PUERTO RICO

DISASTER RECOVERY ACTION PLAN

For use of CDBG-DR funds in response to February 2022 Floods (DR-4649-PR) and Hurricane Fiona (DR-4671-PR)

ABSTRACT

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DEPARTMENT OF HOUSING

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Overview

The U.S. Department of Housing and Urban Development (HUD) announced that the Commonwealth of Puerto Rico will receive $166,312,000 in funding to support long-term recovery efforts following Severe Storm, Flooding and Landslides (DR-4649-PR), and Hurricane Fiona (DR-4671-PR) through the Puerto Rico Department of Housing (PRDOH). Community Development Block Grant- Disaster Recovery (CDBG-DR) funding is designed to address needs that remain after all other assistance has been exhausted. These fund allocations included the municipalities of Salinas, Añasco, Arecibo, Barranquitas, Cabo Rojo, Caguas, Canóvanas, Dorado, Guayama, Hormigueros Humacao, Juana Diaz, Lajas, Las Piedras, Naranjito, Orocovis, Ponce, San Lorenzo, Santa Isabel, Toa Baja, Vega Baja, Yabucoa, and Yauco.

On July 6, 2023, PRDOH submitted a consultation to HUD regarding the possibility of expanding the Most Impacted and Distressed (MID) Area in Puerto Rico. On July 12, 2023, HUD responded via e-mail to PRDOH to proceed with the request to add other municipalities in the MID Area with data driven analysis that illustrates the basis for designating additional areas as most impacted and distressed. On October 9, 2023, PRDOH requested an expansion of the HUD identified MID Area with data driven analysis, based on the best available information to address needs in all the seventy-eight (78) municipalities. On December 1, 2023, HUD responded via e-mail the approval of the expansion to the MID Area for the DR-4649-PR and DR-4671-PR. This expansion added twenty-five (25) municipalities to the MID Area identified in the 88FR 32046, increasing the total MID Area to forty-eight (48) municipalities. The added municipalities are: Adjuntas, Aguada, Aguadilla, Aibonito, Barceloneta, Bayamón, Carolina, Cataño, Cidra, Coamo, Comerío, Guayanilla, Isabela, Jayuya, Juncos, Mayagüez, Moca, Patillas, Peñuelas, Rincón, San Germán, San Juan, Toa Alta, Utuado, and Vega Alta.

To meet disaster recovery needs, the statutes making CDBG-DR funds available have imposed additional requirements and authorized HUD to modify the rules that apply to the annual CDBG program to enhance flexibility and allow

for a quicker recovery. This allocation was made available through Notices published in Appropriations Act, 2023 (making continuing appropriations for fiscal year 2023, and for other purposes) (Pub. L. 117-180, Division A) approved September 30, 2022, and Appropriations Act, 2023 (making consolidated appropriations for the fiscal year ending September 30, 2023) (Pub. L. 117-328, Division L, Title II) approved December 29, 2022.

Hurricanes and Flooding

As stated in the Fourth National Climate Assessment, Chapter 20 explain that the U.S Caribbean region historically has experienced relatively stable seasonal rainfall patterns, moderate annual temperature fluctuations, and a variety of extreme weather events, such as tropical storms, hurricanes, and drought. Through the years these patterns are changing and are projected to be increasingly variable as atmospheric greenhouse gas concentrations increase. [1]The region is sensitive to large-scale patterns of natural variability in both the Atlantic and Pacific tropical basins, such as the El Niño- Southern Oscillation and the Atlantic Multidecadal Oscillation. While there is still much uncertainty in global climate model predictions of tropical cyclone formation, climate models project an increase in the frequency of strong hurricanes (Categories 4 and 5) in the Atlantic Basin, including the Caribbean. The 2021 Puerto Rico State Natural Hazard Mitigation Plan (**PRSNHMP**) identifies hurricanes and tropical storms as the most common natural hazard in Puerto Rico that cause the most extensive damage and loss. These weather events are viewed as the most dangerous because of their potential for destruction, their potential to affect large areas, ability to form spontaneously, and unpredictability. Hurricanes are also often accompanied by other destructive natural events such as high tides, storm surges, and heavy rains that cause landslides and flooding. A study released in 2020 based on surveys of land managers found that long-term planning for hurricane events is still uncommon compared to shorter term preparedness and recovery activities.[2]

The **PRSNHMP** acknowledges that the Island has tropical rainforests in the Sierra de Luquillo and the Cordillera Central, but semi-arid conditions prevail on

[1] https://nca2018.globalchange.gov/downloads/NCA4_Ch20_US-Caribbean_ExecSum.pdf
[2] Wiener, Sarah S.; Álvarez-Berríos, Nora L.; Lindsey, Angela B. 2020. Opportunities and challenges for hurricane resilience on agricultural and forest land in the US, Southeast and Caribbean. Sustainability, 12, 1364

the south and southwest coasts. Average annual rainfall totals range from thirty (30) inches in the southwest portion of the south coast up to 160 inches near the top of El Yunque National Forest. The reason for this is a combination of Rain is heaviest on the Island from May to November because of geographical location, topology and tropical weather. Atmospherics and climate events like waves, tropical cyclones, el Niño and la Niña, have the potential of causing peaks in rainfall or and sometimes have potential for droughts. Flooding risks are at the highest during this period. The weather is warmest from June to September, thus, the risk of high-frequency atmospheric events such as tropical storms and hurricanes is highest.

Historic Hurricane and Flooding Events of Significance	
Event	**Description**
Hurricane San Ciriaco, 1899	This hurricane was one of the most shocking tragedies in terms of loss of life: more than 3,000 people died, mostly drowned. Rainfall was recorded at twenty-three (23) inches in twenty-three (23) hours in the Municipality of Adjuntas.
Hurricane San Felipe, 1928	This hurricane is considered one of the most violent in its effects on Puerto Rico. Estimated death tolls ranged from 300 to 1,000 and many of the crops that supported the economy—coffee, sugar, tobacco—were destroyed.
Hurricane San Ciprián, 1932	This hurricane happened a year after Hurricane San Nicolás (September 1931), when the economy was still in recovery. Two hundred twenty-five (225) people died.
Hurricane Donna, 1960	This hurricane passed over the Island 100 miles north of San Juan; however, heavy rains caused floods, killing one hundred and seven (107) people in the Municipality of Humacao.

Tropical depression, 1970	This depression was stationary from October 5 to October 10, 1970. It produced widespread flooding that led to Presidential Disaster Declarations in sixty (60) municipalities. The highest rainfall totals measured in Jayuya were more than thirty-eight (38) inches. There were eighteen (18) deaths and damage quantified over $65 million.
Tropical storm Eloísa, 1975	This storm caused flooding and landslides that killed thirty-four (34) people and twenty-nine (29) were reported missing. Damage was estimated at $125 million.
Hurricane David and storm Federico, 1979	These events occurred on August 30 and September 4, 1979, respectively. Both events led to a Presidential Disaster Declaration in seventy-two (72) municipalities and seven (7) people were killed. The federal allocation for individual and Public Assistance totaled $102 million.
Tropical depression, 1985	In May 1985, there was another Presidential Disaster Declaration because of flooding caused by a tropical depression that later became Hurricane Gloria. Two (2) people were killed, and damage totaled $37 million.
Tropical wave / Mameyes event, 1985	A tropical wave crossed the Island causing flooding in some areas, depositing up to twenty-four (24) inches of rain in twenty-four (24 hours) causing flooding, landslides, and mudflows that interrupted basic services, blocked roads, destroyed bridges, damaged structures, and deposited silt, gravel, and debris on the roads. The works of flood control, drainage and irrigation facilities were blocked. The Puerto Rico Aqueducts and Sewers Authority and the Electricity Puerto Rico Electric Power Authority suffered significant system damage. This tropical wave left fifty-three (53) people dead from floods; the community of Mameyes was buried because of a landslide killing 127 people, and a bridge collapsed killing twenty-nine (29) people. The flow of water that eroded the bridge passed by the Municipality of Coamo destroying more than 600 homes. The water flow was higher than the expected recurrence of a 100-

	year flood. About five (5) bridges were destroyed, leaving many communities isolated. In addition, seventeen (17) people died in Ponce, as they were washed away by Las Batatas gully. There was a Presidential Disaster Declaration, twenty-eight (28) municipalities were eligible for Individual Assistance and thirty-four (34) municipalities were eligible for Public Assistance, FEMA assistance totaled nearly $264 million.
Hurricane Hugo, 1989	This hurricane was a Category 4. To the east and northeast of Puerto Rico there was an estimated storm surge of four (4) to six (6) feet in the vicinity of Fajardo and Ceiba. Higher storm surge totals were observed in Vieques and Culebra. There were about ten (10) inches of rain in forty-eight (48) hours causing flooding in the northeastern part of the Island. There were heavy losses in livestock, agriculture, and horticulture recorded; a total of twenty-seven (27) municipalities were eligible to receive federal aid. Damage was estimated at $2 billion. Carraízo Lake Dam suffered a power failure that prevented the floodgates from opening to allow water discharge. The water level rose, reaching the engine room and damaging the pump motors of the dam. These engines pump water to the Sergio Cuevas Filtration Plant, which serves two-thirds (2/3) of the San Juan Metropolitan Area and surrounding municipalities. Water service was restored nine (9) days later.
Floods of January 5-6, 1992	On January 5, 1992, a cold front, accompanied by a trough in the upper levels of the atmosphere, generated heavy rain and thunderstorms. This caused flash floods that killed twenty-one (21) people, eighteen (18) of whom died in their cars traveling at night, three (3) people went missing, and there was more than $50 million in property damage. Most deaths occurred when people in their cars were swept away by the river or as they were trying to cross rivers beyond their banks.

Hurricane Marilyn, 1995	The Islands of Vieques and Culebra were the hardest hit by this hurricane. An estimated one hundred and twenty (120) homes were destroyed and another eight hundred twenty-nine (829) sustained damage. The waste treatment plant in the Municipality of Culebra was damaged, causing the overflow of the lake which created a potential health risk to the community. The accumulation of debris was estimated at 4,000 cubic yards in Vieques and approximately 10,000 cubic yards in Culebra. Initially, estimated damage was $1.2 million for private residences and $9 million for municipal infrastructure. Twenty (20) deaths and eight (8) injuries were attributed to this disaster. The President signed Disaster Declarations for fourteen (14) municipalities.
Hurricane Hortense, 1996	This hurricane was a Category 1 with winds of eighty-five (85) mph. It caused an estimated $200 million in damage to public and private property and the death and disappearance of twenty (20) people, most of them because of flooding. About 10,500 people were displaced to shelters across the Island. Recorded rainfall data exceeded twenty (20) inches in twenty-four (24) hours. In the interior of the Island, rainfall exceeded the expected levels of a 100-year storm. Large tracts of land to the north, east and southeast of Puerto Rico remained under water. Many of the major rivers and their tributaries overflowed. About forty (40) roadways were blocked by flooding and landslides and some bridges collapsed due to the speed of current flow or due to the accumulation of debris.

Hurricane Georges, 1998	This hurricane left a trail of damage as a result of high winds, rains, floods, mudslides, and surges. The greatest accumulation of rain occurred in the central mountainous interior causing all rivers to overflow their banks, some of which set record discharges, and many created new channels. The storm surge values were estimated at about ten (10) feet high in the town of Fajardo. Many parts of the West coast experienced severe erosion of the beaches. The seventy-eight (78) municipalities were affected: 3.6 million people without drinking water, 600,000 people without phone service, one hundred percent (100%) of the electrical system was interrupted, 31,000 homeless, 100,000 houses damaged or destroyed, forty (40) bridges and miles of roads damaged or blocked, 2.5 million cubic yards of rubble, ninety-five percent (95%) of the total loss of banana crop, seventy percent (70%) total loss of coffee harvest, and sixty percent (60%) loss of poultry production. The number of refugees rose to 28,000 in 420 shelters spread throughout the Island. The economic impact was estimated at $2 billion.
Floods of November 2003	November 12 to 14, 2003, a trough caused heavy rains on the Island for three (3) consecutive days affecting the south region. Total damage was estimated at $4.3 million. The roads affected were PR-10 from Adjuntas to Ponce, PR-52 at Cayey, and PR-172 that connects Caguas to Cidra. In the town of Moca a woman died after falling off a cliff in her car. Two (2) men died trying to walk across flooded bridges in the municipalities of Aibonito and Ciales. Three (3) bridges collapsed, and six (6) others were damaged. A total of 856 people had to be sheltered, forty percent (40%) of the public-school system was closed, twenty (20) roads were impassable, 138,174 people were left without drinking water and more than 12,600 families were left without electricity. One hundred percent (100%) of crops were damaged. In the Valle of Lajas many cattle drowned. The Río Grande of Añasco came out of its banks causing loss of banana crop. President George Bush issued a

	Presidential Disaster Declaration covering twenty-one (21) municipalities, which qualified for Public Assistance and Individual Assistance.
November 10, 2005	There was a new Presidential Emergency Declaration in Puerto Rico due to severe storms causing landslides and floods across the Island. The most affected municipalities were: Adjuntas, Aibonito, Cayey, Guayanilla, Jayuya, Juana Díaz, Lares, Maricao, Orocovis, Peñuelas, Ponce, Salinas, Santa Isabel, Utuado, Villalba, Yabucoa and Yauco.
October 1, 2008	Presidential Disaster Declaration (DR-1798) due to severe storms and flooding from September 21, 2008, to October 3, 2008. The most affected municipalities were: Guayama, Humacao, Maunabo, Patillas, Ponce, Salinas, Santa Isabel, and Yabucoa. The total number of residences impacted was over 2,000 and the total assistance cost estimate was $43 million.
June 24, 2010	Presidential Disaster Declaration (DR-1919) due to severe storms and flooding during the period of May 26 to 31, 2010. Ten (10) municipalities were affected: Arecibo, Barranquitas, Coamo, Corozal, Dorado, Naranjito, Orocovis, Utuado, Vega Alta, and Vega Baja. The total Public Assistance cost estimate was $6 million. This declaration also made Hazard Mitigation Grant Program assistance available for hazard mitigation measures in all municipalities within the Government of Puerto Rico as requested by the Governor.
Tropical storm Otto, October 26, 2010	Presidential Disaster Declaration (DR-1946) due to severe storms, flooding, mudslides, and landslides associated with Tropical Storm Otto during the period of October 4 to 8, 2010. The most affected municipalities were: Adjuntas, Aibonito, Añasco, Guánica, Guayama, Jayuya, Lares, Las Marías, Maricao, Mayagüez, Morovis, Orocovis, Patillas, Ponce, Sabana Grande, Salinas, San Germán, Utuado, Villalba, Yabucoa, and Yauco. $20 million was obligated for Public Assistance.

July 14, 2011	Presidential Disaster Declaration (DR-4004) due to severe storms, flooding, mudslides, and landslides during the period of May 20, 2011, to June 8, 2011. The most affected municipalities were: Añasco, Caguas, Camuy, Ciales, Hatillo, Las Piedras, Morovis, Orocovis, San Lorenzo, San Sebastián, Utuado, and Villalba. Seven point five ($7.5) million was obligated for Public Assistance.
Hurricane Irene, August 22, 2011	Emergency Declaration (EM-3326) due to severe rain, flooding, and landslides caused by Hurricane Irene during the period of June 21 to 24, 2011. The hurricane impacted infrastructure, housing, personal property, and vehicles in twenty-two (22) municipalities: Humacao, Naguabo, Ceiba, Fajardo, Luquillo, Loíza, Carolina, Caguas, Cidra, Cayey, Comerío, Aguas Buenas, Canóvanas, Gurabo, Juncos, Maunabo, San Lorenzo, Yauco, Orocovis, Villalba, Ponce, and Peñuelas.
Hurricane Irene, August 27, 2011	Presidential Disaster Declaration (DR-4017) due to severe rain, flooding, and landslides caused by Hurricane Irene during the period of June 21 to 24, 2011. The Disaster Declaration included Individual Assistance for seven (7) municipalities: Caguas, Canóvanas, Carolina, Cayey, Loíza, Luquillo and San Juan. It also included Public Assistance for local government and non-profit organizations in Aguas Buenas, Carolina, Cayey, Ceiba, Comerío, Juncos, Las Marías, Luquillo, Morovis, Naguabo, Orocovis, Utuado, Vega Baja, and Villalba. The total Individual Assistance cost estimate was over $30 million, and the total Public Assistance cost estimate was nearly $5 million, primarily for roads and bridges.
Tropical storm María, September 2011	Presidential Disaster Declaration (DR-4040) due to severe rain, flooding, and landslides caused by Tropical Storm María during the period of September 8 to 14, 2011. The Disaster Declaration included Individual Assistance for three (3) municipalities: Yabucoa, Juana Díaz, and Naguabo. The total Individual Assistance cost estimate was $7 million.

Hurricane Irma, September 2017	Irma was a category 5 hurricane when its eye passed within 30 miles (48 kilometers) of the Puerto Rico Island of Culebra on September 6, 2017, with over 10 - 15 inches (25 -38 centimeters) of rainfall recorded in 36 hours. Also, the hurricane caused a storm surge flooding in a few areas on the north coast.
Hurricane María, September 2017	In September 20, Maria made landfall as a Category 4 hurricane. Over 38 inches (96 centimeters) of rainfall was recorded in 48 hours, and storm surge of over 6-10 feet (2 meters) was estimated above ground level to the east of Maria's landfall along the coasts of Humacao, Naguabo, and Ceiba, as well as the north central municipality of Arecibo. To the southeast, in Yabucoa, Maunabo, Patillas, and Arroyo, maximum storm surge inundation was approximately 4–7 feet (1.2–2.1 meters). Along the remaining southern and northeastern coastline, maximum inundation of 3–5 feet (0.9–1.5 meters) occurred from the municipality of Ponce eastwards. The remaining coastline generally experienced inundations ranging from 1 to 4 feet (0.3 to 1.2 meters). Additionally, the island of Vieques experienced 3–5 feet (0.9–1.5 meters) of maximum storm surge inundation.
Frontal boundary, February 2022	The convergent flow at low levels caused the higher moisture band to remain over northeastern Puerto Rico leading to better precipitation efficiency that resulted in prolonged periods of heavy rainfall, especially in the western half of the metropolitan area. Accumulations across these areas ranged between 3 to 6 inches of rainfall, with a maximum of 10 inches of rainfall in some areas. Several rounds of heavy rainfall over the same areas only aggravated the flood problems the next day.

Hurricane Fiona, September 2022	Based on preliminary information from the US Geological Survey Stream Gauge Network, 50 out of 108 river gauges rose above the USGS-NWS flood stage. Most river gauges along Río Grande de Manatí, Río Cibuco, Río Grande de La Plata, Río Grande de Arecibo, Río Grande de Loíza, and Río Guanajibo rose above moderate or major flood stage. Across southern and southeastern portions of the island, significant catastrophic flooding was observed due to sharp rises along rivers combined with storm surge/coastal flooding. Thousands of families were rescued in Salinas, where a Flash Flood Warning with a catastrophic threat tag was issued. Overall, around 50 Flash Flood Warnings and 30 Flood Warnings were issued between Sunday, September 18th and early Tuesday, September 20th.

Landslides Caused by Heavy Rains

The 2021 **PRSNHMP** explains that many of the landslides that occur in Puerto Rico are in a special category of landslides known as "debris flow," which occurs in mountainous areas with significant slopes during heavy rains. The rain saturates the soil and causes ground level and peel strength loss, usually where the ground contacts the bedrock.

Historic Landslide Events of Significance	
Event	**Description**
Tropical storm Eloísa, 1975	This storm caused flooding and landslides, and unspecified damages.
Tropical wave / Mameyes event, 1985	From October 4 to October 7, 1985, one of the most catastrophic events in recent decades in Puerto Rico and the United States history occurred, which led to a Presidential Disaster Declaration and federal allocation of $65 million. On this occasion, a tropical wave crossed the Island causing flooding in some areas, dumping up to twenty-four (24) inches of rain in twenty-four (24) hours. There were 127 people killed by a landslide in the neighborhood of Mameyes

	located in the municipality of Ponce. This was an informal community located on a steep slope, which experienced a massive rock release. The soil failed, in part because of the saturation of the ground caused by a leak from a water storage tank located at the top of the slope. This wiped out one hundred (100) homes that were literally buried under layers of earth and rocks. Another tragedy occurred during the night when the slab of a bridge collapsed on the road leading from San Juan to Ponce, on the stretch of Coamo due to soil erosion under one of the columns; about twenty-nine (29) people rushed down the bridge and died.
Rains on November 2003	Rains caused twenty-one (21) municipalities to be declared disaster areas by Presidential Disaster Declaration. Twenty-six (26) roads were impassable among them; PR-10 between Adjuntas and Ponce was blocked by a landslide of 1,300 cubic meters of mud. On Highway Luis A. Ferré in Cayey, detachment of a pipe blocked two lanes. A huge wall of forty (40) feet belonging to a housing project (Bairoa Wall) in the Municipality of Caguas collapsed in some areas, endangering the lives of more than a dozen (12) families who lived behind it. A family in the town of Moca became homeless when their three-story house collapsed; the family came out unharmed. The rains caused the ground to give way and split some of the columns, the land deposited outside the residence that gave way consisted of nineteen (19) feet of landfill and rough soil. Several landslides left some communities in the municipality of Utuado isolated; in Barriada Nueva development thirty (30) houses were in danger of collapsing as the river undermined the land of the local road which faces the residences. In the Monte Verde development, in the municipality of Manatí, three (3) families lost their homes in a sinkhole and six (6) other houses sank exposing the vents of other sinkholes. The construction of this development took place between hummocks and a total of eight (8)

	sinkholes that were fenced by the developer to isolate them from the 500 homes built.
Tropical storm Jeanne, September 17, 2004	By Presidential Disaster Declaration Number 1552, FEMA has provided financing for recovery for the effects of Tropical Storm Jeanne, which caused multiple landslides in virtually the entire Island. A total of seventy-two (72) municipalities received assistance because of this event.
March and April 2008	Rainfall occurred during the months of March and April 2008, causing landslides. The effects of these events impacted the community of Carruzos in Carolina, the community Cerca del Cielo in Ponce, and the community of Unibón in Morovis. The combination of geological, climatological and the inappropriate construction and development practices in urbanized areas, were the main causes for these landslides.
Tropical storm Otto, October 26, 2010	A Presidential Disaster Declaration (DR-1946) was declared due to severe storms, flooding, mudslides, and landslides associated with Tropical Storm Otto during the period of October 4 to 8, 2010. The municipalities most affected were: Adjuntas, Aibonito, Añasco, Guánica, Guayama, Jayuya, Lares, Las Marías, Maricao, Mayagüez, Morovis, Orocovis, Patillas, Ponce, Sabana Grande, Salinas, San Germán, Utuado, Villalba, Yabucoa, and Yauco. $20 million was obligated for Public Assistance.
July 14, 2011	A Presidential Disaster Declaration (DR-4004) was declared due to severe storms, flooding, mudslides, and landslides during the period of May 20, 2011, to June 8, 2011. The municipalities most affected were: Añasco, Caguas, Camuy, Ciales, Hatillo, Las Piedras, Morovis, Orocovis, San Lorenzo, San Sebastián, Utuado, and Villalba. $7 million was obligated for Public Assistance.

Hurricane María, September 2017	Landslides associated with high rainfall occurred throughout Puerto Rico, blocking thousands of roads. The Hurricane triggered more than 70,000 landslides across Puerto Rico that caused loss of life and widespread damage to transportation, communication, and power-supply infrastructure, and to other public and private property.
Frontal boundary, February 2022	In February, Puerto Rico received heavy floods which caused landslides. The heavy rains produce severed land slippage and mudslides on major roadways.
Hurricane Fiona, September 2022	In September 2022, the extreme rainfall (12-18 inches) from an intensifying hurricane resulted in widespread flooding and mudslides causing damage to many homes, businesses, vehicles, and other infrastructure.

Winds from Tropical Cyclones and Hurricanes

The 2021 **PRSNHMP** notes that winds caused by hurricanes and tropical cyclones can cause significant damage to buildings and infrastructure because of their intensity and their high-speed winds that can pick up and release debris.

Historic Wind Events of Significance	
Event	**Description**
Hurricane San Felipe, 1928	This Category 5 hurricane is considered one of the largest cyclones in the North Atlantic. Maximum sustained winds were 160 mph, with gusts of two hundred (200) mph. It caused extensive private property damage, 312 people died, 83,000 people were without shelter, and it caused $50 million in losses.
Hurricane Hugo, 1989	This Category 4 hurricane passed through San Juan with sustained winds of 125 mph. A Presidential Disaster Declaration was issued in which fifty-seven (57) municipalities were declared eligible for Public Assistance and Individual Assistance. There was one (1) death and damage were estimated at $1 billion.

Hurricane Marilyn, 1995	On September 15, early in the morning, the center of the hurricane passed forty-five (45) miles east-northeast of San Juan with maximum sustained winds of 110 mph. It grew to be a Category 3 hurricane.
Hurricane Hortense, 1996	This hurricane damaged some 4,000 homes. Agriculture suffered severe damage, particularly in the mountainous area. Other damages associated with winds were falling trees, falling utility poles and telephone poles. A Presidential Disaster Declaration was issued covering sixty-seven (67) municipalities.
Hurricane Georges, 1998	This hurricane's 110 mph winds defoliated agricultural areas. About sixty percent (60%) of poultry production was lost, and a workforce of thirty-six thousand 36,000 agricultural jobs were affected. Heavy rains and strong winds caused $45 million in damage to roads. Winds defoliated and uprooted trees in forest areas causing an accumulation of vegetative debris, mainly in urban areas. The United States Army Corps of Engineers indicated that the hurricane caused a total of approximately 2.5 million cubic yards of vegetative debris (trees, branches, and leaves) equivalent to three (3) fifty (50)-story buildings. The forest areas are classified as critical to the recovery of native and migratory bird species. An estimated 20,000 homes were destroyed, 38,000 homes suffered major damage, 63,000 homes reported minor damage, and - 48,500 were affected. Two (2) days after the Hurricane, 31,500 people were in shelters. Puerto Rico's government estimated the hurricane's economic impact to businesses at $528 million. The government spent $371,500 in Public Assistance to repair damage to its infrastructure. The Presidential Disaster Declaration for seventy-eight (78) municipalities included all categories of disaster relief. It is the first time that all the municipalities of Puerto Rico are included in only one Presidential Disaster Declaration.

Tropical storm Otto, 2010	The indirect effects of Tropical Storm Otto on October 4 to October 8, 2010, caused flooding and mudslides, a Presidential Disaster Declaration (DR-1946) was issued covering twenty-five (25) municipalities. The municipalities included in the declaration were: Adjuntas, Aibonito, Añasco, Cayey, Ciales, Corozal, Guánica, Guayama, Jayuya, Lares, Las Marías, Maricao, Mayagüez, Morovis, Orocovis, Patillas, Ponce, Sabana Grande, Salinas, San Germán, San Lorenzo, Utuado, Villalba, Yabucoa and Yauco. $20 million has been obligated for Public Assistance.
Hurricane Irene, 2011	A Presidential Disaster Declaration (DR 4017) was declared due to effects caused by Hurricane Irene during the period of June 21 to 24, 2011. The effects of Hurricane Irene included: severe rain, flooding, and landslides. The Disaster Declaration included Individual Assistance for seven municipalities: Caguas, Canóvanas, Carolina, Cayey, Loíza, Luquillo y San Juan. Also included Public Assistance for local government and non-profit organizations in Aguas Buenas, Carolina, Cayey, Ceiba, Comerío, Juncos, Las Marías, Luquillo, Morovis, Naguabo, Orocovis, Utuado, Vega Baja, and Villalba. The total Individual Assistance cost estimate was $30 million, and the total Public Assistance cost estimate was nearly $5 million primarily for roads and bridges.
Tropical storm María, 2011	A Presidential Disaster Declaration (DR-4040) to sever rain, flooding, and landslides caused by Tropical Storm María during the period of September 8 to 14, 2011. The Disaster Declaration included Individual Assistance for three (3) municipalities: Yabucoa, Juana Díaz, and Naguabo. The total Individual Assistance cost estimate was more than $7 million.
Hurricane Irma, 2017	Peak wind gust speeds in Puerto Rico were over 120 miles per hour (mph) (193 kilometer per hour). Sustained winds in Puerto Rico 58 mph (93 kph), with a gust of 89 mph (143 kph).

Hurricane María, 2017	Presented a diverse distribution of extreme winds across the island. This is because the distribution of winds across the hurricane structure is not homogeneous that, according to the National Hurricane Center Tropical Cyclone Report the system swept through Puerto Rico as a high- level Category 4. Hurricane Maria's maximum wind intensity was estimated at173 miles per hour. Besides, the increased wind intensity of 74 miles per hour for 24 hours on September 18 makes it the sixth highest intensity hurricane on record for the Atlantic Basin (NWS).
Hurricane Fiona, 2022	Strong, gusty winds accompanied much of the stronger convection embedded within the hurricane. Hurricane-force gusts were observed over portions of southern Puerto Rico during the afternoon on Sunday. These gusty winds combined with ground saturation resulted in damage across the island due to fallen trees and power lines.

Climate Change

The 2021 **PRSNHMP** identifies climate change as an area of scientific research, analyzing the relationship between rising global temperatures and the effect on the polar caps melting, thus increasing sea levels, and threatening coastal areas in all countries. The 2005 study by the Organization for Economic Cooperation and Development based in Paris, France, positioned the City of San Juan, Puerto Rico in rank sixty-five (65) of a total of 136 cities in terms of population exposed to floods.

National Objective

All programs supported by HUD CDBG-DR assistance must demonstrate benefit to individuals and communities by meeting one (1) of the program's three (3) National Objectives for all money spent on projects. These are: (1) benefiting low- and to moderate-income (**LMI**) persons, (2) aiding in the prevention or elimination of slums or blight, or (3) meeting a need having a particular urgency (urgent need). Low- to moderate- income households are defined as households that do not exceed 80% of the median income for their area, as determined updated by

HUD annually. These income categories are grouped into the following classifications:

- Extremely Low income – has an annual income at 30% or below the area median income;
- Very Low income – has an annual income at 31% to 50% of the area median income; and
- Low income – has an annual income at 51% to 80% of the area median income.

In compliance with the HCDA, and as announced in 88 FR 32046, the primary objective of the HCDA is the "development of viable urban communities, by providing decent housing and a suitable living environment and expanding economic opportunities, principally for persons of low and moderate income" (42 U.S.C. § 5301(c)). To carry out this objective, the statute requires that not less than 70% of the aggregate of CDBG program funds be used to support activities benefitting LMI persons. The 70% overall benefit requirement shall remain in effect for this allocation unless waived pursuant to a request by an individual grantee to authorize a lower overall benefit for its CDBG-DR grant based on a determination by HUD of a compelling need for the reduction.

Disaster-Specific Overview

Puerto Rico was affected by heavy rainfall and a hurricane, resulting in severe floods and landslides. As the recovery needs in Puerto Rico increase with each disaster, the demand of a coordinated approach between agencies and local governments is necessary to better allocate resources to meet the necessities of the communities. The persistence of these challenges caused by nature mandates a collective response, emphasizing the importance of investing in resilient infrastructure and strategic risk management. The identified areas require immediate attention, not only to address current issues but to fortify against future natural disasters. As Puerto Rico confronts these critical infrastructure challenges, it becomes paramount to prioritize the safety and accessibility of the communities, ensuring a more resilient future for all.

