

FY 2023 Building Resilient Infrastructure and Communities

Subapplication Selections for the BRIC National Competition

July 2024





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1. Introduction

On July 1, 2024, FEMA is announcing the selections for the fiscal year 2023 Building Resilient Infrastructure and Communities cycle. FEMA is offering more than \$882.6 million in federal cost share for 656 subapplications identified for further review. We also selected 94 communities and Tribal Nations for BRIC Direct Technical Assistance.

FEMA accelerated the announcement for selections much earlier than last year with the goal of making awards sooner so state, local, tribal and territorial governments can begin their mitigation journey to make their communities safer and stronger against future disasters.

This effort highlights the importance of FEMA's continued commitment to "people first" and helping communities, families and businesses build climate resilience. It also aligns with the 2024 FEMA Year of Resilience theme to build capacity to withstand tomorrow's hazards.

These funds will help state, local, tribal, and territorial governments address high-level current and future risks to natural disasters. These disasters include extreme heat, wildfires, drought, hurricanes, earthquakes, and increased flooding.

This document includes descriptions of the 56 subapplications FEMA announced from the fiscal year 2023 Building Resilient Infrastructure and Communities National Competition totaling \$674.5 million.

2. California

2.1. Climate Adaptive Water Infrastructure Resiliency Project

Pollock Pines looks to use fire-resistant concrete tanks to protect its drinking water reservoirs from wildfires.

Tags: Primarily Benefits Justice 40 Communities

Placerville, California: \$14.6 million

Project Description

This resiliency project will protect the water supply by replacing geomembrane-lined reservoirs with fire-resistant concrete tanks. Wildfire embers and debris can damage and contaminate the existing reservoirs. A similar loss was seen when the 2018 Camp Fire burned the Paradise Irrigation District's reservoirs. New concrete tanks will be built beside the current system. This will ensure continuous water service and system redundancy.

The project supports climate adaptation and resilience in the Pollock Pines service area, which includes a socially vulnerable community. The project will protect the entire local service area's water supply during wildfires. It will keep 33% of the district's overall service area from forced conservation measures.

2.2. Oakland Alameda Flood Adaptation and Community Benefits Project

Oakland Alameda will harden shorelines, build a floodwall, and restore habitat to reduce flooding.

Tags: Primarily Benefits Justice 40 Communities, Primarily Benefits Community Disaster Resilience Zones

Alameda, California: \$50 million

Project Description

The Oakland Alameda Flood Adaptation and Community Benefits Project will lower flood risk in Oakland's Airport Community Disaster Resilience Zone, Alameda's Bay Farm Island, and the San Leandro Creek watershed area in East Oakland's underserved communities. Key components include:

- Adding armoring and a floodwall along State Route 61/Doolittle Drive to protect transportation routes.
- Improving marsh habitat to address sea level rise.
- Closing a gap in the San Francisco Bay Trail.

In the East Oakland Columbian Gardens Neighborhood, the project will strengthen channels and begin neighborhood greening. On Bay Farm Island, it will raise the northern shoreline and improve

the lagoon's stormwater system. The project will also restore marsh and upland habitats. These efforts aim to grow community resilience and improve the environment in flood-prone areas.

2.3. Paradise Irrigation District - Magalia Dam Seismic Retrofit Project

Seismic retrofits will strengthen Magalia Dam.

Tags: Primarily Benefits Justice 40 Communities

Paradise, California: \$37.5 million

Project Description

The Paradise Irrigation District Magalia Dam Seismic Retrofit Project lowers seismic risks to boost resilience. It will retrofit the dam to strengthen it. A large earth-fill buttress will be built on the upstream slope of the dam (main dam and saddle dam). A smaller earth-fill buttress will go up on the downstream slope of the dam. The retrofit will protect critical infrastructure, including the dam's water capacity and structure; the adjacent spillway; the nearby downstream roadway; and the downstream water treatment plant. By reinforcing the dam, the project aims to prevent major seismic damage. This way, the infrastructure will stay safe and function during and after seismic events.

2.4. San Bernardino County Flood Control District - Mission Channel

San Bernardino County steps up flood protection with Mission Channel project.

Tags: Primarily Benefits Justice 40 Communities, Primarily Benefits Community Disaster Resilience Zones

San Bernardino, California: \$36.4 million

Project Description

The goal of the San Bernardino County Flood Control District's Mission Channel project is to reduce flooding from Interstate 10 to the Santa Ana River. People and buildings in San Bernardino and Redlands will be safer. The channel, which directs runoff from the Crafton Hills watershed, will be designed for 100-year storm flows.

A natural or articulated block bottom will benefit the environment. Phase 1, starting in October 2024, will be the design and study phase. Construction would occur in Phase 2 using FEMA and state funding. The project protects socially vulnerable communities and critical infrastructure (a fire station, highway patrol division, and a children's hospital) from climate change effects. Much of the population resides in Community Disaster Resilience Zones and Justice40 communities.

2.5. Sutter Bypass East Levee Project

Sutter County will upgrade the levee along Sutter Bypass.

Tags: Primarily Benefits Justice 40 Communities, Primarily Benefits Community Disaster Resilience Zones

Sacramento, California: \$49.9 million

Project Description

Sutter County has faced flooding since the early 1900s from the Sacramento, Feather and Bear rivers. Levees were built along these rivers, but levee breaks have led to major flooding in the county over the years. The project will increase the level of flood protection provided by about 5.2 miles of levees on the east side of the Sutter Bypass. The project involves levee restoration and increasing the levee height. By making the levees stronger, the project will make the community more resilient and protect homes, businesses and critical infrastructure from future floods.

3. Florida

3.1. Sweetwater Branch Creek Stabilization

Main Street Water Reclamation Facility protected from erosion through creek bank improvements.

Tags: Primarily Benefits Justice 40 Communities

Gainesville, Florida: \$4 million

Project Description

Erosion along Sweetwater Branch puts the Gainesville Regional Utilities Main Street Water Reclamation Facility at risk. The creek bank is now only 20 feet from critical infrastructure. The bank has eroded an average of 0.3 feet per year since 1986. To prevent a disaster, the project will stabilize about 1,200 feet of creek bank using gabion baskets, concrete blocks and sheet piles. The wastewater discharge point will also be moved away from the facility. Other measures include installing riprap, moving stormwater outlets, removing old bank structures, and adding new sampling platforms. Along with protecting the facility, these efforts will ensure safe access for staff and reduce downstream sediment. By stopping erosion and making the creek bank stable, the project will protect the community from future storms and maintain vital infrastructure and services.

