



PUERTO RICO

COMMUNITY DEVELOPMENT BLOCK GRANT – MITIGATION

3rd AMENDMENT TO THE ACTION PLAN (SUBSTANTIAL)

This document constitutes a DRAFT DELIVERY and is subject to HUD approval.

DRAFT DELIVERY DATE: February 12, 2024

TABLE OF CONTENTS

${f 3}^{ t RD}$ AMENDMENT TO THE CDBG-MIT ACTION PLAN (SUBSTANTIAL): REVISED DR	AFT 3
U.S. Department of Housing and Urban Development Review Period	3
SUMMARY OF CHANGES	1
Budget Reallocation Table	2
PROPOSED SUBSTANTIAL AMENDMENT CHANGES	3
The Importance of Systemic Stability	3
Single-Family Housing Mitigation Program	5
Social Interest Housing Mitigation Program	15
Multi-Sector Community Mitigation Program	26
Economic Development Investment Portfolio for Growth – Lifeline Program	
Community Energy and Water Resilience Installations Program	42

3RD AMENDMENT TO THE CDBG-MIT ACTION PLAN (SUBSTANTIAL): REVISED DRAFT

U.S. Department of Housing and Urban Development Review Period

This document constitutes a DRAFT DELIVERY of the 3rd Amendment to the CDBG-MIT Action Plan (Substantial) and is subject to approval by the U.S. Department of Housing and Urban Development (**HUD**).

On November 23, 2023, the DRAFT of the 3rd Amendment to the CDBG-MIT Action Plan (Substantial) was published for a 30-day public comment period that concluded on December 23, 2023. Each substantial amendment to the CDBG-MIT action plan must be published on the Puerto Rico Department of Housing (**PRDOH**) website for a public comment period of no less than thirty (30)¹ calendar days to ensure adequate citizen participation, as required by HUD.

All comments received on the draft substantial amendment were revised by PRDOH before submitting the DRAFT amendment to HUD on February 12, 2024, for the federal agency's 60-day review period. Upon this DRAFT DELIVERY date, HUD shall complete its evaluation process and approve or request modifications to this 3rd Amendment to the CDBG-MIT Action Plan (Substantial) on or before a 60-day period from the date of receipt. If HUD requires modifications, the PRDOH will resubmit a revised version of the amendment.

The approved amendment will be posted on PRDOH's website and incorporated into the Action Plan as a whole. This will allow the public and HUD access to PRDOH's entire action plan for viewing as a single document, rather than having to search for and cross-reference its multiple changes.²

The most current version of the CDBG-MIT Action Plan, including all approved amendments, is available in English and Spanish at PRDOH's website at https://recuperacion.pr.gov/en/action-plans/action-plan-cdbg-mit/. and https://recuperacion.pr.gov/en/action-plans/action-plan-cdbg-mit/.

Public comments related to this substantial amendment with PRDOH's responses are available at the CDBG-MIT website as Appendix G and G.1.

¹ See Federal Register Notice Vol. 84, No. 169 (August 30, 2019), 84 FR 45838, 45850.

² See 84 FR 45838, 45850.

SUMMARY OF CHANGES

This substantial amendment includes programmatic changes for housing and multisector programs. A summary of the changes is provided in the table below:

Section	Subsection	Proposed Changes	
Housing Sector			
Single-Family Housing Mitigation (SFM) Program	Maximum award	The PV and water storage systems maximum award under the SFM Program was increased to allow the program to cover the increased costs of purchasing and installing these systems for eligible households.	
Social Interest Housing Mitigation (SIHM) Program	Eligible entities, Public facilities reconstruction or rehabilitation for social interest hosing set-aside, Maximum award	The SIHM Program added a \$15 million set-aside for the reconstruction or rehabilitation of publicly owned facilities and buildings to use as multi-family unit buildings to serve socially vulnerable populations. The set-aside's eligible entities will be municipalities with the capacity and experience to work with socially vulnerable populations.	
Multi-Sector Community Mitigation (MSC) Program	Program description, Program priorities, Program implementation, Method of distribution, and more.	The Targeted Community Representative (TCR) requirement under the MSC Program was removed to allow PRDOH to collaborate directly with the targeted communities' community-based organizations and stakeholders. Furthermore, language under the Method of distribution was modified to clarify that PRDOH may directly select a nonprofit organization or community-based organization as subrecipient to help with the implementation of the program.	
	Caño Martín Peña (CMP) Communities Set–Aside	The estimate of the current residents living in CMP Communities was removed as these numbers may change throughout the grant's life cycle. Additionally, a footnote was updated to clarify that El Caño Martín Peña's total number of residents and its communities are extracted from Act 489-2004.	
Multi-sector			
Economic Development Investment Portfolio for Growth – Lifeline Mitigation (IPGM)	Eligible entities	The eligible entities criteria section under the IPGM Program was modified to clarify that private entities that are part of a public-private partnership are eligible entities under the program.	
Program	Footnote	A footnote referencing the CEWRI-IP Program under the IPGM Program was updated to clarify that energy projects that directly improve the	

Section	Subsection	Proposed Changes	
		electrical power grid should be funded through the CDBG-DR Energy Program.	
Community Installations subprogram	Measurable Mitigation Risk	The Risk-Benefit Score under the Community Installations subprogram was removed since the PV and water storage systems installation will be conducted individually, at a household level, as introduced in the 2 nd Amendment to the CDBG-MIT Action Plan (Substantial).	
Updated Language			
Introduction	The Importance of Systemic Stability	Language under the "The Importance of Systemic Stability" was updated to include Hurricane Fiona among the disasters that have impacted Puerto Rico.	

Budget Reallocation Table

No budget reallocation was conducted in this amendment.

PROPOSED SUBSTANTIAL AMENDMENT CHANGES

The following changes are proposed for the 3rd Amendment to the CDBG-MIT Action Plan (Substantial). This draft is subject to HUD approval.

The Importance of Systemic Stability

In the context of disasters, a resilient system supports continued and reliable access to essential services vital to the health and safety of the population. Citizens need safe and sanitary water utilities, reliable power, access to supplies and safety routes, the means to communicate, and adequate flood and drainage systems to remove vector-borne threats.

Stabilization occurs when basic lifeline services are available prior to, during, and post-disaster. Mitigation not only minimizes disruption but should also reduce the need for restoration of services in the event of temporary failure.