The February & September 2022 Puerto Rico Disasters

The Caribbean and Puerto Rico are at risk of cyclical natural hazards such as storms and hurricanes. According to the 2021 PRSNHMP, hurricanes and tropical storms, which produce extreme wind gusts resulting from intense turbulence, are the most frequent event in Puerto Rico. A hurricane is a tropical cyclonic system with a sustained wind intensity greater than 74 miles per hour. Tropical cyclone systems are categorized into; 1) tropical depression, 2) tropical storm, and 3) hurricane. The warming of the waters feeds the pressure gradient that can generate extreme winds. These warm waters are the formation of tropical cyclones, it is the source of energy. It also influences the density of water masses, the variation of sea level height, and the dynamics of atmospheric systems.

The year 2022 was one of extreme climate in the island: from droughts in January to a hurricane in September. Puerto Rico was struck by a severe storm which brought flooding and landslides between February 4 and 6, 2022. As a result, February ended as the wettest month on record. During the hurricane season, later on September 17, 2022, category one Hurricane Fiona lashed the island with torrential rains and flooding. In addition, produced 1 to 3 ft of storm surge inundation above ground level (AGL) along the southern coast of Puerto Rico. The hurricane caused catastrophic flooding. Many locations received 8-16 inches of rainfall during the event and higher rainfall totals over sections of southern and eastern portions of Puerto Rico. There were numerous observations of over two feet of rainfall, and a total maximum of 32.40 inches of rain reported by the United States Geological Survey (USGS) rain gauge along the Rio Cerrillos near Ponce.[3]

Major Disaster Declaration DR-4649-PR & HUD CDBG-DR Allocation

The unusual climate instability in 2022 started with a frontal boundary, and an associated deep moisture moved over Puerto Rico on Friday, February 4th. This atmospheric condition developed a low-level moisture over northeast Puerto Rico including the San Juan Metro area, producing rainfall accumulations of 1 to 3 inches. Additionally, rain that developed early in the week led to locally high rainfall totals, causing more than 4 inches of rainfall in some areas of San Juan, Carolina, Vega Alta and Vega Baja. An upper-level feature combined with the

[3] https://www.nhc.noaa.gov/data/tcr/AL072022_Fiona.pdf

remnants of the front developed another round of heavy rainfall. The convergent flow at low levels caused the higher moisture band to remain over northeastern Puerto Rico, leading to precipitation that resulted in prolonged periods of heavy rainfall with accumulations of 10 inches in some areas (Fig. 1).[4]

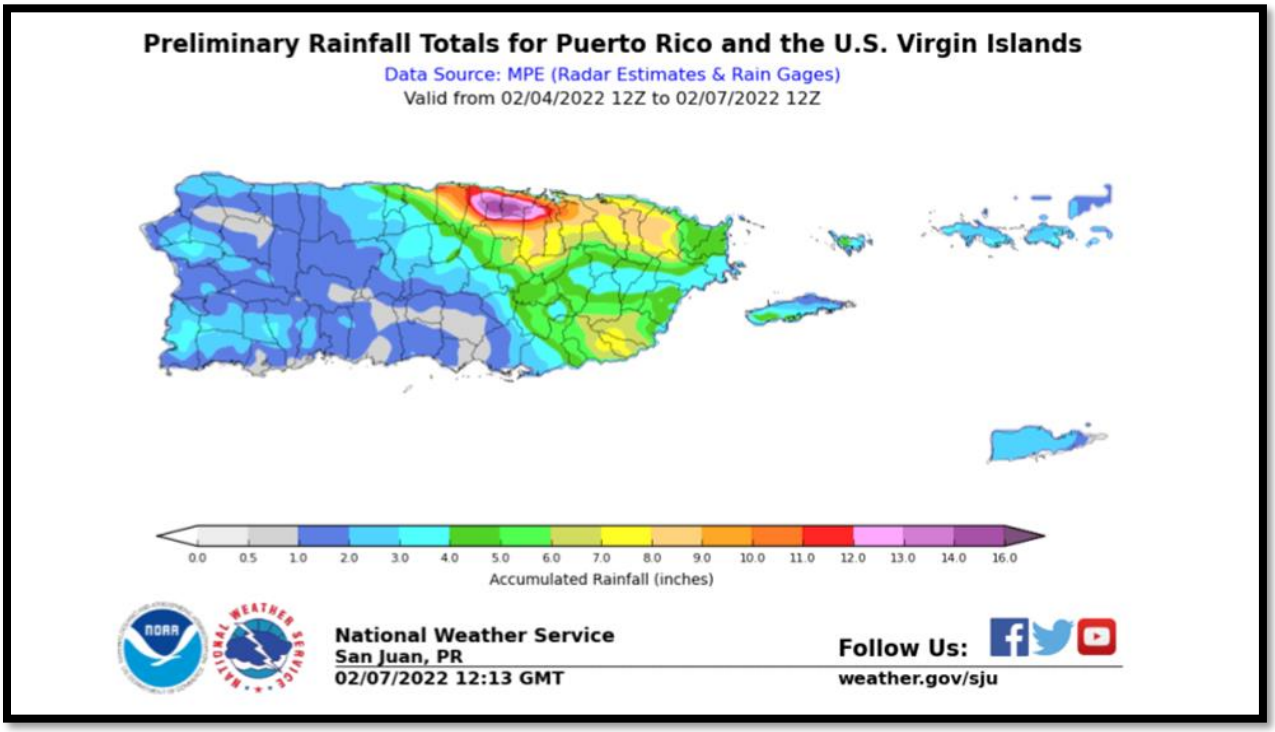

Figure 1: Rainfall estimates for the main rainfall event in February, where over 12 inches of rain were registered over north central Puerto Rico.

On March 8, 2022, the Governor of Puerto Rico Pedro R. Pierluisi requested a major disaster declaration due to the severe storm, flooding, and landslides that affected Puerto Rico between February 4 and 6, 2022. The Governor requested a declaration for FEMA's Individual Assistance (IA) for seven municipalities and FEMA's Hazard Mitigation Assistance (HMA) for the entire island.[5] On March 29, 2022, Joseph R. Biden President of the United States, declared that a major disaster impacted the Commonwealth of Puerto Rico. This declaration made the IA requested by the Governor available to affected individuals and households in the municipalities of Cataño, Dorado, Toa Baja, Vega Alta, and Vega Baja. Moreover, this declaration also made FEMA's Hazard Mitigation Grant Program

[4] https://www.weather.gov/media/sju/climo/monthly_reports/2022/2022.pdf
[5] https://www.fema.gov/sites/default/files/documents/PDAReport_FEMA4649DR-PR.pdf

(HMGP) assistance requested by the Governor available for hazard mitigation measures for the entire commonwealth.

Public Law 117-180 and 117-328 appropriated $166,312,000 through the CDBG-DR Program. The assigned funds are intended to address unmet needs assessment for selected 2022 disasters and provide any remaining funds to support mitigation activities. As per Federal Register 88 FR 32046, the Municipalities of Salinas, Añasco, Arecibo, Barranquitas, Cabo Rojo, Caguas, Canóvanas, Dorado, Guayama, Hormigueros Humacao, Juana Diaz, Lajas, Las Piedras, Naranjito, Orocovis, Ponce, San Lorenzo, Santa Isabel, Toa Baja, Vega Baja, Yabucoa, and Yauco were the HUD-identified MID Areas, and these were required to be given funding priority in the recovery from the Floods, landslides and Hurricane Fiona.

Figure 2: Cataño, Puerto Rico, February 9, 2022.[6]

[6] https://www.fema.gov/sites/default/files/photos/fema_dr-4649-pda-catano-3.jpg

Major Disaster Declaration DR-4671-PR & Second HUD CDBG-DR Allocation

On September 17, 2022, Hurricane Fiona brought catastrophic flooding for several regions of Puerto Rico. Due to the significant amount of rain, the drought was erased across all Puerto Rico. Aside from rain, very warm temperatures persisted, and nine heat advisories, as well as one first ever Extreme Heat Warning were issued in September (Fig.3).[7]

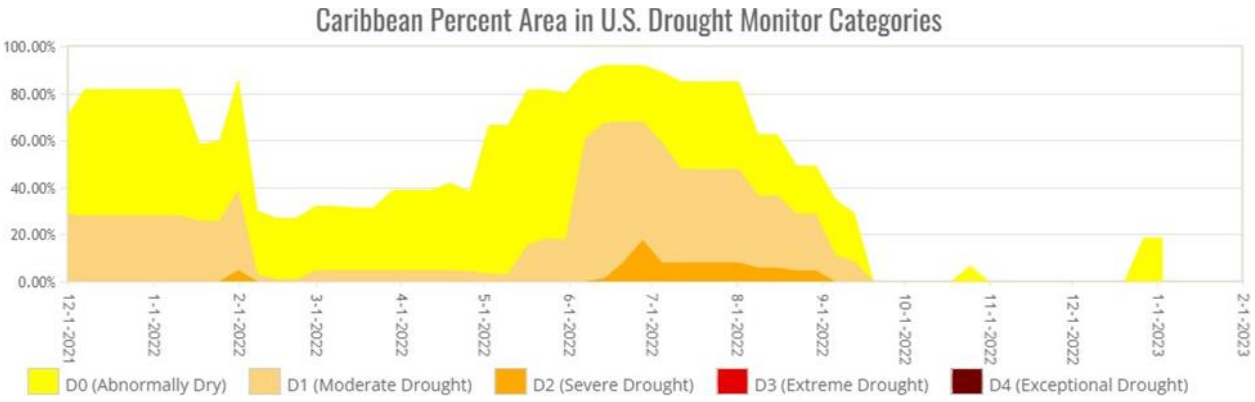

Figure 3: Time series of drought conditions across the island. Worst classifications from June to August 2022.

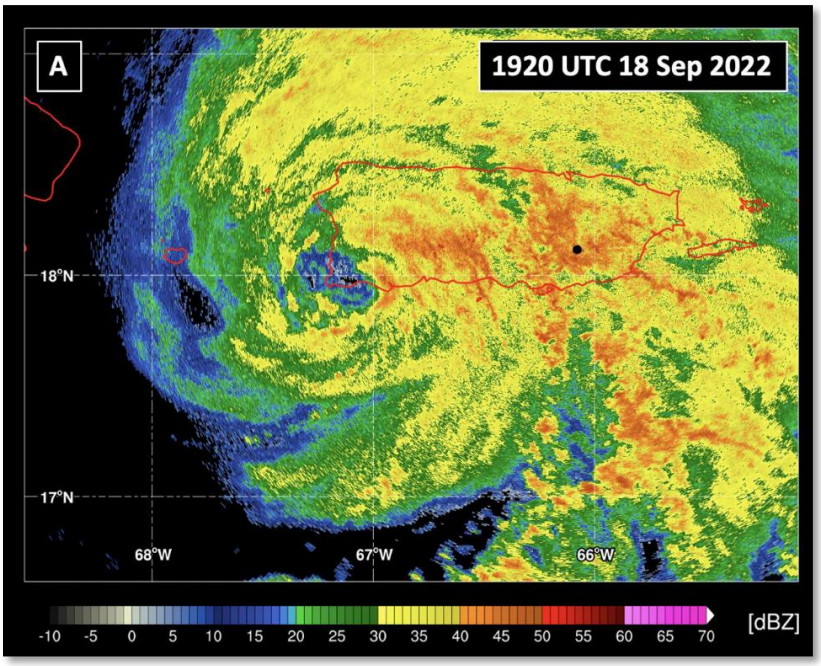

Figure 4: Radar images of Hurricane Fiona at landfall in Puerto Rico. Courtesy of NWS San Juan, National Hurricane Center Tropical Cyclone report.

[7] https://www.weather.gov/media/sju/climo/monthly_reports/2022/2022.pdf

On September 20, 2022, Governor Pedro R. Pierluisi requested an expedited major disaster declaration due to Hurricane Fiona. The Governor also requested a declaration for FEMA's IA and Public Assistance (PA) for all 78 municipalities and FEMA's HMA for the entire island. On September 21, 2022, President Joseph R. Biden declared that a major disaster impacted the Commonwealth of Puerto Rico. This declaration made FEMA's IA requested by the Governor available to affected individuals and households in the municipalities of Adjuntas, Aguas Buenas, Aibonito, Arroyo, Barranquitas, Bayamón, Caguas, Canóvanas, Carolina, Cataño, Cayey, Ceiba, Ciales, Cidra, Coamo, Comerío, Corozal, Dorado, Fajardo, Florida, Guayama, Guayanilla, Guaynabo, Gurabo, Humacao, Jayuya, Juana Díaz, Juncos, Lares, Las Piedras, Luquillo, Maricao, Maunabo, Morovis, Naguabo, Naranjito, Orocovis, Patillas, Peñuelas, Ponce, Río Grande, Salinas, San Juan, San Lorenzo, Santa Isabel, Toa Alta, Toa Baja, Trujillo Alto, Utuado, Vega Alta, Vega Baja, Vieques, Villalba, Yabucoa, and Yauco.

Figure 5: Homes flooded in Salinas, PR. Source: Alejandro Granadillo – Associated Press.

This declaration also made assistance for debris removal and emergency protective measures (Categories A and B), including direct Federal assistance, available under the Public Assistance program for all 78 municipalities. Finally, this

declaration made FEMA's HMGP assistance requested by the Governor available for hazard mitigation measures for the entire island.[8]

Summary

Both of these disaster events arrived at a time where all seventy-eight (78) Municipal governments were still recovering from the impacts of hurricanes Irma and María. For those in the Southwest region, Fiona was the third disaster declaration in five years. Six (6) municipalities are still addressing the aftermath of the 2019-2020 seismic events. Moreover, because of the economic conditions in the island, municipalities lack the financial resources to rebuild or enhance infrastructure vital to community recovery and revitalization.

[8] https://www.fema.gov/sites/default/files/documents/PDAReport_FEMA4671DRexpedited-PR.pdf

CDBG-DR FUNDS
CDBG-MIT FUNDS

UNMET NEEDS ASSESSMENT

DEPARTMENT OF HOUSING

Unmet Need and Proposed Allocation

Category	Remaining Unmet Need	% of Unmet Need	Program Allocation Amount	% of Program Allocation
DR Infrastructure			$137,388,050	95%
MIT Set-aside			$20,608,350	95%
Total			$157,996,400	100%

Table 1: Unmet need and Proposed Allocation

***Allocation Amount includes project delivery costs and does not include administration and planning costs.**

2. Unmet Needs Assessment

Overview

HUD Identified Most Impacted and Distressed Areas

HUD uses the best available data to identify and calculate unmet needs for disaster relief, long-term recovery, restoration of infrastructure, and housing and economic revitalization. For the major disaster declarations DR-4649-PR and DR-4671-PR, the methodology for the identification of the MID Areas detailed in 88 FR 32046 as of May 18, 2023, indicated that HUD designation is based on an analysis of FEMA and SBA data. As a result, HUD identified the Municipalities of Salinas, Añasco, Arecibo, Barranquitas, Cabo Rojo, Caguas, Canóvanas, Dorado, Guayama, Hormigueros, Humacao, Juana Diaz, Lajas, Las Piedras, Naranjito, Orocovis, Ponce, San Lorenzo, Santa Isabel, Toa Baja, Vega Baja, Yabucoa, and Yauco as MID Areas, and were required to be given funding priority in the recovery from the disasters (fig.6).

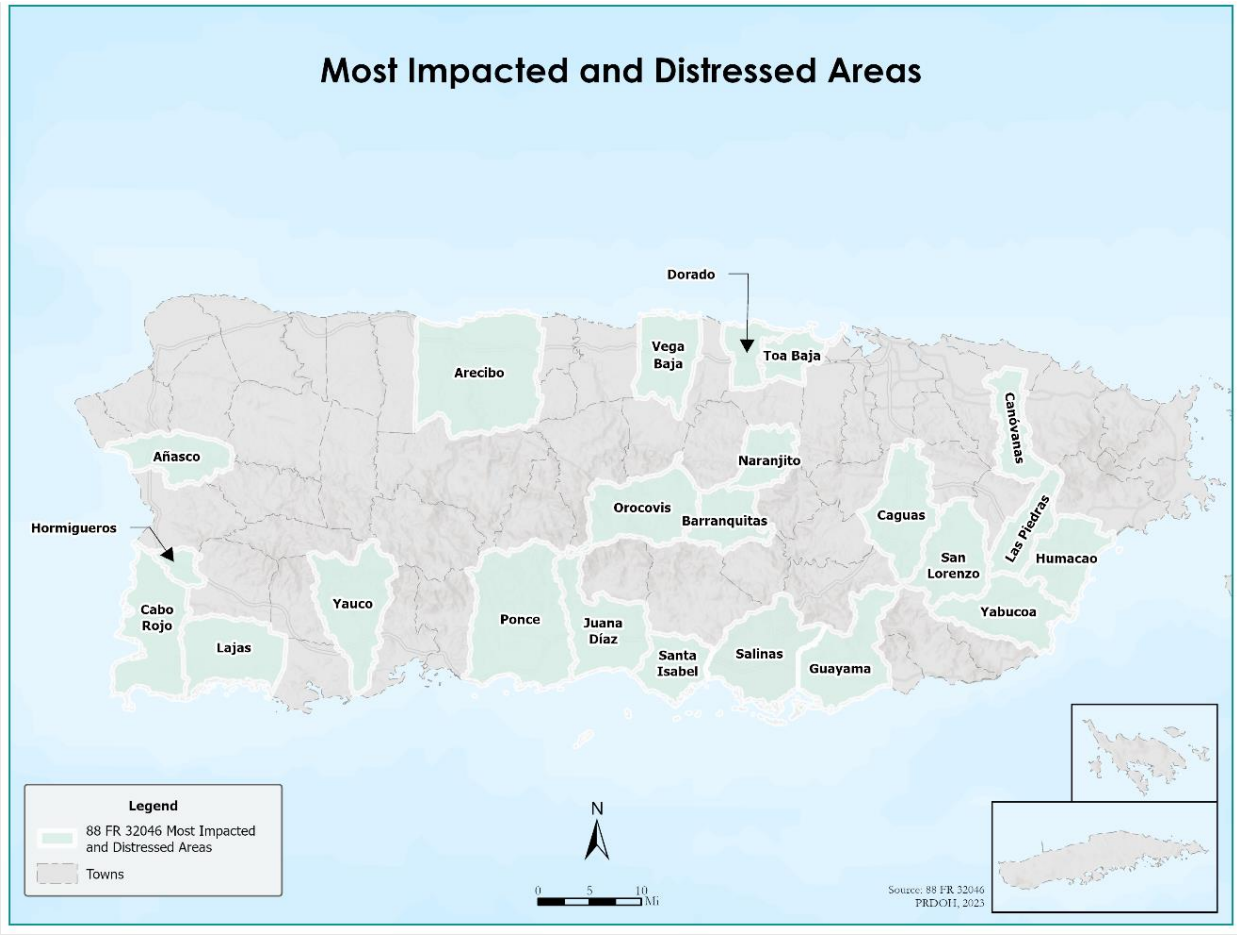

Figure 6: 88FR 32046 First MID Area designation.

On December 1, 2023, HUD approved an expansion of the MID Area for the DR-4649-PR and DR-4671-PR requested by PRDOH. This expansion added twenty-five (25) municipalities to the original HUD MID Areas, including Adjuntas, Aguada, Aguadilla, Aibonito, Barceloneta, Bayamón, Carolina, Cataño, Cidra, Coamo, Comerío, Guayanilla, Isabela, Jayuya, Juncos, Mayagüez, Moca, Patillas, Peñuelas, Rincón, San Germán, San Juan, Toa Alta, Utuado, and Vega Alta. Based on this assessment, and as per the Federal Register Notice, no less than $133,049,600 must be expended for unmet recovery needs in the MID Areas, identified in (fig.7).

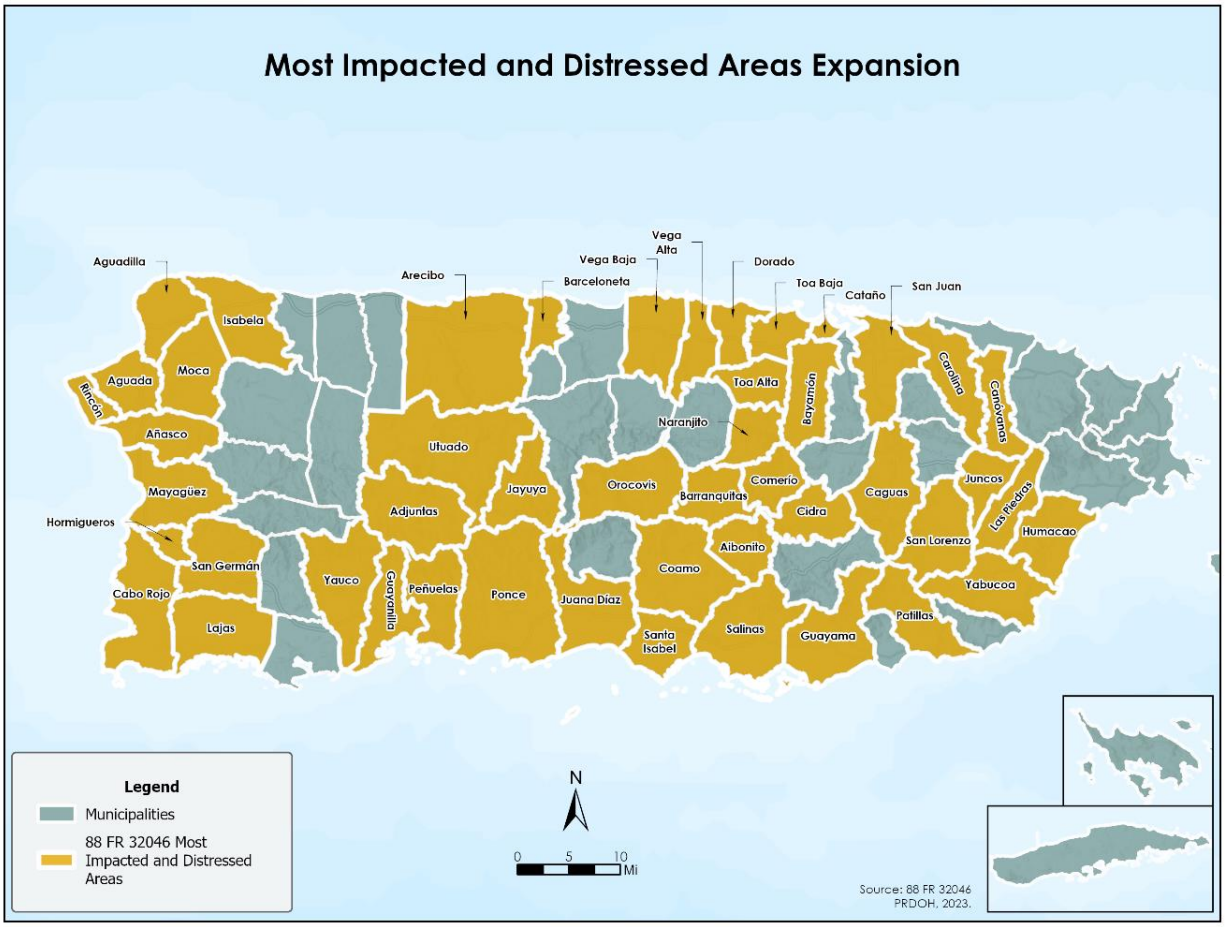

Figure 7: 88FR 32046 expanded MID Area.

PRDOH has analyzed the best available data which includes reviewing planning, housing, and infrastructure efforts during the period of both disaster events and the following year. The efforts summarize hundreds of outreach and citizen participation strategies at the community level. These range from focal groups, surveys, participatory mapping exercises and public discussions. One of the main problems identified in relation to unmet needs data availability is that, due to situations that occurred after Hurricane María with disaster recovery assistance, there was a lot of confusion as to who could claim damages and under what conditions. Considering many citizens did not receive the requested aid that they expected from Hurricane María, it is our understanding that citizens may have been discouraged to report damages from the impact of the 2022 disasters. Moreover, an example of the unmet needs data gap is linked with the necessity of legitimizing home-owner titles in areas impacted by the hurricane, which proves to be a recurring challenge for thousands of residents who still present situations of inheritance/heirs (over thirty 30%) of applications received in

the CDBG-DR Title Clearance (**TC)** Program. Aware of these issues, PRDOH continues to assist thousands of citizens around the island that lack a title to be eligible for federal assistance.

The TC Program has received a total of 14,406 cases; 9,931 referrals from the Home Repair, Reconstruction or Relocation (**R3**) Program, and 4,475 direct requests. There is a variety of reasons that limit the ability of granting a title, such as: missing or unknown heirs, or internal/family conflicts that end up without cooperation. A considerable number of cases present situations of lack of clearly defined property dimensions with land surveys, added to the fact that, after the deaths of ancestors, the family members continued to divide the land and build without permits, clearly defining property limits and required distances, among others. These situations make eventual approvals of the land survey plans difficult, which are the products that the TC Program manages. Moreover, PRDOH has not been able to support thousands of citizens that enter directly into the TC Program, if it is determined that the property is in a flood zone. Although PRDOH is requesting HUD the ability to address these cases through a substantial amendment to the Action Plan, actual and future planning and infrastructure efforts are envisioned at closing this gap. To date, 667 property titles have been granted, 260 have been determined to be unreachable and 500 are currently under evaluation for closure for this reason, for a total of 1,979 cases that have been closed.

PRDOH believes that beyond proposing specific projects or programs, it is important to understand the conditions of existing infrastructure that affect communities in order to improve, comprehensively, the constraints that limit recovery and mitigation efforts. Recent CDBG-DR Planning efforts at the community level by PRDOH have provided inclusive and participatory planning processes focused on existing community vulnerabilities and needs, through the Whole Community Resilience Planning (**WCRP**) Program.[9] The Community Resilience Plans (**CRPs**) under development as part of the WCRP Program will help identify and prioritize resilience actions in order to reduce the communities' vulnerabilities, strengthen their capabilities and mitigate future risks.[10] There have

[9] WCRP mapping tools, Interactive Social Capital Maps and the Interactive Vulnerability and Risk Maps can be found at: https://recuperacion.pr.gov/wcrp/tools.html

[10] WCRP program education modules can be found at: https://recuperacion.pr.gov/wcrp/education-module1.html

been over 200 engagement meetings across twenty-nine (29) Municipalities for the seventy-nine (79) participating communities between November 2022 and January 2024, in which the community has had a leading role in the data collection process. With the WCRP data collection program and planning process, the communities have been highlighting issues of emergency management needs and the physical accessibility of vulnerable citizens during disasters and floods due to rain, among others.

Moreover, the Municipal Recovery Planning (**MRP**) Program created to respond to current and future municipal needs has provided funding to municipalities to carry out planning activities that address the conditions created or exacerbated by natural disasters. The planning process in MRP culminates with the preparation of Recovery Plans that serve as a guide to develop resilient communities in the municipalities of Puerto Rico. To carry out the planning activities set fourth for the MRP Program, seventy-seven (77) Municipalities signed an initial Subrecipient Agreement (**SRA**) with the PRDOH between December 17, 2020 and February 14, 2022. Since November 2021, the MRP Program has facilitated over 166 community meetings across the island in order to document existing needs and vulnerabilities.

The Municipal Recovery Plans published in the PRDOH website detail information related to critical infrastructure and individual assistance needs such as impacted roads, bridges and homes flooded by the Hurricane Fiona or Severe Storm, Flooding and Landslides disasters related to this allocation.[11] 47 out of 48 Municipalities included in the expanded MID Area participated in the MRP program. Based on the progress of their planning activities at the time (period after the disaster), twenty-eight (28) municipalities had the opportunity to present relevant and valuable information for this Action Plan development (detailed in Table 2). Each MRP contain an Operational Plan as well as community profiles which present data that can be related to issues, activities, and other critical needs:

- water control and management;
- acquisition of properties to channel community waters along with stormwater drainage;

[11] Drafts and approved MRP Plans can be found at: https://recuperacion.pr.gov/en/municipal-recovery-planning/

- installation of pump stations that can support discharge to nearby rivers for flood control and mitigation;
- mitigation measures for landslides and erosion;
- increasing water reservoir reforestation activities; and
- integrating green infrastructure mitigation actions into new constructions.

These CDBG-DR Planning Program efforts have highlighted the impact of Hurricane Fiona, detailing how the most significant damages were related to the resulting floods and landslides. Moreover, additional CDBG-DR Planning Program efforts from the Regional Planning Phase and Individual and Specialized Planning Analysis Phase of the MRP Program include six (6) of the forty-eight (48) Municipalities of the expanded MID Area which have submitted proposals with specific strategies related to flood risk management, which may result in future flood recovery and mitigation projects.

Municipality	Municipal Recovery Plan Status	Planning Phase Period
Adjuntas	Approved by PRDOH	03/15/2022 - 03/18/2023
Aguada	Approved by PRDOH	03/11/2022 - 03/30/2023
Aguadilla	Approved by PRDOH	09/09/2022 - 05/31/2023
Aibonito	Approved by PRDOH	08/27/2021 - 09/30/2022
Arecibo	In Process (3/4 Documents Approved)	12/16/2022 -
Añasco	Approved by PRDOH	03/24/2022 - 06/29/2023
Barceloneta	Approved by PRDOH	03/03/2022 - 06/23/2023
Barranquitas	Approved by PRDOH	11/03/2021 - 08/31/2022
Bayamón	Did not participate in Program	N/A
Cabo Rojo	In Process (0/4 Documents Approved)	08/09/2022 -
Caguas	Approved by PRDOH	10/03/2022 - 10/27/2023

Municipality	Municipal Recovery Plan Status	Planning Phase Period
Canóvanas	Approved by PRDOH	06/08/2022 - 12/30/2023
Carolina	In Process (3/4 Documents Approved)	12/06/2022 -
Cataño	Approved by PRDOH	08/27/2021 - 09/25/2023
Cidra	Approved by PRDOH	03/14/2022 - 07/17/2023
Coamo	Approved by PRDOH	05/03/2022 - 09/19/2023
Comerío	Approved by PRDOH	10/26/2021 - 08/31/2022
Dorado	Approved by PRDOH	08/27/2021 - 09/30/2022
Guayama	Not started	Not started
Guayanilla	Approved by PRDOH	02/10/2022 - 04/28/2023
Hormigueros	Approved by PRDOH	04/13/2022 - 05/01/2023
Humacao	Approved by PRDOH	02/04/2022 - 05/31/2023
Isabela	In Process (3/4 Documents Approved)	11/15/2022 -
Jayuya	Approved by PRDOH	10/04/2022 - 12/30/2023
Juana Diaz	Approved by PRDOH	02/09/2022 -06/16/2023
Juncos	Approved by PRDOH	04/27/2022 - 08/30/2023
Lajas	Approved by PRDOH	03/04/2022 - 07/31/2023
Las Piedras	Approved by PRDOH	01/25/2022 - 02/28/2023
Mayagüez	In Process (3/4 Documents Approved)	06/06/2022 -
Moca	Approved by PRDOH	03/11/2022 - 04/28/2023
Naranjito	Not started	Not started
Orocovis	Approved by PRDOH	10/14/2021 - 09/30/2022

Municipality	Municipal Recovery Plan Status	Planning Phase Period
Patillas	Approved by PRDOH	03/17/2022 - 05/01/2023
Peñuelas	Approved by PRDOH	03/25/2022 - 07/19/2023
Ponce	In Process (3/4 Documents Approved)	08/01/2022 -
Rincón	Approved by PRDOH	04/08/2022 - 04/24/2023
Salinas	In Process (2/4 Documents Approved)	08/18/2022 -
San Germán	Approved by PRDOH	09/20/2021 - 11/30/2022
San Juan	In Process (2/4 Documents Approved)	12/21/2022 -
San Lorenzo	Approved by PRDOH	02/04/2022 - 02/19/2023
Santa Isabel	Approved by PRDOH	02/17/2022 - 07/19/2023
Toa Alta	In Process (3/4 Documents Approved)	11/22/2022 -
Toa Baja	In Process (3/4 Documents Approved)	05/23/2023 -
Utuado	In Process (0/4 Documents Approved)	08/02/2022 -
Vega Alta	In Process (2/4 Documents Approved)	02/15/2023 -
Vega Baja	I In Process (1/4 Documents Approved)	06/23/2023 -
Yabucoa	Approved by PRDOH	10/20/2021 - 11/30/2022
Yauco	Approved by PRDOH	01/31/2022 - 03/10/2023

Table 2: MID Area Municipal Recovery Plan status and MRP Individual Municipal Planning phase period as of January 2024.

a. Housing Unmet Need

Assessment Disaster DR-4649-PR Severe Storm, Landslides, and Floods

PRDOH has analyzed the best available data, which indicates approximately 1,156 registrations for FEMA's Individual Assistance (**IA**) Program. From 901 referrals, only 499 were approved for IA related to the declared disaster FEMA-4649-DR with an estimate damage within FEMA IA of $1,496,881.99. Furthermore, the housing assistance applications represented a total of $837,936.88 based on 834 referrals, with 229 approved applications. In data obtained from the OpenFEMA Dataset: Housing Assistance Program Data – Owners – v2 for Individual Assistance by FEMA's Enterprise Coordination & Information Management (**ECIM**) included 830 valid registrations. The average inspected damage by case was $34,252.33.