3.2. Union County, Clay Electric Infrastructure Resilience

Union County boosts utility strength with hardening project.

Tags: Primarily Benefits Justice 40 Communities

Lake Butler, Florida: \$5.5 million

Project Description

The proposed project in Union County will make Clay Electric's grid more reliable during severe weather. It will upgrade two transmission loops and harden five distribution line and pole systems. A critical generator at the Lake Butler Reception and Medical Center will also be replaced. The substation loops will keep service continuous. Old poles and conductors will be replaced with stronger ones. The new generator will keep the power on at an essential medical facility. This will protect public safety and support emergency response. These efforts aim to grow community awareness, save resources and reduce the need for post-disaster recovery funds in this underserved area.

4. Georgia

4.1. Flood Resilient DeKalb: Critical Route Protection Program

Dekalb's Critical Route Protection Program makes it safer from floods.

Tags: Primarily Benefits Justice 40 Communities

Decatur, Georgia: \$1.9 million

Project Description

The Flood Resilient DeKalb: Critical Route Protection Program will replace undersized culverts at five locations in four neighborhoods. The larger culverts will protect against 100-year flood events. The county's stormwater master plan lists these areas as highly vulnerable to heavy rainfall. Climate change could exacerbate this hazard. Undersized culverts are safety risks. They can lead to roads becoming impassable or washed-out during storms. When this happens, access for emergency vehicles can be blocked. By upgrading these culverts, major roadways will stay open during severe weather. This initiative benefits disadvantaged communities by making them more resilient during severe precipitation events.

5. Illinois

5.1. Farmers Creek and Prairie Creek Stormwater Management Project

Farmers and Prairie Creeks flood project builds community resilience.

Tags: Primarily Benefits Justice 40 Communities

Chicago, Illinois: \$14.4 million

Project Description

Farmers Creek and Prairie Creek frequently flood because of low runoff capacity and urban development in the floodplain. The proposed project includes:

- Channel improvements
- Streambank stabilization
- Culvert repairs
- New storm sewers
- Lowering Lake Mary Anne's elevation
- Enlarging stormwater ponds
- Adding a pump station

These measures will make nearby homeowners safer from flooding. Lowering Lake Mary Anne will protect nine structures. Improving the Lutheran General Hospital pond and building a new pump station, will safeguard 40 structures and improve access to the trauma center. This project makes the community more resilient by lowering flood risk, protecting critical infrastructure, and reducing the financial burden of flood insurance on residents.

6. Iowa

6.1. Denison Municipal Utilities Power Resiliency Project

Underground infrastructure project protects against storm-related outages.

Tags: Primarily Benefits Justice 40 Communities

Denison, Iowa: \$12.7 million

Project Description

The project will move overhead electrical lines underground to reduce outages during wind and ice storms. The lines will be buried within city easements or public rights-of-way. The plan includes careful placement of pull boxes, installing conduit, and sizing cables based on electrical loads. Generators will also be added to the main utility service center, water treatment plant, and wastewater treatment plant to keep services online. This project protects essential infrastructure from storm damage and keeps electricity, water and wastewater services operational.

7. Kentucky

7.1. City of Falmouth Project

Falmouth plans to overhaul its radial transmission line.

Tags: Primarily Benefits Justice 40 Communities

Falmouth, Kentucky: \$6.7 million

Project Description

The city of Falmouth aims to rebuild a 5.1-mile, 69 kV radial transmission line. This is the main source of electricity for 2,200 citizens. A 2023 report found the city's energy system is failing and needs immediate efforts to prevent long-term power outages. The project includes purchasing the line, engineering and design work, using a temporary generator during construction, and replacing 45 out of 65 aging structures to reduce wind and storm damage. This plan replaces old infrastructure in a Justice40 community.

8. Louisiana

8.1. City of Central Combined Drainage Project

Improving creeks and detention basins in Central.

Central, Louisiana: \$39.8 million

Project Description

Channel improvements along Shoe Creek in the city of Central will reduce flood risk. They will widen the creek and use green infrastructure features to improve water flow, reduce erosion, and lower 100-year flood levels by up to five inches across 500 acres to benefit 119 structures—including 106 homes. The Beaver Bayou Culvert Improvements and Regional Detention Basin project will upgrade culverts and create a 93-acre dry detention basin to store over 20 million cubic feet of floodwater. The Draughan Creek Regional Detention Basin will create a 28.3-acre dry detention basin to store over two million cubic feet of floodwater. Together, these projects reduce flood risk and protect homes and infrastructure from future flood events.

8.2. Houma Water Treatment Plant Servicing Terrebonne General Medical Center - Generator

Enhancing Terrebonne General Medical Center's resilience with backup power and water autonomy.

Tags: Primarily Benefits Community Disaster Resilience Zones

Houma, Louisiana: \$505,970

Project Description

The project will keep the Terrebonne General Medical Center up and running by installing 750 kilowatts backup diesel generator. An automatic transfer switch will also be added at the Houma water pump station to give Terrebonne General Medical Center a safe water source (up to four million gallons) during power outages, or other events that could disrupt the hospital's power supply. This project addresses the critical need for fast replenishment of water reserves. By refilling these tanks automatically, the hospital can maintain its water supply and continue providing healthcare services during an emergency. This initiative shows Terrebonne General Medical Center's commitment to patient care and operational safety.

8.3. Presque Isle Water Pump Station - Generator

Backup power for water services strengthens Terrebonne Parish.

Tags: Primarily Benefits Justice 40 Communities

Houma, Louisiana: \$372,490

Project Description

The project will install a 300 kilowatts backup diesel generator and automatic transfer switch at the Presque Isle water pump station, operated by Terrebonne Parish Consolidated Waterworks District #1. This upgrade will ensure a continuous drinking water supply during power outages, especially during severe weather events like hurricanes. By keeping the water pump station online, the project reduces public safety hazards and supports economic stability. The automatic transfer switch will turn on the backup generator during outages. Community engagement and sustainability are integral to the project to ensure long-term benefits and adaptability to future challenges.