In September 2017, Hurricanes Irma and María cut across Puerto Rico's three (3) inhabited islands, crippling the power grid and communication systems, and supply chain, flooding coastal and alluvial plains, and causing significant landslide and wind damage. All seventy-eight (78) municipalities were subsequently declared disaster impact areas under Puerto Rico Hurricane Irma DR-4336 and Puerto Rico Hurricane María DR-4339. Three (3) years later, on January 6, 2020, a 5.8 magnitude earthquake shook the Island, and was followed by a 6.4 magnitude earthquake the next day. The regions most impacted by these earthquakes were declared disaster impact areas under presidential declaration³ DR-4473. Subsequently, the Island experienced aftershock tremors. The people of Puerto Rico are now facing are still facing the effects of the worldwide pandemic of the Coronavirus Disease 2019 (COVID-19), a disaster under presidential⁴ DR-4493-PR. Consequently, the Island is experiencing severe impacts as import and export economies and small and medium businesses are affected; and social assistance is limited, coupled with vast challenges in remote educational systems, and a limited healthcare system. In the three (3) years since September 2017, Puerto Rico experienced three (3) presidentially declared disasters, and has responded to a multitude of other threats, including tropical storms, hurricanes, earthquake aftershocks, droughts, population loss, and ongoing economic insecurity. On September 17, 2022, the Island faced Hurricane Fiona, which led to the September 21, 2022, Presidential declaration of a major disaster for Puerto Rico (4671-DR).

The social, environmental, and technological conditions of Puerto Rico contribute to snowballing challenges across the Island and loss of adaptive capacity over time. As

³ United States. FEMA. *President Donald J. Trump Approves Major Disaster Declaration*. Accessed on August 30, 2020 at: https://www.fema.gov/press-release/20210318/president-donald-j-trump-signs-major-disaster-declaration-puerto-rico
⁴ United States. FEMA. *DR-4493PR Initial Notice*. Accessed on November 30, 2020, at: https://www.fema.gov/disaster-federal-register-notice/dr-4493-pr-initial-notice

hazard events continue to impact the Island, economic insecurity rises, and lifeline assets –resources such as transportation routes, communication systems and healthcare facilities that support human habitation– fall into disrepair. The people of Puerto Rico are increasingly exposed to life changing events and difficulties.

Single-Family Housing Mitigation Program

RISK-BASED NEED: The Risk Assessment results show the top threatening hazards for Puerto Rico at the Island-wide level to be: hurricane-force winds, flooding, earthquakes, landslides, and liquefaction. These top threats have most notably been present in Puerto Rico's recent history as the conditions of these weather-related and seismic events have resulted in eight (8) emergency and major disaster declarations between 2017 and 2020.⁵ Each year as tropical storms and hurricanes bring in bouts of flood-inducing rainfall, thousands of homes face the risk of flood, flood-induced landslides, and hurricane-force winds. In addition, recent seismic activity has also highlighted the need to mitigate risks to homes for these events as well as the resulting landslides and liquefaction.

1	Hurricane Force Winds
2	Flood (100-year)
3	Earthquake
4	Landslide
5	Liquefaction
6	Drought
7	Severe Storm
8	Sea Level Rise (10 ft)
9	Wildfire
10	Human Hazard
11	Fog
12	Lightning
13	Category 5 Storm Surge
14	Tornado
15	Tsunami
16	Wind
17	Hail
18	High Temp

Figure 1: Ranking of Risks in Puerto Rico

Puerto Rico is vulnerable to several disaster-inducing risk factors, which vary in the likelihood of occurrence and degree of threat, depending on geography, population density, and the presence of socially vulnerable communities. This risk is profiled down to

⁵ Declarations include: DR-4571-PR declared on November 5, 2020; DR-4560-PR declared on September 9, 2020; EM-3537-PR declared on August 22, 2020; EM-3532-PR declared on July 29, 2020; DR-4473-PR declared on January 16, 2020; EM-3426-PR declared on January 7, 2020; EM-3417-PR declared on August 27, 2019; DR-4339-PR declared on September 20, 2017, among others. Source: <a href="https://www.fema.gov/disasters/disaster-declarations?field_dv2_state_territory_tribal_value=PR&field_year_value=All&field_dv2_declaration_type_value=All&field_dv2_incident_type_target_id_selective=All

the 0.5-mile hex grid in the PRDOH Risk Assessment.⁶ Although the level of risk has been categorized throughout Puerto Rico from high, medium to low risk, hex-grid level data shows some level of risk to all homes on the Island.

Approximately eleven percent (11%) of Puerto Rico's residents live in high-risk areas, approximately thirteen percent (13%) live in medium high-risk areas and approximately twenty-three percent (23%) of the people live in medium risk areas. Based on the average number of persons per home in Puerto Rico, this represents an estimated 619,000 homes.

Estimated Population, Percentage, and Estimated Number of Homes in High, Medium High, and Medium Risk Areas				
Risk Estimated Population Percent of ACS Estimated Number of Population Homes*				
High	393,024	11%	146,651	
Medium High	464,329	13%	173,257	
Medium	801,568	23%	299,093	
Total 619,000				
*Estimated number of homes is based on 2018; ACS 1-Year Estimates; 2.68 persons per-home in Puerto Rico; 1.179.637				

*Estimated number of homes is based on 2018: ACS 1-Year Estimates; 2.68 persons per-home in Puerto Rico; 1,179,637 estimated homes in Puerto Rico.

Figure 111 shows the location of the high, medium high, and medium risk areas in Puerto Rico.⁷

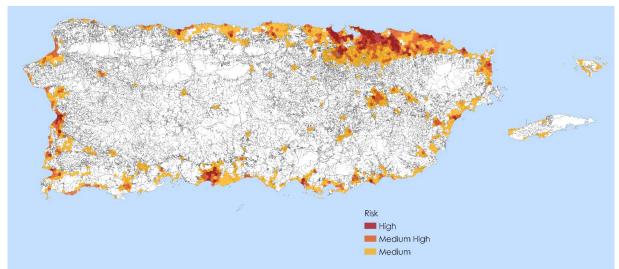


Figure 2: Population in High, Medium High, and Medium Risk Areas in Puerto Rico

Although the level of risk has been categorized throughout Puerto Rico from high to low, hex-grid level data available to the public shows there is some level of risk to all homes

⁶ The Puerto Rico Hazards and Risk Dashboard is available on the CDBG-MIT website in English at https://cdbq-dr.pr.gov/en/cdbq-mit/, and Spanish at https://cdbq-dr.pr.gov/en/cdbq-mit/.

⁷ PRDOH used population data collected from the American Community Survey products developed for HUD's LMI block group dataset at the block group level. This population data was geo-processed with the ESRI ArcGIS Pro Create Random Points tool to randomly distribute the population (Low-Moderate Universe). The data was then analyzed based on location within the high, medium high, and medium risk areas developed as part of the Risk Assessment.

on the Island. The Program addresses the need to reduce loss of life and property by offering the opportunity to repair, coupled with a retrofit; reconstruct (including elevation); and relocate, where feasible, for single-family homes, offering new mitigation options to households that face risk.

Risk and Immediate Threat

In addition to the formulaic calculation of risk, PRDOH also recognizes many homes in Puerto Rico also face an undeniable risk of immediate threat, defined by FEMA as the threat of additional damage or destruction from an event that can reasonably be expected to occur within five (5) years. The immediate threat is evident in the many homes in Puerto Rico which are uninhabitable or substantially damaged due to recent disaster or hazardous events. These conditions have left many households with not only a formulaic estimation of risk, but an immediate threat.

