

Efforts to help rebuild Puerto Rico after hurricanes María and Fiona, and the earthquakes, are paving the way for an unprecedented opportunity to recover in a way that builds resilience. In coordination with the Government of Puerto Rico, the pace of the recovery has gained momentum in the last several years as new infrastructure, permanent repairs, and reconstruction can be seen across the island. FEMA is committed to supporting the Government of Puerto Rico as we maximize this opportunity to build Puerto Rico back in a way that is stronger and can lessen the impacts of future severe weather events.

This is a whole of society effort, bringing together communities and local leaders to understand their vulnerabilities, find sustainable solutions that help advance equity and climate adaptation, and ensure recovery is community-driven. And FEMA can't do this alone. With the support of the entire federal family, FEMA has faced the challenges in Puerto Rico's recovery by implementing innovative solutions to strengthen communities and better serve the island's residents. The road to recovery will bring new obstacles, and together with local communities and all of government, FEMA is ready to face them and help Puerto Rico thrive.

In this report, you will learn more about Puerto Rico's recovery:

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FEMA has been able to chart extraordinary progress in Puerto Rico and has identified many opportunities along the way. This is a testament to our close coordination with the Government of Puerto Rico and their efforts to ensure an effective recovery, solve problems and prioritize communities rebuilding. This is a reflection of the efforts of our dedicated workforce, many of whom are local to the island.

Andrew D'Amora FEMA Region 2 Deputy Regional Administrator



Hogar Ruth has already completed all the projects that were submitted to FEMA. We would not have been able to continue providing our services if we had not restored the facilities to the way they were before the hurricane. So, the reality is that we are talking about saving lives.

Lisdel Flores Barger
Executive Director for Hogar Ruth
[nonprofit that provides secure living spaces for women who are victims of abuse]





LETTER FROM FEMA ADMINISTRATOR

DEANNE CRISWELL

Puerto Rico's recovery is as unique as it is inspiring. The level of damage across the island from multiple hurricanes and the 2020 earthquakes has inspired FEMA and our partners to innovate and go beyond building back what was lost—instead, we are working to build back stronger than ever. Working closely with the Government of Puerto Rico, recovery progress can be seen in communities across the island and in every sector that affects the quality of life of residents.

Our commitment to Puerto Rico goes beyond federal dollars. We understand the importance of providing technical assistance and using our agency's convening power to coordinate resources from across the federal family. Through our joint efforts, we are making sure Puerto Rico has the resources it needs to recover effectively and become more resilient as we look to the future.

Transformation takes time, and this recovery overview provides tangible examples of where we are now and what we can expect as we continue along the road to recovery. The before and after images in this report serve as a testament to the hard work taking place on the ground. They are also visual examples of the perseverance and dedication of our workforce on the island, many of whom call Puerto Rico home.

Recovery in Puerto Rico is far from over, and FEMA will be there as long as it takes to offer support.

Our workforce on the island is committed to a resilient recovery and this unprecedented effort continues to have a positive impact on those who matter most—the people of Puerto Rico.

Deanne Criswell FEMA Administrator













LETTER FROM FEMA REGION 2 ADMINISTRATOR

DAVID WARRINGTON

Each new year brings hope and a renewed sense of purpose. With global warming literally changing the landscape of our world, it also brings increased challenges and additional responsibilities in our roles as FEMA emergency management specialists.

While the amount and intensity of natural disasters have increased, so has our commitment to help survivors and communities recover from these events and move on with their lives.

During my past years as Region 2
Administrator I have traveled to Puerto
Rico several times and I am always
impressed by the enthusiasm and
dedication of the extraordinary team that
is moving the recovery forward.
Composed of more than 90 percent local
staff, FEMA Puerto Rico has an
exceptionally committed, skilled and
diverse workforce that has contributed to
the recovery of their island and has also

deployed to other jurisdictions of the United States, as far aways as Guam, to help survivors in their recovery and contribute through the lessons they have learned as survivors themselves. As survivors, I am inspired by how the Puerto Rico team is moving the recovery forward with compassion and through a lens of resiliency.