8.4. Project to Harden Distribution in Ascension Parish, Louisiana

Entergy builds resilience in Gonzales and Sorrento with wind-resistant upgrades and pole replacements.

Tags: Primarily Benefits Justice 40 Communities, Primarily Benefits Community Disaster Resilience Zones

Gonzales, Louisiana: \$29.9 million

Project Description

Entergy, working with the parish and the port, will reinforce six transmission feeders, two distribution structures, and a control house. These improvements can withstand winds of 125 to 150 miles mph to protect residents and infrastructure. Structures in Gonzales, Sorrento, Geismar and Burnside will be upgraded. These structures serve 5,900 residents and hospitals, evacuation shelters, chemical plants and emergency services. Entergy will replace 1,658 poles wooden with steel ones. This reduces the number of poles by half and lessens environmental impacts. The steel poles and transmission towers will be buried to prevent failures during extreme weather. This project ensures reliable power delivery and protects critical infrastructure during severe weather events.

8.5. Project to Harden Distribution in Lafourche Parish, Louisiana

Wind-resistant feeder upgrades in Fourchon, Grand Isle and Golden Meadow increase resilience.

Tags: Primarily Benefits Justice 40 Communities

Thibodaux, Louisiana: \$20.1 million

Project Description

Entergy, working with the parish and the port, will reinforce four electric feeders in two primary locations to withstand 150 mph winds to protect residents and critical infrastructure. For the Fourchon Substation, Feeder X3613 will have its poles upgraded from wood to steel to better withstand extreme weather and increase reliability. Feeder X3612's—backup for Louisiana Offshore Oil Port, LLC, and Grand Isle—load capacity will increase. In the Original Port Area, Feeder X3614 will become a self-healing loop—preventing outages and allowing for quicker power restoration. Upgraded wires will support future expansion. Golden Meadow Feeder X3723 will see poles upgraded to more durable wood. They will resist lightning and supply power to Golden Meadow and Leeville and be a backup for Grand Isle and Port Fourchon. This project ensures reliable power during extreme weather events to protect critical infrastructure and economic stability.

9. Maryland

9.1. Mobile Home Severe Storm Damage Mitigation

Mobile home relocations and floodplain restoration will improve flood resilience in Rising Sun.

Tags: Primarily Benefits Justice 40 Communities

Rising Sun, Maryland: \$1.2 million

Project Description

The town of Rising Sun will buy property where mobile homes have incurred repetitive losses during floods. The town will raze any significantly damaged mobile homes and provide relocation assistance to the occupants. It will also convert the property into an open space that will serve as a floodplain buffer. This property has incurred repetitive losses, costing the property owner and town money. It also poses a severe risk to public safety. After the homes are demolished, the town will plant trees and other plants that can further serve as a floodplain buffer between Stone Run and nearby homes. This project will eliminate the risk of the mobile homes flooding. It will also reduce the risk of flooding and debris displacement for nearby residents.

9.2. Sludge Management Sustainability and Resiliency

Stream restoration and a belt filter press will lower flood risk at a wastewater treatment facility.

Tags: Primarily Benefits Justice 40 Communities

Rising Sun, Maryland: \$4.1 million

Project Description

The town of Rising Sun will reduce the risk of flooding at a wastewater treatment plant. It will do this by decommissioning a sludge storage lagoon. In its place, the town will build a sludge digester and belt filter press. The existing stream will be redirected and restored to create a natural buffer full of plant life in the decommissioned lagoon area. That will reduce the chances of future flooding at the site. This project will entail nature-based solutions to restore the floodplain. These include using waterside vegetation to help stabilize banks; establishing a bankfull bench to reduce in-channel stresses during storm events; improving the aquatic habitat; and reducing sediment. Climate change has increased the frequency, length and strength of storms and floods., This sludge storage lagoon needs to be removed. Doing so will prevent overtopping of the berms in the future.

9.3. Southern Crisfield Flood Mitigation Project

Crisfield will reduce flood risk with a five-mile tidal flood protection barrier and new drainage system.

Tags: Primarily Benefits Justice 40 Communities

Crisfield, Maryland: \$36.2 million

Project Description

The Southern Crisfield Flood Mitigation Project in the city of Crisfield aims to boost resilience. It will do this through a two-phased approach. Phase 1 involves data collection, permitting, property acquisition, and preparing construction documents. It also entails setting up funding mechanisms and reaching out to the community. Phase 2 will build a nearly five-mile-long tidal flood protection barrier and a new internal drainage system. It will also rehabilitate or replace up to six tide gates. This project will improve flood protection, stormwater management, and wetland health. By reducing flood risks, it safeguards property, boosts public safety, and helps protect the environment.

10. Massachusetts

10.1. Tenean Beach Conley Street Resilient Waterfront Project

Boston will elevate parts of Dorchester to close flood pathways and restore waterside habitat.

Boston, Massachusetts: \$12 million

Project Description

The Tenean Beach Conley Street Resilient Waterfront Project will elevate Conley Street and Tenean Beach up to 14 feet. Doing so will provide passive flood management in the Dorchester neighborhood of Boston. This project will also include nature-based solutions to restore degraded wetlands and waterside habitat. These solutions will also enhance access to recreational experiences and the natural landscape in a way that is equitable, inclusive and welcoming. Coastal modeling efforts have helped identify flood pathways along the Dorchester waterfront. Coastal flooding in Dorchester has a profound impact on local communities. It causes physical damage, stress, displacement costs, business disruption, and harm to vital infrastructure systems. This project will solve the near-term flood pathway issue. The long-term vision for this area will require future projects to close future flood pathways.

11. Montana

11.1. Slaughterhouse Creek Flood Mitigation

Channel improvements and culvert replacements will reduce flood risk for more than 1,100 buildings and 12 critical facilities.

Tags: Primarily Benefits Justice 40 Communities

Forsyth, Montana: \$7.5 million

Project Description

The Slaughterhouse Creek Flood Mitigation project involves channel improvements and culvert replacements. The project will enhance a channel so it can contain 1%-annual-chance flood flows. It will also install new culverts at crossings like Interstate 94, Front Street, Rosebud Street, and Cedar Street. This project will divert roughly 610 cubic feet per second of floodwater. It will remove 1,122 buildings and 12 critical facilities from the Zone AE floodplain. These facilities include the Burlington Northern Santa Fe rail yard, water treatment plants, schools, and health care centers. The project addresses the 1%-annual-chance event. It will also provide benefits during the 0.2%-annual-chance (500-year) flood event. It will boost hydraulic capacity and reduce flood impacts.