Anecdotal public comments provided during public engagement for the CDBG-MIT Action Plan indicate that individual homes remain under immediate threat of landslides, seismic activity, sea-level rise, and other risks.

PRDOH also performed preliminary geospatial analysis utilizing aerial imagery to locate homes impacted affected by Hurricanes Irma and María that still have a blue tarp as a partial or whole roof. Through survey and outreach efforts under the CDBG-DR Program, PRDOH has confirmed, as of May 2022, approximately 3,646 homes impacted by Hurricanes Irma and María still have a blue tarp as a partial or whole roof.

Additional Housing Considerations

The Program considers focuses on single-family housing needs, understanding considering that assistance for multi-family housing projects is currently being addressed through CDBG-DR programs, he Multi-Sector Community Mitigation Program, and the Social Interest Housing Mitigation Program. Additionally, assistance to public housing units that serve vulnerable communities is currently addressed through the HMGP match which includes fifty-nine (59) potential public and multi-family housing projects with mitigative properties. 10

Furthermore, this Program also considers anti-displacement measures and serves to minimize the risk of displacement and/or homelessness by providing homeowners vulnerable to one or more top risks with the hardening of their homes or with an alternative option to living in a high-risk and in some cases unlivable area.

^{8 44} C.F.R. § 206.221(c): Immediate threat means the threat of additional damage or destruction from an event which can reasonably be expected to occur within five years.

⁹ These CDBG-DR multi-family assistance programs are intended to serve vulnerable populations, homeless and at-risk of homelessness, and public housing developments.

¹⁰ PRDOH has committed to provide twenty-five percent (25%) match to the entire HMGP portfolio to cover the non-federal funding obligation. Eligible multi-family housing projects that serve vulnerable populations shall be selected by COR3 as per FEMA requirements.

PROGRAM DESCRIPTION: The Single-Family Housing Mitigation Program is available to households in Puerto Rico that face risk as calculated in the Puerto Rico Risk Assessment. Due to limited resources, however, PRDOH has designed this Program to prioritize mitigation assistance to those households with an immediate threat that whose primary residences are uninhabitable due to damages from recent disasters or hazardous events, are under immediate threat due to damage from recent events, are certified as a Substantially Damaged property under local regulations, and/or are located in a high-risk area in Puerto Rico. As funding allows, PRDOH will continue to develop targeted strategies to identify and assist households with the greatest risks.

The Single-Family Housing Mitigation Program has been designed to prioritize mitigation solutions according to the property conditions, location and risk level for homeowners categorized under the beneficiaries' classifications, interested in repairs, rehabilitation, voluntary relocation, or elevation as means to reduce the risk of loss of life and property. This Program offers individual flood and landslide-threatened homeowners the option to investigate the feasibility of elevation of their home, the feasibility of reinforcing the property foundation, or the alternative option for voluntary relocation. The Single-Family Housing Mitigation Program also includes the installation of solar and water resilience systems as part of mitigation activities.

ELIGIBILITY CRITERIA:

Limited mitigation assistance funds will be awarded to eligible individuals utilizing a targeted outreach approach:

- Population identified through survey and outreach efforts under the CDBG-DR Program; and/or
- Uninhabitable primary residence due to damage from recent disaster events; and/or
- Primary residence with an "immediate threat" due to damage from recent disaster events, Certification of Substantial Determination issued by PRPB¹¹; and/or
- Primary Residence in a high-risk area as determined by PRDOH.

REPAIR AND HARDENING: Repair/retrofit, reconstruction, or new construction activities may be considered as the first mitigation option to be conducted to support resilient housing by including but not being limited to activities such as:

 Flood proofing – this can include property elevation where feasible, the use of concrete in place of wood or other flood-vulnerable structural materials, and mold resistant materials.

¹¹ As part of its responsibility, the Puerto Rico Planning Board (PRPB) assessed the damage to homes from Hurricane María on September 20, 2017, located in the Special Flood Hazard Area (SFHA), as identified in the Flood Insurance Rate Maps (FIRM) developed by the Federal Emergency Management Administration (FEMA). PRDOH will utilize this data to locate potential beneficiaries for this program.

- age 9
- Wind proofing this can include the use of materials and structural design elements for wind resistance up to category 4 hurricane winds per current and applicable codes.
- Earthquake retrofitting this can include reinforced structural elements designed and built to withstand lateral and vertical forces present in an earthquake event.
- Landslide proofing this can include reinforced structural elements and site level geotechnical engineering.

ELEVATION: As required in 84 FR 45838, 45864, PRDOH will apply elevation standards for single family housing structures located in the Advisory 100-year (or one percent (1%) annual chance) floodplain. PRDOH is to require requiring that homes elevated, or reconstructed and elevated, raise the lowest floor (including the basement) to at least two (2) feet above the base flood elevation (**BFE**).

Homeowners requesting for elevation must be aware that the option for elevation will be contingent upon a feasibility analysis to consider, at a minimum:

- Whether elevating a home in place leaves the homeowner vulnerable to limited evacuation routes in the event of a disaster, thereby not removing a homeowner from harm's way;
- Whether the cost of elevating a structure is at or below \$75,000;
- Whether or not raising a home to the BFE plus two (2) feet is feasible when considering the potential for transferring flood risk to the surrounding neighborhood; and/or
- Whether the home parcel permits enough space for stair and/or rampway access.

The housing stock in Puerto Rico is generally more resilient to floods when compared to the construction of homes in many floodplain areas of the mainland U.S. Most Puerto Rican homes are poured concrete, slab-on-grade, with concrete roofs, which are sturdier and resistant to structural damage by floodwaters. Several feet of floodwater in a concrete house with no drywall, subfloor, or insulation will affect much less damage than the same height of floodwater in a wooden home with drywall and insulation. ¹² This standard of construction, however, and the close proximity of Puerto Rican homes must be taken into consideration as these factors may complicate the potential for elevation options and could create safety concerns at the neighborhood level by adversely impacting flood patterns.

Homes determined eligible at the conclusion of the feasibility analysis will proceed forward with the property eligibility process. Poured concrete, slab-on-grade homes will likely require reconstruction of the home to ensure the safety of the structure. Homes located in the floodway will not be eligible for elevation. If elevation is determined to be infeasible, the property owner will be provided an alternative option for relocation.

¹² Residential Flood Insurance in Puerto Rico, Wharton Risk Center Issue Brief, March 2018. Accessed at: https://riskcenter.wharton.upenn.edu/wp-content/uploads/2018/03/WRCib2018_Flood-Insurance-in-Puerto-Rico.pdf.

RELOCATION: At the time it is determined that a homeowner is eligible for relocation, the homeowner will be provided with the option for housing counseling services where information on housing options will be made available, and the homeowner will be given a chance to make an informed decision regarding those options. The nature of the acquisition activity (acquisition or buyout) will depend on the end use of the property. Properties acquired through buyout must be demolished and the land restricted to green space under HUD restrictive guidance. Properties acquired to serve the immediate need of the household, but that have the potential for redevelopment as a critical municipal tax base asset, shall be acquired and property redevelopment must fall within HUD guidelines. ¹³ All buyout and acquisition activities shall be voluntary.

