - Justice40: Tagged as a Justice40 project
- [Florida: Miami's 8th Street Flood Improvement Project](#)
 - Funding Amount: \$7.34 million
 - Project Description: This project will improve stormwater infrastructure, install and upsize stormwater inlets and pipes, install rain gardens and surfaces that can absorb water, rebuild roadways, and create exfiltration trenches, gravity drainage inlets, and curbs to minimize flood losses.
 - Nature-based solutions included:
 - Rain gardens
 - Permeable surfaces
 - Justice40:
 - Tagged as a Justice40 project
- [Massachusetts: Cities of Chelsea and Everett – Island End River Coastal Flood Resilience Project](#)
 - Funding Amount: \$50 million
 - Project Description: The project combines vegetated berms, floodwalls, flood gates, and a living shoreline to protect an industrial district and residential areas from coastal flooding.
 - Nature-based solutions included:
 - Living shoreline
 - Justice40: Tagged as a Justice40 project
- [New Jersey: Jersey City McGovern Park Resilience Project](#)
 - Funding Amount: \$3.84 million
 - Project Description: To reduce flooding risk, this project will install a stormwater park with below-ground storage systems.
 - Nature-based solutions included:
 - Stormwater park
 - Justice40: Tagged as a Justice40 project
- [New Jersey: Cape May County Municipal Utilities Authority – Ocean City Wastewater Treatment Facility Floodwall](#)
 - Funding Amount: \$20.73
 - Project Description: To protect against flooding during high tidal events, this project will install a floodwall around the Ocean City Wastewater Treatment Facility. Phase 2 of the project also includes improving dunes and vegetation.
 - Nature-based solutions included:
 - Improving dunes and vegetation

- Justice40: Not tagged as a Justice40 project
- [New Jersey: Highlands and Monmouth Hills Flood Mitigation and Green Infrastructure Project](#)
 - Funding Amount: \$12.19 million
 - Project Description: To improve runoff challenges, this project will install Monmouth Hills Headwalls, bioswales, and check dams to redirect stormwater and improve water quality.
 - Nature-based solutions included:
 - Bioswales
 - Justice40: Not tagged as a Justice40 project.
- [North Carolina: Forest City Sewer Force Main, Raw Water Intake, and Stream Bank Stabilization Project](#)
 - Funding Amount: \$2.60 million
 - Project Description: To mitigate erosion, prevent sewer overflows, protect the environment, and provide protection from future storms, this project will stabilize streambanks, rehabilitate sewer lines and manholes, floodproof the pump station, and install new sewer lines.
 - Nature-based solutions included:
 - Streambank stabilization
 - Justice40: Not tagged as a Justice40 project
- [North Carolina: Hominy Swamp Stormwater Park Will Prevent Future Flooding](#)
 - Funding Amount: \$6.39 million
 - Project Description: This project will develop a 26-acre Stormwater Park to detain and treat stormwater and reduce heat island effects. The project will also increase Hominy Swamp's storage capacity through nature-based stream restoration
 - Nature-based solutions included:
 - Stream restoration
 - Stormwater park
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Indian Hills Sub Station](#)
 - Funding Amount: \$2.40 million
 - Project Description: This project will upgrade the pump station's capacity, elevate it, and stabilize the streambank.
 - Nature-based solutions included:
 - Streambank stabilization
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Patterson Street and East Prospect Avenue Storm Drainage Improvements](#)
 - Funding Amount: \$999,370
 - Project Description: To mitigate flooding impacts, this project will replace culverts with larger ones and replace a section of asphalt with grass.
 - Nature-based solutions included:
 - Larger culverts
 - Replacing a section of asphalt with grass
 - Justice40: Tagged as a Justice40 project
- [Oregon: Grants Pass Water Treatment Plant Relocation](#)
 - Funding Amount: \$50 million