Moreover, a total of 710 inspected housing units received a valid registration, with a total damage of $1,329,145.49. Based on data obtained from the Small Business Administration (**SBA**), a total home damage of $5,807,148.33 verified loss was reported. This total includes real estate loss of $4,014,410.83 and content of $1,792,738.00. The total loans amount approved was $2,408,200.00, $1,673,100.00 for real estate and $733,226.13 for content. For this disaster, FEMA highlighted the municipalities of Vega Baja, Vega Alta, Dorado, Toa Baja and Cataño based on the disaster declaration (Fig. 8).

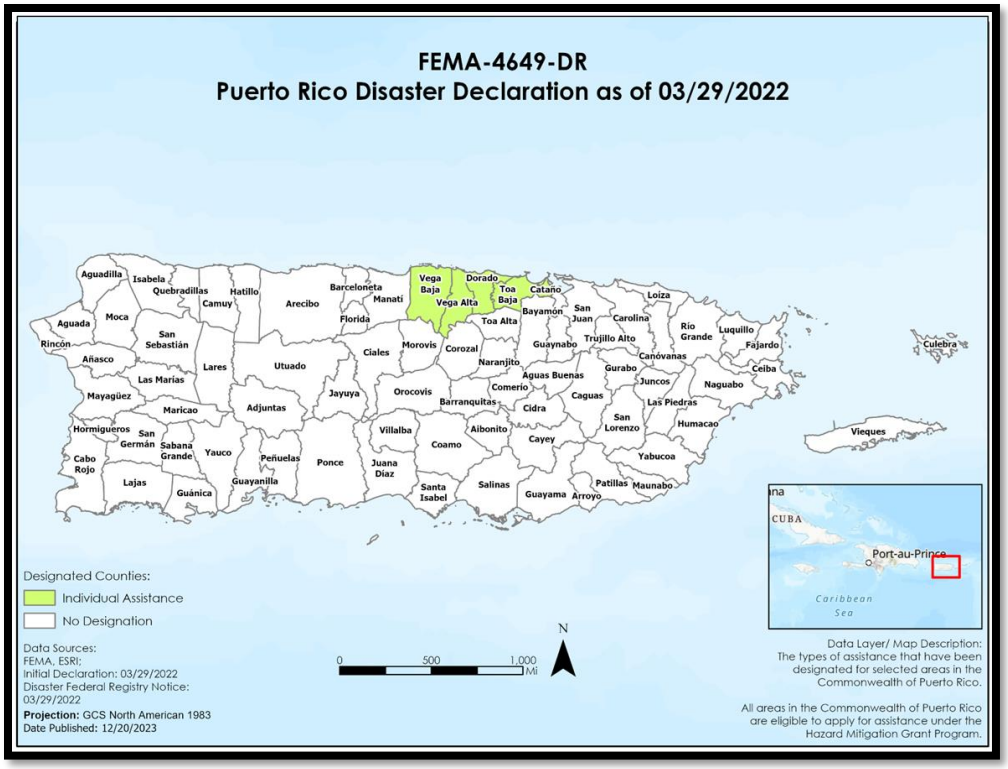

Figure 8: FEMA-4649-DR.

Assessment of Disaster DR-4671-PR (Hurricane Fiona)

PRDOH has analyzed the best available data, which indicates approximately 1,242,033 registrations for FEMA IA for this disaster. Of the 885,825 referrals, only 740,547 were approved for FEMA IA for the declared disaster FEMA-4671-DR with an estimate damage within FEMA IA of $647,510,365.79. Moreover, from 302,091 referrals, a total of 19,775 were approved totaling $72,355,108.60. For this disaster, FEMA obtained information from the 78 municipalities of the forty-eight 48 MID Areas selected by HUD (Fig.9). The total approved FEMA assistance of the inspected houses was 466,707, totaling $429,128,830.60. Moreover, based on data obtained by SBA, a total home damage of $117,134,458.70 verified loss was reported. This total includes real estate loss of $89,653,307.91 and content of $27,481,150.76. The total loans amount approved was $71,711,036.00, $56,194,499.00 for real estate and $15,484,647.48 for content.

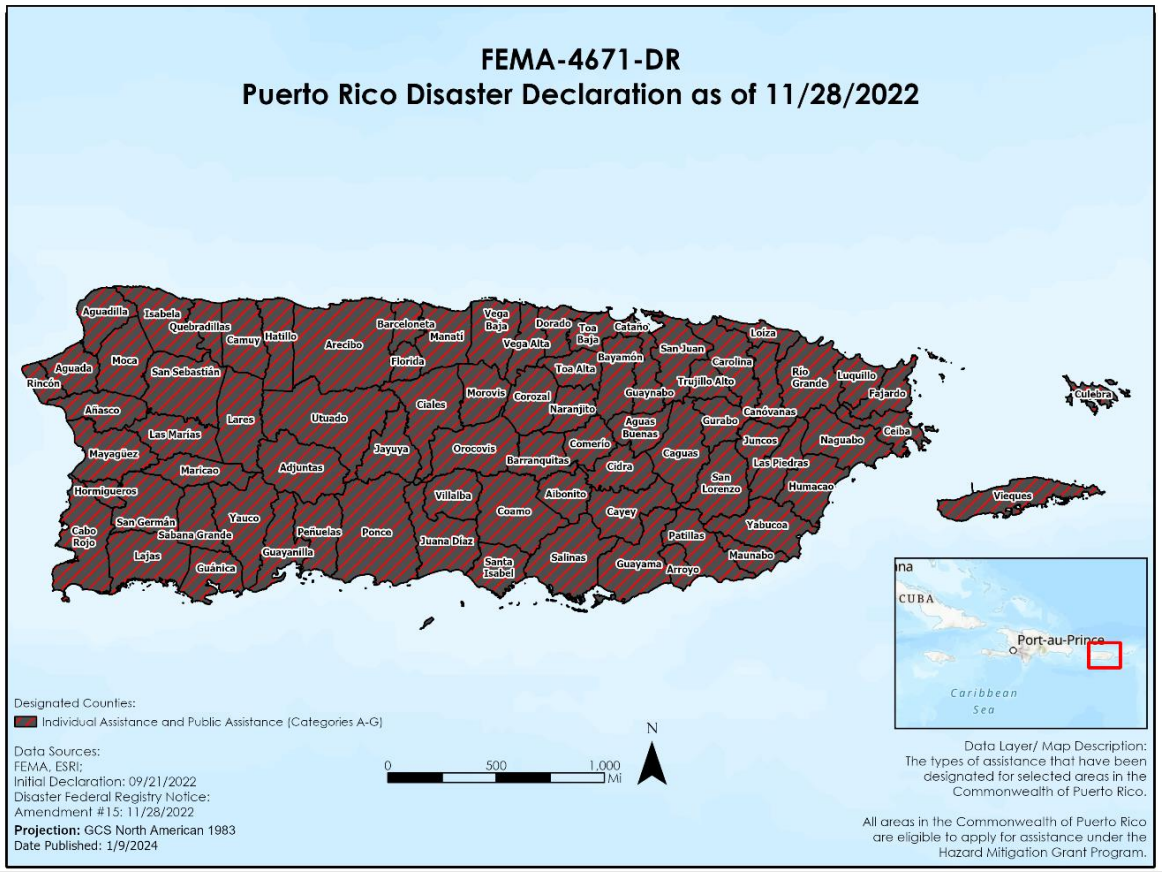

Figure 9: FEMA-4671-DR.

Disaster 4649 and 4671 Assessment

Using the best available information at the time, the 88 FR 32046 identified twenty-three (23) of Puerto Rico's seventy-eight (78) municipalities as MID areas. The Federal Register indicates that eighty percent (80%) of allocated funds be spent in these areas and provides an allocation methodology for calculating disaster impacts and unmet needs, identifying MID areas as those "counties" with more than $10 million in serious unmet housing needs or zip codes with more than $2 million of serious unmet housing needs. Serious unmet housing need is defined as the sum of: (1) Repair estimates for serious damaged owner-occupied housing units without insurance in most impacted areas after FEMA and Small Business Administration (**SBA**); (2) Repair estimates for seriously damaged rental units occupied by very low-income renters; (3) Repair and content loss estimates for small businesses with serious damage denied by SBA; and (4) The estimated local cost share for FEMA Public Assistance Category A – G projects.

PRDOH has utilized methodologies, based on HUD frameworks, and applied indicators to extrapolate impact for residents who may not have been fully evaluated in the initial assessments. Since data from prior disasters indicates that initial FEMA loss estimates often under-represent the full breadth of impact, either through unit counts or with loss estimates. PRDOH created an assessment with an analytic approach. This approach reproduces the Federal Register (FR) method for MID identification. With the summary of impacts to homeowners (without insurance) classified as major-low or greater damage, low-income renters, small businesses, and public infrastructure and use the methods provided in the FR. The minimal "Total FR Determined Unmet Needs" ($1,039,337) across all municipalities identified in the FR was used to appraise all other municipalities in terms of their total loss. This approach produced an additional twenty-five (25) municipalities with greater FR Unmet Need than those already identified as MID areas. A total of forty-eight (48) municipalities would be classified as MID using this approach. Using this approach, the repair estimates for seriously damaged (Major-Low, Major-High, Severe) owner-occupied units without insurance was $30,111,683. The repair estimates for seriously damaged rental units occupied by very low-income renters was $90,904,379. In addition, the repair and content losses estimate for small businesses with serious damage denied by SBA was $21,612,667. Moreover, the estimated local cost-share for Public Assistance Categories C-G was $20,463,688. The total FR determined Unmet Needs calculation by this approach to be $163,092,416.

Disaster Damage and Impacts

Disaster 4649 Severe Storm, Landslides, and Floods Impact

On February 4, 2022, a frontal boundary and an associated deep moisture moved over Puerto Rico producing rainfall accumulations of one (1) to three (3) inches. A saturated soil was observed in many areas, especially along the north coast of Puerto Rico and portions of the San Juan metro area. On Saturday February 4th and Sunday February 5th, a strong upper trough slowly moved southward over Puerto Rico providing a very unstable environment across the region. This upper-level feature combined with the remnants of the front lingering over the region supports the development of another round of heavy rainfall. The high moister band over northern Puerto Rico led to heavy rainfall on the western half of the metropolitan area on Saturday, February 5th. The accumulation of water ranged

between three (3) to six (6) inches with a maximum of ten (10) inches in some areas (Fig.10).[12]

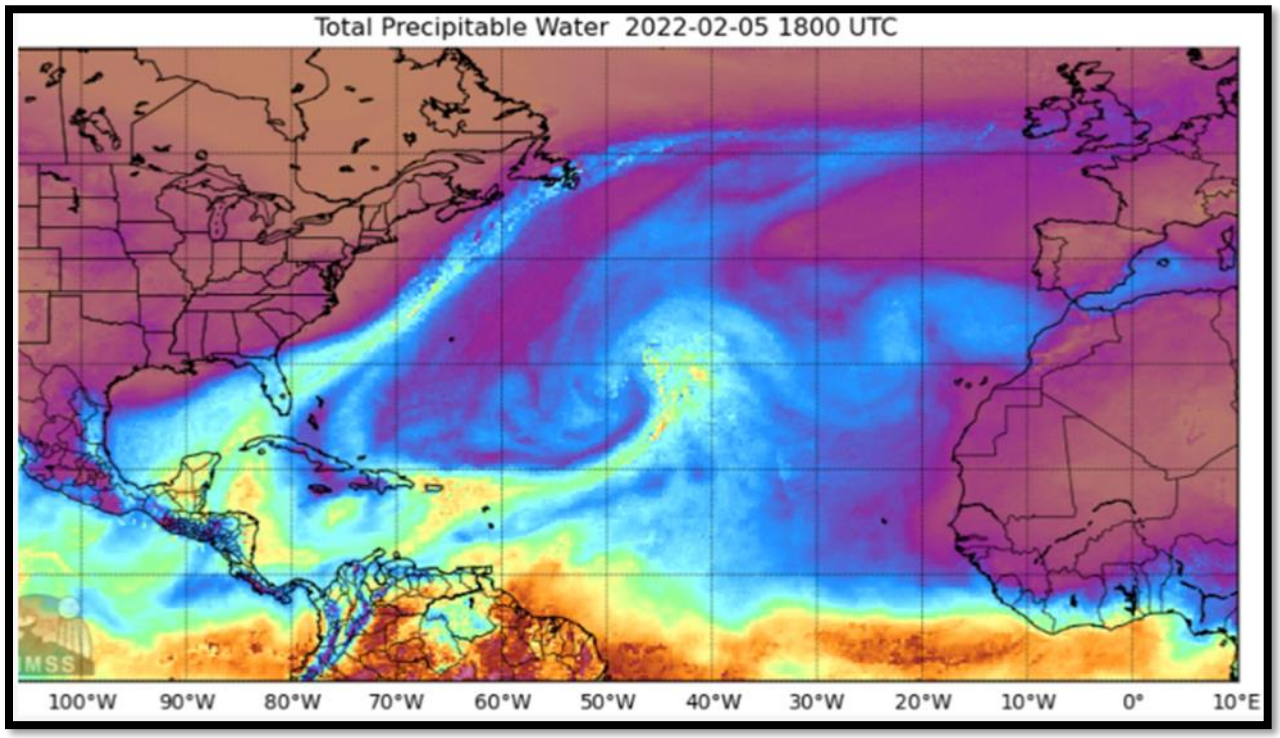

Figure 10: CIMSS Precipitable Water analysis on February 5th, 2022. Source: National Weather Service.

These atmospheric events affected the municipalities of Cataño and Toa Baja where several flooded houses were affected by the excessive runoff and poor drainage. Also, the municipalities of Dorado and Vega Alta reported urban areas flooded as well as landslides.

Disaster 4671 (Hurricane Fiona) Impact

On September 18, 2022, at 3:20 PM hurricane Fiona made landfall near Punta Tocón in Lajas Puerto Rico. Hurricane-force gusts were observed over portions of southern Puerto Rico during the afternoon on Sunday of September 18th. The greatest impacts were caused by the extreme rainfall, especially from southeeastern Puerto Rico. In areas along the Cordillera and around El Yunque, widespread rainfalls total more than sixteen (16) inches. Preliminary estimates suggest that more than two (2) feet of rain were seen, mostly around Cayey and

[12]https://www.weather.gov/sju/flashflood_feb2022#:~:text=One%20of%20the%20most%20affected,major%20roads%20impassable%20and%20landslides.

southern Caguas and Aibonito to southern Jayuya. Widespread flooding was reported, mostly in southern and central Puerto Rico. Numerous landslides were also reported throughout the affected areas of steep terrain. Moisture continued to be pulled across the archipelago through Monday September 19 into Tuesday September 20 with a total rainfall accumulation more than thirty (30) inches in Ponce, Caguas and San Lorenzo (Fig.11). [13]

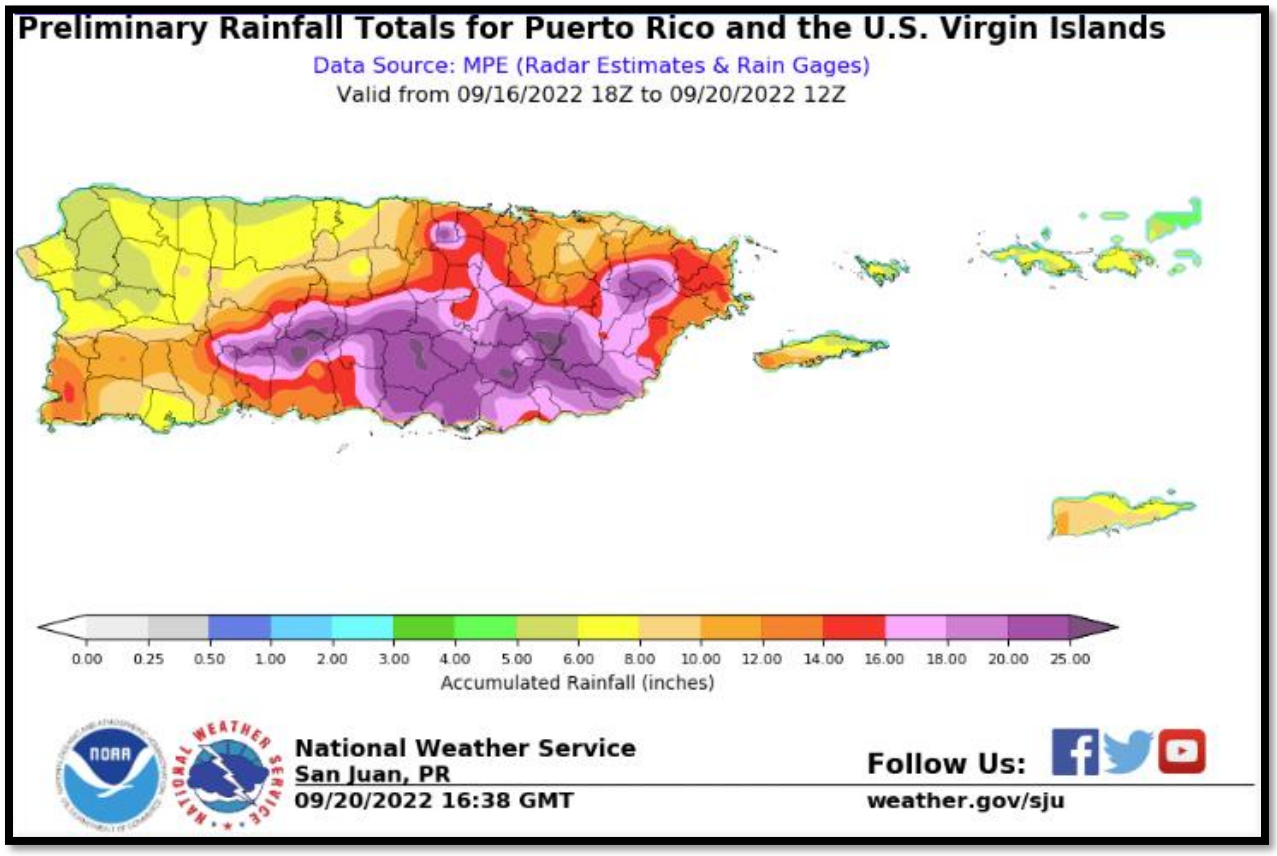

Figure 11: 72-hours rainfall accumulation associated with Hurricane Fiona. Source: National Weather Service.

Based on preliminary information from the US Geological Survey Stream Gage Network, fifty (50) out of 108 river gauges rose above the USGS-NWS flood stage. Most river gauges along Río Grande de Manatí, Río Cibuco, Río La Plata, Río Grande de Arecibo, Río Grande de Loíza, and Río Guanajibo rose above moderate or major flood stage. Across southern and southeastern portions of the island, significant catastrophic flooding was observed due to sharp rises along

[13] https://www.weather.gov/sju/fiona2022

rivers combined with storm surge/coastal flooding. Families were rescued in Salinas where a Flash Flood Warning with a catastrophic threat was issued (Fig.12).[14]

Figure 12: Local Storm Reports received during Hurricane Fiona by NOAA

A Flash flooding emergency was reported in Salinas, with the highest impact in sector El Coqui, Playa, and La Playita. Moreover, multiple communities were affected by the hurricane's significant landslides and rockfalls along the interior and southern portions of Puerto Rico, leaving over a dozen structures uninhabitable (Fig.13,14).

[14] https://www.weather.gov/sju/fiona2022

Figure 13: Destroyed home and infrastructure in Salinas near the Rio Nigua. Source: Gabriella N. Báez - NPR Network.

Figure 14: A house collapsed into a river in Guayama. Ricardo Arduengo - Reuters.

A total of 721 houses were affected by Hurricane Fiona in the Municipality of Ponce. Most of the damage were caused by winds, floods, and landslides in low to moderate areas of susceptibility to landslide, with some communities located near water resources. In addition, official information indicates that most of the houses were destroyed or partially damaged (Fig.15).

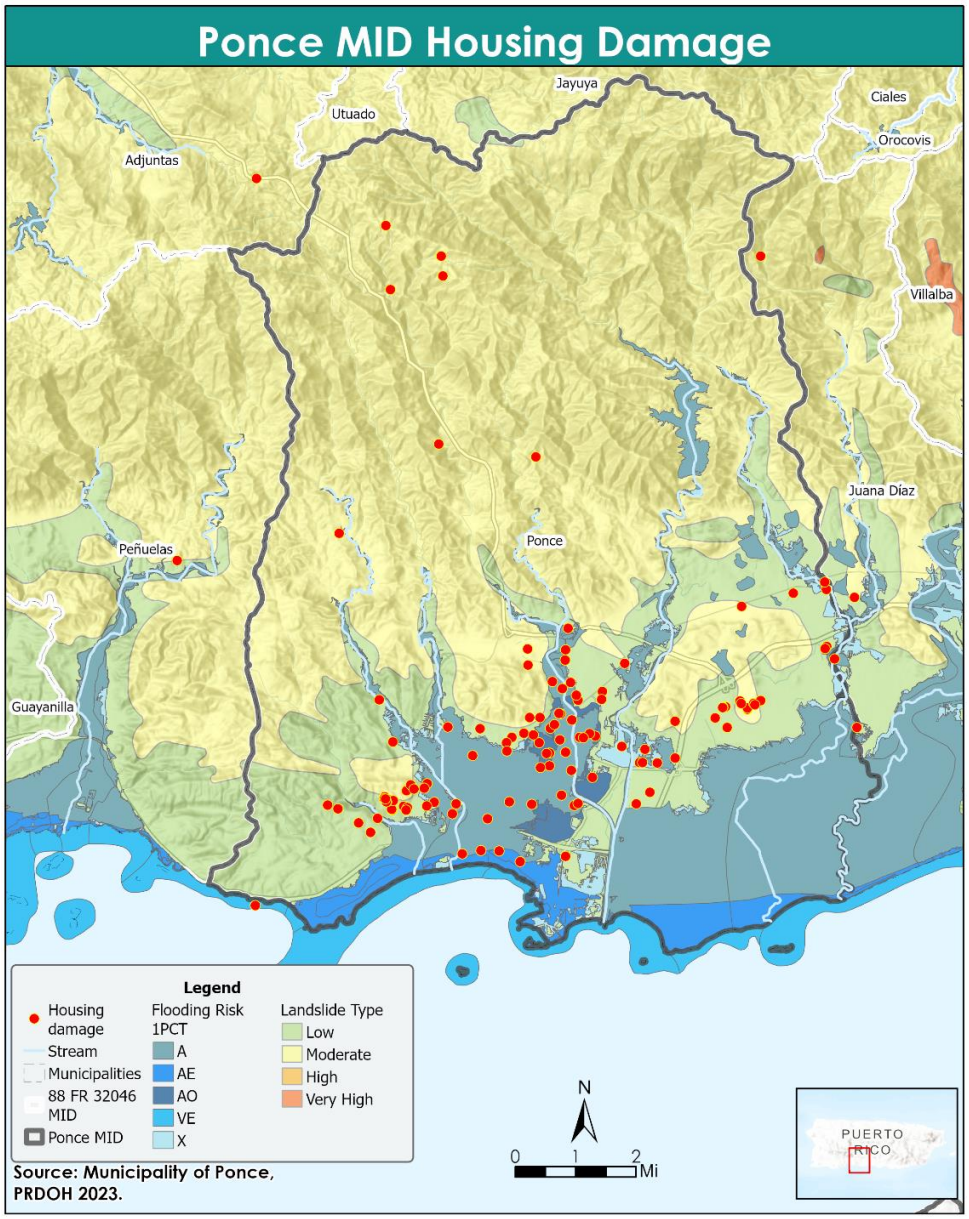

Figure 15: Ponce MID Housing Damage.

Moreover, the Municipality of Utuado reported a total of eighty-one (81) houses affected by the disaster. Most of the damage was caused by landslides

and flooding (**Fig.16**). As shown in the map, many of the houses are located near flood zones and rivers, located in low, moderate and high susceptibility to landslides.

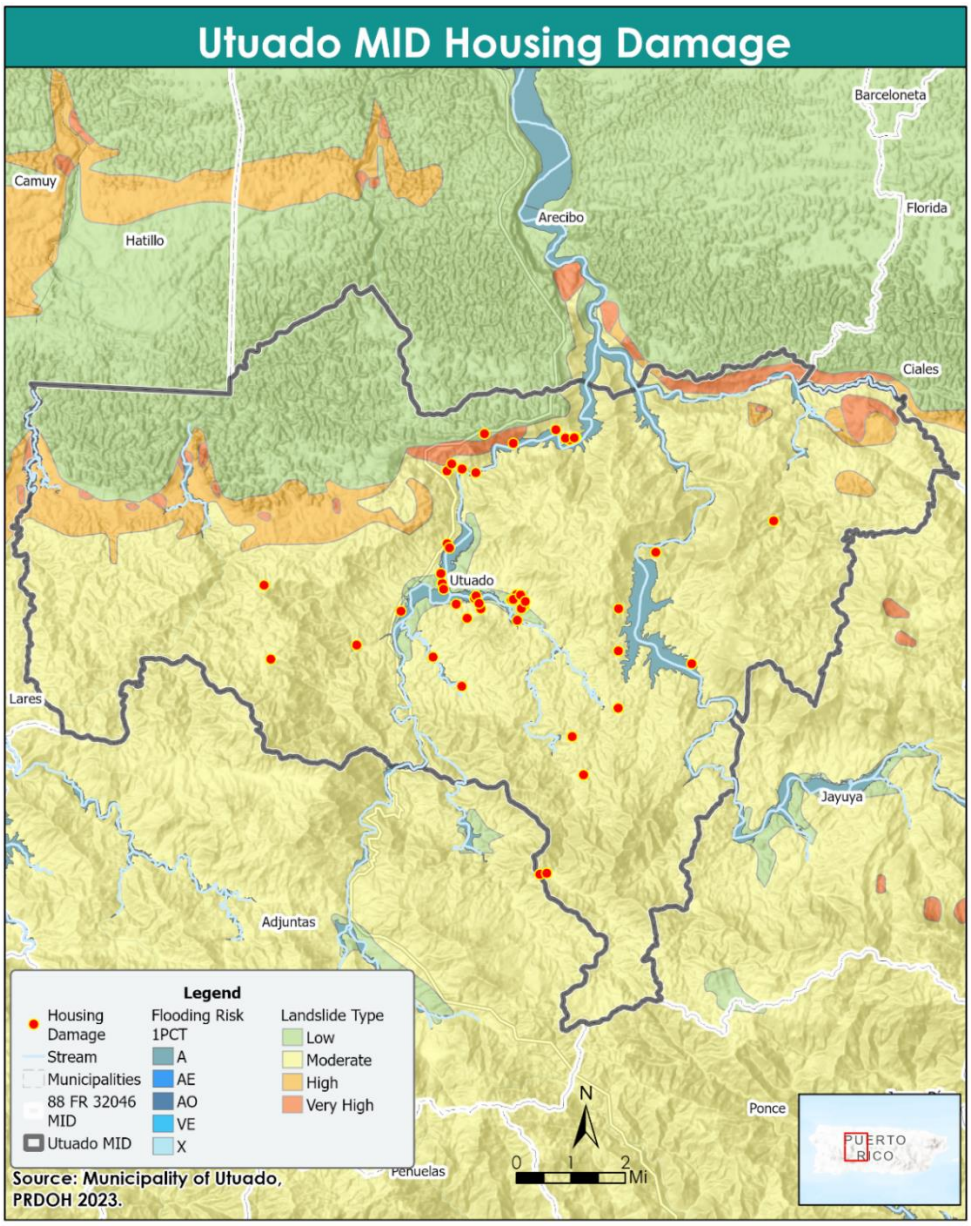

Figure 16: Utuado MID Housing Damage

Single Family v. Multi-Family Needs; Owner Occupied v. Tenant

FEMA's Individual Assistance Program Applications Owner Applicants vs. Rental Applicants

FEMA's IA data and Real Property Damage information provide the basis for analysis on unmet housing needs in the HUD identified MID areas by tenure. Across all MID areas for both 2022 disasters, there were a total of 1,243,189 applications for FEMA IA. Most FEMA's IA applications refer to Owner-occupied properties, which constitute almost seventy-percent (70%) of all applications; however, the total FEMA verified loss for Owner-occupied properties constitute thirty-eight (38%) of all FEMA verified loss. Many of the Owner-occupied properties applications located in the MID were from the municipalities of San Juan, Bayamón, Ponce, Caguas, Arecibo, Toa Baja, Vega Baja, Humacao and Cabo Rojo.