Voluntary relocation allows for PRDOH acquisition of the damaged property, coupled with relocation options for the household in the form of a housing voucher which allows the beneficiary to select a home outside a high-risk area. These options shall be further defined in program guidelines and will consider a variety of relocation incentives or options that align with strategic placement in lower-risk housing.

Relocation options may include existing housing units. Units may also be bank-foreclosed properties, a market-listed unit, or a home in a condominium. Existing homes must be located in Puerto Rico and pass applicable environmental clearance and permit requirements.

Another relocation option may include new housing development selected by PRDOH in low-risk areas and will consider take into account best practices for mixed-income residential developments. These developments will leverage private sector market research and investment to create viable housing options that revitalize the Island while serving the most immediate needs of the people. PRDOH recognizes that the housing development industry is an important partner in implementing this new housing development option.

New housing development options may include: vouchers for beneficiaries to occupy newly developed housing, the purchase of new homes developed by PRDOH, the purchase of new homes developed by partners, or any combination of the above. In addition, when an applicant with a relocation voucher selects a housing unit in a PRDOH housing development, PRDOH may waive the voucher cap.

ALTERNATIVE PLANNING SOLUTIONS TO MINIMIZE DISPLACEMENT: The PRDOH Planning Group will support community-level mitigation solutions by gathering site locations for each housing structure submitted to CDBG-DR and CDBG-MIT to track, and evaluate, where comprehensive mitigation solutions might be possible within the pool of

¹³ See HUD CPD Notice CPD-17-09: https://www.hudexchange.info/resource/5632/notice-cpd1709-management-of-community-development-block-grant-assisted-real-property/

applicants. Referrals may be made to the Multi-Sector Community Mitigation Program, as appropriate.

QUALITY CONSTRUCTION AND GREEN BUILDING STANDARDS: PRDOH will implement construction methods that emphasize quality, durability, energy efficiency, sustainability, and mold resistance. All homes reconstructed in place will be designed to incorporate sustainability principles, including water and energy efficiency, resilience, and mitigation against the impact of future shocks and stressors.

The Green Building Standard means that PRDOH will encourage all applicable construction meets an industry-recognized standard that has achieved certification under at least one (1) of the following programs: (i) ENERGY STAR (Certified Homes or Multifamily High-Rise), (ii) Enterprise Green Communities, (iii) LEED (New Construction, Homes, Midrise, Existing Buildings Operations and Maintenance, or Neighborhood Development), (iv) ICC–700 National Green Building Standard, (v) EPA Indoor AirPlus (ENERGY STAR a prerequisite), (vi) the "Permiso Verde," or (vii) any other equivalent comprehensive green building program acceptable to HUD. PRDOH will identify which Green Building Standard will be used in the program policies and procedures, as per HUD requirements.

Where feasible, Puerto Rico will follow best practices such as those provided by the U.S. Department of Energy's Guidelines for Home Energy Professionals. For all reconstructed structures, this may require installed appliances to meet ENERGY STAR certification standards at a minimum.

ELIGIBLE ACTIVITIES:

Pursuant to the HCDA, the following are eligible activities:

- Section 105(a)(1) Acquisition of Real Property
- Section 105(a)(2) Public Works facilities and Improvements
- Section 105(a)(4) Clearance, demolition, removal, reconstruction, and rehabilitation (including rehabilitation which promotes energy efficiency) of buildings and improvements
- Section 105(a)(7) Disposition of Real Property
- Section 105(a)(8) Public Services
- Section 105(a)(11) Relocation Payments and Assistance
- Section 105(a)(15) Assistance to Eligible Entities for Neighborhood Revitalization,
 Community Economic Development and Energy Conservation
- Section 105(a)(20) Housing Counseling Services
- Section 105(a)(24) Homeownership Assistance

INELIGIBLE ACTIVITIES:

- Disbursement of Program funds that incur in the associated costs for labor, materials, fixtures, supplies, finishes and other expenses to conduct a construction activity on an ineligible applicant and/or property.
- Any work on a secondary home.
- Repair/retrofit, reconstruction, or elevation activities in the floodway.
- Creation of an additional housing unit to an eligible applicant's primary unit.
- Expansion to an existing structure, unless necessary to meet building codes, or reasonable accommodations and/or modifications needs.
- Any work on a secondary or complementary structure, such as storages, sheds, detached garages, etc., unless strictly necessary to conduct Program eligible activities.
- Costs of equipment, furniture, or other personal property not an integral part of a structure this includes including, but is not limited to, dish washers, clothes washer, and dryer, among others.
- Purchase of tools, equipment, furnishing, clothes, other similar items or personal belongings.
- Purchase, installation, or repair/retrofit of luxury homes and/or items, such as swimming pools, jacuzzi, barbecue pit, landscaping, decks, and terraces¹⁴, marble floors, granite, quartz and/or porcelain countertops and others.
- The value of the homeowner's sweat equity to rehabilitate their own property.

METHOD OF DISTRIBUTION: Direct Distribution Model

NATIONAL OBJECTIVE: LMI, UNM

ELIGIBLE BENEFICIARIES:

- Homeowners with clear ownership of an eligible single-family property, individuals
 with proprietary interest in the occupied structure (including alternative methods
 of verification of informal ownership), as well as occupants, possessors, or users of
 structures located in a targeted and documented high-risk area, including but not
 limited to, FEMA floodway.
- Participants must qualify as LMI (below 80% Area Median Family Income, AMFI), but may be served under the UNM National Objective if the UNM criteria is satisfied.
- Property must be the homeowner's primary residence.

MIN AWARD: Based on cost feasibility analysis.

MAX AWARDS:

• **RELOCATION MAX AWARD:** \$200,000.00

• RECONSTRUCTION MAX AWARD: \$215,000.00

¹⁴ In some instances, garages, decks, and terraces may require to be impacted and/or improvement solely improved only to the extent necessary to preserve the property from soil erosion or structural deterioration.

- REPAIR AND HARDENING MAX AWARD: \$60,000.0015
- PV SYSTEMS AND WATER STORAGE SYSTEMS: \$30,000.00

Costs in excess of Program caps may be permissible and will be evaluated on a case-by case-basis for items such as: reasonable elevation, environmental abatement, or unique site-specific costs, when necessary, which may also include utility connection costs. Exceptions to the caps may also consider necessary household composition requirements, accessibility features, historic preservation, or current market conditions.

Exceptions to the max award will be considered when necessary to comply with federal accessibility standards or to reasonably accommodate a person with disabilities.

ALIGNMENT WITH CDBG-DR PROGRAMS:

• The program may serve the mitigation needs of households identified during implementation of the CDBG-DR R3 Program that are considered uninhabitable, face an immediate threat, or are located in a high-risk area. Assistance to households shall not be duplicated between programs. Thus, households receiving assistance through the R3 Program will not be eligible to receive assistance under the Single-Family Housing Mitigation Program.