12. Nebraska

12.1. City of Wood River Drainage Improvement Project

Drainage improvements will reduce flood risk for homes, businesses, infrastructure, and roads in Wood River.

Tags: Primarily Benefits Justice 40 Communities

Wood River, Nebraska: \$3.9 Million

Project Description

This project will reduce the risk of flooding from the Wood River. Historically, floods have affected homes, businesses, and utility infrastructure in the town. This is due to flat terrain, as well as drainage structures that are too small. The project will carry out drainage improvements at five subareas. Such efforts will entail culvert improvements and additions, as well as enhancements to roadside ditches. These enhancements include widening, cleanout, and adding concrete liners to improve water quality. The project will bring more than 150 homes and businesses and 86 acres of rural land and green space out of the 100-year floodplain. It will also protect local roads and the highway from five-year and up to 50-year storm events. The planning process entailed several types of environmental protection assessments; the use of grass swales and vegetated areas will boost sustainability and improve water quality. Extensive public outreach throughout the planning phase

showed there is a lot of enthusiastic support for the project. This outreach included city council meeting discussions, as well as mailings and newspaper notices in English and Spanish.

12.2. Nebraska Public Power District – Pine Ridge, South Dakota

Creating a more robust and flexible electrical system will keep Pine Ridge residents safe from coldweather power outages.

Tags: Primarily Benefits Justice 40 Communities

Columbus, Nebraska: \$24.8 million

Project Description

This project will reduce the risk of long-term power outages that could cause loss of heat in homes in Pine Ridge. Pine Ridge is a socially vulnerable community prone to the effects of natural hazards. Nebraska Public Power District conducted a detailed assessment of how cold-weather scenarios could affect Pine Ridge and vital life services; the team focused on improvements to make to the electrical system to mitigate cold-weather outages. This project will upgrade many components of the electrical system to harden it (or make it more robust). It will also double the capacity of the Pine Ridge Substation. Improvements will include

- Rebuilding and upgrading a 24-mile sub-transmission line
- Building a new 24-mile underbuild distribution line
- Installing more line switches
- Replacing and upgrading transformers
- Rebuilding and strengthening 3.5 miles of distribution circuit
- Removing a voltage regulator station that will no longer be needed
- Adding native plant species to the site.

Upon the project's completion, Pine Ridge residents will be safer from harm due to cold-weather events and loss of heat to their homes.

13. New York

13.1. Central Harlem Cloudburst Flood Mitigation Project

Innovative, climate-adaptive stormwater capture and control measures will boost flood resilience in Central and East Harlem.

Tags: Primarily Benefits Justice 40 Communities

Elmhurst, New York: \$50 million

Project Description

Central and East Harlem are quite vulnerable to flooding during cloudburst events (extreme amounts of precipitation in a short period of time). This is due to their location beside the Harlem River and status as disadvantaged communities. Surcharging in the sewer system and topographic low points mean that flood hotspots in the area may flood to a depth of over a foot during a future 10-year storm event. That makes ground floor and basement homes near to these flood hotspots very vulnerable. This project will boost stormwater capture for cloudburst rainfall events. It will do this by intercepting stormwater runoff before it gets into the sewer system. It will detain the flows during the peak of the storm event. It will also release the flows back to the sewer system once the storm has passed.

The project will employ a range of stormwater control measures. These include porous concrete parking lanes, green infrastructure, onsite storage, depressed gutters, and conveyance measures. These measures will detain local stormwater runoff, which will reduce local flooding and ease the load on New York City's combined sewer infrastructure. That, in turn, will reduce the volume of sewer overflow discharged into the Harlem River. This nature-based and climate-adaptive drainage solution will help mitigate loss of life and property. It will also directly protect the community lifelines of safety and security; food, water, shelter; and transportation.

13.2. East Elmhurst Cloudburst Flood Mitigation Project

Climate-adaptive stormwater control measures will manage 1.5 million gallons of stormwater in East Elmhurst.

Tags: Primarily Benefits Justice 40 Communities

Elmhurst, New York: \$50 million

Project Description

The East Elmhurst Cloudburst Project will boost resilience. It will use innovative measures to manage extreme stormwater events and reduce local flooding. These measures include installing porous concrete parking lanes and bike lanes, as well as green infrastructure and on-site storage. These steps will manage 1.5 million gallons of stormwater. This project is part of a response to severe storms like Tropical Storm Ida which caused \$38 million in damages and several deaths. This project aims to capture and detain stormwater runoff. In doing so, it will protect vulnerable areas. The East Elmhurst neighborhood is vulnerable to flooding during cloudburst events.

East Elmhurst is a disadvantaged community, and the area has also become highly urbanized. More sealed surfaces mean that the area is more susceptible to flood events. The project aims to safeguard lives and property; protect critical infrastructure; and provide a climate-adaptive drainage solution for the community. By doing so, it will boost the neighborhood's resilience to extreme weather events.

13.3. New York City Housing Authority Polo Grounds Houses Coastal Storm Surge Barrier

Innovative storm surge barriers will protect homes and a public school.

Tags: Primarily Benefits Justice 40 Communities

New York City, New York: \$12.2 million

Project Description

This project will install a cost-effective coastal storm surge barrier that will improve the resiliency and quality of life at Polo Grounds Towers and Public School 46. The innovative design will embed urban amenities within a perimeter barrier. On a sunny day, passersby may enjoy community-designed murals, accessible seating, bike parking, native plants, enhanced lighting, or other amenities. During extreme coastal storms, the barrier will protect this property. This means it will protect critical infrastructure, walkways, structures, residents and students from coastal storm surges.

13.4. Port Authority of New York and New Jersey Holland Tunnel – Power Distribution Code Upgrade and Emergency Generator Upgrade

The Holland Tunnel will become safer and more flood-resilient with improvements to the power distribution system and emergency generator.