Municipality	Population 2022	Households 2022	Valid Owner Registrants	Owners with Damage	Valid Renters Registrants	Renters with Damage	Total Damage to Owners
Adjuntas	17,905	5,608	4,572	451	2,350	17	$1,356,754.56
Aguada	37,666	12,904	10,794	702	4,013	35	$996,406
Aguadilla	53,931	21,650	12,671	768	8,393	44	$1,221,307
Aibonito	24,555	8,995	6,217	633	3,158	19	$1,071,196
Arecibo	25,026	8,757	22,293	1,225	11,103	121	$2,297,157
Añasco	15,289	31,415	7,262	530	2,693	40	$1,474,565
Barceloneta	22,416	8,254	6,465	510	2,811	20	$753,573
Barranquitas	28,944	9,098	7,314	1,085	4,811	21	$2,421,909
Bayamóon	181,577	69,043	37,396	1,768	28,788	117	$2,636,562
Cabo Rojo	46,718	17,568	13,256	1,136	5,202	72	$2,245,478
Caguas	125,136	49,645	28,278	2,004	20,629	100	$3,256,098
Canóovanas	41,637	14,712	11,631	865	4,745	42	$1,902,083
Carolina	151,571	61,883	29,842	1,253	22,986	41	$1,176,749
Cataño	22,364	8,794	4,087	292	4,271	23	$646,080
Cidra	33,887	14,207	10,655	748	5,510	16	$1,341,822
Coamo	18,619	12,835	9,253	1,141	4,292	23	$1,286,600
Comerío	35,663	5,420	4,847	391	2,947	23	$750,920

Municipality	Population 2022	Households 2022	Valid Owner Registrants	Owners with Damage	Valid Renters Registrants	Renters with Damage	Total Damage to Owners
Dorado	12,800	11,950	8,428	569	3,732	37	$1,654,493
Guayama	35,262	14,427	9,496	1,068	4,903	60	$2,818,931
Guayanilla	15,413	6,327	5,372	530	1,798	21	$968,960
Hormigueros	49,924	6,139	4,185	425	1,921	65	$1,756,484
Humacao	42,754	18,206	14,140	1,308	7,130	94	$2,215,653
Isabela	14,495	14,843	11,062	590	4,830	35	$904,531
Jayuya	45,923	4,945	3,816	487	2,284	12	$1,134,164
Juana Díaz	36,672	15,574	12,472	1,383	4,200	50	$2,827,204
Juncos	22,936	13,145	10,378	859	4,798	44	$1,488,980
Lajas	34,814	8,210	6,842	619	2,374	40	$1,500,204
Las Piedras	70,609	12,219	9,859	896	4,301	46	$1,961,187
Mayagüez	37,279	29,343	15,470	1,343	14,834	89	$2,698,222
Moca	29,208	13,254	10,300	595	4,090	20	$848,657
Naranjito	21,229	8,536	7,736	585	3,739	37	$1,355,475
Orocovis	15,524	6,792	6,576	923	2,941	33	$2,940,685
Patillas	19,763	6,196	4,982	609	1,858	36	$1,691,545
Penuelas	132,138	6,939	5,956	576	2,018	23	$1,284,052
Ponce	15,316	52,977	34,770	3,719	21,904	185	$8,906,492
Rincón	25,000	5,679	3,943	374	1,593	8	$665,813
Salinas	31,174	9,721	8,492	1,629	3,129	187	$6,337,098
San Germán	334,776	11,560	8,325	511	3,827	20	$1,041,467
San Juan	37,260	147,044	48,131	2,008	73,401	139	$4,344,823
San Lorenzo	19,822	13,775	10,025	876	4,502	29	$2,159,307
Santa Isabel	66,041	7,230	6,025	958	2,241	81	$2,154,064
Toa Alta	72,783	22,568	15,246	750	6,260	24	$1,334,572
Toa Baja	27,535	28,155	18,351	1,576	10,338	265	$7,026,748
Utuado	34,786	10,326	7,857	782	4,087	40	$1,633,751
Vega Alta	53,684	12,599	9,017	576	4,146	28	$1,303,428
Vega Baja	29,305	20,098	14,903	1,108	7,264	74	$1,853,119

Municipality	Population 2022	Households 2022	Valid Owner Registrants	Owners with Damage	Valid Renters Registrants	Renters with Damage	Total Damage to Owners
Yabucoa	32,904	11,682	9,473	1,366	3,239	63	$3,590,681
Yauco	17,905	12,392	10,312	809	3,740	42	$1,663,754

Table 3: Comparative Assessment of Owner Impacts by Fiona and Severe Storms/Flooding. Source: Fema 2022 and PRDOH.

Public Housing and Affordable Housing

Ongoing efforts through PRDOH's CDBG-DR and CDBG-MIT active programs will support housing opportunities with up to date construction standards to mitigate household losses across the island**.** Figure 17 below depicts the locations of current projects under development for the CDBG-DR Gap for Low-Income Housing Tax Credits (**LIHTC**) Program as of December 2023 and overlays some of the HUD-identified MID areas. These Programs will continue providing support for the populations in need of affordable rental housing and the vulnerable populations housing needs.

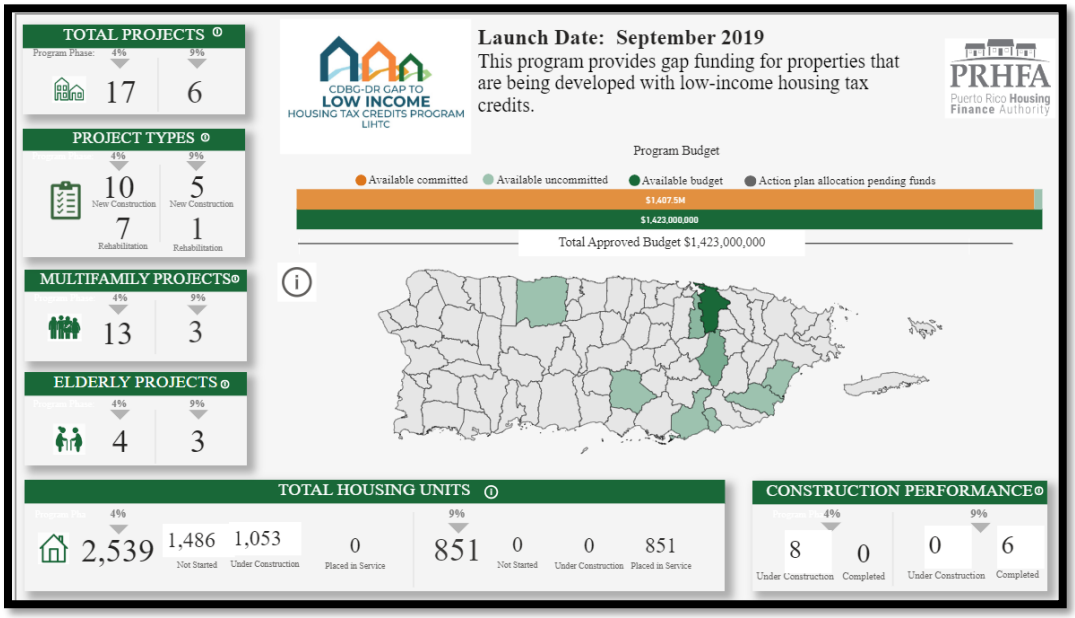

Figure 17: CDBG-DR Gap to Low Income Housing Tax Credits (LIHTC) Program projects.

The projects are distributed as follows;

- The Municipality of Arecibo has one (1) elderly project for a total of 120 housing units.

- The Municipality of San Juan has a total of eight (8) projects, six (6) multifamily housing projects and two (2) Elderly projects, for a total of 1,193 housing units.
- The Municipality of Caguas has three (3) projects, two (2) multifamily projects and one (1) elderly project, for a total of 648 housing units.
- The Municipality of Coamo has one (1) elderly project of 69 housing units.
- The Municipality of Guayama has one (1) multifamily project with a total of 123 housing units.
- The Municipality of Yabucoa has one (1) multifamily project for a total of 149 housing units.
- The Municipality of Humacao has one (1) elderly project with a total of 90 housing units.

As for the Social Interest Housing (**SIH**) Program focused on housing opportunities for the citizens with special needs, those who are homeless or victims of domestic abuse, forty (40) applications were received on the MIT version, with twenty-four (24) pre-selected. Figure 18 below depicts the locations of current projects under development.

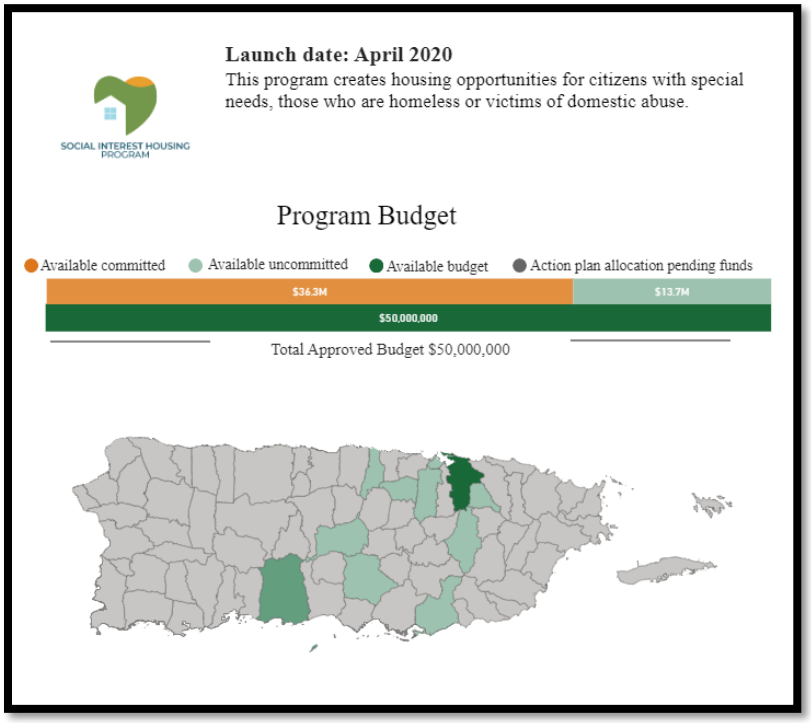

Figure 18: Social Interest Housing Program Projects.

Furthermore, the Single-Family Housing Mitigation (**SFM**) Program under the CDBG-MIT portfolio prioritizes mitigation assistance to families facing an immediate threat and whose homes have been rendered uninhabitable due to damage caused by recent disaster events or hazards. Table 4 below summarizes the fifteen (15) awarded projects with the total housing units for this initiative distributed across Functional Zones, as designated by the Puerto Rico Planning Board (PRPB).

REQUEST OF PROPOSALS No. CDBG-MIT-RFP-2022-04 Single-Family Housing Development Initiatives		
Municipality	**Allocated Funds**	**Amount of Units**
Añasco	$21,210,000.00	70
Barceloneta	$11,586,200.00	38
Bayamón	$22,265,000.00	73
Carolina	$18,605,000.00	61
Fajardo	$23,782,200.00	78
Guayama	$32,318,343.18	106
Humacao	$30,485,000.00	100
Juana Díaz	$25,364,769.29	83
Luquillo	$30,500,000.00	100
Naguabo	$30,430,000.00	100
Naguabo	$30,390,000.00	100
Naguabo	$52,805,000.00	179
Ponce	$30,500,000.00	100
Vega Baja	$27,922,000.00	92
Vega Baja	$30,500,000.00	100
	Total of Units - 1380 Total Amount of allocated funds - $418,663,512.47	

Table 4: Awarded projects for SFM.

Puerto Rico Public Housing Authorities Damaged

According to data provided by PRPHA, two (2) Public Housing Complex projects were reported to FEMA for disaster recover assistance related to Hurricane Fiona. The projects submitted as Category E – Buildings and Equipment are detailed below:

Public Housing Complex Dr. Pedro Palou

The public housing complex Dr. Pedro Palou, located in the municipality of Humacao, was impacted by Hurricane Fiona, resulting in the displacement and cracking of a 45-degree retaining concrete wall on the streambank of an adjacent creek. Moreover, site estimates for work to be completed summarized $384,199.30, detailing $287,681.60 as a base repair cost and $95,257.78 as soft repair costs.

Public Housing Complex Manuel Román Adames

The public housing complex Manuel Román Adames, located in the municipality of Camuy, was impacted by Hurricane Fiona, resulting in damages to LED Flood Lights of building exteriors, light fixtures, tilted walls due to strong winds and surface water flooding, and the detachment of rubber tiles due to surface water flooding. Moreover, site estimates for work to be completed summarized $40,138.53, detailing $31,639.92 as a base repair cost and $8,498.61 as soft repair costs.

Fair Housing, Civil Rights Data and Advancing Equity

CDBG-DR and CDBG-MIT funds can increase recovery, mitigation, and resilience through Program implementation that does not bring discrimination based on race, color, religion, sex, disability, familial status, or national origin.

PRDOH will consider the impact of planning decisions on racial, ethnic, and low-income concentrations. This may include utilizing mapping tools and data to identify racially or ethnically concentrated areas of poverty for the evaluation of possible impacts on those areas as well as to promote fair housing choice and foster inclusive communities. All this leveraging geospatial analysis on Puerto Rico's Racially and Ethnically Concentrated Areas of Poverty (R/ECAPs), developed as part of the CDBG-MIT Action Plan assessments.

HUD has developed a census tract-based definition of R/ECAPs across Puerto Rico. R/ECAPs must have a non-white population of fifty percent (50%) or more. Additionally, areas that have a poverty rate that exceeds forty percent (40%) or three (3) or more times the average tract poverty rate for the metropolitan/micropolitan area, whichever threshold is lower, are also considered R/ECAPs. Figure 19 below shows the Census tracts within the HUD-

Identified MID Areas' that are considered R/ECAPs, which illustrates how the distribution of R/ECAPs is aligned and significantly covers the HUD-identified MID areas.

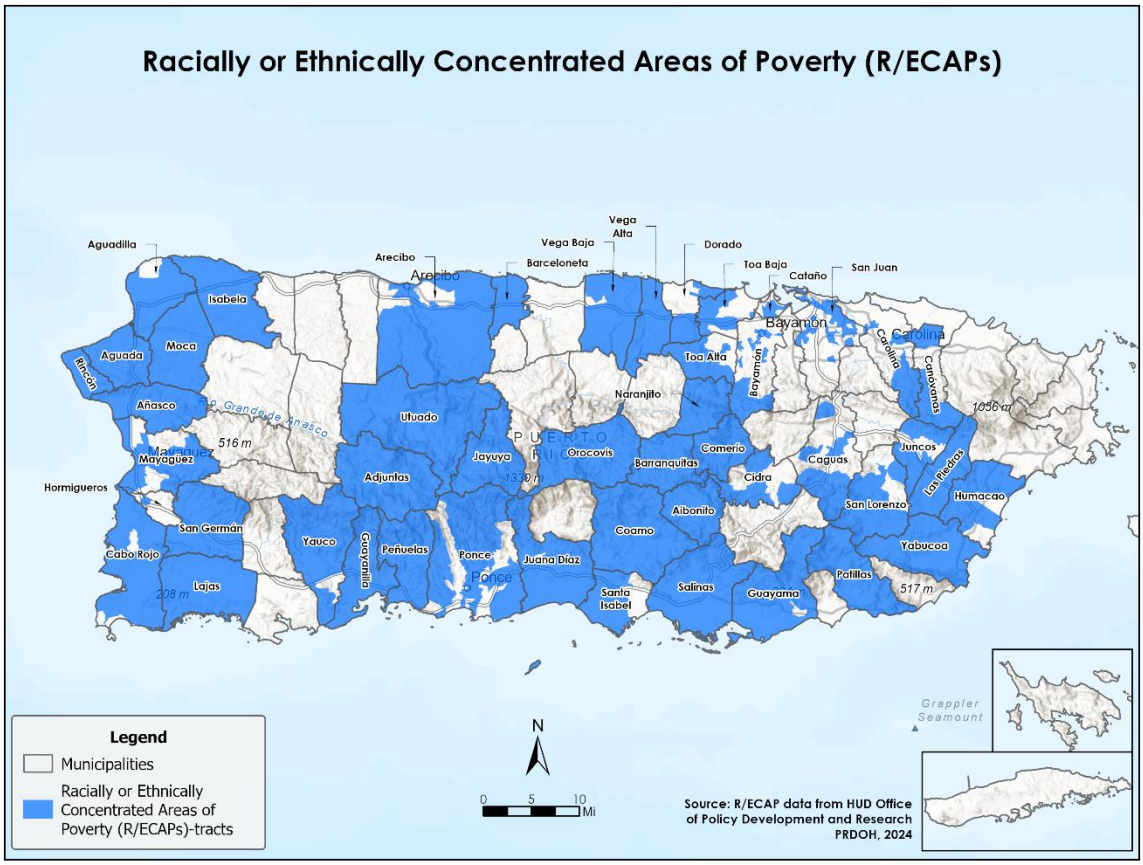

Figure 19: Racially or Ethically Concentrated Areas of Poverty (R/ECAPs).

Moreover, the Justice 40 Initiative uses census tract data to illustrate disadvantaged communities in order to provide better assistance. This federal project developed categories of burdens with indicators that highlight disadvantaged populations and communities based on the following: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. Figure 20 shows the Justice 40 data results mapped by the HUD-identified MID Areas and assigns a tier value depending on the number of categories that each population under a certain census tract positioned, therefore, considered to be more or less disadvantaged. All census tracts in the HUD-identified MID Areas meet at least one (1) category,

with hundred sixty (160) census tracts having populations that fall under at least three (3) categories that meet the disadvantaged thresholds.

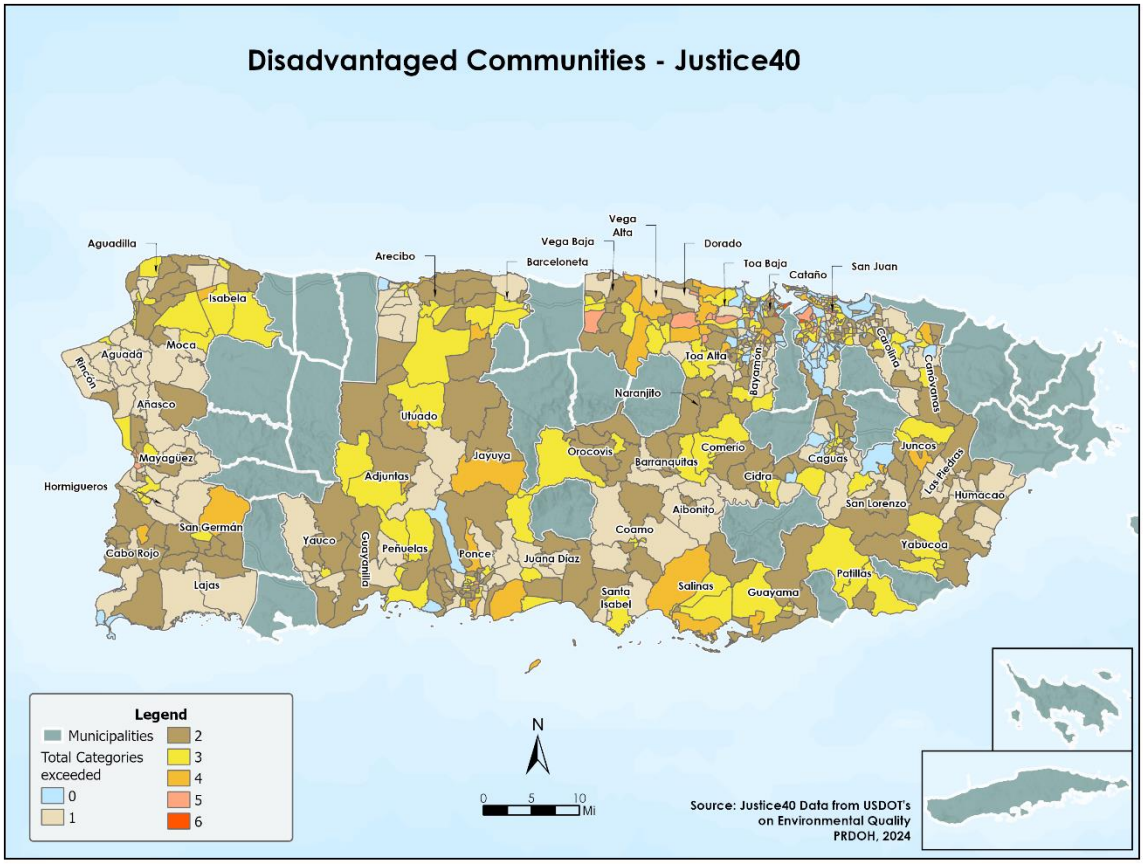

Figure 20: Disadvantage communities-Justice40 in HUD-identified MID Area.

PRDOH, subrecipients, contractors and other program partners must comply with applicable federal civil rights, fair housing, and equal opportunity laws, statutes, and executive orders. PRDOH will conduct regular training sessions for all CDBG-MIT and CDBG-DR staff, subrecipients, and contractors to ensure all parties understand and comply with relevant fair housing and civil rights requirements.

PRDOH is responsible for ensuring that programs are designed and implemented in a manner that complies with the requirements set forth in the Fair Housing and Equal Opportunity (**FHEO**) Policy for CDBG-DR Programs. The FHEO Policy for CDBG-DR Programs as well as all General Policies are available in English

and Spanish at https://recuperacion.pr.gov/en/resources/policies/general-policies/ and https://recuperacion.pr.gov/recursos/politicas/politicas-generales/.

PRDOH is available to provide technical assistance to any program office, subrecipient or contractor requesting support in ensuring that they are sufficiently complying with requirements to affirmatively further fair housing, provide equal opportunity, and comply with all civil rights requirements.

Demographic Profile of HUD identified MID Areas

An estimated population of 2,381,801 people reside within the forty-eight (48) Municipalities that were identified by HUD as the MID areas for the disaster declaration DR-4649-PR and DR-4671-PR. Table 5 shows the total populations by Municipality. The table also shows the total population estimates from all the municipalities for 2022, which includes the annual change from July 1, 2021 to July 1, 2022.[15]

Municipality	U.S. Census Bureau, Population Estimates Program (PEP), Population estimates, July 1, 2022, (V2022)	Annual Change, July 1, 2021 to July 1, 2022
Adjuntas	17,905	-0.7
Aguada	37,666	-0.9
Aguadilla	53,931	-1.3
Aibonito	24,555	-0.5
Añasco	25,026	-1.5
Arroyo	15,289	-2
Barceloneta	22,416	-1

[15] Annual Estimates of the Resident Population for Puerto Rico Municipios: April 1, 2020 to July 1, 2022 (PRM-EST2022-POP) Source: U.S. Census Bureau, Population Division Release Date: March 2023.

Municipality	U.S. Census Bureau, Population Estimates Program (PEP), Population estimates, July 1, 2022, (V2022)	Annual Change, July 1, 2021 to July 1, 2022
Barranquitas	28,944	-0.4
Bayamón	181,577	-1.3
Cabo Rojo	46,718	-0.8
Caguas	125,136	-1.2
Canóvanas	41,637	-1.2
Carolina	151,571	-1.3
Cataño	22,364	-2
Coamo	33,887	-1.4
Comerío	18,619	-1.3
Dorado	35,663	-0.8
Guánica	12,800	-3.6
Guayama	35,262	-1
Hormigueros	15,413	-1
Humacao	49,924	-1.2
Isabela	42,754	-0.5
Jayuya	14,495	-1.4
Juana Díaz	45,923	-1
Juncos	36,672	-0.9

Municipality	U.S. Census Bureau, Population Estimates Program (PEP), Population estimates, July 1, 2022, (V2022)	Annual Change, July 1, 2021 to July 1, 2022
Lajas	22,936	-1.2
Las Piedras	34,814	-0.9
Mayagüez	70,609	-1.8
Moca	37,279	-0.6
Naranjito	29,208	-0.5
Orocovis	21,229	-0.9
Patillas	15,524	-1.8
Peñuelas	19,763	-1.9
Ponce	132,138	-1.9
Rincón	15,316	-0.1
Salinas	25,000	-1.8
San Germán	31,174	-1.3
San Juan	334,776	-1.3
San Lorenzo	37,260	-0.9
Santa Isabel	19,822	-1.5
Toa Alta	66,041	-1
Toa Baja	72,783	-1.9
Utuado	27,535	-1.6

Municipality	U.S. Census Bureau, Population Estimates Program (PEP), Population estimates, July 1, 2022, (V2022)	Annual Change, July 1, 2021 to July 1, 2022
Vega Alta	34,786	-1.2
Vega Baja	53,684	-1
Yabucoa	29,305	-2.1
Yauco	32,904	-2.1
Aguas Buenas	23,538	-1.8
Arecibo	86,090	-1.2
Camuy	32,620	-0.8
Cayey	40,782	-1.3
Ceiba	10,931	-1.9
Ciales	16,742	-1.2
Cidra	39,515	-1
Corozal	34,322	-0.8
Culebra	1,769	-0.8
Fajardo	31,375	-1.4
Florida	11,538	-1.1
Guayanilla	17,064	-2.4
Guaynabo	89,057	-0.7
Gurabo	40,061	-1.1

Municipality	U.S. Census Bureau, Population Estimates Program (PEP), Population estimates, July 1, 2022, (V2022)	Annual Change, July 1, 2021 to July 1, 2022
Hatillo	38,021	-0.9
Lares	27,774	-0.8
Las Marías	8,705	-1.3
Loíza	22,657	-2.5
Luquillo	17,449	-1.3
Manatí	38,751	-1.3
Maricao	4,575	-2.2
Maunabo	10,368	-1.5
Morovis	28,277	-1.1
Naguabo	22,964	-1.3
Quebradillas	23,332	-0.9
Río Grande	45,840	-1.6
Sabana Grande	22,351	-1.2
San Sebastián	38,969	-0.8
Trujillo Alto	66,810	-1.1
Vieques	8,043	-1.6
Villalba	21,466	-1.6

Table 5: *Annual Estimates of the Resident Population for Puerto Rico 2022. Source: U.S. Annual Estimates of the Resident Population for Puerto Rico Municipios: April 1, 2020 to July 1, 2022 (PRM-EST2022-POP).*

Table 6 corresponds to the annual estimates of the resident population for the MID area from July 1, 2021 to July 1, 2022.[16]

Impacted Municipalities	U.S. Census Bureau, Population Estimates Program (PEP), Population estimates, July 1, 2022, (V2022)	Annual Change, July 1, 2021 to July 1, 2022
Adjuntas	17,905	-0.7
Aguada	37,666	-0.9
Aguadilla	53,931	-1.3
Aibonito	24,555	-0.5
Añasco	25,026	-1.5
Arroyo	15,289	-2
Barceloneta	22,416	-1
Barranquitas	28,944	-0.4
Bayamón	181,577	-1.3
Cabo Rojo	46,718	-0.8
Caguas	125,136	-1.2
Canóvanas	41,637	-1.2

[16] Annual and Cumulative Estimates of Resident Population Change for Municipios in Puerto Rico and Municipio Rankings: April 1, 2020 to July 1, 2022 (PRM-EST2022-CHG) Source: U.S. Census Bureau, Population Division Release Date: March 2023

Carolina	151,571	-1.3
Cataño	22,364	-2
Coamo	33,887	-1.4
Comerío	18,619	-1.3
Dorado	35,663	-0.8
Guánica	12,800	-3.6
Guayama	35,262	-1
Hormigueros	15,413	-1
Humacao	49,924	-1.2
Isabela	42,754	-0.5
Jayuya	14,495	-1.4
Juana Díaz	45,923	-1
Juncos	36,672	-0.9
Lajas	22,936	-1.2
Las Piedras	34,814	-0.9
Mayagüez	70,609	-1.8
Moca	37,279	-0.6
Naranjito	29,208	-0.5
Orocovis	21,229	-0.9
Patillas	15,524	-1.8
Peñuelas	19,763	-1.9

Ponce	132,138	-1.9
Rincón	15,316	-0.1
Salinas	25,000	-1.8
San Germán	31,174	-1.3
San Juan	334,776	-1.3
San Lorenzo	37,260	-0.9
Santa Isabel	19,822	-1.5
Toa Alta	66,041	-1
Toa Baja	72,783	-1.9
Utuado	27,535	-1.6
Vega Alta	34,786	-1.2
Vega Baja	53,684	-1
Yabucoa	29,305	-2.1
Yauco	32,904	-2.1

Table 6: Annual Estimates of the Resident Population for Puerto Rico HUD identified MID.Source: U.S. Census . Annual Estimates of the Resident Population for Puerto Rico Municipios: April 1, 2020 to July 1, 2022 (PRM-EST2022-POP).

Moreover, the increasing number of populations over sixty-five (65) years in Puerto Rico's is higher than the U.S. average of seventeen-point three percent (22.1% and 16.5% respectively), as shown in Table 7. The older adult population is an important indicator to determine the social vulnerability of an area, as older adults are more vulnerable than other age groups because of their need for the susceptibility to harm, and potential mobility constraints, all of which influence the

ability to get out of harm's way[17]. Social imbalances historically tend to reduce women's status in society, their access to resources, opportunities, and power, leading to higher female vulnerability to adverse hazard and disaster outcomes[18]. In both indicators, Puerto Rico and the Municipalities within the HUD-identified MID areas have higher percentages than the U.S. average.

Areas	Females, %	Persons 65 yrs. & over, %
United States	50.4%	16.5%
Puerto Rico	52.6%	22.1%
Adjuntas	51.2%	21.4%
Aguada	51.2%	21.5%
Aguadilla	51.5%	23.0%
Aibonito	52.3%	23.1%
Añasco	51.8%	22.1%
Arecibo	52.4%	22.9%
Barceloneta	52.8%	20.6%
Barranquitas	51.0%	17.9%
Bayamón	53.2%	23.2%
Cabo Rojo	52.7%	24.0%
Caguas	53.7%	21.5%
Canóvanas	52.1%	18.4%

[17] See Puerto Rico's CDBG-MIT Action Plan Section "Additional Analysis of Demographics and Protected Classes" for detailed assessment on socially vulnerable populations and protected classes. Accessed at: https://cdbg-dr.pr.gov/en/cdbg-mit/ (English) and https://cdbg-dr.pr.gov/cdbg-mit/ (Spanish).
[18] Trieb, Carolin-Anna. Vulnerability to Natural Hazards: A Gender Perspective in Disasters, Management Center Innsbruck. Accessed at: http://www.ibgeographypods.org/uploads/7/6/2/2/7622863/university_dissertation_ib_dp_geography.pdf.

Carolina	54.5%	23.6%
Cataño	53.0%	22.4%
Cidra	51.8%	19.5%
Coamo	51.6%	19.7%
Comerío	50.1%	20.0%
Dorado	51.6%	18.7%
Guayama	50.4%	19.7%
Guayanilla	52.8%	22.3%
Hormigueros	53.8%	29.2%
Humacao	52.8%	24.2%
Isabela	51.4%	21.3%
Jayuya	51.1%	18.7%
Juana Díaz	52.6%	19.4%
Juncos	52.6%	17.3%
Lajas	51.6%	25.9%
Las Piedras	52.2%	20.2%
Mayagüez	52.2%	25.3%
Moca	51.2%	19.4%
Naranjito	49.5%	21.4%
Orocovis	50.1%	18.6%
Patillas	52.1%	24.2%
Peñuelas	51.7%	18.4%

Ponce	52.3%	23.8%
Rincón	53.5%	26.4%
Salinas	51.8%	21.1%
San Germán	51.4%	26.3%
San Juan	54.3%	24.1%
San Lorenzo	51.4%	20.7%
Santa Isabel	52.0%	17.2%
Toa Alta	52.2%	16.0%
Toa Baja	53.6%	21.0%
Utuado	51.7%	23.7%
Vega Alta	52.0%	19.7%
Vega Baja	52.3%	21.8%
Yabucoa	51.8%	23.1%
Yauco	52.4%	23.9%

Table 7: Vulnerability Indicators for HUD-Identified MID Areas. Source: U.S. Census ACS: 5-year (2018-2022) Estimate- Table DP05.

Furthermore, Puerto Rico has high rates of poverty with an average of Thirty-eight-point eight percent (38.8%) of people living in poverty according to the United States Census estimates from 2022, which is significantly higher than the United States average at twelve-point-five percent (12.5%). Table 8 displays the HUD-identified MID areas, with their poverty percentage.