ALIGNMENT WITH HUD POLICY OBJECTIVES:

- Support data-informed investments in high-impact projects that will reduce risks
 attributable to natural disasters, with a particular focus on the repetitive loss of
 property and critical infrastructure.
- Support the adoption of policies that reflect local ¹⁶ and regional priorities that will have long-lasting effects on community risk reduction, to include the risk reduction to community lifelines such as Safety and Security, Communications, Food, Water, Sheltering, Transportation, Health and Medical, Hazardous Material (management) and Energy (Power & Fuel).
- Maximize the impact of available funds by **encouraging leverage**, **public-private partnerships**, **and coordination** with other federal programs.

RECOVERY PLAN ALIGNMENT:

- HOU 1 Assess, Repair, Rehabilitate, or Relocate Substantially Damaged Owner-Occupied Homes
- HOU 3 Make Owner-Occupied Homes More Resilient (Less Vulnerable to Natural Hazards)
- HOU 5 Collect, Integrate, and Map Housing Sector Data

¹⁵ Homes not located in the floodplain with an estimated cost of repair less than \$60,000, will be rehabilitated in place. Homes located in the floodplain with an estimated cost of repair less than \$60,000 or 50% of the current assessed value of the home, whichever is less, will also qualify to be rehabilitated in place.

¹⁶ PRDOH interprets the word local to mean municipal in this context.

- HOU 10 Assess and Renovate Vacant and Blighted Properties
- **CPCB 3** Capacity Building to Incorporate Hazard Risk Reduction into Planning and Design
- CPCB 4 Resilience Building in Collaboration with High-Risk Communities

Social Interest Housing Mitigation Program

RISK-BASED NEED: Socially vulnerable populations that have lower capacity to absorb shocks and stresses, have increased susceptibility associated with their demographic characteristics and other barriers such as access to lifelines.¹⁷ The Risk Analysis calculation of vulnerability identifies socially vulnerable populations as having fewer resources to aid in preparation for disasters, while often bearing the brunt of disaster impacts as well as taking longer to bounce back from disaster events. For those persons sheltering in unfit structures or in homeless situations, access to critical lifelines (water, power, transportation) is limited or nonexistent. Additionally, Housing Sector needs assessment identified as a contributor to the lifeline's instability: vulnerable populations, citizens that who are homeless, and citizens at-risk of homelessness that who are unable to recover quickly from disaster events and lack housing options.

As the additional analysis of demographics and protected classes section in this Action Plan shows, there are several socio-economic characteristics throughout Puerto Rico has, that are markedly different across Puerto Rico than both United States and from those of other states receiving CDBG-MIT funds. These characteristics put residents at an immediate disadvantage in terms of their capacity to prepare for, respond to, or rebound from shocks and stresses, such as disasters.

While previous disaster recovery social interest housing programs concentrated on addressing unmet needs connected to the Hurricanes Irma and María, this mitigation program expands the opportunity for social interest housing to address multiple risks, not just hurricanes. The program will use risk-based mitigation criteria for the analysis, prioritization, and selection of projects.

Social Interest Housing Needs in Puerto Rico: The last two (2) Point in Time Surveys (PIT) ¹⁸ reports from Puerto Rico's Continuum of Care (**CoC**) Systems counted an estimated homeless population of 3,501 for the year 2017 and 2,535 in 2019. Although homelessness is a complex issue picture, both reports have consistently shown that a high percentage of this population is not sheltered, with seventy-two percent (72%) of the population identified in 2017 and seventy-five percent (75%) in 2019, proportions that add up to 2,512 and 1,902 people, respectively.

Among the factors identified as the main reasons why they are homeless, responses from 2017 and 2019 indicated abuse or problematic use of drugs or alcohol and mental health problems. Additionally, the 2019 report indicates that nine-point one percent (9.1%) of

¹⁷Cutter, S., & Emrich, C. (2006). Moral Hazard, Social Catastrophe: The Changing Face of Vulnerability along the Hurricane Coasts. The Annals of the American Academy of Political and Social Science, 604, 102-112. Accessed at: http://www.istor.org/stable/25097783.

¹⁸ Estudios Técnicos, Inc. Conteo de Personas Sin Hogar 2017. Accessed at: http://www.agencias.pr.gov/agencias/secretariado/ProgramasServicios/Documents/COC 2017/INFORME%20CONTEO-2017.pdf. Conteo de Personas sin Hogar 2019. Accessed at:

http://www.agencias.pr.gov/agencias/secretariado/ProgramasServicios/Documents/PRESENTACION%20CONTEO%20PERSONAS%20SIN%20HOGAR%202019.pdf.

the people surveyed identified Hurricanes Irma or María as a contributing reason for their homelessness, and two-point two percent (2.2%) indicated other natural or human-caused disasters as a cause. Another factor consistently mentioned was being a victim of domestic or gender violence, with three percent (3%) for 2017, while in 2019 five-point two percent (5.2%) indicated domestic violence or gender violence, sexual assault, or harassment. Regarding the LGBTQ+ homeless population, the 2017 survey reflected a population of three percent (3%), or eighty-nine (89) people who identified as homosexual or bisexual. On the other hand, eight (8) people identified as transgender, all of which whom were unsheltered.

The 2017 PIT counted 118 homeless families, with a total of 218 minors, out of which eighty-six (86) minors were counted as not sheltered (39.5% of all homeless minors). In the 2019 count it was estimated that four-point three percent (4.3%) of the total homeless population was under 18 years old, equaling 109 homeless minors.

The next table indicates the physical and mental health conditions that survey respondents expressed suffering from. For both 2017 and 2019, a significant portion identified problematic use of substances, alcohol and medications, mental health conditions, persistent or chronic illnesses, physical disability, and other situations.

Health Conditions Suffered by Surveyed Participants 19				
Conditions	2017		2019	
	Percent (%)	Count	Percent (%)	Count*
Illegal Drug Use	41.6%	1,207	46.3%	888
Mental Health Condition	34.1%	990	38.8%	744
Alcohol Use	29.6%	858	29.3%	562
Persistent or Chronic illnesses, such as: cancer, diabetes, among others/ heart disease	27.0%	783	35.7%	685
Hepatitis C	19.1%	554	N/A	N/A
Use of Prescription Drugs and/or Medicine	19.0%	552	N/A	N/A
Use of medicine without Prescription	N/A	N/A	16.9%	324
Physical Disability	18.4%	535	18.8%	361
Brain Injury or Trauma	12.7%	369	13.8%	265
Post-Traumatic Stress Disorder	9.9%	287	7.6%	146

¹⁹ Source information taken from the 2017 and 2019 Point in Time Surveys reports developed by Estudios Técnicos, Inc. 2017 data accessed under the file name "Conteo de Personas Sin Hogar 2017" http://www.agencias.pr.gov/agencias/secretariado/ProgramasServicios/Documents/COC 2017/INFORME%20CONTEO-2017.pdf and 2019 data accessed under file name "Conteo de Personas sin Hogar http://www.agencias.pr.gov/agencias/secretariado/ProgramasServicios/Documents/PRESENTACION%20CONTEO%20PE RSONAS%20SIN%20HOGAR%202019.pdf.