The recovery projects in this Overview reflect the resolve of Puerto Rico's residents in achieving a holistic recovery and in empowering their communities through the permanent infrastructure that fosters a greater sense of belonging of the place they call home.

We will continue supporting the Government of Puerto Rico to ensure that the recovery continues to move forward. Undoubtedly, we have the tools we need to rise above the challenges that lie ahead and will do so by embodying our core values of compassion, fairness, integrity and respect every step of the way.

To our FEMA Region 2 family from Puerto Rico, thank you for the role you play in the agency and for helping make history on the island. The work you do each day is shaping the recovery and your commitment is what will continue to guide longterm efforts. And thank you to our partners who remain an integral part of our mission of helping people before, during and after disasters.

David Warrington, Regional Administrator FEMA Region 2











A Look Back As We Move Forward

Puerto Rico's ideal climate and prime geographic location in the Caribbean make it a highly desirable destination for both visitors and residents. However, these same attributes also increase its vulnerability to natural disasters such as hurricanes and tropical storms.

Hurricane María's passage in 2017 caused widespread devastation across the entire island, affecting every community with its 155 mph winds. The entire island was left without power, leaving most residents without electricity for months. Roughly 40,000 landslides washed out roads and cut off entire municipalities, halting transportation and making it nearly impossible to reach many survivors by land. Less than three years later, a series of earthquakes rocked the island, mostly causing damage in the southern towns. In 2022, Hurricane Fiona swept in and exacerbated ongoing recovery efforts and underscored the power grid's fragility.











Progress in Puerto Rico A Streamlined, Wholistic Recovery

The last several years have been significant in FEMA's pace and progress to advance recovery.

Since 2021. FEMA's efforts in Puerto Rico have led to an increase in the rate of funding awards to boost the island's recovery. Tangible results across the island's 78 municipalities are an indicator that recovery is underway and reconstruction activities can be seen in every town. FEMA is providing a historic level of support to Puerto Rico, both financially and in the form of technical guidance. Through continuous interaction and communication with the Government of Puerto Rico. FEMA is able to clarify documentation requirements and conditions to help avoid delays and ensure project formulation processes can move forward.

To further streamline recovery and jumpstart construction activities, FEMA worked on a strategy to accelerate obligations for critical infrastructure on the island. This was accomplished by grouping facilities with similar disaster-related damage and extrapolating the costs across each grouping to arrive at a global cost estimate. The result is known as FEMA's Accelerated Awards Strategy

which was the catalyst for the agency's single largest funding obligation – over \$9.4 billion to rebuild Puerto Rico's power grid. Other projects using this strategy followed, including those for the Puerto Rico Aqueduct and Sewer Authority and the Puerto Rico Department of Education.

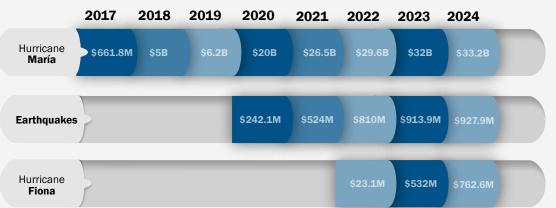
As a result of the impacts of Hurricane Fiona, the governor of Puerto Rico requested the federal government's support to stabilize the power system. The Puerto Rico Power System Stabilization Task Force was established less than a month after the hurricane's impact on the island. Through the task force's collaboration, FEMA provided over \$335 million for the acquisition of the temporary generation units at the Puerto Rico. Electric Power Authority's Palo Seco and San Juan power plants. The ability to keep the temporary generation units in operation supports grid stability while the repair, maintenance and reconstruction of electrical infrastructure is underway. This is essential so that ongoing recovery work from previous disasters can continue.





As recovery moves forward, the number of obligated projects per year decreases as FEMA strives to obligate 100% of recovery projects.

Cumulative Federal Share Obligated Per Year





Investing in Resiliency

Puerto Rico's recovery is an opportunity to build back better and help mitigate damage from future hurricanes and other natural disasters.