Areas	Persons in Poverty %
United States	**12.5%**
Puerto Rico	**38.8%**
Adjuntas	**59.4%**
Aguada	**45.4%**
Aguadilla	**46.5%**
Aibonito	**38.7%**
Añasco	**44.5%**
Arecibo	**41.5%**
Barceloneta	**46.0%**
Barranquitas	**47.7%**
Bayamón	**31.4%**
Cabo Rojo	**37.8%**
Caguas	**34.1%**
Canóvanas	**33.5%**
Carolina	**28.3%**
Cataño	**41.5%**
Cidra	**33.9%**
Coamo	**43.5%**
Comerío	**52.1%**
Dorado	**26.2%**
Guayama	**46.7%**

Guayanilla	**47.8%**
Hormigueros	**38.4%**
Humacao	**31.4%**
Isabela	**44.5%**
Jayuya	**52.7%**
Juana Díaz	**41.0%**
Juncos	**36.3%**
Lajas	**53.9%**
Las Piedras	**35.5%**
Mayagüez	**47.5%**
Moca	**45.7%**
Naranjito	**47.1%**
Orocovis	**52.5%**
Patillas	**45.5%**
Peñuelas	**46.9%**
Ponce	**47.2%**
Rincón	**37.9%**
Salinas	**46.5%**
San Germán	**42.8%**
San Juan	**36.4%**
San Lorenzo	**43.5%**
Santa Isabel	**42.4%**

Toa Alta	**30.2%**
Toa Baja	**31.7%**
Utuado	**48.6%**
Vega Alta	**41.5%**
Vega Baja	**38.2%**
Yabucoa	**44.8%**
Yauco	**39.2%**

Table 8: Percent of Persons in Poverty in HUD-identified MID Areas for Puerto Rico. Source: U.S. Census ACS: 5-year (2018-2022) Estimate- Table DP03. U.S. Census Bureau, Current Population Survey, 1959 to 2022 Annual Social and Economic Supplements (CPS ASEC).

Additional Analysis of Demographics and Protected Classes

Added Focus on Protected Class Group

The assessment of socially vulnerable and protected class populations aims to identify areas where these groups reside and understand where concentrations of the most marginalized populations occur across the MID areas. Included here are assessments of sex, familial status, race, ethnicity, and national origin, with a specific focus on racially and ethnically concentrated areas of poverty.

Identifying Puerto Rico Population by Sex, Age, and Familial Status

The Fair Housing Act prohibits discrimination based on sex, age, or familial status. PRDOH will consider those characteristics individually here based on a variety of theoretical and conceptual links to inequity. Each of these indicators of social vulnerability has proven ties to adverse outcomes in relation to hazards. Gender, or specifically being female, is an important driver of social vulnerability to disasters. Patriarchic structures and power imbalances tend to reduce women's status in society, their access to resources, opportunities, and power, and subsequently lead to higher female vulnerability to adverse hazards and

disaster outcomes[19]. Age, another key characteristic influencing social vulnerability, is normally recognized at the two (2) extremes of the age continuum—children and older adults are more vulnerable than others[20]. Both age cohorts (young and old) need special care, are often more susceptible to harm, and may have mobility constraints, all of which influence the ability to get out of harm's way[21&22]. For this assessment, a focus on aging populations is required by Fair Housing regulations. Similarly, families with large numbers of dependents or single-parent households may be more vulnerable because of the need to rely on paid caregivers. Like sex and age, identifying areas based on familial status, or those with children in the home, is of particular interest here to address Fair Housing regulations. Each of these three (3) indicators of socially vulnerable areas is mapped and discussed.

Puerto Rico Population by Gender

Like Hispanic populations across Puerto Rico, gender is a ubiquitous vulnerability characteristic, with female populations evenly dispersed across Puerto Rico. As shown in the map below, thirty (34) census tracts have greater than sixty percent (60%) female populations. These municipalities would tend to have a more challenging time preparing for, responding to, and recovering from disaster situations.

[19] Trieb, Carolin-Anna. *Vulnerability to Natural Hazards: A Gender Perspective in Disasters*, Management Center Innsbruck. Accessed at: http://www.ibgeographypods.org/uploads/7/6/2/2/7622863/university_dissertation_ib_dp_geography.pdf

[20] Rodriguez, Donner & Trainor. *Handbook of Disaster Research. 2018.*

[21] Smith, Susan M. *Disaster planning and response: considering the needs of the frail elderly*, International Journal of Emergency Management. Accessed at: https://www.researchgate.net/publication/244924906_Disaster_planning_and_response_Considering_the_needs_of_the_frail_elderly

[22]Anderson, William A. *Bringing children into focus on the social science disaster research agenda*, International Journal of Mass Emergencies and Disasters. Accessed at: http://ijmed.org/articles/376/download/

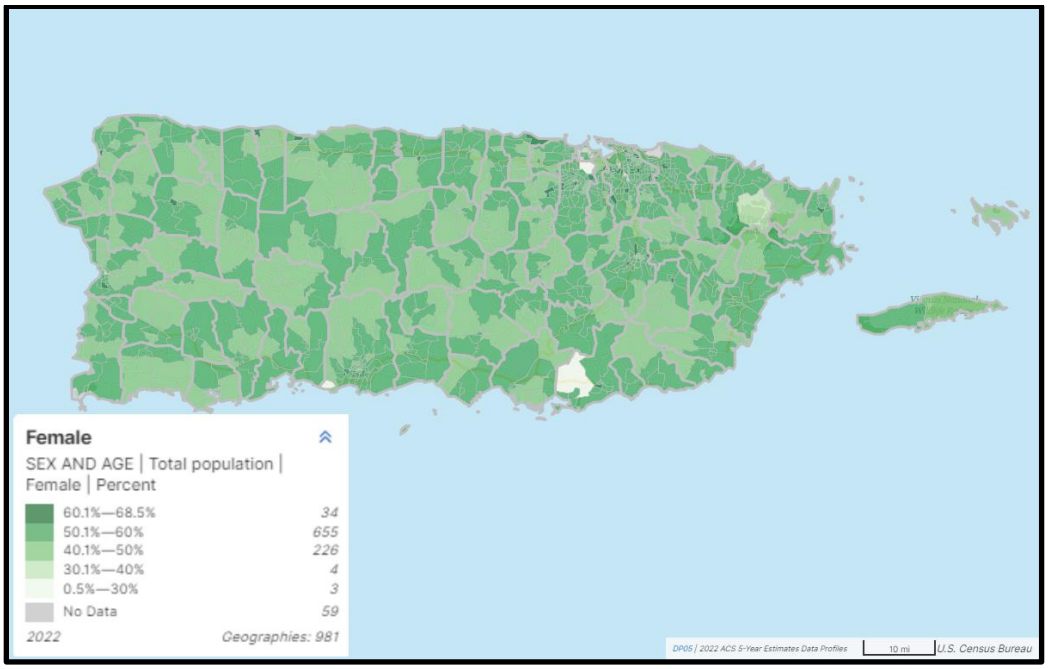

Figure 21: *Female Populations by census tract. Source: U.S. Census ACS: 5-year (2018-2022) Estimate- Table DP05.*

Puerto Rico Population by Age

Puerto Rico's twenty-one-point one percent (21.1%) population over age sixty-five (65) is higher than the U.S. average and the average of other CDBG-MIT receiving states. However, the spatial pattern of aging populations does not clearly indicate any specific concentrations. 117 census tracts have greater than thirty percent (30%) of their population over age sixty-five (65), and only seven (7) census tracts have greater than forty percent (40%) populations over age sixty-five (65).

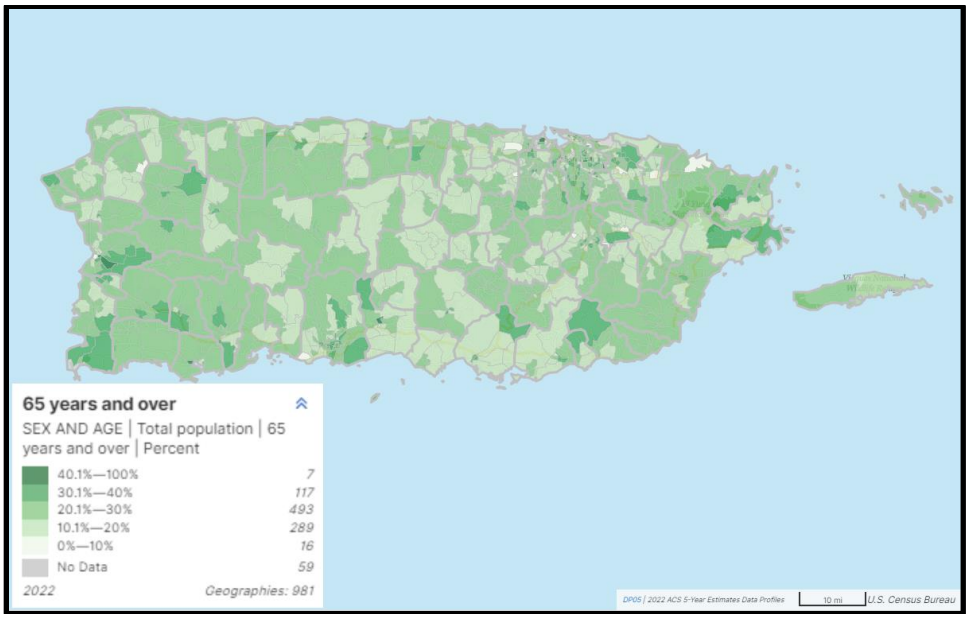

Figure 22: Populations over 65 by census tract. Source: U.S. Census ACS: 5-year (2018-2022) Estimate- Table DP05.

Puerto Rico Population by Familial Status

Like the other individual social characteristics assessed here, familial status does not show a distinct pattern of concentration across Puerto Rico. Only Thirty-three census tracts (33) had forty percent (40%) or more households with children. However, an additional 179 census tracts had thirty percent (30%) or more households with children.

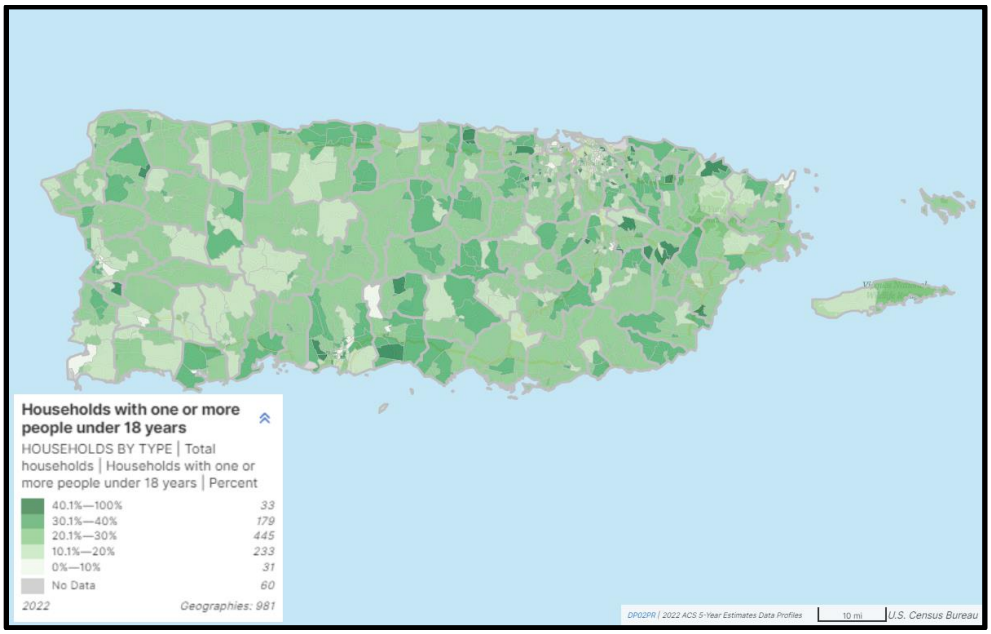

Figure 23: Households with children under 18. Source: U.S. Census ACS: 5-year (2018-2022) Estimate- Table DP02PR.

Identifying Puerto Rico Population by Race

The U.S. Census provides quality data on racial composition at several levels of geographic specificity from State to census block group. Most useful for the Puerto Rican case are county (municipality) and census tract levels of geography. These enumeration units are either politically defined (in the case of municipalities) or statistically defined (in the case of census tracts) based on population thresholds determined by the census.[23] Identifying the racial composition of census tracts enables a more holistic understanding of where these different population groups reside across Puerto Rico. However, it must be noted that data on race (White, Black, Other) may be misleading in the Puerto Rican context due to historical trends in identifying as "white" even though much of the population across the Island has roots in Africa.[24] Maps of Other Race (Non-White/Black) populations, Black populations, and White populations show specific regionalization patterns. Those identifying as "Other" Race (Non-White/Black) make up a higher percentage of the population in southwestern municipalities such as Lajas and Mayagüez.

[23] U.S. Census Bureau. Glossary. Accessed at: https://www.census.gov/programs-surveys/geography/about/glossary.html#:~:text=Census%20Tracts%20are%20small%2C%20relatively,Bureau's%20Participant%20Statistical%20Areas%20Program.

[24] Alford, Natasha S. Why Some Black Puerto Ricans Choose 'White' on the Census, The New York Times. February 2020. Accessed at: https://www.nytimes.com/2020/02/09/us/puerto-rico-census-black-race.html

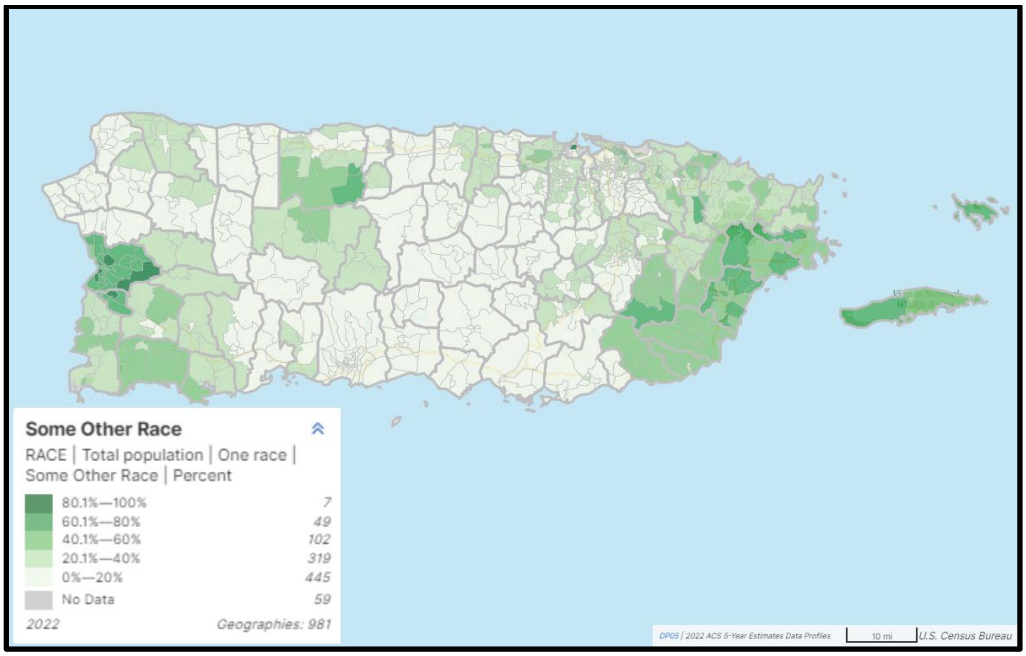

Figure 24: Non-White/Black population by census tract. Source: U.S. Census ACS: 5-year (2018-2022) Estimate- Table DP05.

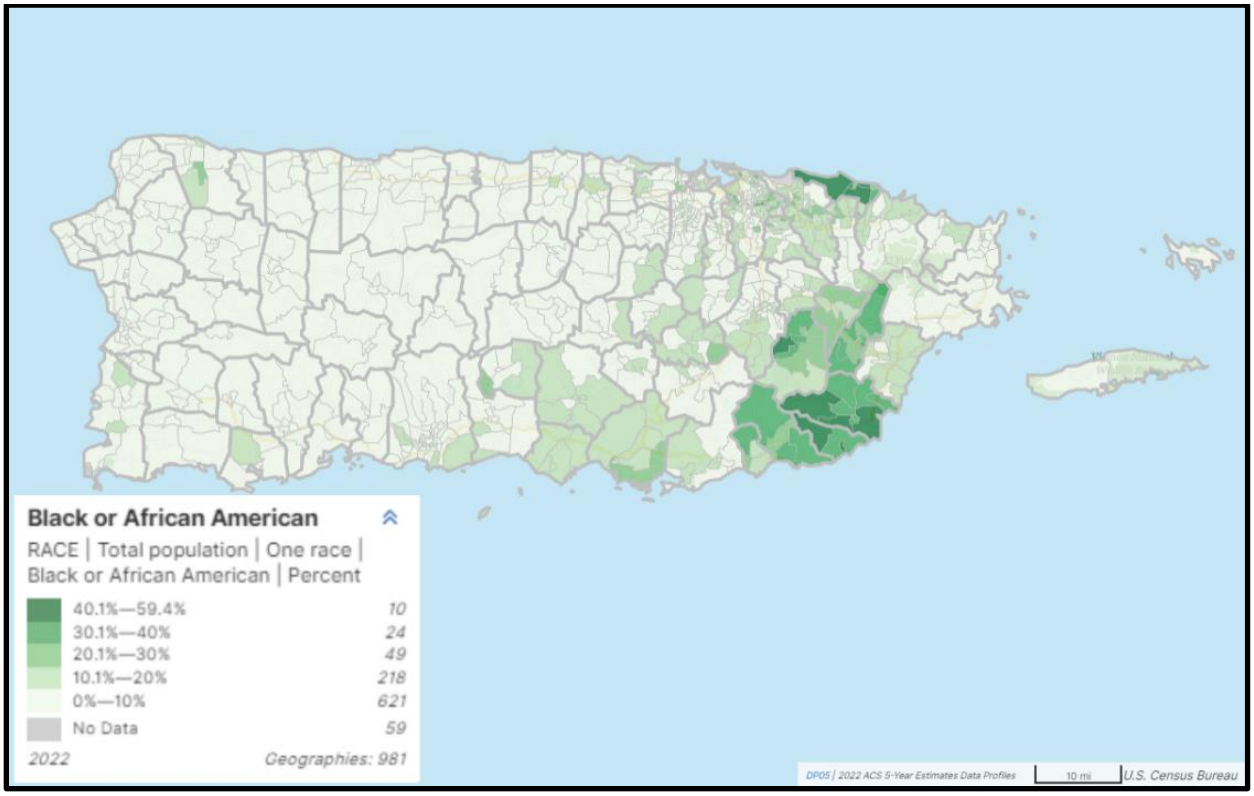

Figure 25: Black population by census tract. Source: U.S. Census ACS: 5-year (2018-2022) Estimate- Table DP05.

Grantee Demographics and Disaster Impacted Populations						
Demographic	Area-Wide estimate	Area- wide percent	Disaster Declaration Estimate	Disaster Declaration percent	MID estimates	MID percent
Total Population	3,272,382	100%	3,272,382	100%	2,453,456	75%
Under 5 years	112,877	3.40%	112,877	3.40%	84,845	75%
65 years and over	722,934	22.10%	722,934	22.10%	543,735	75%
Population with a Disability	722,330	22.30%	722,330	22.30%	537,079	74%
White or Caucasian	2,119,740	64.80%	2,119,740	64.80%	1,553,669	73%
Black or African American	507,998	15.50%	507,998	15.50%	392,513	77%
American Indian and Alaska Native	51,071	1.60%	51,071	1.60%	44,346	87%
Asian	9,359	0.30%	9,359	0.30%	7,156	76%
Native Hawaiian and other Pacific Islander	998	0%	998	0%	908	91%
Other	1,447,932	44.20%	1,447,932	44.20%	1,118,118	77%

Table 9: Grantee Demographics and Disaster Impacted Population. U.S. (sf). *DP05: Demographic and Housing Estimates. 2022 ACS 5-Year Estimates.*

Income Demographics			
Income/ Economic Demographics	**Statewide**	**Area Impacted by Disaster**	**HUD MIDs**
Median Household Income	$24,002	$24,002	$21,287
Per Capita Income	$15,637	$15,637	$23,975

Table 10: *Income Demographics. Income Demographics- Low Income. Source: U.S. . (sf). S1701: Poverty Status in the past 12 months 2022 ACS 5-Year Estimates*

Income Demographics - Low Income			
Income/ Economic Demographics	**Statewide**	**Area Impacted by Disaster**	**HUD MIDs**
Income in the past 12 months below poverty level	3,195,054	3,195,054	1,029,197

Table 11: *Income Demographics- Low Income. Source: U.S. . (sf). S1701: Poverty Status in the past 12 months 2022 ACS 5-Year Estimates.*

LMI Analysis - Overall			
Category	**Total LMI Persons**	**Total Population**	**Percent LMI**
Area wide	2,565,695	3,326,084	77.14%

Table 12: *LMI Analysis – Overall. Source: United States Census Bureau. (Sf). Total Population estimate using ACS 2012-2016.*

LMI Analysis - Federally Declared Disaster Areas						
County/ Municipality	**Non-MID-Total LMI Persons**	**Non- MID-Total Population**	**Non- MID Percentage LMI**	**MID-Total LMI Persons**	**MID- Total Population**	**MID-Percentage LMI**
Adjuntas	--	--	--	15,774	17,821	88.51%
Aguada	--	--	--	31,638	38,443	82.30%
Aguadilla	--	--	--	41,898	51,325	81.63%

Aibonito	--	--	--	19,322	23,349	82.75%
Añasco	--	--	--	22,064	26,875	82.10%
Arecibo	--	--	--	70,023	84,590	82.78%
Arroyo	--	--	--	15,588	17,643	88.35%
Barceloneta	--	--	--	19,747	23,515	83.98%
Barranquitas	--	--	--	23,591	27,463	85.90%
Bayamón	--	--	--	126,265	176,906	71.37%
Cabo Rojo	--	--	--	39,036	48,483	80.51%
Caguas	--	--	--	91,670	129,214	70.94%
Canóvanas	--	--	--	34,720	45,311	76.63%
Carolina	--	--	--	105,849	155,927	67.88%
Cataño	--	--	--	19,283	24,865	77.55%
Coamo	--	--	--	30,677	38,057	80.61%
Comerío	--	--	--	17,057	19,227	88.71%
Dorado	--	--	--	23,200	36,509	63.55%
Guánica	--	--	--	14,786	16,404	90.14%
Guayama	--	--	--	32,380	38,303	84.54%
Hormigueros	--	--	--	12,981	16,104	80.61%
Humacao	--	--	--	41,250	51,935	79.43%
Isabela	--	--	--	34,902	40,788	85.57%
Jayuya	--	--	--	12,847	14,174	90.64%

Juana Díaz	--	--	--	36,393	46,001	79.11%
Juncos	--	--	--	31,693	38,607	82.09%
Lajas	--	--	--	20,919	23,410	89.36%
Las Piedras	--	--	--	30,460	37,340	81.57%
Mayagüez	--	--	--	62,822	76,147	82.50%
Moca	--	--	--	31,322	36,437	85.96%
Naranjito	--	--	--	22,629	28,312	79.93%
Orocovis	--	--	--	18,517	20,874	88.71%
Patillas	--	--	--	15,160	17,433	86.96%
Peñuelas	--	--	--	18,296	21,032	86.99%
Ponce	--	--	--	115,885	141,569	81.86%
Rincón	--	--	--	11,926	14,141	84.34%
Salinas	--	--	--	24,272	28,147	86.23%
San Germán	--	--	--	26,176	31,422	83.30%
San Juan	--	--	--	233,390	338,623	68.92%
San Lorenzo	--	--	--	30,385	37,700	80.60%
Santa Isabel	--	--	--	16,825	21,776	77.26%
Toa Alta	--	--	--	46,488	72,514	64.11%
Toa Baja	--	--	--	56,322	78,041	72.17%
Utuado	--	--	--	25,485	29,548	86.25%
Vega Alta	--	--	--	29,400	36,241	81.12%

Vega Baja	--	--	--	41,002	53,468	76.69%
Yabucoa	--	--	--	28,924	33,979	85.12%
Yauco	--	--	--	29,294	36,475	80.31%
Aguas Buenas	21,570	26,179	82.39%	--	--	--
Camuy	25,909	31,382	82.56%	--	--	--
Cayey	34,653	44,075	78.62%	--	--	--
Ceiba	10,098	11,871	85.06%	--	--	--
Ciales	14,818	16,589	89.32%	--	--	--
Cidra	29,407	38,923	75.55%	--	--	--
Corozal	29,107	33,825	86.05%	--	--	--
Culebra	1,109	1,424	77.88%	--	--	--
Fajardo	25,422	31,385	81.00%	--	--	--
Florida	9,550	11,090	86.11%	--	--	--
Guayanilla	16,043	18,782	85.42%	--	--	--
Guaynabo	48,086	87,617	54.88%	--	--	--
Gurabo	27,406	45,390	60.38%	--	--	--
Hatillo	31,196	40,065	77.86%	--	--	--
Lares	23,328	26,398	88.37%	--	--	--
Las Marías	7,627	8,543	89.28%	--	--	--
Loíza	21,917	26,125	83.89%	--	--	--
Luquillo	14,480	18,226	79.45%	--	--	--

Manatí	32,008	39,514	81.00%	--	--	--
Maricao	5,560	6,048	91.93%	--	--	--
Maunabo	9,487	11,109	85.40%	--	--	--
Morovis	26,960	31,023	86.90%	--	--	--
Naguabo	21,044	25,829	81.47%	--	--	--
Quebradillas	20,566	24,137	85.21%	--	--	--
Río Grande	37,643	49,540	75.99%	--	--	--
Sabana Grande	18,716	22,932	81.62%	--	--	--
San Sebastián	33,033	37,647	87.74%	--	--	--
Trujillo Alto	43,234	66,722	64.80%	--	--	--
Vieques	6,834	8,688	78.66%	--	--	--
Villalba	18,351	22,538	81.42%	--	--	--

Table 13: LMI Analysis- Federally Declared Disaster Area. U.S.. (Sf). Total Low Income Persons-HUD estimate using ACS 2012-2016 Standard Tabulation data.

Limited English Proficiency Population of Disaster-Related Areas		
County/ Municipality	**#of LEP Speakers**	**% Total Population**
Adjuntas	4,386	24.40%
Aguada	9,145	24.07%
Aguadilla	13,606	24.85%
Aibonito	5,890	23.99%

Añasco	6,479	25.41%
Arecibo	22,396	25.68%
Barceloneta	6,147	27.19%
Barranquitas	6,723	23.26%
Bayamón	41,464	22.49%
Cabo Rojo	12,684	27.00%
Caguas	33,422	26.36%
Canóvanas	10,424	24.69%
Carolina	35,904	23.30%
Cataño	5,792	25.12%
Cidra	11,052	27.75%
Coamo	8,032	23.24%
Comerío	4,351	23.12%
Dorado	7,058	19.72%
Guayama	10,571	29.07%
Guayanilla	4,951	28.02%
Hormigueros	4,363	28.02%
Humacao	13,445	26.50%
Isabela	11,160	26.06%
Jayuya	3,941	26.76%
Juana Díaz	10,503	22.67%

Juncos	8,446	22.87%
Lajas	6,186	26.66%
Las Piedras	8,246	23.49%
Mayagüez	20,353	27.99%
Moca	9,584	25.65%
Naranjito	6,956	23.86%
Orocovis	5,361	25.08%
Patillas	4,770	29.95%
Peñuelas	5,064	24.95%
Ponce	36,086	26.43%
Rincón	3,288	21.68%
Salinas	6,242	24.30%
San Germán	9,037	28.53%
San Juan	88,519	25.97%
San Lorenzo	9,859	26.25%
Santa Isabel	4,343	21.49%
Toa Alta	13,317	19.97%
Toa Baja	17,918	23.94%
Utuado	8,256	29.32%
Vega Alta	7,421	21.04%
Vega Baja	13,635	25.17%

Yabucoa	8,687	28.66%
Yauco	8,958	26.36%
Total	**610,035**	

Table 14: *Limited English Proficiency Population of Disaster- Related Areas. . Source: U.S. (sf). S1810: Disability Characteristics. 2022 American Community Survey 5-Year Estimates.*

Point-in-Time Count - Type of Shelter				
Geography	**Emergency Shelter**	**Transitional Housing**	**Unsheltered Homeless**	**Total Known Homeless**
Area wide	37,391	371	1,861	2,215
FEMA Declared	37,391	371	1,861	N/A
MID	37,015	N/A	N/A	N/A

Table 15: *Point in Time - Type of Shelter. Sources: HUD 2022 Continuum of Care Homeless Assistance Programs Housing Inventory Count Report.*

Point-in-Time Count - Impacted by Disaster				
Geography	**Emergency Shelter**	**Transitional Housing**	**Unsheltered Homeless**	**Total Known Homeless**
Area wide	37,391	N/A	N/A	N/A
FEMA Declared	37,391	N/A	N/A	N/A
MID	37,015	N/A	N/A	N/A

Table 16: *Point in Time - Impacted by Disaster. Sources: HUD 2022 Continuum of Care Homeless Assistance Programs Housing Inventory Count Report.*

Assisted Housing Impacted by the Disaster							
Municipality	Total Housing Choice Vouchers	Total Impacted Housing Choice Voucher Units	Total LIHTC Units	Total Impacted LIHTC Units	Total Public Housing Dwelling Units	Total Impacted Public Housing Dwelling Units	Remaining Unmet Need
Adjuntas	51				205		
Aguada	54				232		
Aguadilla	140				1955		
Aibonito	1				159		
Añasco	35				160		
Arecibo	133		120		1611		
Barceloneta	104				220		
Barranquitas	21				160		
Bayamón	954				1897		
Cabo Rojo	21				180		
Caguas	567		648		1343		
Canóvanas	103				124		
Carolina	756				1972		
Cataño	32				1672		
Cidra	57				197		
Coamo	25		69		358		

Assisted Housing Impacted by the Disaster							
Comerío	30				78		
Dorado	43				792		
Guayama	4		123		170		
Guayanilla	6				64		
Hormigueros	26				610		
Humacao	246		90		328		
Isabela	48				226		
Jayuya	15				292		
Juana Díaz	67				516		
Juncos	156				80		
Lajas	6				202		
Las Piedras	118				3411		
Mayagüez	353				142		
Moca	115				79		
Naranjito	56				70		
Orocovis	11				139		
Patillas	9				70		
Peñuelas	9				5466		
Ponce	284				74		

Assisted Housing Impacted by the Disaster							
Rincón	8				191		
Salinas	2				401		
San Germán	14				17829		
San Juan	1595		1193		112		
San Lorenzo	77				311		
Santa Isabel	2				150		
Toa Alta	156				322		
Toa Baja	275				100		
Utuado	95				279		
Vega Alta	67				160		
Vega Baja	105				207		
Yabucoa	83		149		303		
Yauco	15				205		

Table 17: *Assisted Housing Impacted by the Disaster. Source: HUD Census 2022 data from the Office of Policy Development and Research, Housing Choice Vouchers assistance from PRPHA. Information left blank was not available.*

The table above summarizes the report of the assisted housing units in Puerto Rico from HUD submitted in the quarter of December 31, 2022. This data is related to the disaster impacts in the HUD-identified MID Areas.

b. Infrastructure Unmet Need

Disaster Damage and Impacts – Infrastructure

The devastation brought by the floods and Hurricane Fiona severely affected the municipalities vital infrastructure. Several Municipal Recovery Plans, developed through CDBG-DR MRP, reported the extensive consequences on main roads; with landslides, fallen trees and light poles obstructing critical transportation arteries. Thousands of individuals found themselves without power, revealing a crisis with widespread water access issues and floods.

Roads and bridges

The Municipality of Ponce reported landslides that affected the infrastructure of the PR-505 km. 9.4, which suffered damage due to flooding. The neighborhoods that were identified by the municipality as the most affected were: Barrio Anón, Real and Guaraguao. Figure 26 illustrates a cluster of landslides concentrated in the northern, rural part of the Municipality.