Tags: Primarily Benefits Justice 40 Communities

New York City, New York: \$4.2 million

Project Description

The Holland Tunnel Administration Building provides power to systems that keep the tunnel safe and functional. These systems include the Closed-Circuit Television cameras and the tunnel ventilation system, which reports the carbon monoxide levels and controls the fresh air supply and ventilation fan speeds throughout the tunnel. The Holland Tunnel Service Garages and Administration Building receive emergency backup power from a 150 kilowatts portable generator.

This project will improve the power distribution system to meet National Electrical Code and New Jersey Building Code requirements. It will also install a new 400 kilowatts generator on a platform above the 100-year floodplain. The scope of work includes improvements and additions to the electrical system; the replacement of fire pump controllers; structural additions for the new emergency generator; the installation of bollards to protect the generator; and the removal of hazardous material associated with the existing fuel tank.

14. North Carolina

14.1. Craven County Aerial Water Main Mitigation

Craven County will replace and move a water main under the streambed with minimal environmental impacts.

Tags: Primarily Benefits Justice 40 Communities

New Bern, North Carolina: \$588,645

Project Description

The county will cut a 10-inch water main on either side of the stream. It will then remove the main, along with its support system, and relocate it under the streambed. The project team will use directional boring techniques to help install the new water main. This will reduce negative environmental impacts to the stream and surrounding area. The project will cause little ground disturbance on either side of the stream. The team will install silt fencing around the construction area during all excavation. This will further reduce environmental impacts.

14.2. Goldsboro Floodprint – Big Ditch Stream Restoration and Infrastructure Improvements

Nature-based solutions and infrastructure improvements will enhance flood resilience and equity in Goldsboro.

Tags: Primarily Benefits Justice 40 Communities

Goldsboro, North Carolina: \$6 million

Project Description

A blend of nature-based solutions and infrastructure improvements will boost flood resilience along the Big Ditch stream corridor in the city of Goldsboro. Goldsboro is a Justice40 community that suffers frequent and severe flood damages. There is no longer a functioning floodplain for Big Ditch, a stream that runs through the center of the city; Goldsboro is a highly developed and urbanized area.

The project will include a mix of "green" and "gray" infrastructure improvements. These include roughly 2,300 linear feet of in-stream enhancements, three roadway modifications (e.g., upgraded culverts), and an expanded area of restored floodplain and park space within the Elmwood Terrace property. This property consists of 160 housing units owned and managed by the Housing Authority of the City of Goldsboro.

This project is the result of a publicly guided engagement effort. It will reduce property damages at 77 single- and multi-family homes and three public/private entities. The project will prevent residents

in 29 multi-family homes from being displaced in the event of a 500-year flood. It will strengthen public infrastructure networks by making two road crossings able to withstand 100-year flood levels; right now, these crossings overtop with floodwaters during 10-year storm events. The project will also provide a range of community-wide benefits. These include improved water quality, a new wildlife habitat, and more equitable access to recreational resources.

14.3. Lenoir - Resilient Wastewater Treatment Infrastructure

Lenoir will make sewer infrastructure more flood resilient. The city will also restore sections of eroded streambank.

Tags: Primarily Benefits Justice 40 Communities

Lenoir, North Carolina: \$7.7 million

Project Description

This project will relocate the Septage Receiving Station at the Lower Creek Wastewater Treatment Plant. It will build a flow equalization basin at the plant to prevent washouts and overflows during wet weather events. The project will also replace a gravity sewer that is generally parallel to Zacks Fork Creek. The 12-inch gravity sewer was made in the 1970s out of vitrified clay pipe; it was never designed to function in submerged conditions.

Right now, most of the sewer is in the 100-year floodplain, and parts are in the floodway. The vitrified clay pipe will be replaced with ductile iron and/or polyvinyl chloride pipe. Further, the project team will relocate the sections of the sewer line that are in the eroded streambank. This way, they can restore the streambank and revegetate it in strategic locations, which is a nature-based solution.

14.4. Maple Avenue Green Stormwater Project

Installation of piped infrastructure will reduce flooding and help create a new park in Maysville.

Maysville, North Carolina: \$3.7 million

Tags: Primarily Benefits Justice 40 Communities

Project Description

The town of Maysville, North Carolina, is undertaking a phased project to improve its stormwater infrastructure along Maple Avenue. This includes expanding an existing roadside drainage ditch with a series of larger culverts and bioretention cells to manage stormwater runoff. The project aims to mitigate flooding and improve water quality. Maysville is vulnerable to climate-driven disasters due to its coastal proximity. The project addresses both immediate flood risks and long-term environmental sustainability to enhance the safety and well-being of the residents.

14.5. Relocation of Sewer Pump Station in Leland

The town of Leland will move a sewer pump station and improve sewer infrastructure.

Tags: Primarily Benefits Justice 40 Communities

Leland, North Carolina: \$1.1 million

Project Description

The town of Leland will move the South Navassa Road Sewer Pump Station. This project will build a new pump basin, valve vault, discharge piping, and controls. It will relocate the sewer pumps and backup generator equipment. The project team will then install 400 feet of eight-inch gravity sewer. The permitted capacity of the sewer pump station will not change; it is permitted and sized to accommodate sub-basin build-out capacity.

14.6. Taylorsville Flood Mitigation Improvements

Infrastructure improvements and nature-based solutions will boost flood resilience in Taylorsville.

Tags: Primarily Benefits Justice 40 Communities

Taylorsville, North Carolina: \$1.8 million

Project Description

The town of Taylorsville will boost its flood resilience by implementing nature-based and environmentally friendly flood mitigation improvements. At sewer pump stations, the project team will replace and upgrade pumps and control panels. The team will elevate electrical equipment and fortify an exposed sewer pipe near Stirewalt Creek with earth, natural rock, and vegetation; they will not use concrete. The team will replace an undersized road culvert with a nature-based solution—a bottomless culvert with the preferred channel dimension for aquatic life. Chemicals and equipment at a wastewater treatment plant will be moved out of the floodplain. Finally, this project will restore Stirewalt Creek to its natural state; the floodplain will be planted with native vegetation and protected with a permanent riparian conservation easement.

14.7. Wanchese Marine Industrial Park Living Shoreline Resiliency Project

Nature-based solutions and infrastructure improvements will address coastal erosion and flooding in the Wanchese Marine Industrial Park on Roanoke Island.