The unprecedented amount of funding for the island allows roads, public buildings and other infrastructure to be built back better and in ways that can lessen the effects of another disaster. The federal investment in Puerto Rico supports mitigation activities within recovery projects as part of their rebuilding scope and plans. About 86% of obligated projects include funding for mitigation activities like weatherproofing, adding storm

shutters and other hazard-resistant measures. FEMA continues to provide technical guidance and support to ensure projects move forward with a shared vision to restore critical services systems and build capacity in Puerto Rico in a manner that is both fiscally sound and resilient against the impacts of future disasters.

With the complexity of developing cost-effective mitigation projects for the island's electric utility and focused on solutions that prioritize climate resilience, FEMA implemented the Puerto Rico Island Wide Benefit-Cost Analysis. This system evaluates the cost-effectiveness of hazard mitigation measures for the electric grid and

helps advance climate resilience by allowing the evaluation of multiple projects simultaneously. This process increases FEMA's efficiency and further streamlines recovery by avoiding duplication of benefits, the duplication of programs and making the grid more resilient. Through this methodology, the Government of Puerto Rico can maximize hazard mitigation funding, increase transparency and simplify the island's energy infrastructure.

To assist with resiliency efforts in people's homes, the U.S. Department of Housing and Urban Development (HUD) is directing Community Development Block Grant – Disaster Recovery funds to recovery projects, like the Sabana Village in San Juan. This affordable housing project was recently renovated to include solar panels, energy-efficient appliances and a recycling station. Likewise, HUD is working with the Government of Puerto Rico to and the U.S. Department of Energy to build an electric microgrid for Centro Médico, the island's main public hospital.

Investing in Resiliency

Continued

In addition to funds that are meant to repair and rebuild roads, bridges, water facilities and other key components of the island, a historic amount of funding specifically for mitigation activities is making a difference in Puerto Rico's recovery and helping ensure future generations can rely on more resilient infrastructure. FEMA awarded nearly \$80 million to enforce building codes on the island in an effort to eliminate informal construction.

Currently, this project is in the implementation phase and is about 55% complete. The results of this effort will minimize informal construction and marks an important step in the islands' progress toward a more resilient future. This mitigation grant and others will help Puerto Rico enhance its recovery for generations, making the island safe and stronger.













Community Partnerships Leading Recovery

To meet people where they are, FEMA's approach to work in partnership with the local community continues to ensure stronger outcomes.

Puerto Rico's unique culture is at the forefront of FEMA's recovery mission. All recovery operations on the ground are led by a mostly local workforce that understands the island's cultural sensitivities and is committed to ensuring the reconstruction is carried out effectively. To keep all residents informed of recovery progress, FEMA continues to provide information and updates in Spanish and works closely with local Puerto Rican Sign Language Interpreters to support the deaf community.

Working directly with communities and residents, FEMA uses their feedback to better shape recovery and help tailor efforts to their needs. This partnership ensures stronger outcomes by integrating community priorities and concerns into recovery planning. Through its Community Planning and Capacity Building division, FEMA coordinated mapping exercises with the municipalities to identify vulnerable communities and help develop solution-based activities. In Naraniito, for example, FEMA helped develop a Google map with interactive features and provided workshops to help visualize and plan their town's revitalization.





Learning From the Past to Boost Recovery

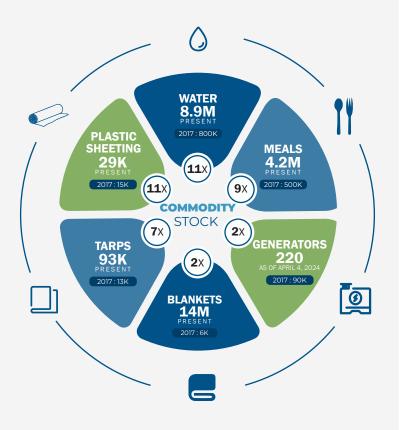
FEMA's experience in Puerto Rico has transformed how we think about community-driven recovery and our policies designed to jumpstart a person's recovery.

The multiple disasters in Puerto Rico in recent years highlight the importance of having commodities like food, water and emergency supplies ready for distribution on island. Currently, FEMA has four distribution warehouses strategically located in Bayamón, Cayey, Ponce and San Juan stocked with commodities in case of another natural

disaster or emergency. FEMA works closely with the Government of Puerto Rico and the Puerto Rico Emergency Management Bureau to understand potential needs, anticipate communication and distribution barriers and prioritize the island's most vulnerable communities.