Developmental disabilities or problems	8.8%	256	N/A	N/A
HIV or AIDS	7.2%	208	6.8%	130

^{*}The count amounts were estimated based on the percentages reported and the total number of people surveyed. No exact count was provided in the report or executive summary.

These conditions result in the populations suffering disproportionately when natural and human-caused disasters occur, deepening physical and social vulnerability. PRDOH is focused on taking proactive steps towards mitigating the risk of loss of life for those extremely vulnerable populations by funding for the rehabilitation and hardening of existing housing structures or new construction of multi-family projects.

Housing Need Data Gathered During CDBG-DR Implementation: Proposals submitted to the CDBG-DR Social Interest Housing (SIH) Program also provide valuable data on the identified social interest housing needs, as well as population characteristics that service organizations have experienced, researched, and gathered. Table 9 summarizes data assembled from the forty-three (43) proposal applications that were received as a response to the Notice of Funding Availability from the CDBG-DR SIH Program. PRDOH is utilizing this research as a preliminary assessment of existing needs for socially vulnerable housing. However, the agency recognizes that some of the mentioned needs will be addressed in by CDBG-DR program implementation, as part of hurricane recovery efforts. The mitigation program is meant to further address similar housing needs by expanding eligibility to other risks identified in the Risk Assessment and by emphasizing placing an emphasis on construction standards that address the long-term mitigation needs of the project site and/or community.

Table 1: Summary of Notable Information Extracted from Social Interest Housing Applications by Topic

Topic	Notable Information Extracted from Applications*
Gender or Domestic Violence	 In the Municipality of San Juan, although there are several ambulatory programs, there is only one (1) organization that provides emergency shelter for women and children fleeing domestic violence. The number of Domestic Violence Emergency Shelters in Puerto Rico has decreased from twelve (12) shelters at some point in history to currently eight (8). After Hurricane María, only five (5) of the eight (8) domestic violence shelters were functioning. According to data from the Office of the Women's Advocate, from 2017 to 2020 there have been 24,832 incidents of domestic violence. Office of Women's Advocate data on fatal domestic violence cases for 2016, 2017, and 2018 have increased from eight (8) to eleven (11) to twenty-five (25), respectively.

²⁰ The information in the Table is not intended to cite specific source documentation. PRDOH is relying on the applicant organizations' knowledge of data and resources in their respective fields.

Topic Notable Information Extracted from Applications* • In the first six months of the year 2020, the Office of the Women's Advocate reported 2,974 incidents of domestic violence in Puerto Rico. • Gender Equality Observatory's Fourth Report (Upegui-Hernández, 2020) states that from March 15 to April 21, 2020, during Puerto Rico's Pandemic Curfew, 675 domestic violence incidents occurred, and 740 domestic violence protection orders were issued. • Organizations reported lifelines system collapse that complicated the provision of services to their socially vulnerable populations: shutdowns for power service lasted seven (7) months and for potable water five (5) months. Additionally, organizations reported phone calls to have tripled once the phone lines were restored. • Domestic violence tends to increase in the wake of natural disasters due to high levels of stress, difficulty in meeting basic needs, and the breakdown of social support networks. Only four (4) organizations provide services to adults with severe intellectual disability in Puerto Rico. • The Department of Justice reported from their Program for Services for People with Intellectual Disability: 302 participants in the year 1999, an increase to 660 participants in 2000, and 141 participants in August of 2019. • An estimate of the global number of people of all ages with Intellectual Disabilities indicates that there are 5,000 people with Intellectual Disabilities in Puerto Rico, most of them under the care of their relatives. • There are no residential facilities for persons with physical and mental disabilities in Puerto Rico focused on the needs of adults with Autism Spectrum Disorder (ASD). • In 2011 the Puerto Rico Department of Health carried out "Prevalence of Autism in Children in Puerto Rico: Results Report of the 2011". The study estimated that 28,745 people at the time had autism. The first data on the Mental or prevalence of autism in children ages between 4 and 17 found a total of Intellectual 154 cases of autism in households in a sample of 9,894 children, for an Disability estimated rate of 1.56%. Estimates by UPR's Medical Sciences Campus-Graduate School of Public Health in late 2012 and based on 2010 Census population levels, were that the population of people with autism in Puerto Rico is between 19,695 and 21,822. Also, the distribution by regions is uniform, that is, no statistically significant differences were found by area, which indicates that autism is an Island-wide challenge. Organizations reported that many families in Puerto Rico that have an autistic child are obligated to look for facilities in the U.S., for when they become too old to continue to take care of their child. Families that look for a residential facility outside of Puerto Rico face the added burden of

separation from their child, anxiety over the child living in a linguistically and culturally foreign place, and the anguish of believing the that they were unable to care for their child. Added to this emotionally charged situation,

Topic	Notable Information Extracted from Applications*
	 grandparents who live with their grandchildren under eighteen (18) years of age are in charge of their basic needs. An organization that provides housing for children reported having to reject seventy-three (73) minors, aging from newborn to eleven (11) years old due to lack of capacity, from January 2019 to June 2020. This organization reports the increase in demand was as a result of Hurricane Irma, Hurricane María and the earthquakes due to but not limited to: deaths of their relatives, guardians, neglect, physical, psychological, and sexual abuse due to these being exposed for more time with their relatives and / or guardians during and after these traumatic events. Organizations reported the homicide rate in Puerto Rico is highest among men ages 18-25, according to the CDC. Many youth organizations engage are members of the foster care system. Numerous studies indicate that youth aging out of the system are at higher risk for acute homelessness. In Puerto Rico, 463 youth age out of the system each year. Puerto Rico has a forty-three percent (43%) dropout rate from the Public Education System.
Poverty	 Before Hurricanes Irma and María, nearly 8,000 families were on Section 8 waiting lists. Organizations reported this to evidence the need for low-income housing in Puerto Rico, identified with the most vulnerable populations. According to the Puerto Rico Institute of Statistics, around sixty one percent (61%) Puerto Rico citizens are beneficiaries of Nutritional Assistance (PAN).
Elderly Population	 Organization-cited studies showed that with every ten (10) years after reaching the age of sixty-five (65), the odds of losing mobility doubles. The Association of Home Builders (ACH) studies confirm that there is a need for adequate housing for these older people, that there are 64,000 heads of households where 250,000 people live in poor quality housing, in poor conditions, of those 67,549 are older adults. For them, the challenges are greater, as more rental projects and low-income housing are needed than those that are being built. Of the total population, 417,218 are sixty-five (65) years old and over (11%). Of those 65 years old and over, 183,500 (44%) live below the poverty level in Puerto Rico. The vast majority of the older persons that live below the poverty level reside in municipalities that have limited job opportunities and limited resources. According to the World Health Organization, Puerto Rico ranks sixth (6th) among thirty-five (35) countries in Latin America with accelerated aging of its population. Organizations cited en a December 2014 report indicating that indicated in Puerto Rico the closest relatives are abusive to the elderly parents because of their inability to pay for care services related to the economic crisis that overwhelms them, as one of many motivators to negligence, emotional abuse, and financial exploitation.