Tags: Primarily Benefits Justice 40 Communities

Raleigh, North Carolina: \$2.8 million

Project Description

The Broad Creek Coastal Resilience Project is for the Wanchese Marine Industrial Park on Roanoke Island. It will use nature-based solutions and make improvements to infrastructure. This project

involves 2,437 linear feet of shoreline stabilization and wave attenuation; it combines "green" and "gray" infrastructure to protect against coastal erosion and flooding. This way, the project mitigates flood risks and preserves the marine ecosystem. It also supports the local economy, which depends on the marine park.

14.8. Western Princeton Drainage Improvements

Drainage improvements, including new and upsized culverts, will boost flood resilience in Princeton.

Tags: Primarily Benefits Justice 40 Communities

Princeton, North Carolina: \$2 million

Project Description

This project will replace and upgrade a stormwater crossing. It will also repair about 12 areas of localized erosion. After a stormwater crossing at Center Street was lost to floodwaters during Hurricane Matthew in 2018, emergency culverts were installed. The town of Princeton will replace these emergency culverts with a box culvert that can withstand a 25-year storm event. This project will also replace, upsize and regrade existing culverts; repair eroded areas; widen the channel to convey more water; and install inlets to quickly get runoff into the piped infrastructure. The project will also use native grasses and plantings to restore the waterside buffer along Beaverdam Creek.

15. North Dakota

15.1. City of Washburn - Long-Term Raw Water Supply

Washburn will secure access to water by building a new pump station and connecting to existing water intake and treatment infrastructures.

Tags: Primarily Benefits Justice 40 Communities

Washburn, North Dakota: \$7.1 million

Project Description

The city of Washburn relies on the Missouri River as its main source of water. Due to recent changes to the river's flow channel, the city no longer receives enough water; the intake now sits on the very outer edge of the river's flow channel. As a result, Washburn constantly faces water supply issues. The city is at risk of complete loss of water access if the issue stays untreated. This project will involve connecting to the already-built Red River Valley Water Supply Project intake. The project team will build a pump station and about nine miles of raw water pipeline. They will then connect to the Washburn Water Treatment Plant, to provide access to water even during times of low flows in the Missouri River.

16. Ohio

16.1. Miami Street Embankment

The city of Toledo will stabilize a failing embankment and repair infrastructure damage to protect critical infrastructure and roadway access.

Tags: Primarily Benefits Justice 40 Communities

Toledo, Ohio: \$854,815

Project Description

The city of Toledo seeks to stabilize a failing embankment on Miami Street adjoining the Maumee River. The city will repair this damage to protect critical roadway access for residents and businesses. Erosion of the embankment was first observed in 2015, and sloughing off the roadway into the river has increased rapidly since 2022. If the embankment is not stabilized, continued erosion and sloughing will result in more severe impacts to the Miami Street roadway, utilities and could close the roadway. The project will use a drilled shaft plug pile wall near the top of the slope anchored into the underlying material. This method protects the access drive, roadway and utility structures at the top.

17. Oklahoma

17.1. City of Norman Flood Warning System Implementation

The city of Norman is launching a flood warning system based on a design from fiscal year 2022.

Norman, Oklahoma: \$356,829

Project Description

During the fiscal year 2022 Building Resilient Infrastructure and Communities grant cycle, FEMA awarded the city of Norman a scoping grant. The city used that grant to research and design a flood warning system. This year, FEMA awarded funds to launch the system and funding activity will begin with the installation of 18 sensors. These are based on locations chosen in the last grant cycle. The sensors are needed to provide data for the system. While the sensor equipment is installed, Information Technology professionals will work with the city of Norman's Information Technology department on the database design. Hydrology and hydraulics professionals will also work with the city's floodplain and stormwater managers to conduct hydraulic modeling and floodplain mapping. When the system is complete, a public education campaign will be developed and rolled out. The city will educate the citizens of Norman about the new system.

17.2. Southmoore Detention Pond Extension

Moore, Oklahoma, will create an emergency spillway and earthen dam to reduce flooding and damage in local communities.

Moore, Oklahoma: \$1.1 Million

Project Description

The city of Moore, Oklahoma, will expand the Southmoore detention pond east toward South Santa Fe Avenue. This project will allow the city to store more rainfall runoff volume during a flood. It will reduce downstream flooding and damage. With the eastern edge of the pond now at Santa Fe Avenue, a new 140-foot length emergency spillway will be positioned to discharge to Santa Fe Avenue. The spillway will be set at an elevation of 1208 feet. An earthen dam will also be built up along the south side of the pond. This will block the existing spillway direction into the Oak Ridge subdivision. The spillway will be used in a flood larger than a 1%-annual-chance event, or used if a blockage occurs in the principal discharge pipe or downstream storm sewer. This project will result in reduced flooding and damage in the Oak Ridge subdivision. It will also reduce flooding in the Bluestem subdivision, east of Santa Fe Avenue, without creating any adverse impacts downstream.

18. Oregon

18.1. Backup Generators for Critical Facilities in the Town of Butte Falls

The town of Butte Falls is purchasing five generators to provide reliable backup power for several buildings in the community.

Tags: Primarily Benefits Justice 40 Communities

Butte Falls, Oregon: \$274,665

Project Description

The town of Butte Falls will purchase and install three 120/240-volt and two 120/208-voltgenerators and supporting equipment. These will be placed at critical facilities in the town to provide reliable backup power. The generators would be installed at these facilities: Butte Falls Elementary School; town hall, fire station, and ambulance depot; water treatment plant; local food bank/preschool; and a gas station. The generators will provide reliable backup power to their location. This will allow the facilities to stay active in an emergency.

18.2. City of Port Orford Water Resilience Improvements

Port Orford is improving their waterlines and meters to strengthen community resilience against drought or wildfire.

Tags: Primarily Benefits Justice 40 Communities

Port Orford, Oregon: \$6.6 Million

Project Description

Much of the water piping and water meters in Port Orford are estimated to be over 50 years old. They are beginning to deteriorate, causing problems for the city. To fix this, Port Orford will set up a water meter replacement program—to get rid of water meter inaccuracies, which add to the high rate of unaccounted for water. The program will allow the city to quickly detect and make needed repairs to reduce water loss. The city also identified 10 strategic waterline locations for improvement. In all 10 locations, the old waterlines will be abandoned—and new waterlines will be replaced near them. The more resilient pipelines to help reduce water loss. They will keep an adequate water supply for Port Orford in a drought or wildfire; and ensure that the supply is reliable during a seismic event.