Lessons learned and best practices from the island's multiple natural disasters helped inform updated agency policies that address some of the barriers residents faced during the disasters. These have been designed to expedite individual recovery and make sure individuals and families, especially those in underserved communities, have the support they need to recover effectively.





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This is the first time we received funds from FEMA, and they helped us through getting the funding approved. FEMA funds were very important and vital because they helped restore water service to the community much faster, since we did not have that kind of money.

Silvia Cruz Maldonado Board Member Anones Community Center I in Naranjito



Leveraging Equitable Solutions

FEMA is helping advance equity and climate adaptation as a core priority in its long-term recovery efforts in Puerto Rico.

For the past several years, FEMA has engaged local leaders and organizations to coordinate workshops and provide guidance to community stakeholders through its Disability Integration section on topics like accessible tourism and how public spaces can include people with access and functional needs. Hazard Mitigation Grant Specialists offer workshops to community and municipal stakeholders to promote nature-based hazard mitigation through FEMA Mitigation Grants.



FEMA is making sure that the values, culture and beliefs of Puerto Rico residents are at the forefront of rebuilding efforts. Local staff are key to enhancing language accessibility and

removing barriers to make sure FEMA assistance is delivered in a way that mitigates disparities.

To assess coastal impacts as a result of Hurricane María and prioritize communities' experience with natural disasters, FEMA awarded over \$1.4 million for a coastal damage study carried out by the University of Puerto Rico.



The project presented the findings on the conditions of Puerto Rico's beaches after Hurricane María and identified erosion, accretion, and stable coastal areas in the island's 44 coastal municipalities. Understanding coastal change related to natural disasters helps Puerto Rico know how vulnerable it is to similar weather events in the future and take action to address the already-present effects of climate change.

Innovation in the Field

Puerto Rico's recovery is moving forward with the support of the entire federal family, which has led to several innovative solutions and initiatives to better serve the island's residents and their unique needs.

Through a joint effort with the U.S. Department of Energy, FEMA allocated over \$15 million to fund a two-year study, known as PR100, to identify and analyze possible pathways for Puerto Rico to reach 100% renewable energy by 2050. The results of the study demonstrate that a transition to renewables is possible through significant upgrades to the existing system. The three pathways in the study illustrate a future energy system that is resilient for Puerto Rico's most remote communities. aligns with Puerto Rico's vision for land use interests, and enables distributed and local ownership of energy generation.



Over the last two years, we've been working with our partners at the Department of Energy and across the Biden-Harris Administration alongside the Puerto Rico Government to prioritize the PR100 study and make it a reality. Through our partnership, we will provide Puerto Rico communities, including those who are

generational opportunity to become more resilient.

disproportionately affected by disasters, a

Deanne Criswell FEMA Administrator

Other joint efforts include FEMA's partnership with the Government of Puerto Rico, the U.S. Army Corps of Engineers and residents of the Caño Martín Peña area in San Juan to address ongoing floods that affect the community. A recovery project for this area will add resiliency to the neighborhood by updating and improving road infrastructure, stormwater systems and sanitary systems. To meet people where they are, FEMA's approach to work in partnership with the local community continues to ensure stronger outcomes. FEMA and its partners are helping improve the quality of life for the 26,000 individuals and families that live in the flood-prone area.





Innovation in the Field

Continued

Working with the Government of Puerto Rico to identify and remove recovery barriers, FEMA is actively supporting the government's Working Capital Advance program, which began in 2022. Through this pilot, municipalities, government agencies and others with FEMA-funded permanent work projects have the capital they need to execute contracts and begin construction work. While the program originally prioritized municipal and certain energy grid projects,, the initiative was expanded to include all permanent work projects and, since April 2023, projects that are designed to specifically address future hazards









All of these efforts [at the Caño Martín Peña] are going to produce what we envisioned together with the residents, a space that provides greater mobility, infrastructure for health and safety, but above all, sustainability. This [project] will ensure that, in case of rain or hurricanes, the residents will have the necessary infrastructure to be able to withstand.