PROGRAM DESCRIPTION: The Social Interest Housing Mitigation Program (**SIHM**) will be available for eligible organizations that have demonstrated experience working with populations to be served under this housing program, such as: homeless, senior citizens, domestic violence victims, persons with intellectual disability, persons with developmental and/or physical disability, persons living with HIV/AIDS, individuals recovering from addiction and individuals with other functional or access needs.

The SIHM Program is intended to address the varying and localized need for mitigation against a number of hazardous threats, and does not to limit projects based on the top risks at the Island-wide level, nor by an assumption of need in a generalized way. Community threats differ greatly when local geography and geographic susceptibility to hazards is are considered. It is for this reason that As such, the Program promotes data-informed decision-making for all eligible applicant entities by launching the publicly transparent Risk and Critical Assets Assessment tools.

The goal for the Program's goal is to address the mitigation needs by funding projects with high-quality, modern, resilient housing solutions for vulnerable populations and protected classes.

DESIGN CONSIDERATIONS: Social interest housing project proposals submitted by eligible entities will be evaluated based on the risks mitigated by indicating the site-specific risks being addressed and the structural and nonstructural measures taken to mitigate such risks. Additional evaluation criteria concerning compliance, innovation, and ecoconscious measures will include, but not be limited to:

- The proposed project serves one or more socially vulnerable populations such as: homeless, senior citizens, domestic violence victims, persons with intellectual disability, persons with developmental and/or physical disability, persons living with HIV/AIDS, individuals recovering from addiction and individuals with other functional or access needs.
- Percentage of LMI benefit: Projects that serve fifty-one percent (51%) or more LMI households within the area of benefit will be prioritized.
- Whether the natural infrastructure is preserved, or other eco-conscious measures are included in project design to minimize the unintended consequences of grey infrastructure and other development. Applicants are encouraged to incorporate innovative nature-based solutions and natural or green infrastructure solutions during project development that reduce the negative impacts on the surrounding human and natural environment. Natural or green infrastructure is defined at 84 FR 45838, 45848, as the integration of natural processes or systems (such as wetlands or land barriers) or engineered systems that mimic natural systems and processes into investments in resilient infrastructure, including, for example, using permeable pavements and amended soils to improve infiltration and pollutant removal.
- Whether or not local code enforcement supports modern and/or resilient building codes and mitigation of identified hazard risks.
- Complies with ADA standards to the most extent feasible.
- Whether it includes on-site support services for the special need population served or is to be located near a service facility.
- Whether the project is accessible to public transportation, grocery shopping, recreation, and socialization, etc.
- Whether the project considered innovative design solutions that:
 - o Improve the quality of life,
 - Stimulate sustainable growth and development,
 - o Improve community mobility and access,
 - o Improve site accessibility and safety,
 - o Preserve historic and cultural resources,
 - o Preserve or improve views and local character,
 - o Encourage stakeholder involvement,
 - o Address conflicting regulations and policies,
 - o Extend the project facility lifespan,
 - o Reduce energy consumption,
 - o Make use of recycled materials,
 - o Make use of local or regional materials,
 - o Divert waste from landfills, and
 - Reduce waste during construction.

Submissions may include proposals for more than one (1) project. Public services provided as part of a proposed project may not supplant other funds and must be part

of a new service or quantifiable increase in the level of a service previously provided. Program guidelines may incentivize projects that address multiple risks.

QUALITY CONSTRUCTION: PRDOH will implement construction methods that emphasize quality, durability, energy efficiency, sustainability, and mold resistance. All housing must be designed to incorporate principles of sustainability, including water and energy efficiency, resilience, and mitigation against the impact of future shocks and stressors.

Where feasible, Puerto Rico will follow best practices such as those provided by the U.S. Department of Energy's Guidelines for Home Energy Professionals. For reconstructed structures, this may include installed appliances that, at a minimum, to meet ENERGY STAR certification standards at a minimum.

BROADBAND INFRASTRUCTURE REQUIREMENTS: Under 84 FR 45838, 45864, projects that include four (4) or more rental units are required to include installation of broadband infrastructure at the time of multifamily new construction or substantial rehabilitation that is funded or supported by HUD.

PRDOH aims to narrow the digital divide in low-income communities served by HUD. Installing unit-based broadband infrastructure in multi-family housing that is newly constructed or substantially rehabilitated with or supported by HUD funding will provide a platform for individuals and families residing in such housing to participate in the digital economy and increase their access to economic opportunities.

Projects are excluded from this requirement only if one (1) of the below exclusions can be documented and validated by PRDOH:

- The location of the new construction or substantial rehabilitation makes installation of broadband infeasible;
- The cost of installing broadband infrastructure would result in a fundamental alteration in nature of its program, or activity, or in an undue financial burden; or
- The structure of housing, to be substantially rehabilitated, makes installation of broadband infrastructure infeasible.

ELIGIBLE ACTIVITIES:

- Section 105(a)(2) Public Facilities and Improvements
- Section 105(a)(3) Code Enforcement
- Section 105(a)(4) Clearance, demolition, removal, reconstruction, and rehabilitation (including rehabilitation which promotes energy efficiency) of buildings and improvements
- Section 105(a)(5) Removal of mobility barriers
- Section 105(a)(8) Supplementary Public Services as a component to place limited clientele (such as homeless persons, etc.) in the housing projects, once completed

- Section 105(a)(14) Activities Carried Out through Non-profit Development Organizations:
- Section 105(a)(15) Assistance to Eligible Entities for Neighborhood Revitalization, Community Economic Development and Energy Conservation
- 84 FR 45838, 45863, V.B.1 Housing-related eligibility waiver permitting new housing construction that addresses disaster risks identified in the grantee's Mitigation Needs Assessment.

ELIGIBLE PROJECTS:

- New construction or substantial rehabilitation of multi-family unit buildings serving socially vulnerable populations.
- Socially vulnerable populations may include homeless, senior citizens, domestic violence victims, persons with intellectual disability, persons with developmental and/or physical disability, persons living with HIV/AIDS, individuals recovering from addiction and individuals with other functional or access needs.

METHOD OF DISTRIBUTION: Direct and Subrecipient Distribution Model.

NATIONAL OBJECTIVE: LMI only

ELIGIBLE ENTITIES:

- Non-governmental organization (501(c)(3)) or Not for Profit Entities;
- Community-Based Development Organizations and private non-profits:
- Units of general local government/municipalities (including departments and divisions), only applicable under the public facilities set-aside.