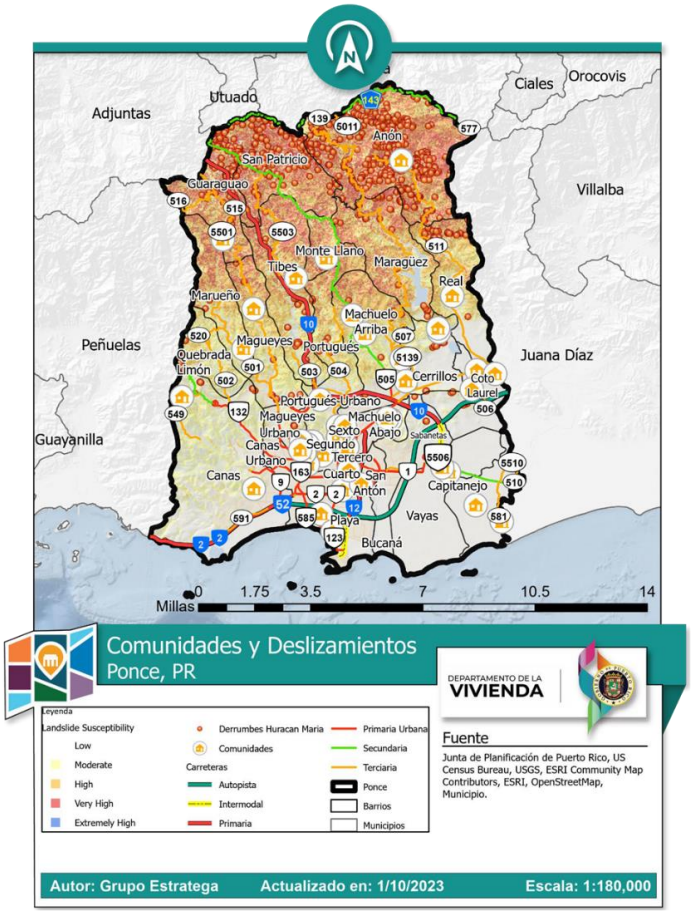

Figure 26: Landslides in the Municipality of Ponce after Hurricane María. MRP Plan, Municipality of Ponce.

Bridges and roads were also reported as damaged or destroyed in the municipalities of Utuado and Arecibo. Figure 27 illustrates an impacted road that connects the Jurutungo sector along the Río Grande de Arecibo, which caused citizens to take alternate routes to get to their homes. The most affected neighborhoods in this municipality were: Pueblo, Río Arriba, Islote and Domingo Ruiz which suffered from flooding and landslides, highlighting the urgent need for comprehensive recovery efforts and resilient infrastructure.

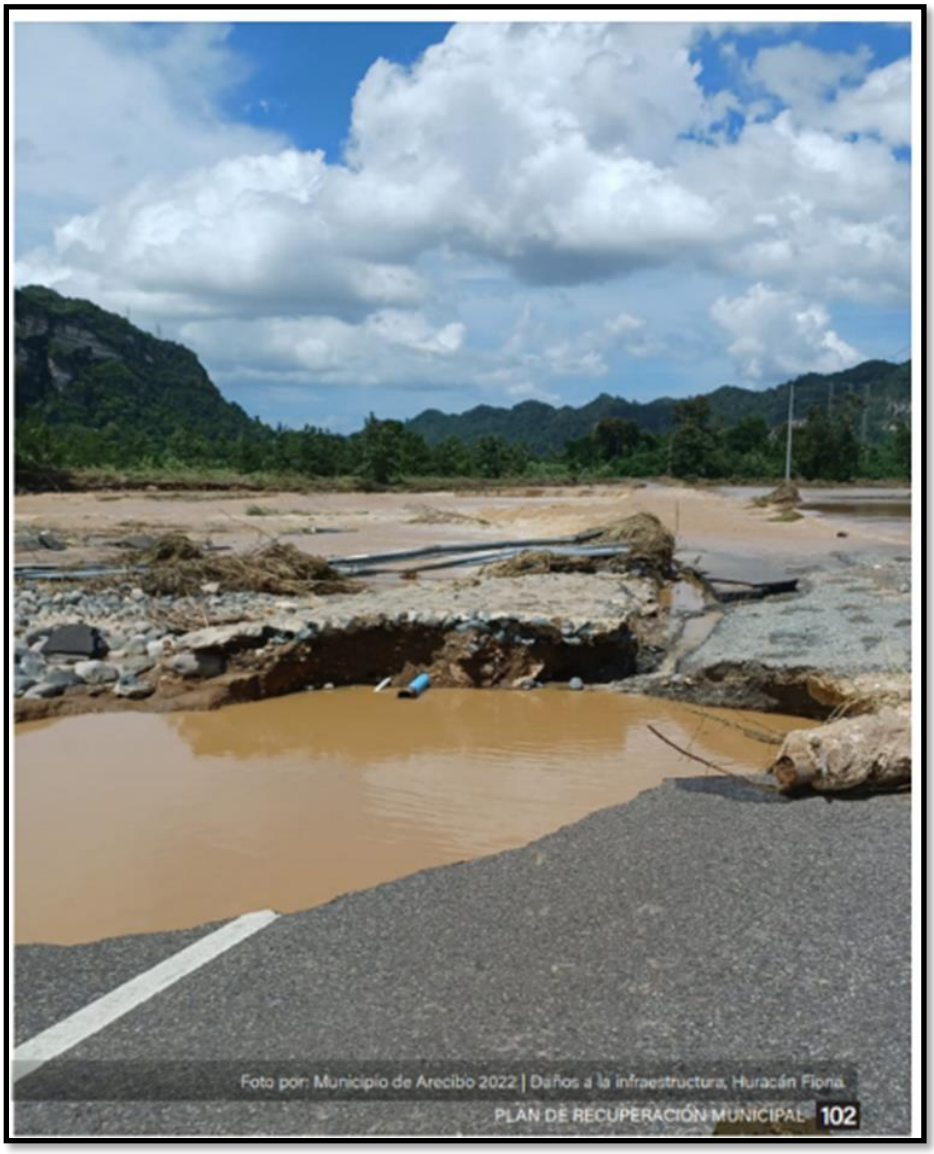

Figure 27: Road Damage near Jurutungo sector and the Río Grande river in the Municipality of Arecibo. MRP Plan Municipality of Arecibo.

Figure 28: Infrastructure damaged by Hurricane Fiona in the Municipality of Cataño. MRP Plan Municipality of Cataño.

Figure 29 below illustrates the susceptibility of landslide and the location of documented damages in the Municipalities of Utuado, Cabo Rojo and Ponce. Most of the reported damages caused by Hurricane Fiona are located near water bodies and in areas with moderate susceptibility to landslides.

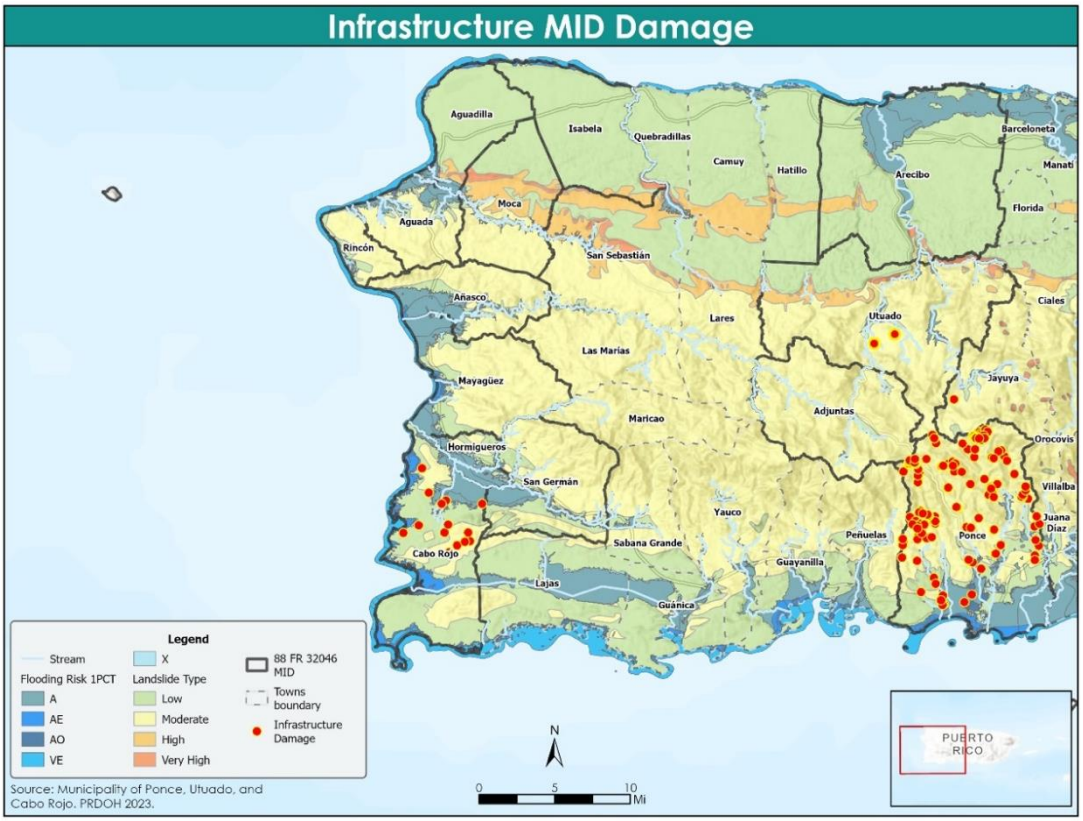

Figure 29: Infrastructure MID Damage.

Figure 30: Infrastructure damage in the Municipality of Utuado. El Nuevo Día, September 22,2022.

Municipalities like Toa Alta still suffer from the consequences of the floods and Hurricane Fiona, with main roads like PR-861 remaining closed due to landslides since the disaster occurred in 2022. The residents of Toa Baja are struggling with compromised accessibility and precarious roads, demanding immediate attention and strategic interventions.

The Municipality of Caguas reported multiple landslides in its southern regions during the emergency. Barrio Borinquen, Barrio San Salvador, and Barrio Turabo Arriba experienced landslides, while bridges succumbed to flooding. During the MRP community engagement process, several interviews revealed the need for improvements in municipal infrastructure, including bridges. Details of the data collection process highlight construction aging as a possible risk factor that may have contributed to landslides and floodings in areas such as: Barrio Cañabón, La Unión sector, Barrio Caña, La Liga sector, San Antonio Sector, Río Abajo Sector among others. Figure 31 provides a visual representation of these vulnerable areas within the municipality.

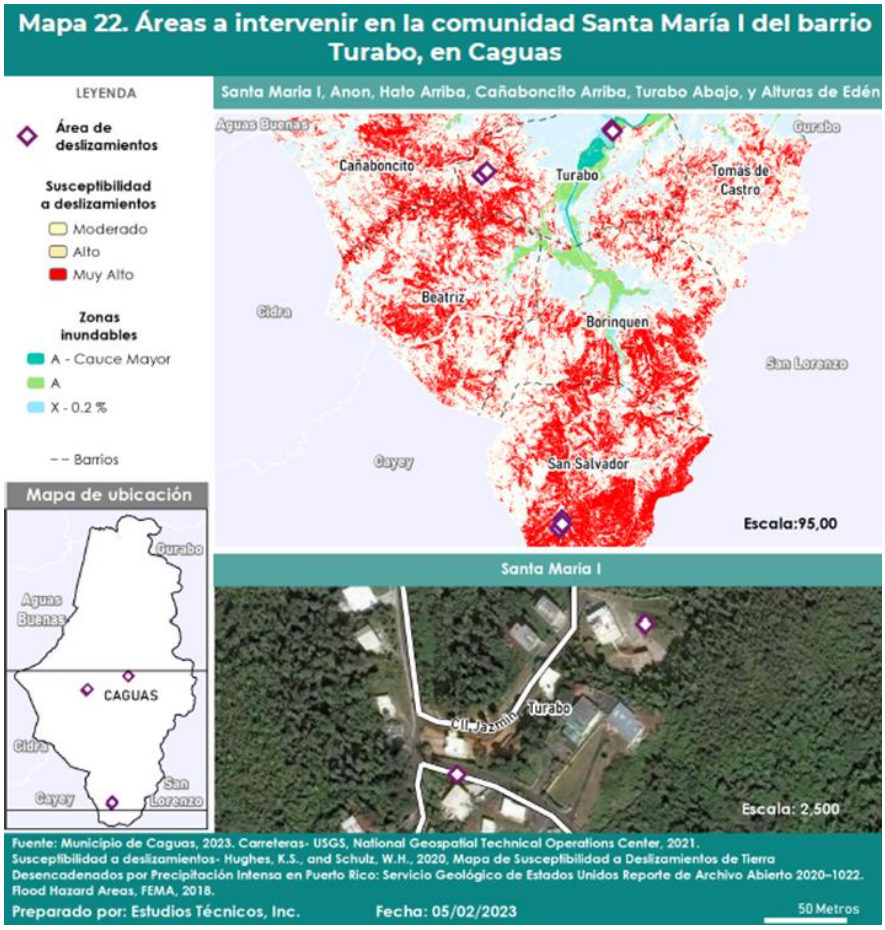

Figure 31: Landslide areas and susceptibility in the Municipality of Caguas. MRP Plan Municipality of Caguas.

Water pumping system infrastructure

The water pumping system, essential for the well-being of residents, faces persistent issues exacerbated by the occurrence of hurricanes and disasters. Not only does the system fail during emergencies, leaving residents without water, but the infrastructure's inherent weaknesses lead to prolonged disruptions even in non-disaster periods. The frailty of the water system demands immediate attention and substantial improvements to ensure consistent and reliable services for all Municipalities. Moreover, efforts at the state level are developing improvements to several facilities around the island. In Toa Baja, commendable efforts have been undertaken to manage stormwater and control floods, significantly reducing the impact on the Municipality. However, the battle against flooding is ongoing, requiring the continuation of initiatives like the stormwater runoff management update outlined in the Municipal Recovery Plan. This proactive approach can serve as a blueprint for other municipalities facing similar challenges, fostering a more resilient response to potential floods. Ponce, unfortunately, faced flooding due to malfunctioning water pumps, sewage breakdowns, and collapsed sewage services. After Hurricane Fiona, detailed data collection highlighted the specific damages incurred and needs of flood mitigation.

Power infrastructure

The stability of the electric power system, already compromised after Hurricane Maria, continues to be a significant concern in the aftermath of subsequent disasters, including DR-4671 and DR-4649. As noted by citizens through multiple Municipal Recovery Plans, there is a general dissatisfaction with the unstable power system. Street light pole failures not only leave main roads in darkness but also contribute to a sense of insecurity within communities. Widespread incidents of falling light poles during disasters, such as the nineteen (19) reported in Ponce after Hurricane Fiona, underscore the pressing need for comprehensive improvements to restore and maintain a reliable power supply.

Furthermore, ongoing efforts by PRDOH continue to support energy grid improvements, providing five hundred (500) million dollars in cost share opportunity to fund projects that enhance the electric system's reliability, affordability, and resiliency through the Energy Grid Rehabilitation and

Reconstruction Cost Share Program (ER1)[25]. This Program focuses on the development of an improved electrical grid for all residents of Puerto Rico, as approved by FEMA's Accelerated Award Strategy (FAASt).

Moreover, a comprehensive approach is also being developed through the Energy Electrical Power Reliability and Resilience (ER2) Program[26], which aims to enhance electric system reliability, affordability, and resiliency through the development and interconnection of projects that qualify as electric system enhancements or improvements. Efforts are focused on creating decentralized sources of power generation, distribution, and storage to minimize blackouts, furthering the goals defined by the Puerto Rico Energy Public Act, No. 17-2019, which sets the Island on a path to forty percent (40%) and one hundred percent (100%) renewable energy by 2025 and 2050, respectively.

Total Cost and Need by PA Category				
Public Assistance (PA) Category	**Quantity of projects**	**Estimated PA Cost**	**Local Match**	**Total Need**
Category C - Roads and Bridges	473	$311,223,019.00	$31,122,292.00	$342,345,311.00
Category D - Water Control Facilities	2	$295,525.00	$29,553.00	$325,078.00
Category E – Buildings and Equipment	100	$10,398,716.00	$1,039,867.00	$11,438,583.00
Category F - Utilities	13	$3,030,682.00	$303,068.00	$3,333,750.00
Category G – Parks, Recreational, Other	53	$3,827,386.00	$382,739.00	$4,210,125.00
Total	641	$328,775,328.00	$32,877,519	$361,652,847.00

Table 18: *COR3 Road to Recovery hurricane Fiona Public Assistance project summary. Source: CORE3*

[25] https://recuperacion.pr.gov/en/energy-grid-rehabilitation-and-reconstruction-cost-share-program/
[26] https://recuperacion.pr.gov/en/electrical-power-reliability-and-resilience-program/

c. Economic Revitalization Unmet Need.

Disaster Damage and Impacts - Economic Revitalization.

The impact of disasters transcends physical infrastructure and housing, extending to the economic landscape. Prolonged electricity outages have crippled many small businesses, rendering them unable to operate. The recovery process not only implies the restoration of electric power or flooding recovery, but also the replacement of goods and merchandise that could be affected or lost because of the event. According to data obtained from SBA loans for fiscal year 2022, related to Disaster Declaration 4649 and 4671, a total of $54,795,689 was approved as unmet needs for the MID Area. That amount includes a thirty percent (30%) or $16,305,228 of unmet needs from businesses. This number should be greater, taking into consideration that no data is available for six (6) municipalities.

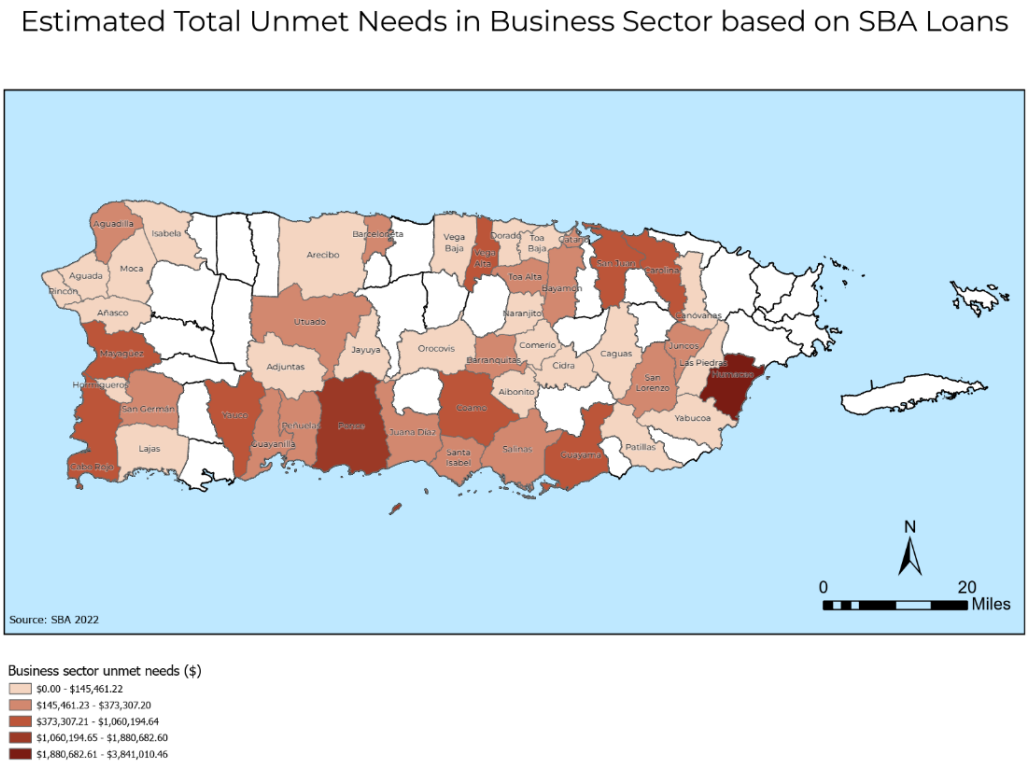

Figure 32: Estimated Total Unmet Needs in Business Sector based on SBA Loans. Source: SBA loans for Fiscal Year 2022.

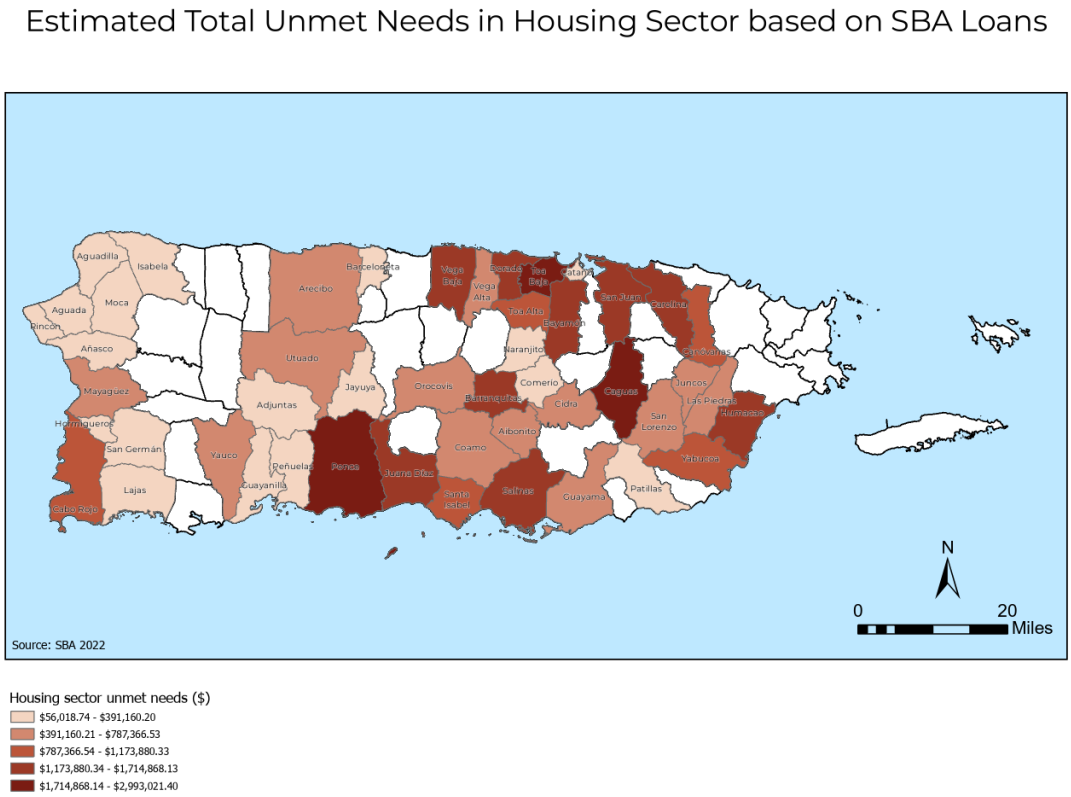

Figure 33: Estimated Total Unmet Needs in Housing Sector based on SBA Loans. Source: SBA loans for Fiscal Year 2022.

It is important to note that for both events reports of damage and, therefore, unmet needs, were scarce for commercial, mixed-use, multifamily and institutional properties. The same could be observed when evaluating the data from the seismic events that occurred in 2019 and 2020 (DR-4473-PR). As previously mentioned, and based on outreach processes and stakeholder meetings during the development of the Earthquake Action Plan, it was identified that many affected commercial, mixed-use, multifamily and institutional properties owners did not report all damages to FEMA because of their experience with Hurricanes Irma and María. The absence of property title (ownership) and hazard insurances also impacted the qualification of federal assistance. Therefore, the number of properties reported by municipalities are usually greater than those reported by FEMA. The recent experiences of emergency management, disaster management, disaster recovery and mitigation processes suggest citizens, businesses, mixed-use, multifamily and institutional property owners may be discouraged or confused as to the extent and details required in reporting all damages to federal agencies such as FEMA. Therefore, creating a gap between real damages and damage estimates, thus being excluded from the calculation of unmet needs and MID Areas.

d. Mitigation Only Activities.

The assessment of risk and unmet needs shows that the floods and landslides are ongoing and can get worse over time. Vulnerability for communities is being tackled by different strategies at state and municipal level. However, due to the amount of funds available to develop projects, not all impacted communities may benefit from disaster recovery efforts. Thousands of homeowners remain at continued risk because their housing structure may not withstand future disaster events, leading to the risk of loss of life and property damage. Communities that are within a reasonable proximity to critical flood zones and landslide clusters will be a part of the outreach and planning process in order to approve project funding comprehensively.

The Appropriations Act requires the use of 13% of the allocated CDBG-DR funds for mitigation activities. As stated in the allocation notice, "mitigation activities are defined as those activities that increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, injury, damage to and loss of property, suffering and hardship, by lessening the impact of future disasters." Consequently, PRDOH may also meet the requirement of the CDBG–DR mitigation set-aside by including eligible recovery activities that both address the impacts of the qualified disaster and incorporate mitigation measures into the recovery activities. PRDOH will report mitigation activities expenditures as such in DRGR so that HUD and the public have visibility over compliance with this requirement. As allowed in 88 FR 4649 & 4671, PRDOH will incorporate mitigation measures into the recovery activities.

3. General Requirements

a. Citizen Participation

The citizen participation protocols described in this Action Plan are further detailed in the PRDOH Citizen Participation Plan, which provides all Puerto Rican residents with an opportunity to participate in the planning and assessment of the PRDOH's CDBG-DR programs.

Methods for Citizen Participation

The following paragraphs describe methods that will be used for citizen participation in relation to the CDBG-DR/MIT programs. The methods described are not intended to be exclusive of other methods of citizen participation allowed by HUD.

Methods and Opportunities for Citizen Involvement:

- Public Hearings;
- Communication via the Internet;
- Information via the PRDOH Website;
- Citizen Advisory Committee(s);
- Participatory Engagement; and
- Other Methods for Citizen Participation

Through these methods, citizens may receive information about the following:

- The amount of assistance available to impacted communities;
- The range of eligible activities to be undertaken;
- Performance reports;
- Action Plan and Action Plan Amendments and comment periods;
- Program information, including how to request additional information;
    - Upcoming Public Hearings, Webinars, or other stakeholder sessions;
    - The Citizen Advisory Committee, including its Subcommittees;
    - Information to request and receive technical assistance;
    - How to comment on the Citizen Participation Plan; and
    - How to file a complaint.

Communication for Individuals with Disabilities

PRDOH is committed to ensuring that citizens with disabilities also have effective means to participate and communicate with PRDOH. Consequently, PRDOH will also effectively communicate with citizens with disabilities regarding Action Plans, policies, and procedures. Interpretation services for sign language will be made available at Public Hearings. Notices for public meetings will include contact information for requesting accessible communication aids or services. Requests for communication aids or services should be requested at least forty-eight (48) hours in advance of the public meeting so that PRDOH has a reasonable opportunity to coordinate the provision of the requested aids or services. PRDOH will make every reasonable effort to honor requests received with less than forty-eight (48) hours of advance notice of a public meeting.

The Action Plan and other materials on the PRDOH website are provided in accessible formats, including those readable by screen readers to provide accessibility to the visually impaired. PRDOH will meet communications requirements at 24 C.F.R. §8.6 and other Fair Housing and civil rights requirements, such as the effective communication requirements under the Americans with Disabilities Act of 1990.

The CDBG-DR/MIT Fair Housing and Equal Opportunity Policy and its appendices, will be posted along with all CDBG-DR/MIT Program policies in English and Spanish at https://www.cdbg-dr.pr.gov/en/resources/policies/general-policies/ and https://www.cdbg-dr.pr.gov/recursos/politicas/politicas-generales/**.** The same Fair Housing and Equal Opportunity Policy shall be adopted for this CDBG-DR/MIT Program for Hurricane Fiona disaster recovery.

Program accessibility for individuals with disabilities may be requested at:

- **Via telephone:**
  1-833-234-CDBG or 1-833-234-2324 (TTY: 787-522-5950)
  Attention hours: Monday to Friday from 8:00am-5:00pm
- **Via email:**
  infoCDBG@vivienda.pr.gov – for all CDBG- DR inquiries, or
  CDBG-MIT@vivienda.pr.gov – for all CDBG-MIT inquiries

- **Online:**
  https://www.recuperacion.pr.gov/en/contact/ (English version)
  https://www.recuperacion.pr.gov/contact/ (Spanish version)
- **In writing:**
  Puerto Rico CDBG-DR/MIT Program
  P.O. Box 21365
  San Juan, PR 00928-1365

Outreach and Engagement

In the development of this disaster recovery action plan, PRDOH consulted with disaster-affected citizens, stakeholders, local governments, public housing authorities, and other affected parties in the surrounding geographic area to ensure consistency of disaster impacts identified in the plan, and that the plan and planning process was comprehensive and inclusive. Among the entities that have already responded by providing information are:

- Federal Emergency Management Administration (FEMA)
- Puerto Rico Central Office for Recovery, Reconstruction and Resiliency (COR3)
- Puerto Rico Public Housing Authority (PRPHA)
- Puerto Rico Planning Board (PRPB)
- Municipalities located in the expanded MID Area

Moreover, a presentation was offered to the PRDOH Citizen Advisory Committee (CAC) on the policies established in this Plan, receiving insight. Notwithstanding, the outreach and engagement will continue through the thirty (30) days public comment period.

In addition to the activities above, PRDOH has published this action plan on Action Plans - CDBG (pr.gov) for a 30-day public comment period. Citizens were notified through a public notice, CDBG-DR/MIT website, eblast, social media and public hearings. PRDOH will ensure that all citizens have equal access to information, including persons with disabilities (vision and hearing impaired) and limited English proficiency (LEP).

A summary of citizen comments on this action plan, along with PRDOH responses, is in Appendix c of this document.

For more information, citizens can refer to PRDOH citizen participation plan that can be found at https://recuperacion.pr.gov/en/download/citizen-participation-plan/

Public hearings

Public Hearings HUD guidance at 88 FR 32046 prescribes for CDBG-DR grantees the number of public hearings that must be convened, based upon the amount of the grantee's allocation. PRDOH adheres to the guidelines for allocations under $500 millions requiring at least one (1) public hearing in the HUD-identified MID Area and a public comment period of thirty (30) calendar days. It's important to note that public safety is a priority concern for PRDOH, its employees, and the citizens it serves. Residents will be offered the option of submitting comments during the public hearings through one or more of the following means, the CDBG-DR website, comments on social media and through the call center (1- 833-234-CDBG or 1-833 234-2324, (TTY: 787-522-5950).

Complaints

Citizen Complaints

As part of addressing Puerto Rico's long-term recovery needs, citizen complaints on any issues related to the general administration of CDBG-DR funds are welcome throughout the duration of the grant. PRDOH aims to provide an opportunity to address all complaints received. Addressing these complaints is an essential responsibility for PRDOH, as it establishes the importance of open communication regarding citizens' concerns about the programs.

It is PRDOH's responsibility, as grantee, to ensure that all complaints are dealt with promptly and consistently and at a minimum, to provide a timely, substantive written response to every written complaint within fifteen (15) business days, where practicable, as a CDBG grant recipient. See 24 C.F.R. § 570.486(a)(7).

PRDOH aims to provide an opportunity to address all complaints received, either formally or informally. An informal complaint refers to those complaints that are verbally communicated through PRDOH program personnel. These are not subject to 24 C.F.R. § 570.486(a) (7) unless the complainant requests it to be filed as a formal complaint. A formal complaint is a written statement of grievance. All formal complaints will be documented, processed, filed, and answered. Complaints with insufficient data or submitted by a third party with no standing in the matter being submitted need not be accepted or reviewed.