18.3. Lane County Blachly Lane Amy Hill Overhead to Underground

Lane County is putting 1.75 miles of overhead power lines underground to lessen damage risk and improve power resiliency.

Tags: Primarily Benefits Justice 40 Communities

Newport, Oregon: \$1.5 Million

Project Description

Lane County's project aims to place 9,000 feet (1.75 miles) of overhead power lines underground. This project will improve the resiliency of sections of line to natural hazards, by protecting the lines from winter storms; floods; ice; wildfires; and windstorms. It will do this by converting the exiting, aging, bare overhead conductor to an underground construction. The conductor has been exposed to natural elements for five decades. Lane County and Blachly Lane chose this section of line to put underground because of recurring power interruptions. These took place in this remote area of the county during severe weather events. By putting the proposed section of line underground, Blachly Lane will be able to provide a reliable source of power during extreme weather conditions. This project will eliminate the risk of sparking a wildfire in the area. It will also give a consistent and resilient power source to multiple fire stations, fuel stations, traffic lights, communication structures, local businesses, and irrigation systems.

18.4. Siletz Community Micro-Grid Resilience Project

Consumers Power Incorporated will create a micro-grid that helps to reactivate power grids more quickly when they go out.

Tags: Primarily Benefits Justice 40 Communities

Newport, Oregon: \$784,050

Project Description

Consumers Power Incorporated plans to create an automated microgrid that serves critical structures within the Confederated Tribes of Siletz Indians territory. It will also serve surrounding homes in Lincoln County and the city of Siletz. Because of its remote location, the Oregon Coast Range has some of the most extended outage durations in Consumers Power Incorporated's 'service territory. The power lines from Consumers Power Incorporated to this region may be damaged from winter storms or windstorms. During such events, the power lines are shut off to help control the spread of wildfires. Consumers Power Incorporated does not have a backup power source to serve the community. Consumers Power Incorporated's microgrid will allow instant transfer of source power to the project area and eliminate outages to critical infrastructure. Consumers Power Incorporated is working with Central Lincoln People's Utility District on the microgrid.

19. Pennsylvania

19.1. City of Scranton Acquisition Project

Scranton will buy out and remove 18 structures that damaged during a September flash flood.

Tags: Primarily Benefits Justice 40 Communities

Scranton, Pennsylvania: \$2.7 Million

Project Description

Scranton will buy out and remove 18 structures in two project areas that were damaged during a September 2023 flash flood event. All properties are located within the Special Flood Hazard Area and have flooded many times. Most of the structures have been found to be substantially damaged. The project will eliminate future property damage due to flooding. It will also reduce public health and safety risks from floodwaters.

19.2. Eastwick Near-Term Flood Barrier Project

Eastwick will build a flood barrier to reduce flood risks from many sources.

Tags: Primarily Benefits Justice 40 Communities, Primarily Benefits Community Disaster Resilience Zones

Philadelphia, Pennsylvania: \$2.1 Million

Project Description

The Philadelphia Office of Sustainability leads the Eastwick Near-Term Flood Barrier Project. It aims to boost resilience by reducing flood risks in Eastwick. The Eastwick area is vulnerable to several flooding sources. This project tackles the issue of riverine flooding from Cobbs Creek. This flooding threatens about 601 residences during a 100-year storm event. By setting up a flood barrier, the project will protect against flooding now. The community can develop a long-term, in-depth Flood Resilience Strategy. This project was selected for Building Resilient Infrastructure and Communities Direct Technical Assistance.

19.3. Philadelphia Water Department South 42nd Street Combined Wastewater and Stormwater Pump Station Resilience Project

The Philadelphia Water Department is going to rebuild its South 42nd Street Combined Wastewater and Stormwater Pump Station.

Tags: Primarily Benefits Justice 40 Communities

Philadelphia, Pennsylvania: \$50 Million

Project Description

The Philadelphia Water Department will rebuild its South 42nd Street Combined Wastewater and Stormwater Pump Station and provide critical wastewater service protection to more than 103,672 residents. This will enhance the resilience of the station. This project will protect the pump station from damage and loss of service due to flooding and high flow events. This project will also increase the pump station's capacity to 100 million of gallons per day to reduce the risk of combined sewer overflows. This project will preserve wastewater service and prevent physical damage to the pump station. It will also improve water quality in local waterways, including the Schuylkill River. In addition, the project will make the station and the surrounding community more resilient to the increased frequency and severity of wet weather events.

20. South Carolina

20.1. Grove Creek Critical Infrastructure Protection and Stream Restoration Project

ReWa (renewable water resources) will relocate sewer lines farther from a streambank to protect against future erosion.

Tags: Primarily Benefits Justice 40 Communities

Greenville, South Carolina: \$2.6 Million

Project Description

ReWa, a critical community lifeline for Greenville County residents and industries, is addressing the increasing risk of heavy precipitation and floods due to climate change. Communities face threats from erosion resulting from these events. ReWa will focus on Grove Creek, where streambank erosion is increasing and undermining mature trees. The trees lose their root strength and fall into the channel—a large amount of sediment enters the channel and causes further erosion. This project will relocate parallel sewer lines farther away from the streambank, and use basin-scale nature-based solutions (i.e., stream restoration). The project will protect wastewater assets from future erosion.

20.2. MetroConnects Critical Wastewater Infrastructure and Mitigation Project Application

MetroConnects will protect five sewer crossings in its service area from erosion and increased precipitation.

Greenville, South Carolina: \$2.7 Million

Project Description

MetroConnects, a wastewater service for 100,000 Greenville residents and industries, will manage risk for five sewer crossings in its service area. The five areas were identified as most at risk to erosion and exposure to high velocity waters that could carry debris. These five sites serve mostly residential areas, but one critical lifeline is the Prisma Health Greenville Memorial Hospital. At each site, MetroConnects will either armor existing crossings or relocate the sewer line crossings farther away from the streambank. Nature-based solutions will be used, such as stream restoration, to protect assets from future erosion. Ultimately, the project will reduce infrastructure failure caused by erosion and increased precipitation.