- Project Description: To mitigate potential flooding and collapse, this project will relocate the water treatment plant a half-mile from its current location. The relocated plant will add permeable surfaces to mitigate and control stormwater runoff.
- Nature-based solutions included:
 - Permeable surfaces
- Justice40: Not tagged as a Justice40 project
- [Texas: Climate Resilience Flood Mitigation Project for Critical Power and Treatment Infrastructure](#)
 - Funding Amount: \$50 million
 - Project Description: To mitigate flood impacts, this project will extend and raise levees and floodwalls, and improve an earthen berm with channel benching, bank stabilization, riparian reestablishment, and land conservation through acquiring open space.
 - Nature-based solutions included:
 - Riparian reestablishment
 - Open space acquisition
 - Justice40: Not tagged as a Justice40 project
- [Texas: Combes Nixon Road Drainage](#)
 - Funding Amount: \$848,180
 - Project Description: To improve stormwater management, this project will implement an underground storm sewer system. The project also includes seeding native grasses and wildflowers in the ditch and berms to provide stabilization.
 - Nature-based solutions included:
 - Native planting
 - Justice40: Tagged as a Justice40 project
- [Texas: South Lateral Regional Detention Facility](#)
 - Funding Amount: \$2.30 million
 - Project Description: To mitigate flooding, this project will create a detention pond.
 - Nature-based solutions included:
 - Detention pond
 - Justice40: Tagged as a Justice40 project
- [Washington: Goldendale Climate Resilience Microgrid](#)
 - Funding Amount: \$9.82 million
 - Project Description: To mitigate impacts from wildfires, ice storms, and extreme heat events, this project will establish a microgrid network. The project will also include water retention and xeriscaping projects.
 - Nature-based solutions included:
 - Water retention
 - Xeriscaping
 - Justice40: Tagged as a Justice40 project
- [Washington: Cuba City School District Community Safe Room Project](#)
 - Funding Amount: \$8.79 million
 - Project Description: This project will construct a 22,551 sq. ft concrete safe room to provide tornado safety. The project also includes installation of a backup generator and construction of green spaces for flood mitigation.

- Nature-based solutions included:
 - Construction of green spaces for flood mitigation
- Justice40: Tagged as a Justice 40 project
- [Wisconsin: Phillips School District Community Safe Room](#)
 - Funding Amount: \$4.20 million
 - Project Description: This project will build an 8,800 square foot concrete safe room. The project will also develop large green spaces, a rain garden, and rainwater harvesting system to manage runoff.
 - Nature-based solutions included:
 - Green spaces
 - Rain garden
 - Rainwater harvesting system
 - Justice40: Tagged as a Justice40 project
- [Wisconsin: Potosi School District Community Safe Room Project](#)
 - Funding Amount: \$2.89 million
 - Project Description: This project will construct a concrete tornado safe room. The project will also include rainwater harvesting to improve local flood conditions.
 - Nature-based solutions included:
 - Rainwater harvesting
 - Justice40: Tagged as a Justice40 project

For 16 of the projects that FEMA tagged as NBS (representing \$258,503,002), the nature-based approach included in the project is unclear or very vague from the project description, making it difficult to understand the type and significance of the nature-based component.