Citizens who wish to submit formal complaints related to the CDBG-DR funded activities may do so through any of the following means:

- **Via email:**
  LegalCDBG@vivienda.pr.gov
- **Online:**
  https://recuperacion.pr.gov/en/complaints/ (English)
  https://recuperacion.pr.gov/quejas/ (Spanish)
- **In writing:**
  Puerto Rico CDBG-DR/MIT Program
  Attn: CDBG-DR/MIT Legal Division- Complaints
  P.O. Box 21365
  San Juan, PR 00928-1365

Although formal complaints are required to be submitted in writing, complaints may also be received verbally and by other means necessary, as applicable, when PRDOH determines that the citizen's particular circumstances do not allow the complainant to submit a written complaint. However, in these instances, PRDOH shall convert these complaints into written form. These alternate methods include, but are not limited to:

- **Via telephone:**
  1-833-234-CDBG or 1-833-234-2324 (TTY: 787-522-5950)
  Attention hours: Monday to Friday from 8:00am-5:00pm
- **In-person:**
  PRDOH Headquarters Office

The Citizen Complaints Policy and all CDBG-DR and CDBG-MIT Program policies are posted in both English and Spanish languages at

https://recuperacion.pr.gov/en/resources/policies/general-policies/ and https://recuperacion.pr.gov/recursos/politicas/politicas-generales/. All policies that pertain to the CDBG-DR program carry over to CDBG-MIT unless otherwise clarified in the document.

Citizen Complaints for Anti-Fraud, Waste, Abuse or Mismanagement

PRDOH, as grantee, is committed to the responsible management of CDBG-DR and CDBG-MIT funds by being a good advocate of the resources while maintaining a comprehensive policy for preventing, detecting, reporting, and rectifying fraud, waste, abuse, or mismanagement.

Pursuant to 87 FR 6364, PRDOH implements adequate measures to detect and prevent fraud, waste, abuse, or mismanagement in all Programs administered with CDBG-DR funds. It also encourages any individual who is aware, or suspects, any kind of conduct or activity that may be considered an act of fraud, waste, abuse, or mismanagement, regarding the CDBG-DR Program, to report such acts to the CDBG-DR Internal Audit Office, directly to the Office of Inspector General (OIG) at HUD, or any local or federal law enforcement agency.

The Anti-Fraud, Waste, Abuse, or Mismanagement Policy (AFWAM Policy) is established to prevent, detect, and report any acts, known or suspected, of fraud, waste, abuse, or mismanagement of CDBG-DR. This Policy applies to any allegations or irregularities, either known or suspected, that could be considered acts of fraud, waste, abuse, or mismanagement, involving any citizen, previous, current or potential applicant, beneficiary, consultant, contractor, employee, partner, provider, subrecipient, supplier, and/or vendor under the CDBG-DR Programs.

Report Fraud, Waste, Abuse or Mismanagement to PRDOH

- **CDBG-DR-hotline:**
  787-274-2192 (English/Spanish/TTY)
- **Postal mail:**
  Puerto Rico Department of Housing
  CDBG-DR Internal Audit Office
  P.O. Box 21355
  San Juan, PR 00928-1355

- **Email:**
  hotlineCDBG@vivienda.pr.gov
- **Online:**
  https://recuperacion.pr.gov/app/cdbgdrpublic/Fraud?culture=en-US
- **In person:**
  Request a meeting with the Deputy Audit Director of the CDBG-DR Internal Audit Office located at PRDOH's Headquarters at 606 Barbosa Avenue, Building Juan C. Cordero Dávila, Río Piedras, PR 00918.

Report Fraud, Waste, Abuse, or Mismanagement Directly to HUD OIG

- **HUD OIG hotline:**
  1-800-347-3735 (Toll-Free)
  787-766-5868 (Spanish)
- **Postal mail:**
  HUD Office of Inspector General (OIG) Hotline
  451 7th Street SW
  Washington, D.C. 20410
- **Email:**
  HOTLINE@hudoig.gov
- **Internet:**
  https://www.hudoig.gov/hotline

The AFWAM Policy and all CDBG-DR Program policies are posted in English and Spanish at https://recuperacion.pr.gov/en/resources/policies/general-policies/ and https://recuperacion.pr.gov/recursos/politicas/politicas-generales/.

Discrimination Complaints

PRDOH will ensure potential and actual program applicants and beneficiaries will be able to adequately submit discrimination complaints. That is, report any possible discrimination under the Fair Housing Act (including housing that is privately owned and operated) and/or any possible discrimination of civil rights violations in the CDBG-DR/MIT Programs.

Discrimination Complaints submitted directly to PRDOH

A Discrimination Complaint may be presented directly to PRDOH by submitting the complaint to the PRDOH CDBG-DR/MIT FCSM Division. Any discrimination complaint received by a PRDOH regional office or program area shall be forwarded to the PRDOH FCSM Division via: fairhousing@vivienda.pr.gov.

Discrimination complaints can be submitted to the CDBG-DR/MIT FCSM Division via:

- **Email:**
  fairhousing@vivienda.pr.gov
- **Postal mail:**
  Puerto Rico CDBG-DR/MIT Program Attn: Federal Compliance Division
  P.O. Box 21365
  San Juan, PR 00928-1365

To ensure accessible communication for persons with disabilities, a complainant may request reasonable accommodation, as needed. PRDOH may allow a discrimination complaint to be received verbally. CDBG-DR/MIT personnel or other related CDBG-DR/MIT parties receiving said complaint will put it in writing and assure compliance with all other requirements, as described in the Fair Housing and Equal Opportunity (FHEO) Policy for CDBG-DR/MIT Programs available in English and Spanish languages at: https://www.cdbg-dr.pr.gov/en/resources/policies/general-policies/ (in English) and https://www.cdbg-dr.pr.gov/recursos/politicas-generales/ (in Spanish).

Telephone:
1-833-234-CDBG
1-833-234-2324
TTY: 787-522-5950
Attention hours: Monday to Friday from 8:00 am-5:00 pm

Discrimination Complaints submitted directly to HUD

A Discrimination Complaint may be presented directly to HUD by submitting HUD Form 903.1 (available in English, Spanish, and other languages) via:

- **Email**:
  ComplaintsOffice02@hud.gov

- **Telephone:**
  (212) 542-7519
  (800) 496-4294
  TTY (212) 264-0927
- **Fax:**
  (202) 485-5737
- **Online:**
  - https://www.hud.gov/program_offices/fair_housing_equal_opp/online- complaint
  - English: https://portalapps.hud.gov/FHEO903/Form903/Form903Start.action
  - Spanish: https://portalapps.hud.gov/AdaptivePages/HUD_Spanish/Espanol/complain t/complaint-details.htm
  - Other languages: https://www.hud.gov/program_offices/fair_housing_equal_opp/online- complaint

b. Public Website

Accessibility of Information

Information related to PRDOH's CDBG-DR, including Action Plans, Action Plan amendments, program policies and procedures, performance reports, citizen participation requirements, program information, and details of contracts and ongoing procurement policies will be publicly available in English and Spanish at https://recuperacion.pr.gov/welcome/en/index.html and https://recuperacion.pr.gov/welcome/index.html, respectively. Program information posted to the website accessible and available in both Spanish and English and will be made available in accessible formats, including those readable by screen readers. PRDOH will make information available in alternate formats as needed and upon request, to ensure effective communication to persons with disabilities.

PRDOH may use a variety of communication methods to notify the public of information regarding the CDBG-DR Programs. The methods listed have been used by PRDOH prior to the disaster to communicate information across the

Island. The use of these methods varies based on region and municipality. In addition to these methods of outreach and an active online presence, PRDOH regularly provides CDBG-DR written outreach materials for all municipalities to use and communicate with their constituents. These methods may include, but are not limited to:

- Print media, such as the newspaper;
- Social media;
- Radio or television advertisements;
- Letters or emails to municipalities, government agencies,
- non-profit organizations, and NGOs;
- Notices posted to internet sites, including PRDOH's CDBG-DR
- and CDBG-MIT websites;
- Ads on billboards and bus stops;
- Sound wagons (a popular local method for communication which includes a vehicle with speakers used for promotion);
- Brochures and printed materials;
- Direct mail;
- Outbound call campaigns (live or automated);
- Email announcements;
- Community events or fairs;
- Webinars or web conferences;
- Web-based surveys;
- Focus groups or interviews;
- Community meetings;
- Press releases;
- Media events or interviews; and
- Other forms of communication accepted by HUD.

PRDOH will continue to coordinate outreach meetings with municipalities, government agencies, non-profit and community organizations, and other interested stakeholders to disseminate information related to the PRDOH Action Plan or substantial Action Plan amendments.

To promote access to information among LMI citizens, PRDOH will organize special orientation events throughout the Island or use broad-band media campaigns, once the launch of the first CDBG-DR fund program is completed,

and dissemination initiatives begin. The use of direct communication with municipalities, government agencies, non- profit organizations and NGOs as partners is intended to increase residents' access to information and is supplemental to communication between PRDOH and residents. In addition to citizen involvement, PRDOH encourages the participation of regional and Island-wide institutions.

Simultaneously with the abovementioned efforts, PRDOH will distribute informational material through its regional offices and public residential administrators and strengthen the distribution of news information on the programs through regional media that operate in areas where CDBG-DR funds will intervene. This is in accordance with the Plan's initiatives aimed to strengthen access to information among LMI citizens and members of minority or disabled groups.

Communication Via the internet

Public information for CDBG-DR (Hurricane Fiona) allocations during Action Plan development can be found on a dedicated page within the CDBG- DR Program website in English and Spanish at https://recuperacion.pr.gov/welcome/en/index.html and https://recuperacion.pr.gov/welcome/index.html, respectively. From this page, entity and private citizen stakeholders can find more information, register for program-related notifications, and find a formal announcement for the opening of the CDBG-DR Action Plan public comment period.

The CDBG-DR Action Plan will be posted in its entirety to the CDBG-DR Action Plan and amendments page where all versions of the CDBG-DR Action Plans are currently located and future CDBG-DR Action Plan and amendments will reside in English and Spanish at: https://recuperacion.pr.gov/en/action-plans/ and https://recuperacion.pr.gov/planes-de-accion/ respectively.

Once the CDBG-DR Action Plan is approved by HUD, and an additional program becomes available, all information will be integrated into the current CDBG-DR site for Hurricane Fiona allocations.

Interested individuals are encouraged to comment at any time by sending an email to infoCDBG@vivienda.pr.gov for CDBG-DR (Hurricane Fiona) inquiries. Additionally, citizens may comment by using the "Contact Us" tool included in

PRDOH's disaster recovery website. The "Contact Us" tool can be accessed directly at https://recuperacion.pr.gov/en/contact-us/ in English version and https://recuperacion.pr.gov/contactanos/ in Spanish.

As part of the implementation of CDBG-DR Programs, PRDOH will regularly interact with municipalities, NGOs, and the citizens of Puerto Rico. These methods may include but are not limited to:

- Web-based surveys
- Coordination with municipalities, non-profit or community organizations, faith- based or other organizations
- Focus groups or interviews
- Other in-person meetings as requested by individuals or organizations.

This Citizen Participation Plan will continue to be updated as programs progress. Citizen comment is welcome on this Plan throughout the duration of this grant. Please contact PRDOH using the following methods:

- **Via telephone:**
  1-833-234-CDBG or 1-833-234-2324
  (TTY: 787-522-5950)
  Attention hours: Monday to Friday from 8:00am-5:00pm
- **Via email:**
  infoCDBG@vivienda.pr.gov – for all CDBG-DR inquiries
- **Online:**
  https://recuperacion.pr.gov/en/contact-us/ (English version)
  https://recuperacion.pr.gov/contactanos/ (Spanish version)
- **In writing:**
  Puerto Rico CDBG-DR/MIT
  P.O. Box 21365
  San Juan, PR 00928-1365

Performance Report

Program performance reports, such as Quarterly Performance Reports (QPR), will be posted at https://recuperacion.pr.gov/en/reports/ prior to submission to HUD. Citizens will be provided fifteen (15) calendar days to comment on performance reports, as required by 24 C.F.R. § 91.115.

- **Via telephone:**
  1-833-234-CDBG or 1-833-234-2324
  (TTY: 787-522-5950)
  Attention hours: Monday to Friday from 8:00am-5:00pm
- **Via email:**
  infoCDBG@vivienda.pr.gov – for all CDBG-DR inquiries
- **Online:**
  https://recuperacion.pr.gov/en/contact-us/ (English version)
  https://recuperacion.pr.gov/contactanos/ (Spanish version)
- **In writing:**
  Puerto Rico CDBG-DR Program /CDBG-MIT Program
  P.O. Box 21365
  San Juan, PR 00928-1365

Individuals with Limited English Proficiency

Program materials, including plans and program guidelines, will be available in Spanish and English at https://recuperacion.pr.gov/en/resources/ and Spanish at https://recuperacion.pr.gov/recursos/. For access to language access services in languages other than English or Spanish, citizens may contact PRDOH at:

- **Via telephone:**
  1-833-234-CDBG or 1-833-234-2324
  (TTY: 787-522-5950)
  Attention hours: Monday to Friday from 8:00am-5:00pm
- **Via email:**
  infoCDBG@vivienda.pr.gov – for all CDBG-DR inquiries
- **Online:**
  https://recuperacion.pr.gov/en/contact-us/ (English version)
  https://recuperacion.pr.gov/contactanos/ (Spanish version)
- **In writing:**
  Puerto Rico CDBG-DR Program /CDBG-MIT Program
  P.O. Box 21365
  San Juan, PR 00928-1365

Materials will also be disseminated among program partners, including municipalities, government agencies, non-profit organizations, and NGOs to ensure that these materials are accessible locally.

The CDBG-DR Language Access Plan will be posted, along with all CDBG-DR Program policies, in both English and Spanish languages at https://cdbg-dr.pr.gov/en/resources/policies/ and at https://cdbg-dr.pr.gov/recursos/politicas/.

Technical Assistance

PRDOH will provide technical assistance to facilitate public participation regarding CDBG-DR Programs, upon request. The technical assistance provided will be determined based on the needs of the community or individual requesting assistance. This technical assistance may be requested at:

- Via telephone at: 1-833-234-CDBG or 1-833-234-2324
  (TTY: 787-522-5950)

  Attention hours: Monday to Friday
  from 8:00am-5:00pm

- Via email at: infoCDBG@vivienda.pr.gov –
  for all CDBG-DR inquiries

- Online at: https://recuperacion.pr.gov/en/contact-us/
  (English version)
  https://recuperacion.pr.gov/contactanos/
  (Spanish version)

- In writing at: Puerto Rico CDBG-DR Program/CDBG-MIT Program
  P.O. Box 21365
  San Juan, PR 00928-1365

c. Amendments

Citizen Involvement in the Original Action Plan

The original Action Plan will be posted in English and Spanish in the PRDOH program website https://recuperacion.pr.gov/welcome/en/index.html and https://recuperacion.pr.gov/welcome/index.html to allow an opportunity for public comment for **thirty (30) calendar days** for CDBG-DR, as required by 86 FR 569, 572. The posting communicated via e-mail, and/or postal mail, to non-profit organizations who work with vulnerable populations, municipalities, elected officials, and others, and announced through the PRDOH social media site on Facebook. PRDOH will consider comments on the Action Plan or substantial amendments received in writing, via email, verbally via the Call Center or expressed in-person or at official public hearing events.

Additionally, in an effort to permit public examination and accountability, PRDOH will make formal comments regarding Action Plans or substantial amendments publicly available at https://recuperacion.pr.gov/en/action-plans/ in English and https://recuperacion.pr.gov/planes-de-accion/ in Spanish. PRDOH responses to comments regarding Action Plans or substantial amendments will also be posted to the website. PRDOH will submit the summary of these comments or views, and its response to each comment to HUD with the Action Plan or substantial amendment.

Citizens accessing information via the CDBG-DR website in English and Spanish at https://recuperacion.pr.gov/welcome/index.html and who are seeking to comment on the CDBG-DR Action Plan will be directed to the Action Plan links for public comment as outlined above.

The most current version of the approved Action Plan, including any substantial amendments, will be posted as a single document and located at: https://recuperacion.pr.gov/en/action-plans/ in English and https://recuperacion.pr.gov/planes-de-accion/ in Spanish. Posting the Action Plan and any amendments as a single document allows the public to view the Action Plan as a whole, rather than the public having to view and cross-reference changes among multiple amendments. Citizens who cannot access the Action Plan or proposed substantial amendments through the website may request assistance from PRDOH:

- Via telephone: 1-833-234-CDBG or 1-833-234-2324
  (TTY: 787-522-5950)

  Attention hours: Monday to Friday
  from 8:00am-5:00pm

- Via email at: infoCDBG@vivienda.pr.gov –
  for all CDBG-DR inquiries

- Online at: https://recuperacion.pr.gov/en/contact-us/
  (English version)
  https://recuperacion.pr.gov/contactanos/
  (Spanish version)

- In writing at: Puerto Rico CDBG-DR Program /CDBG-MIT Program
  P.O. Box 21365
  San Juan, PR 00928-1365

Substantial Amendment

Citizen Involvement in the Substantial Amendment Process

Substantial amendments are subject to a **thirty (30) calendar day** public comment period and shall be posted to the PRDOH website where citizens will also be able to submit electronic comments, or follow instructions for submitted written comments, by alternative means listed on the website.

Citizen participation for substantial amendments to the Action Plan will follow this PRDOH Citizen Participation Plan. Changes made via substantial amendments to the Action Plan will be highlighted or otherwise identified within the context of the entire Action Plan. As required by 87 FR 6364 every substantial amendment will include the following:

- A section that identifies what content is being added,
  deleted, or changed;
- Chart or table that clearly illustrates where funds are coming from and where they are moving to; and
- Revised budget allocation table that reflects all funds.

A substantial amendment is defined as an amendment that contemplates one (1) or more of the following:

- Change in a program benefit or eligibility criteria;
- Addition or deletion of an activity; and
- Allocation or reallocation of more than ten percent (10%) of grant funds.

NON-SUBSTANTIAL AMENDMENT

Non-substantial Amendments to this Action Plan are not subject to a public comment period and will, therefore, follow HUD procedure requiring PRDOH to notify HUD at least **five (5) business days** before the amendment becomes effective. All non-substantial amendments will be posted to the PRDOH public website with changes to the text highlighted in grey.

This amendment is deemed substantial.

d. DISPLACEMENT OF PERSONS AND OTHER ENTITIES

Minimizing or Addressing Displacement

PRDOH plans to minimize displacement of persons or entities and assist persons or entities displaced as a result of implementing a project with CDBG-DR funds. This is not intended to limit the ability of PRDOH to conduct buyouts or acquisitions for destroyed and extensively damaged units or units. PRDOH will ensure that every project funded in part or in full by CDBG-DR funds, and all activities related to that project, are subject to the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (**URA**), as amended,[27] and section 104(d) of the Housing and Community Development Act of 1974 (**HCDA**),[28] except where waivers or alternative requirements have been provided by HUD. The implementing regulations for URA are at 49 C.F.R. § Part 24, and the regulations for section 104(d) are at 24 C.F.R. § Part 42, subpart C. The primary purpose of these laws and regulations is to provide uniform, fair, and equitable treatment of persons whose real property is acquired or who are displaced in connection with federally funded projects.

Additional modifications to increase accessibility for applicants or household members of applicants who have access and functional needs are an allowable part of the repair, or reconstruction assistance provided by the Program. Eligible applicants who require additional accessibility accommodation will be provided with accessibility options during the pre-construction meeting (for repair or reconstruction) or during the pre-award meeting (for relocation).

[27] 49 C.F.R § Part 24
[28] 42 U.S.C § 5301 et seq.

Additional reasonable permanent accessibility options will be available to applicants if the applicant or a member of the household requires such accommodation. PRDOH will consider exceptions to the maximum award amounts when necessary to comply with federal accessibility standards or to reasonably accommodate a person with functional diversity. The costs associated with the accommodation may be considered in addition to the Program caps and evaluated for cost reasonableness. The Uniform Relocation Assistance Guide & Residential Anti- Displacement and Relocation Assistance Plan (URA & ADP Guide)[29] as well as all General Policies are available in English and Spanish at https://recuperacion.pr.gov/en/resources/ and https://recuperacion.pr.gov/recursos/.

e. Protection of People and Property.

PRDOH will implement construction methods that emphasize quality, durability, energy efficiency, sustainability, and mold resistance as described further described through this Action Plan.

Elevation standards

Elevation is not a standalone activity in this CDBG-DR Program but shall be included as a resiliency measure for structures receiving assistance through the Community Flood Recovery and Mitigation Program and shall only be applied when it is required and feasible to mitigate future flood risk and protect federal investment. PRDOH will apply elevation standards for reconstruction, repair of substantially damaged structures, or substantial improvements to critical infrastructure structures in flood hazard areas. Elevation and flood insurance requirements will be put into place for all applicable program assistance to structures in the floodplain.

Flood Insurance Requirements

As per Federal regulations, a HUD-assisted homeowner of a property located in a Special Flood Hazard Area must obtain and maintain flood insurance in the amount and duration prescribed by FEMA's National Flood Insurance Program. Section 102(a) of the Flood Disaster Protection Act of 1973 (42 U.S.C.

[29] The URA and ADP Guide has been developed for CDBG-DR programs and will carry through into implementation of the CDBG-MIT Program

4012a) mandates the purchase of flood insurance protection for any HUD-assisted property within a Special Flood Hazard Area. Section 582 of the National Flood Insurance Reform Act of 1994, as amended, (42 U.S.C. 5154a) prohibits flood disaster assistance in certain circumstances. In general, it provides that no Federal disaster relief assistance made available in a flood disaster area may be used to make a payment to a person for ''repair, replacement, or restoration'' for damage to any personal, residential, or commercial property if that person at any time has received Federal flood disaster assistance that was conditioned on the person first having obtained flood insurance under applicable Federal law and the person has subsequently failed to obtain and maintain flood insurance as required under applicable Federal law on such property. This means that a PRDOH may not provide disaster assistance for the repair, replacement, or restoration of a property to a person who has failed to meet this requirement and must implement a process to check and monitor for compliance.

Construction Standards

PRDOH will support and supervise construction methods that emphasize quality, durability, energy efficiency, sustainability, and mold resistance. All reconstructed and newly constructed infrastructure will be required to incorporate principles of sustainability, including water and energy efficiency, resilience, and mitigation against the impact of storms, floods and landslides, where appropriate.

Infrastructure construction performed under the program will, at a minimum, adhere to the Puerto Rico Codes 2018, Regulation No. 9049, as adopted on November 15, 2018,[30] and must comply with the federal accessibility requirements. Exceptions may be reviewed on a case-by-case basis. All construction developed should ensure the protection of people and property from harm; emphasizing high quality, durability, energy efficiency, sustainability, and mold resistance; supporting the adoption and enforcement of modern and/or resilient building codes and mitigation of hazard risks, including possible sea level rise, high winds, hurricane storm surge, and flooding, where appropriate;

[30] Permits Management Office (OGPe, by its Spanish Acronym), Puerto Rico Codes 2018, Regulation No. 9049 (November 15, 2018) http://app.estado.gobierno.pr/ReglamentosOnLine/Reglamentos/9049.pdf.

and implementing and ensuring compliance with the Green and Resilient Building standards as follows.

The Green and Resilient Building Standard means that PRDOH will require that all applicable construction meets an industry-recognized standard that has achieved certification under at least one (1) of the following programs:

- Enterprise Green Communities;
- LEED (New Construction, Homes, Midrise, Existing Buildings Operations and Maintenance, or Neighborhood Development);
- ICC–700 National Green Building Standard Green+Resilience;
- Living Building Challenge; or
- any other equivalent comprehensive green building program acceptable to HUD.

To the extent practicable, PRDOH will follow best practices such as those provided by the U.S. Department of Energy's Guidelines for Home Energy Professionals and guidelines specified in the HUD CPD Green Building Retrofit Checklist. For all reconstructed and newly constructed structures, this may require installed appliances to meet ENERGY STAR certification standards at a minimum.

Contractors Standards

PRDOH will ensure that contractors are in compliance with codes, regulations, and permit requirements at the federal, state, and local levels. Work must also be conducted in a workmanship manner always ensuring adherence to construction standards.

Further information about a warranty periods, appeals, and/or applicant responsibilities related to acceptance of the Program assistance will be further developed in Program Guidelines that will be published in English and Spanish at: https://recuperacion.pr.gov/welcome/en/index.html and https://recuperacion.pr.gov/welcome/index.html.

Preparedness, Mitigation and Resilience

The Appropriations Act requires the use of 13% of the allocated CDBG-DR funds for mitigation activities. As stated in the allocation notice, "mitigation activities are defined as those activities that increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, injury, damage to and loss of property, suffering and hardship, by lessening the impact of future disasters." Consequently, PRDOH may also meet the requirement of the CDBG–DR mitigation set-aside by including eligible recovery activities that both address the impacts of the qualified disaster, and incorporate mitigation measures into the recovery activities. PRDOH will report mitigation activities expenditures as such in DRGR so that HUD and the public have visibility over compliance with this requirement. As allowed in 88 FR 4671, 4649 PRDOH will incorporate mitigation measures into the recovery activities.

Vulnerability in the Disaster Impacted Areas

Resilience is defined as a community's ability to minimize damage and recover quickly from extreme events and changing conditions, including natural hazard risks. In alignment with this methodology, flood hazard vulnerability is determined with the following indicators: social vulnerability, landslide risk and flood risk. The area with the highest social vulnerability identifies those areas where the persons have a lower capacity to absorb shocks and stressors. In the map below (Fig. 34) indicators of social vulnerability were used to create a SoVI for Puerto Rico. SoVI scores were categorized from (0 – no data to 5 – high social vulnerability) using a standard deviation classification scheme. Social vulnerability describes an area's capacity to prepare for, respond to, and rebound from disaster events[31], and has a long conceptual and theoretical history in social and disaster science fields.[32] Socially vulnerable populations have fewer resources to aid in preparation for disasters, often withstand the worst of disaster impacts, and take longer to bounce recover from disaster events. Empirical measures of social vulnerability enable decision makers and emergency managers to understand

[31] Cutter, Susan L., Emrich, Christopher T. Moral Hazard, Social Catastrophe: The Changing Face of Vulnerability along the Hurricane Coasts. The ANNALS of the American Academy of Political and Social Science. March 1, 2006. Accessed at: https://journals.sagepub.com/doi/10.1177/0002716205285515.

[32] Birkmann, Jörn. Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient Societies Second Edition. United National University Press. December 2013.

where vulnerable populations reside and how that vulnerability manifests across a landscape.

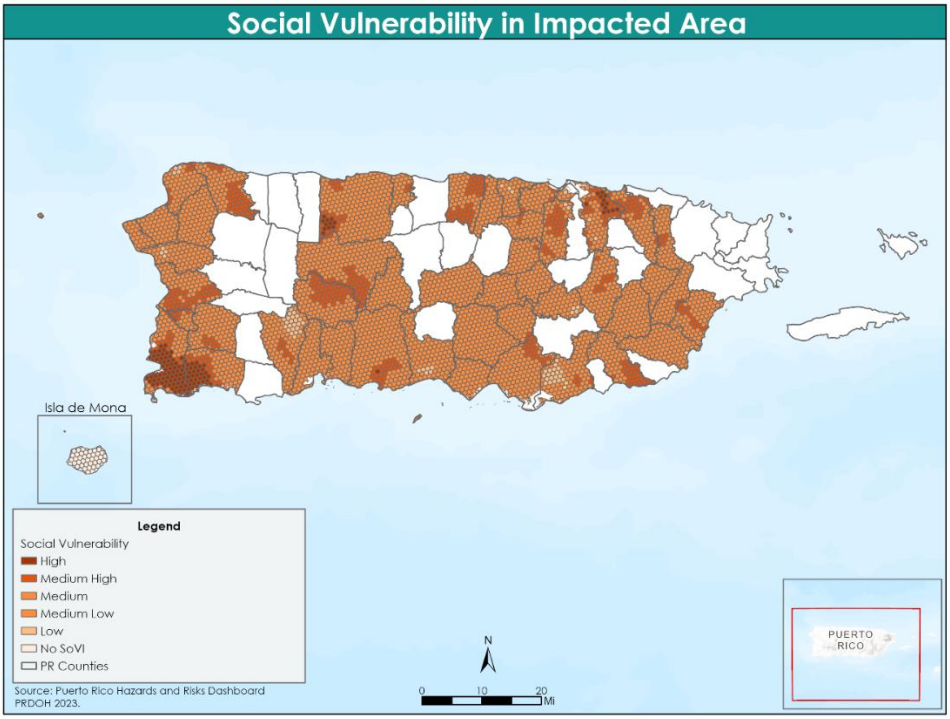

Figure 34: Social Vulnerability Analysis of the MID Area.

The term landslide includes a wide variety of land movements, such as rockfalls, slope failures, and debris flow. This earth movement threatens life and property and can disrupt transit, dragging trees, houses, bridges and cars, among others. Meteorological variations of intense rainfall, such as hurricanes can trigger landslides. In the 2021 PRSNHMP, many of the landslides that occur in Puerto Rico are in a special category known as "debris flow". The flow occurs in mountainous areas with significant slopes during heavy rains. The rain saturates the soil and causes the ground level and peel strength loss, usually where the ground contacts the bedrock. There are many types of landslides, however, associated with soil saturation by water:

1. Slow landslides: slow and steady movement of soil or rock falls down the slope, often recognized by their content of tree trunks, twisted pieces of fences or retaining walls, tilted poles or fences.

2. Debris flow: fast-moving mass which combines loose soils, rocks, organic matter, air infiltration, and water to form a viscous flow that slides down the slope.

3. Debris avalanche: fast, or extremely fast, debris flow range.

4. Mud flow: the mass rapid flow of wet material containing at least fifty percent (50%) sand, silt, and clay particles.

As described in the map below, (Fig.35) represents the landslide risk in the MID Areas.

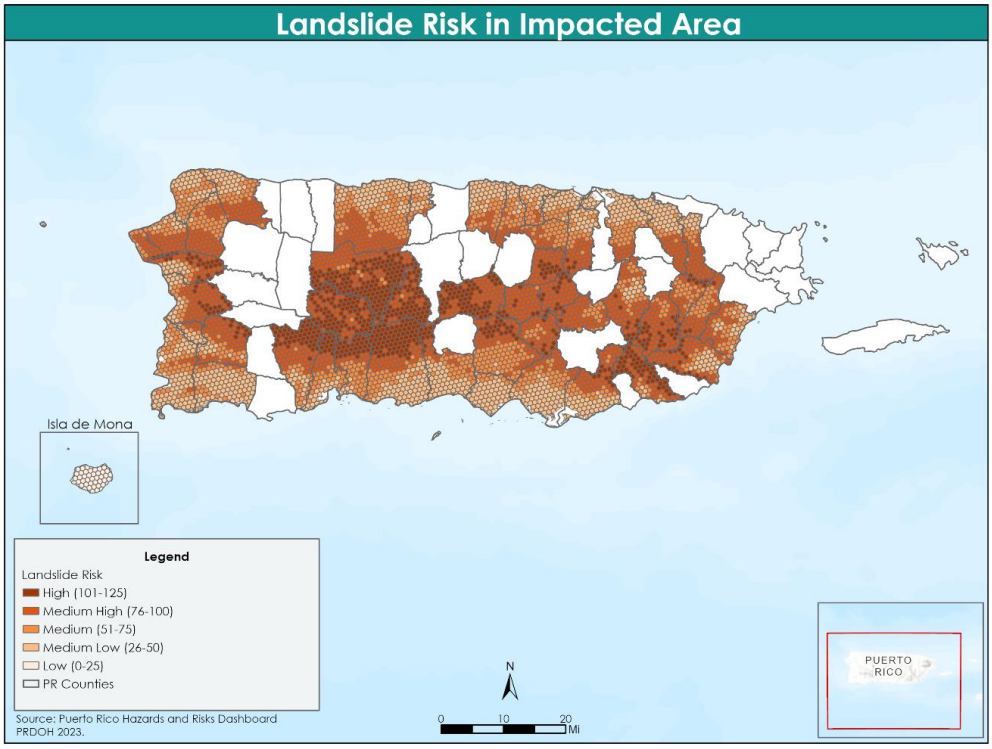

Figure 35: Landslide Risk in the MID Area.