20.3. Overhead Electric Utility Conversion Project

The city of Rock Hill will convert overhead power lines in the backyards of peoples' homes to underground lines in front of homes.

Tags: Primarily Benefits Justice 40 Communities

Rock Hill, South Carolina: \$5.6 Million

Project Description

The city of Rock Hill's electric utility has committed to converting most of its overhead lines underground. This will protect its infrastructure and provide a more resilient system for all electric utility customers. This project will relocate overhead electric utility lines from inaccessible backyards and bury them in the front yards. City staff will conduct outreach with affected homeowners before any on-site work begins. Underground lines are more resilient than overhead lines; by relocating them from the back of homes to the front, the lines will be more accessible by utility crews for upkeep and repair. The new power lines will also be more resilient to dense woody vegetation where ice, wind, and snowstorms cause frequent outages.

20.4. Rocky Creek Basin Critical Infrastructure Protection and Stream Restoration Project

ReWa (renewable water resources) will address erosion and flooding of manholes and sewer lines. This will be done through improvements and relocation of a stream.

Greenville, South Carolina: \$9.1 Million

Project Description

ReWa, a critical community lifeline for Greenville County residents and industries, is addressing the increasing risk of flood damage. Flooding is due to climate change and more frequent heavy precipitation in its communities. Gradual erosion powered by several isolated storm events has caused a nearby stream to reroute itself. The stream now runs parallel to existing ReWa infrastructure and flooded several manholes and gravity sewer lines. To reduce the risk of failure and improve the overall stream stability and ecosystem, the project will improve four areas of stream and/or sewer along Rocky Creek and its floodplain. It will also relocate a portion of the sewer lines to reduce risk and minimize the likelihood of wastewater spills and overflow. Ultimately, this project will protect the stream corridor and reduce risk from flooding to sewer infrastructure. It will also provide more stability for ReWa's critical services during a disaster.

21. Texas

21.1. Seminary Regional Detention Facility

Edinburg will build a regional stormwater detention facility to increase resilience against large storm events.

Tags: Primarily Benefits Justice 40 Communities

Edinburg, Texas: \$2.7 Million

Project Description

Edinburg will build a regional stormwater detention facility and ditch extension that are in a low-lying area that connects to a system of drainage ditches. The project manages flooding from intense but short rain events that have been more frequent in recent years. Rain events such as those in 2018, 2019, and 2020 were described as "never before" experienced events, but they have occurred three times within the last five years. Through this nature-based solution, the proposed detention facility reduces the depth of flooding. It benefits an estimated 302 people (90 structures), within the Edinburg Extra-Territorial Jurisdiction. The improvement will have a positive impact on the social, environmental, and economic vitality of this area.

21.2. Southwest Weslaco Regional Detention Facility

Weslaco will build a regional stormwater detention facility to increase resilience when facing large storm events.

Tags: Primarily Benefits Justice 40 Communities

Edinburg, Texas: \$4 Million

Project Description

Weslaco will build a regional stormwater detention facility in a low-lying area that connects to a system of drainage ditches. The project manages flooding from intense but short rain events that have been more frequent in recent years. Rain events such as those in 2018, 2019, and 2020 were described as "never before" experienced events, but they have occurred three more times within the last five years. The improvement will have a positive impact on the social, environmental, and economic vitality of this area. Through this nature-based solution, the proposed detention facility reduces the depth of flooding. It benefits an estimated 325 people (81 structures) within the city of Weslaco.

22. West Virginia

22.1. Rand, West Virginia Flooding Storm Sewer Improvements

Rand will build outfall structures and repair and add storm sewer lines to reduce flood risk and increase resilience.

Tags: Primarily Benefits Justice 40 Communities

Charleston, West Virginia: \$7.1 Million

Project Description

The Rand, West Virginia Flooding Storm Sewer Improvements project is a first-time applicant to the Building Resilient Infrastructure and Communities National Competition. The project will upgrade community infrastructure. It will address critical drainage issues. The project has two main phases. The phases will build outfall structures, repair main storm sewer lines and add new lateral lines. Ultimately, these improvements will reduce flood risk, strengthen community resilience to storm events, and create new and more reliable infrastructure.

23. Wisconsin

23.1. Village of Almena Community Safe Room

The village of Almena will build a community safe room.

Tags: Primarily Benefits Justice 40 Communities

Almena, Wisconsin: \$986,703

Project Description

The village of Almena will build a community safe room at Shadyside Park, in the central part of the village. The safe room will be 2,304 square feet in size and will have a 317-person capacity (315 ambulatory; two wheelchairs). It will also serve as a multiple-use facility in the community. The community safe room will afford the highest level of near absolute life-safety protection from tornadoes and severe weather. It will be able to resist 250-mph winds during its 50-year design life. The exterior of the entire structure is hardened as a community safe room. All spaces within are protected.

23.2. Village of Melrose Community Saferoom Project

The village of Melrose will build a community safe room.

Tags: Primarily Benefits Justice 40 Communities

Melrose, Wisconsin: \$6.4 Million

Project Description

The village of Melrose will build a community safe room adjacent to the Melrose-Mindoro's 4K-12 School. It will provide near-absolute life safety to 1,322 of the Village of Melrose residents and students at the Melrose-Mindoro Area School District. The safe room will serve as a multi-purpose gymnasium, fitness center, and community center for the students and community of Melrose. It will provide a much needed educational and athletic facility. The safe room will also provide backup power using its emergency generator. This will allow the facility to function as a warming/cooling shelter for area residents in extreme temperatures.

23.3. Village of Merrillan Community Safe Room

The village of Merrillan will build a community safe room.

Tags: Primarily Benefits Justice 40 Communities

Almena, Wisconsin: \$3.7 Million

Project Description

The village of Merrillan Community Safe Room Project will consist of an approximately 6,336-square-foot concrete community tornado safe room attached to Lincoln Elementary School. It will provide near-absolute safety to 690 of the village of Merrillan residents and students at Lincoln Elementary School. The safety room will also provide backup power through an emergency generator. That way, it can function as a warming/cooling shelter for area residents in the event of extreme temperatures. The safe room will also serve as a multi-purpose daycare center for the students and community of Merrillan. It will provide a much-needed educational facility.