- [Arizona: City of Buckeye Historic Downtown Storm Water Flood Mitigation Project](#)
 - Funding amount: \$4.57 million
 - Project description: To mitigate flooding, this project will connect the drainage system to existing irrigation canals and build a floodwater retention basin on a vacant lot.
 - Justice40: Tagged as a Justice40 project
- [California: City of Sacramento North Beach Lake Levee and Habitat Resiliency Project](#)
 - Funding Amount: \$14.98 million
 - Project Description: To mitigate flooding, the city will raise its levee to 24.5ft, relocate a pump station, add drainage ditches, and create a wind-wave buffer to protect against erosion and improve habitat quality.
 - Justice40: Tagged as a Justice40 project
- [California: Port of San Francisco Downtown Coastal Resilience Project](#)
 - Funding Amount: \$50 million
 - Project Description: To mitigate flooding, storm, and seismic hazards, this project includes enhancing coastal defenses along the waterfront. The project will raise seawalls, and construction of fixed walls, deployable barriers, seismic retrofitting, and a living seawall with native species habitats.
 - Justice40: Not tagged as a Justice40 project.
- [California: San Bernardino County – Cable Creek Basin Flood Mitigation Project](#)
 - Funding Amount: \$15 million
 - Project Description: To mitigate flooding, the project will build a large detention basin to manage and use stormwater runoff and will allow continuous flow through the normal season flows of Cable Creek.
 - Justice40: Tagged as a Justice40 project
- [California: Santa Cruz County Wildfire Resilient Communities Home Hardening and Nature-Based Mitigation](#)
 - Funding Amount: \$21.44 million
 - Project Description: To mitigate wildfire risk, the project will implement defensible space, ignition resistant construction, hazardous fuel reduction, and nature-based solutions.
 - Justice40: Not tagged as a Justice40 Project
- [Florida: City of Hialeah Critical Facility Backup Generator](#)
 - Funding Amount: \$409,397
 - Project Description: This project will install a 400-kilowatt diesel fuel generator at the Emergency Operations Center.
 - Justice40: Tagged as a Justice40 project
- [Michigan: City of Detroit Project – Jefferson Chalmers Implementation](#)
 - Funding Amount: \$11.28 million
 - Project Description: This project will replace approximately 18,800 feet of combined sewer mains, upsize existing sewer mains, and install new relief sewers.

- Justice40: Tagged as a Justice40 project
- [Minnesota: City of Lambert Community Safe Room Project](#)
 - Funding Amount: \$3.48 million
 - Project Description: This project involves the construction of a 10,608 square foot concrete tornado safe room.
 - Justice40: Tagged as a Justice40 project
- [New York: The New York City Housing Authority – Stormwater Protections for Nostrand and Sheepshead Bay Houses](#)
 - Funding Amount: \$23.08 million
 - Project Description: To mitigate extreme flooding, nature-based solutions and stormwater management strategies will be used. The project also includes integration of heat mitigation strategies and supplying sustainable backup power to the community center.
 - Justice40: Tagged as a Justice40 project
- [New York: New York City Coney Island Creek Shoreline Protection Project](#)
 - Funding Amount: \$50.72 million
 - Project Description: To mitigate flooding and storm events, this project will design and construct new nature-based shoreline protection measures, such as bulkheads, revetments, or other measures as appropriate.
 - Justice40: Tagged as a Justice40 project
- [New York: Kissena Corridor Cloudburst Hub Project Addresses Flooding in Queens](#)
 - Funding Amount: \$50 million
 - Project Description: To mitigate flooding impacts, this project will install a nature-based and climate-adaptative drainage solution.
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Relocation of the North Walnut and Happy Hill Pump Stations in Fairmont](#)
 - Funding Amount: \$2.48 million
 - Project Description: To mitigate repeated flooding of pump stations, this project will relocate the pump station outside of the 100-year floodplain.
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Mount Pleasant Road Pump Station Relocation](#)
 - Funding Amount: \$883,605
 - Project Description: To mitigate hurricane impacts, this project will relocate the wastewater pump station outside the flood area and at a higher elevation.
 - Justice40: Tagged as a Justice40 project
- [North Carolina: Robeson County Resilient Power Project](#)
 - Funding Amount: \$2.15 million
 - Project Description: To ensure water treatment plants have a constant power supply, this project will install nine generators for the Lumber Bridge system and eight generators for the Maxton location.
 - Justice40: Tagged as a Justice40 project
- [Oregon: Lane County Mapleton Water Storage](#)
 - Funding Amount: \$2.70 million
 - Project Description: To mitigate flooding impacts, this project will implement a 396,000-gallon water storage tank.
 - Justice40: Not tagged as a Justice40 project
- [Pennsylvania: Bridgeville Borough Flood Control Infrastructure Project](#)

- Funding Amount: \$5.33 million
- Project Description: To mitigate flooding, this project will construct a levee for flood control benefits.
- Justice40: Not tagged as a Justice40 project

This analysis was completed on 10/23/2023 and updated on 10/27/2023.