Carlos Muñiz Urban Planning and Infrastructure Manager Proyecto ENLACE, Caño Martín Peña



Looking Ahead

FEMA has a plan to address the recovery challenges ahead, and our whole community and all of government approach is essential.

While there is a tremendous amount of work ahead, and thousands of reconstruction projects that still need to break ground, FEMA is committed to continue working with the Government of Puerto Rico to provide the technical assistance and guidance they need to keep recovery moving forward. This is a complex mission that will yield important results across every sector, and FEMA will be there every step of the way.

FEMA is working with the government to address the challenges that are part of a recovery of this magnitude.

Availability of construction workers, rising labor costs and supply chain issues are significant roadblocks that FEMA anticipates and is proactively engaged with the Government of Puerto Rico to identify the best way forward.

Transformation like the efforts currently underway in Puerto Rico take time. Through program flexibilities, funding opportunities with other federal agencies and community input on how to tailor the recovery to their unique needs. FEMA is helping lay a solid foundation over which a new, more resilient island will be built. Working closely with the Government of Puerto Rico will continue to be a key element in making sure the recovery remains on track, is focused on rebuilding with resiliency in mind and prioritizes individuals and communities.

As climate change continues to pose a threat to the island, and more intense hurricanes can be expected in the future, FEMA is better prepared to support the island and any potential response efforts on the ground. With this in mind, FEMA and the Government of Puerto Rico are taking the time to ensure this unprecedented reconstruction is done right and that new infrastructure can hold up to what nature may have in store.









RECOVERY ACROSS

Puerto Rico

Community Impact

Recovery projects across the island are helping communities have more robust infrastructure in place like access to potable water and educational facilities. Other efforts are helping preserve the island's rich culture and ensuring future generations have access to historic properties and other spaces that are town landmarks. Most permanent projects funded by FEMA include hazard mitigation dollars to build up resilience and target vulnerabilities. A selection of reconstruction projects and their impact in communities are highlighted below.



Buena Vista Water Tank Humacao



Date Completed May 2022







Hazard Mitigation Funds Over \$2,000, wind-resistant fence and doors.

This site provides potable water to over 1,648 families in the Buena Vista community. The new tank is able to withstand 180 mph winds and has a new pumping system to help residents have continuous service during emergencies.



Before



After

El Alemán Bridge Jayuya



Date Completed October 2022



Federal Share Over \$1.7M



Hazard Mitigation Funds Over \$692,000, bridge replacement.

The bridge provides access for coffee farms and families in Barrio Mameyes and adjacent communities.



Before



After

Félix Millán Stadium

Yabucoa



Projected Date Of Completion Serves as a community September 2024



Federal Share Over \$26.3M



Hazard Mitigation Funds Over \$2.1M, elevating the terrain, drainage system improvements.

meeting point, hosts the town's Double-A Superior Baseball League. The town is passionate about baseball and the stadium holds significant cultural value for residents.



Before



After

Agripiña Seda Public School Guánica



Projected Date Of Completion July 2025



Federal Share Over \$21.1M



Hazard Mitigation Funds \$1.2M, roof strengthening

This school serves 625 students that live in Guánica and nearby towns. The original facility was destroyed by the 2020 earthquakes and the new modular facilities provide a safe space for students and faculty.



Before



After

Ballajá Barracks San Juan



Projected Date Of Completion December 2025



Federal Share Over \$21.4M



Hazard Mitigation Funds Over \$7.1M, voltage regulators, hurricane shutters, micro-grid.

This historic property is open to the public and is a hub of Spanish culture and heritage. Ballajá attracts thousands of visitors each year and is home to the Jardín Mirador, a garden that boasts 67,000 plants and a hydroponic green wall. The solar roof panels on the roof produce about 50% of the energy needed to power the building.



Before



After

RECOVERY ACROSS

Puerto Rico

Community Impact

The positive impacts of recovery can be seen across all sectors of the island as efforts continue to enhance residents' way of life. Safe roads and medical facilities offer stability to everyday life while other projects ensure basic needs like clean water is available. Most permanent projects funded by FEMA include hazard mitigation dollars to build up resilience and target vulnerabilities. A selection of reconstruction projects and their impact in communities are highlighted below.