Floods are generally the result of excessive precipitation and can be classified under two (2) categories: flash floods, the product of heavy localized precipitation in a brief time over a given location; and general floods, caused by precipitation over a longer time period and over a given river basin. The severity of a flooding event is determined by a combination of stream and river basin topography and physiography, precipitation and weather patterns, recent soil moisture conditions and the degree of vegetative clearing.

Flash flooding events usually occur within minutes or hours of heavy amounts of rainfall, from a dam or levee failure, or from a sudden release of water held by an ice jam. Most flash flooding is caused by slow-moving thunderstorms in a local area or by heavy rains associated with hurricanes and tropical storms. Although flash flooding occurs often along mountain streams, it is also common in urbanized areas where much of the ground is covered by impervious surfaces. General floods are usually longer-term events and may last for several days.

The primary types of general flooding include riverine flooding, coastal flooding and urban flooding. Riverine flooding is a function of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall produced by hurricanes, tropical storms, and other large coastal storms. Urban flooding occurs where man-made development has obstructed the natural flow of water and/or decreased the ability of natural groundcover to absorb and retain surface water runoff. As presented in the figure 36 below, the MID Areas locate several municipalities in high risk of 100-year flooding.

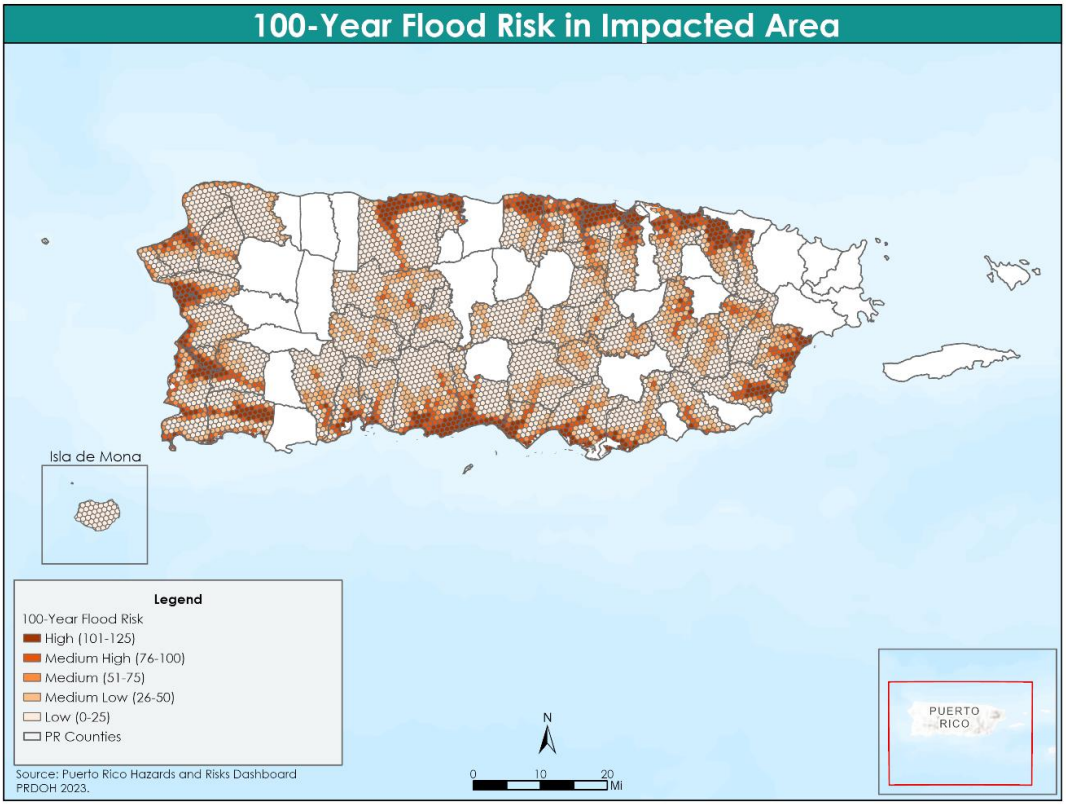

Figure 36: 100 year Flood Risk in the MID Area.

Top 5 Hazard Risk by Municipality					
Municipality	**Top Risk**	**2nd Highest Risk**	**3rd Highest Risk**	**4th Highest Risk**	**5th Highest Risk**
Aguadilla	Hurricane_Wind	Earthquake	Flood_100	Landslide	Liquefaction
Coamo	Hurricane_Wind	Landslide	Earthquake	Drought	Flood_100
Arecibo	Hurricane_Wind	Earthquake	Flood_100	Landslide	Liquefaction
Cataño	Flood_100	SLR10Ft	Hurricane_Wind	Earthquake	Cat5_Surge
Comerío	Hurricane_Wind	Landslide	Drought	Earthquake	Liquefaction
Guayanilla	Hurricane_Wind	Flood_100	Earthquake	Landslide	Drought
Ponce	Flood_100	Hurricane_Wind	Earthquake	Landslide	Drought
Juncos	Hurricane_Wind	Landslide	Flood_100	Earthquake	Drought
Naranjito	Hurricane_Wind	Landslide	Earthquake	Drought	Flood_100
Vega Baja	Hurricane_Wind	Flood_100	Earthquake	Landslide	Liquefaction
Rincón	Hurricane_Wind	Earthquake	Landslide	Flood_100	SLR10Ft
San Lorenzo	Hurricane_Wind	Landslide	Earthquake	Drought	Severe_Storm
Mayagüez	Flood_100	Hurricane_Wind	Earthquake	Landslide	SLR10Ft
Peñuelas	Hurricane_Wind	Earthquake	Flood_100	Landslide	Drought
Añasco	Flood_100	Hurricane_Wind	Earthquake	Landslide	Severe_Storm
Lajas	Flood_100	Earthquake	Hurricane_Wind	Landslide	Liquefaction
Toa Baja	Flood_100	Hurricane_Wind	SLR10Ft	Earthquake	Liquefaction
Barranquitas	Hurricane_Wind	Landslide	Earthquake	Drought	Wildfire
Santa Isabel	Flood_100	Hurricane_Wind	Earthquake	Drought	SLR10Ft
Salinas	Hurricane_Wind	Flood_100	Drought	Earthquake	Landslide
Cidra	Hurricane_Wind	Landslide	Drought	Earthquake	Flood_100
Carolina	Flood_100	Hurricane_Wind	Earthquake	Landslide	SLR10Ft
Humacao	Flood_100	Hurricane_Wind	Landslide	Earthquake	Drought
Aguada	Hurricane_Wind	Flood_100	Earthquake	Landslide	Liquefaction
San Germán	Hurricane_Wind	Earthquake	Flood_100	Landslide	Liquefaction
Toa Alta	Hurricane_Wind	Earthquake	Landslide	Flood_100	Liquefaction
Yabucoa	Hurricane_Wind	Flood_100	Landslide	Earthquake	Drought
Guayama	Hurricane_Wind	Flood_100	Drought	Landslide	Earthquake
Barceloneta	Flood_100	Hurricane_Wind	Earthquake	SLR10Ft	Liquefaction
Isabela	Hurricane_Wind	Earthquake	Landslide	Flood_100	Liquefaction
Canóvanas	Hurricane_Wind	Flood_100	Landslide	Earthquake	Severe_Storm

Las Piedras	Hurricane_Wind	Landslide	Earthquake	Drought	Severe_Storm
Adjuntas	Hurricane_Wind	Landslide	Earthquake	Flood_100	Lightning
Yauco	Hurricane_Wind	Earthquake	Landslide	Flood_100	Drought
Jayuya	Hurricane_Wind	Landslide	Earthquake	Severe_Storm	Liquefaction
Hormigueros	Flood_100	Hurricane_Wind	Earthquake	Liquefaction	Landslide
Cabo Rojo	Flood_100	Hurricane_Wind	Earthquake	Liquefaction	SLR10Ft
Vega Alta	Hurricane_Wind	Flood_100	Earthquake	Landslide	Liquefaction
Juana Díaz	Hurricane_Wind	Flood_100	Earthquake	Landslide	Drought
Dorado	Flood_100	Hurricane_Wind	Earthquake	Liquefaction	SLR10Ft
Moca	Hurricane_Wind	Earthquake	Landslide	Severe_Storm	Liquefaction
Caguas	Hurricane_Wind	Flood_100	Landslide	Earthquake	Drought
Orocovis	Hurricane_Wind	Landslide	Earthquake	Drought	Severe_Storm
Aibonito	Hurricane_Wind	Landslide	Drought	Earthquake	Flood_100
Utuado	Hurricane_Wind	Landslide	Earthquake	Flood_100	Lightning
San Juan	Hurricane_Wind	Flood_100	Human_Hazard	Earthquake	Landslide
Bayamón	Hurricane_Wind	Flood_100	Earthquake	Landslide	Liquefaction
Patillas	Hurricane_Wind	Landslide	Flood_100	Earthquake	Drought

Table 19: *Top 5 Hazard Risk by Municipality in the MID Area. Source: Action Plan MIT 2019.*

Furthermore, PRDOH will continue to gather data and consider risk factors associated to the level of vulnerability, as illustrated in Figure 37.

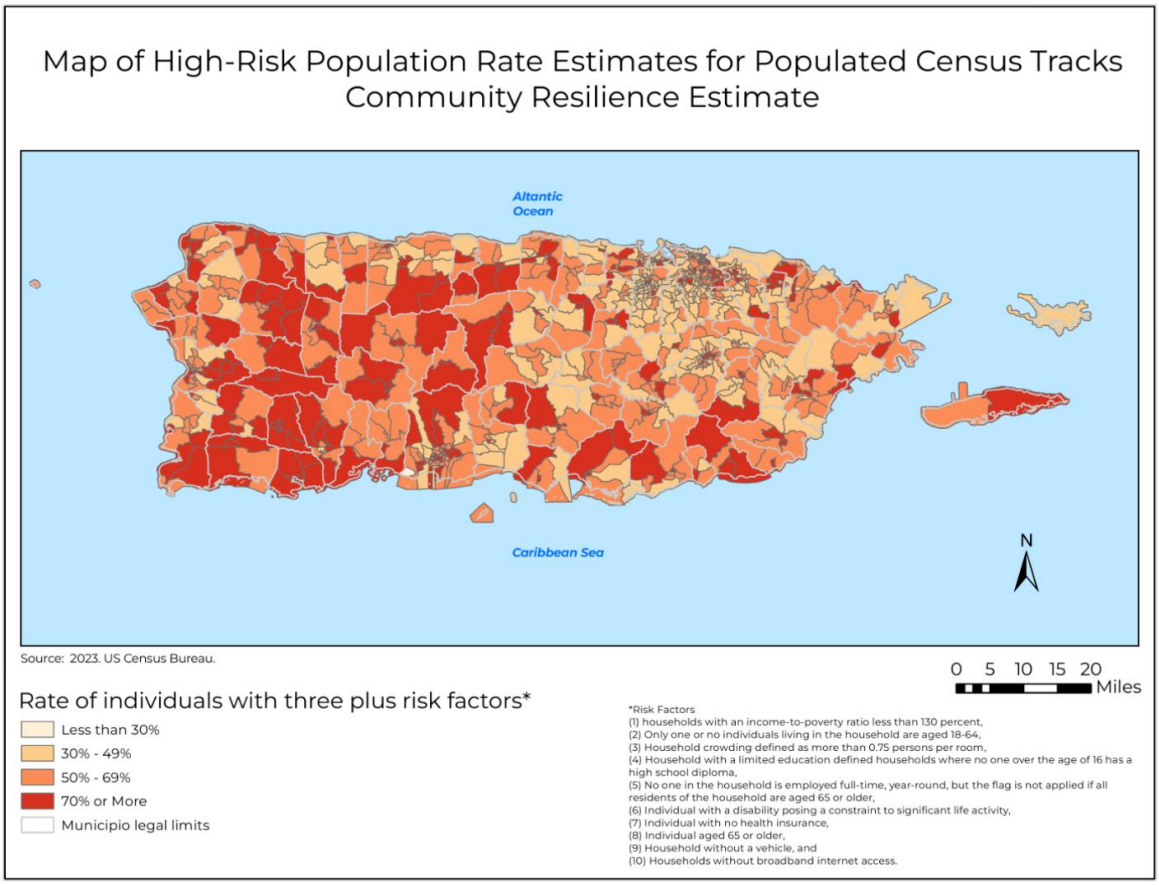

Figure 37: High-risk population estimates based on Census tracts. US Census Bureau Community Resilience Estimates.

Cost-Effectiveness

PRDOH will review all projects for feasibility through cost-benefit analysis or comparison of repair costs plus mitigation measures versus reconstruction to the highest resiliency standard. Procurement procedures pertaining to the planning, acquisition of materials, construction or reconstruction and services will be reviewed for compliance with 2 C.F.R. Part 200 Cost Principles including: necessary costs, cost reasonableness standards, allowable costs, and cost allocability.

Duplication of Benefits.

In accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. §§ 5121–5207), as amended, and CDBG-DR appropriations acts, Puerto Rico will implement policies and procedures to ensure no individual receives duplication of benefit for the same purpose and/or effect

to recover from the Hurricane Fiona. Federal law prohibits any person, business concern, or other entity from receiving Federal funds for any part of such loss as to which they have received financial assistance under any other program, from private insurance, charitable assistance, or any other source. Detailed policies and procedures for assessing DOB will be included in program guidelines. The DOB guidance included in Federal Register Vol. 84, No. 119 (June 20, 2019), 84 FR 28836, updates the duplication of benefits guidance issued in Federal Register Vol. 76, No. 221 (November 16, 2011), 76 FR 71060, for CDBG-DR grants received in response to disasters declared between January 1, 2015, and December 31, 2021. As such, the DOB policy to be outlined in the program guidelines will follow the guidance issued in 84 FR 28836.

4. Grantee Proposed Use of Funds

Overview

a. Program Budget

The program budget outlines how funds will be spent. PRDOH will comply with the requirement that not less than eighty seven percent (87%) of the funds provided under the Federal Registry Notice must address unmet disaster needs or mitigation activities within the "most impacted and distressed" counties identified in 88 FR 32046 and not less than seventy percent (70%) of the aggregate of CDBG-DR program funds to support activities benefitting LMI population. Funds assigned to the program will be distributed amongst the forty-eight (48) municipalities as approved in the MID Area, taking into consideration the amount of unmet need and damage reports submitted to FEMA and used by HUD.

The program budget aligns with the categories identified in the unmet need's assessment, with funds designated for Infrastructure activities within the MID areas. PRDOH may propose the use of funds for housing and economic revitalization needs unrelated to the grantee's unmet infrastructure needs. However, the grantee must demonstrate, in its need's assessment, that there is no remaining unmet infrastructure need or that the remaining unmet infrastructure need will be addressed by other funding sources

Any amendments to the Action Plan will take place in conformity with HUD requirements. Non-substantial amendments addressing minor administrative changes will be presented to HUD five (5) days prior to being incorporated into the comprehensive Action Plan. Substantial amendments addressing alterations to the Action Plan such as change to program benefit or eligibility criteria, the addition or deletion of an activity, or the allocation or reallocation of more than ten percent (10%) of grant funds will be publicly posted for no less than thirty (30) days, or as otherwise indicated in the Citizen Participation Plan, to allow public input before finalizing and incorporating into the comprehensive Action Plan. Amendments to this Action Plan will be incorporated into one comprehensive document and tracked chronologically in a version control log.

Allocation	Total	Percent
PL-117-180 & PL-117-328 Grand Total	$166,312,000	100.0%
PL-117-180 DR Unmet Needs	$144,039,000	86.6%
PL-117-328 DR Unmet Needs	$580,000	0.3%
DR Unmet Needs Total	$144,619,000	87.0%
PL-117-180 MIT Set-aside	$21,606,000	13.0%
PL-117-328 MIT Set-aside	$87,000	0.1%
MIT Set-aside Total	$21,693,000	13.0%
Administrative PRDOH DR	$7,230,950	4.3%
Administrative PRDOH MIT	$1,084,650	0.7%
Administrative PRDOH Total	$8,315,600	5.0%
DR Allocation for Program Delivery	$137,388,050	95.0%
MIT Allocation for Program Delivery	$20,608,350	95.0%
4671 Fiona DR Unmet Needs (80%)	$123,649,245	80.0%
4649 Floods DR Unmet Needs (20%)	$13,738,805	20.0%
DR Unmet Needs Total	$137,388,050	100.0%
4671 Fiona MIT Set-aside (80%)	$16,486,680	80.0%
4649 Floods MIT Set-aside (20%)	$4,121,670	20.0%
MIT Set-aside Total	$20,608,350	100.0%

Table 20: *Allocation.*

Connection to Unmet Needs

PRDOH has analyzed the best available data for, FEMA/COR3 damages reports, as presented in COR3's transparency portal, show seventy-four percent (74%) of projects submitted are directed at roads and bridges. Moreover, FEMA IA data applications for the Severe storm, landslide and floods reflect eighty-nine percent (89%) of valid registration damage reported was approved ($1,496,881.99 and $1,329,145.49 respectively). As for t Hurricane Fiona's impact, FEMA IA data reflect sixty-six percent (66%) of valid registration damage reported was approved ($647,510,365.79 and $429,128,830.60 respectively). During the data analysis period, PRDOH considered that not all affected individuals submitted an application to FEMA. However, the type of impact based on flooding and landslides, as well as the community engagement taking place after the event suggests the most effective, cost-efficient use of the allocation should be focused on projects that can prevent and mitigate future floods and consequently landslides. As required by the 88FR 32046, PRDOH will allocate at least eighty-seven percent (87) of the funds to address unmet needs with HUD-identified "most impacted and distressed" areas. The remaining thirteen (13%) percent of the allocation may be used to address unmet needs as more data and/or planning processes are gathered and completed. It is estimated that at least seventy-percent (70%) of all program funds will benefit LMI persons or households.

This Action Plan primarily considers and addresses floods at the community level as the main impact from both disasters, supporting efforts that can benefit low to moderate income vulnerable communities. At least 70 percent of all program funds will benefit LMI persons or households. Using the best available data to identify LMI vulnerable communities, priority will be given across the forty-eight (48) Municipalities included in the MID Area. in the project evaluation process.

Leveraging Funds

In order for PRDOH to maximize a cost-effective use of other federal and local infrastructure disaster recovery funds, coordination with FEMA, COR3, Municipalities and Non-governmental Organizations will continue through the preparation and approval of the action plan, as well as the program design. This

approach will identify the available and ideal funding sources, as well as expedite the necessary and cost-reasonable aid to most vulnerable communities in need of immediate flood and/or landslide recovery assistance. However, PRDOH also recognizes that Puerto Rico's economic situation limits the amount of available state and municipal funding to leverage the reconstruction and rehabilitation of LMI households, primarily based on current construction constraints in terms of cost, labor and projects already in process across the island.

Distribution of Funds.

METHOD OF DISTRIBUTION

PRDOH may utilize two (2) distribution models for its flood recovery and mitigation disaster recovery program as shown in models A and B in the graphic below. These Methods of Distribution (MODs) shall be utilized to implement the program as outlined in detail within the program description in the following pages. Municipalities and stakeholders will play an active role in the program. The Program will be administered by PRDOH under one of these models:

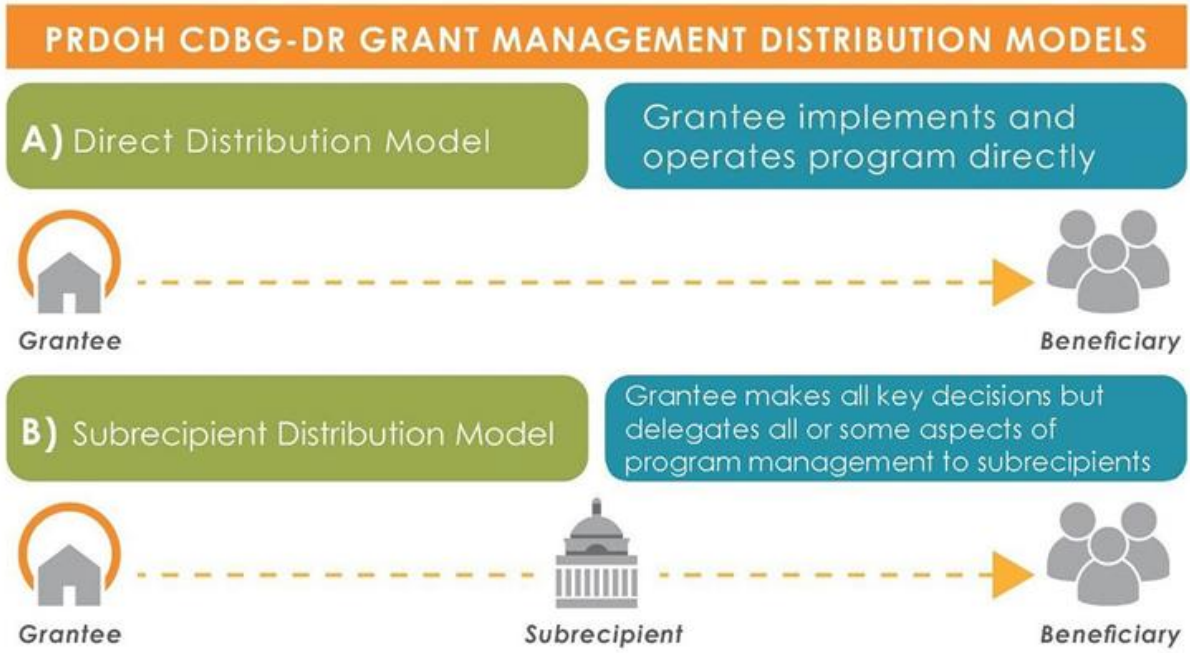

Figure 38: Method of Distribution models for PRDOH CDBG – DR Programs

Grantee

The Government of Puerto Rico is formally the Grantee for the CDBG-DR funds. The Governor has designated PRDOH as the grantee for purposes of

administering the program and executing grant agreements with HUD. Therefore, PRDOH will be referred to as the grantee in this Action Plan and in administrative agreements with HUD.

Subrecipients

Subrecipients are chosen by the grantee to undertake certain eligible CDBG activities. Subrecipient means a public or private nonprofit agency, authority, or organization, or a for-profit entity authorized under 24 C.F.R. §570.201(o), receiving CDBG funds from the recipient or another subrecipient to undertake activities eligible for such assistance. Subrecipients may include public and private organizations, agencies, including nonprofit and for-profit subrecipients, as applicable for the program established in the Action Plan. For-profits may only be included as subrecipients when assisting with economic development and micro-enterprise activities, unless otherwise waived by HUD. Subrecipients will meet the selection criteria outlined in the Action Plan and/or program guidelines and will: CDBG-DR Severe Flood, landslide and Hurricane Fiona Allocation Action Plan and/or program guidelines and will:

- Carry out specified program on behalf of PRDOH
- Comply with all Federal statutes, regulations, and program requirements
- Comply with all terms and conditions of the subrecipient agreement
- Meet all established performance goals

PRDOH is the responsible entity for subrecipient compliance and performance and Environmental Review under 24 C.F.R. § Part 58. Agreements with subrecipients will comply with 24 C.F.R. § 570.503. Therefore, Subrecipients who fail to meet any of the criteria outlined above, or as specified in their Subrecipient Agreement (SRA), may have their ability to carry out program activities rescinded, in which case, activities would be managed by PRDOH or its Subrecipient, or funds redistributed in accordance with the Action Plan.

Program Income.

Puerto Rico does not anticipate it will generate program income as part of the activities allowed under these allocations. Should any funds be generated, recovery of funds including program income, refunds, and rebates will be used before drawing down additional CDBG-DR funds, as per 88 FR 32074. These

amounts will be recorded and tracked in the accounting systems and recorded in the HUD Disaster Recovery Grant Reporting (**DRGR**) system. The DRGR system requires grantees to use program income before drawing additional grant funds and ensures that program income retained will not affect grant draw requests for other subrecipients. Subrecipients will be required to report program income at least quarterly and will be subject to applicable regulations from PRDOH and HUD directives. Retention of program income will be in compliance with any subrecipient agreements.

Repayment or Recapture.

Instances may arise where a beneficiary must return all or part of the awarded funding to PRDOH. PRDOH is responsible for recapturing duplicative funds from beneficiaries or from beneficiaries who become non-compliant. All files will be reviewed and reconciled for accuracy to ensure DOB did not occur and that beneficiaries are in compliance with Program requirements and federal guidelines. If a beneficiary has been identified as receiving a potential overpayment, PRDOH will document the amount and basis for the repayment. All funds recovered because of this policy will be tracked in the DRGR system and returned to the CDBG-DR account or U.S. Treasury if the CDBG-DR grant has been closed out.

Further information about program award requirements, occupancy and residency periods, ongoing monitoring during compliance periods, and/or applicant responsibilities related to acceptance of the Program assistance will be further developed in Program Guidelines that will be published in English and Spanish at: https://recuperacion.pr.gov/welcome/en/index.html and https://recuperacion.pr.gov/welcome/index.html.

PROGRAM DETAILS

b. Program Details

Severe storm, floods, landslides and hurricane impact

Whilst Hurricane Fiona and the February floods impacted all seventy-eight (78) municipalities in Puerto Rico, forty-eight (48) are included in the MID area. Moreover, although Municipal governments and state agencies are undertaking active efforts to rebuild or enhance infrastructure vital to community recovery and revitalization, projects in the planning, design and even construction phase were impacted by the disasters. Severe rainfall flooded streets and overwhelmed water management infrastructure.

Infrastructure Coordination

PRDOH is aware of the infrastructure needs of communities across the island, as identified by the municipalities through outreach efforts of ongoing disaster recovery and mitigation programs and initiatives detailed in active Action Plans. Thus, PRDOH will continue to work closely with FEMA, COR3, Municipalities, NGO's and communities as project worksheets are developed in an effort to effectively address funding gaps for actual projects and support future projects. PRDOH will collaborate with the COR3to develop strategies for long-term resilience to natural hazards and detail how infrastructure investments align with other planned capital improvements. This funding coordination may include working with local governments on the construction, maintenance, or rehabilitation of water management systems in areas impacted by floods and landslides.

Infrastructure Program

Community Flood Recovery and Mitigation Program

Prioritizing infrastructure in identified MID areas is of paramount importance to prevent and mitigate flood and landslide impacts in the most vulnerable communities across the island. PRDOH will continue to support ongoing efforts of active CDBG-DR and CDBG-MIT infrastructure Programs, focusing on community flooding needs in both urban centers and rural communities. This program seeks to promote the redevelopment, re-greenin, and restoration of lost natural resources. PRDOH is looking to improve public infrastructure or their extension to implement a wide range of "RE-Green" initiatives such as using green best

practice in infrastructure projects and promoting a positive restorative and protective effect on the natural infrastructure. It may also include public infrastructure extensions and/or improvements, as well as the establishment of a Community Resilience Center, if deemed as the best recovery and mitigation strategy for a vulnerable community.

Taking into consideration the common factors for both disasters were floods and landslides, there will also be a focus on Low Impact Development (LID). LID refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater[33]. It's also an approach to land development or redevelopment that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions. EPA promotes the use of Low Impact Development (LID) and Green Infrastructure (GI) as a stormwater management approach that provides many community benefits and that can supplement flood protection. LID/GI projects may allow a community to claim points under the Community Rating System (CRS) developed by FEMA.

RECOVERY PLAN ALIGNMENT

The proposed Community Flood Recovery and Mitigation Program aligns with current CDBG-DR, CDBG-MIT, and CDBG-DR Earthquakes and Isaias Storm Action Plan efforts.

[33] Planning Regulation #40, by PRPB.

ELIGIBLE ACTIVITIES

All projects in this Program will meet at least one (1) of the following eligible activities:

• Section 105 (a) (3) – Code Enforcement in deteriorated or deteriorating areas in which such enforcement, together with public or private improvements or services to be provided, may be expected to arrest the decline of the area

• Section 105 (a) (4) – Clearance, demolition, removal, reconstruction, and rehabilitation (including rehabilitation which promotes energy efficiency) of buildings and improvements

• Section 105 (a) (5) – Architectural Barrier Removal

• Section 105 (a) (7) – Disposition of Real Property

• Section 105 (a) (8) – Public Services

• Section 105 (a) (12) – Planning Activities

• Section 105 (a) (14) – Activities Carried Out through Nonprofit Development Organizations

PROGRAM ACCOMPLISHMENTS

Promotes widespread re-greening (green infrastructure, etc.) efforts across the island to provide multiple benefits to communities. Provide the opportunity to establish Community Resilience Centers (CRC) across Puerto Rico to support communities during disasters, provide with provision of critical functions and increase social resilience through potential expansion of year-round day-to-day functions.

ELIGIBILITY

Applicants must be one (1) of the following types of entities:

• Unit of General Local Government (Municipal Governments);

- Non- Profit Organizations

Additional Eligibility Criteria

• CDBG-DR funds cannot be used for long-term operations and maintenance. Subrecipients must submit an Operations and Maintenance Plan (O&M Plan) for proposed projects to be funded through this program, including daily operations.

• All construction work, repair or new, shall utilize the services of an architect or engineer with a valid professional license to practice in Puerto Rico, to design the facilities and improvements in accordance with PRDOH and FEMA standards, and all applicable local codes and regulations.

• The Project must be within the Municipal boundary.

• Demonstrate tie-back to the disaster.

• Projects must have a CDBG-DR eligible activity.

• Subrecipients of CRC must agree to be on a public registry and make the facility available to the public in future disaster events, and provide year-round maintenance and operations expenses that must be covered through day-to-day operations.

METHOD OF DISTRIBUTION

Subrecipient Distribution Model

To best assist and start the community recovery process, PRDOH plans to distribute funding for this Program amongst the forty-eight (48) municipal governments of Puerto Rico approved by HUD in the MID area expansion requested by PRDOH and provide the opportunity for NGOs to present projects for the identified area. All subrecipients will have a specified period to submit project concepts to PRDOH that meet program objectives. Community Flood Recovery and Mitigation funding distribution information will be publicly available and posted to the PRDOH CDBG-DR website. In situations in which municipal governments do not comply with their funding subrecipient agreements, PRDOH reserves the right to cancel said agreement and carry out an alternate funding distribution process to provide opportunity to other eligible entities to submit applications to implement eligible projects under this Program.

PROGRAM OBJECTIVE & DESCRIPTION

Community Flood Recovery and Mitigation Program establishes a fund for NGOs and municipalities to address infrastructure needs of vulnerable communities in coordination with state and federal agencies. Eligible projects include rehabilitation or reconstruction of public infrastructure improvements, RE-GREEN and LID initiatives, and projects that use green infrastructure techniques or restore and replant impacted natural resources. Municipalities that do not develop a CRC within the CDBG-DR City Revitalization Program may opt to develop a CRC facility, if deemed necessary, cost-effective and if it is endorsed by the vulnerable surrounding community. As per PRDOH intentions to maximize fund investment, CRCs shall provide year-round community gathering spaces where citizens may receive educational materials and information on preparedness and home/community resilience initiatives. While not required, applicants will be strongly encouraged, in the application process, to provide non- CDBG-DR funding to the project, which may include in-kind contributions, land donations, long-term maintenance and operations, or support from non-profits or civic/community groups, and other measures.