COSSMA Health Facility San Lorenzo



Date Completed August 2021



Federal Share Nearly \$6M



Hazard Mitigation Funds

Over \$49,000, A/C unit anchoring system, protective roof membrane.

The facility provides primary health services to around 3,000 people per month and staff served as first responders during Hurricane María. The facility was flooded during the storm.





Before

After

Susana Centeno Health Facility Vieques



Projected Date Of CompletionSeptember 2024



Federal Share Nearly \$43.5M



Hazard Mitigation Funds

Over \$1M, roof anchoring system, secondary roof membrane.

The municipal island's 9,000 residents will have a new facility with pediatric and adult emergency rooms. The building was severely damaged by Hurricane María, and FEMA obligated funding for a temporary facility while the new center is rebuilt.





Before

After

La Francia Basketball Court

Orocovis



Projected Date Of Completion

December 2025

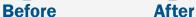


Federal Share \$606,000



About 500 families from this town and neighboring areas use this facility to play sports and host recreational activities. The rebuilt facility has a new roof and flooring, as well as a fence and parking area. The basketball court also serves as a meeting point and distribution center during emergencies.







PRASA's Water Testing Lab Caguas



Projected Date Of Completion

February 2025



Federal Share

Over \$33.6M



Hazard Mitigation Funds
The damage to this facility

The damage to this facility was over 50%, so the facility was demolished and is being rebuilt up to current codes and standards.

This is the main water testing plant on the island and performs over 200,000 sampling tests each year to ensure water quality for residents.



Before



After

Julián Hernández Road Barranquitas



Date Completed December 2021



Federal Share Nearly \$343,000



Hazard Mitigation Funds Over \$38,000, gutter

Over \$38,000, gutter installation to redirect stormwater run off.

Provides residents with a safe road and connects neighboring communities. The road provides access to the neighboring towns of Orocovis and Coamo and the repairs included the water channeling system that is part of the roadway.





Before

After

RECOVERY ACROSS

Puerto Rico

Projects Obligated 2023-24

These sites received funding in the last year and represent some of the most complicated projects that may require more time to develop, need additional municipal input or present challenges due to their location or scope of damage. Once they are rebuilt, their positive impact will have lasting results in the surrounding communities.



Roads in Sector La Mula Utuado



Date ObligatedApril 11, 2024



Federal Share Nearly \$15.9M



Hazard Mitigation Funds

Over \$1.1M, installation of geogrid to stabilize area, gutter and trench system to collect and direct runoff and prevent erosion.

This sector is home to more than 70 families and is the main access route for residents. The repairs will help keep the area safe and allow for better flow of traffic, including emergency services.



Streetlights Yabucoa



Date Obligated April 11, 2024



Federal Share Over \$15M



Hazard Mitigation Funds

Nearly \$2M, upgrade steel arms to withstand 160 mph winds and replace other components for ones of larger capacity. Over 70% of the municipality's luminaires were damaged by Hurricane María. These repairs will help keep neighborhoods well-lit and enhance road safety.



Los Fraticelli Bridge and Road

Yauco



Date ObligatedMarch 15, 2024



Federal Share



Hazard Mitigation Funds Nearly \$1.7M, install

nearly \$1.7M, install geogrid pavement to strengthen road subbase, trench to collect runoff. The bridge and road connect two state roads and serve more than 40 families in the area. The reconstruction will enhance accessibility to the area and help safeguard pedestrians.



Santo Domingo Water Run-Off Channel Peñuelas



Date Obligated Oct. 5, 2023



Federal Share Nearly \$4M



Hazard Mitigation Funds

Nearly \$836,000, install geogrid pavement reinforcement, install water runoff collection and direction system.

Reconstruction will help prevent water from accumulating in the area, which affects nearby crop development. This will also minimize flooding and other local hazards.



Ryder Memorial Hospital

San Lorenzo and Humacao



Date Obligated Oct. 5, 2023



Federal Share Over \$40M



Hazard Mitigation Funds

Nearly \$13.4M, replace wood doors with stronger steel doors, upgrade to window shutters, roof waterproofing.

The facilities render critical healthcare services to San Lorenzo, Humacao and nearby municipalities.