MAX AWARD: \$2,500,000.00²¹

PUBLIC FACILITIES RECONSTRUCTION OR REHABILITATION FOR SOCIAL INTEREST HOUSING SET-ASIDE: The Program includes a \$15 million set-aside for the reconstruction or substantial rehabilitation of publicly-owned facilities and buildings to be used as multifamily unit buildings serving socially vulnerable populations. This set-aside provides a unique opportunity for repurposing vacant publicly-owned properties to achieve SIHM Program goals. Funding under this set-aside will be available to general local government/municipalities (including departments and divisions), with demonstrated capacity or experience working with populations to be served under this housing program, such as the homeless, senior citizens, domestic violence victims, persons with intellectual disability, persons with developmental and/or physical disability, persons living with HIV/AIDS, individuals recovering from addiction and individuals with other functional or access needs.

²¹ Every award calculation will consider a percentage for contingencies. However, if unforeseen conditions or additional extenuating factors arise, the program will conduct an evaluation evaluate on a case-by-case basis to address those conditions to allow for implementation to continue.

MAX AWARD: PRDOH will directly administer or enter into agreements with units of general local government/municipalities to administer this set-aside activity on behalf of PRDOH. No awards will be made to beneficiaries.

ALIGNMENT WITH CDBG-DR PROGRAMS:

This Program directly aligns with the CDBG-DR Social Interest Housing Program
which offers program assistance to eligible housing applicants with an unmet
hurricane recovery need. However, this Program expands eligibility to other risks
identified in the Risk Assessment for the specific project site and places an
emphasis on construction standards that address said risks.

ALIGNMENT WITH HUD POLICY OBJECTIVES:

- Support data-informed investments in high-impact projects that will reduce risks attributable to natural disasters, with a particular focus on the repetitive loss of property and critical infrastructure.
- Maximize the impact of available funds by encouraging leverage, public-private partnerships, and coordination with other federal programs.

RECOVERY PLAN ALIGNMENT:

- HOU 2 Assess, Repair, and Mitigate Damaged Subsidized Rental Housing
- **HOU 7** Assess Need for —and Adopt and Implement Programs to Provide—Additional Subsidized Rental Housing and Special Housing

Multi-Sector Community Mitigation Program

RISK-BASED NEED: Puerto Rico's top threatening hazards according to the Risk Assessment²² results are: hurricane force winds, flooding, earthquakes, landslides, and liquefaction. As tropical storms and hurricanes bring in bouts of flood induced by rainfall each year, thousands of homes face the risk of flood, flood-induced landslides, and hurricane force-winds. Recent seismic activity and its resulting landslides and liquefaction have highlighted the need to also mitigate these risks.

1	Hurricane Force Winds
2	Flood (100-year)
3	Earthquake
4	Landslide
5	Liquefaction
6	Drought
7	Severe Storm
8	Sea Level Rise (10 ft)
9	Wildfire
10	Human Hazard
11	Fog
12	Lightning
13	Category 5 Storm Surge
14	Tornado
15	Tsunami
16	Wind
17	Hail
18	High Temp

Figure 3: Ranking of Risks in Puerto Rico

Puerto Rico is vulnerable to several disaster-related risk factors, which vary in likelihood of occurrence and degree of threat, depending on geography, population density, and the presence of socially vulnerable communities. This risk is profiled down to the 0.5-mile hex grid in the PRDOH Risk Assessment. Although the risk levels across Puerto Rico range from high to low, hex-grid level data shows that all of the Island's households face some level of risk.

²² The Puerto Rico Hazards and Risk Dashboard is available on the CDBG-MIT website in English at https://cdbg-dr.pr.gov/en/cdbg-mit/ and Spanish at https://cdbg-dr.pr.gov/cdbg-mit/.

Approximately eleven percent (11%) of Puerto Rico's residents live in high-risk areas, approximately thirteen percent (13%) live in medium high-risk areas and approximately twenty-three percent (23%) of the people live in medium risk areas. Based on the average number of persons per-home in Puerto Rico, this represents an estimated 619,000 homes.

Estimated Population, Percentage, and Estimated Number of Homes in High, Medium High, and Medium Risk Areas				
Risk Estimated Population Percent of ACS Estimated Number Population Homes*				
High	393,024	11%	146,651	
Medium High	464,329	13%	173,257	
Medium	801,568	23%	299,093	
Total			619,000	

^{*}Estimated number of homes is based on 2018 AC\$ 1-Year Estimates; 2.68 persons per-home in Puerto Rico; 1,179,637 estimated homes in Puerto Rico.

The map below shows the location of the high, medium high, and medium risk areas in Puerto Rico.²³

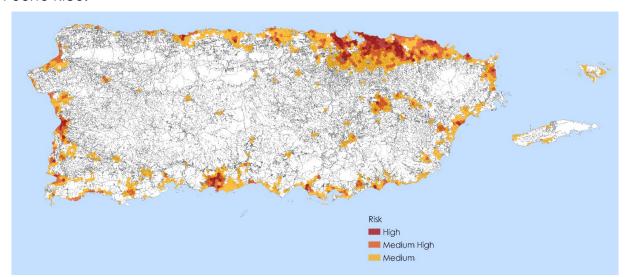


Figure 4: Population in High, Medium High, and Medium Risk Areas in Puerto Rico

Due to its geographic and topographic diversity as an archipelago, the risk of destructive natural and environmental disasters does not affect all regions or communities equally, thereby requiring a tailored, strategic approach — e.g., coastal regions face a higher risk of rising sea levels, while communities in the central mountain range face a higher risk of landslides, and the southwest region has experienced a higher rate of earthquakes. As Puerto Rico continues its recovery from the aftermath of the 2017-2020 disasters, these

²³ PRDOH used population data collected from the American Community Survey products developed for HUD's LMI block group dataset at the block group level. This population data was geo-processed with the ESRI ArcGIS Pro Create Random Points tool to randomly distribute the population (Low-Moderate Universe). The data was then analyzed based on location within the high, medium high, and medium risk areas developed as part of the Risk Assessment.

damages were exacerbated by the excessive flooding and landslides most recently caused by Hurricane Fiona in September 2022, particularly in the hardest-hit areas like the southern and western regions.

COMMUNITY VALUE: Puerto Rican communities are as diverse as the Island's geographical characteristics. Their composition is highly complex, not limited to single-family households, multi-family homes, communal infrastructure, or businesses. Rather, communities are formed and developed through the combination of historical, cultural, and socioeconomic elements, all of which are essential to the creation of a community's social fabric. It is the richness of this complexity that not only makes every community unique, but also contributes to the formation of robust social **support systems** that have proven to be key to Puerto Rico's adaptive capacity. Despite the socioeconomic disparities and structural vulnerabilities exacerbated by past natural disasters across Puerto Rico, these disasters also illuminated the formidable spirit and strong sense of solidarity and resourcefulness embedded within even the Island's most vulnerable communities. In the face of adversity, their willingness and ability to self-organize, collaborate, and be active agents in their own recovery was evident.

To ensure Puerto Rico's long-term resiliency and support its potential to fully thrive, there must be an intentional effort to preserve and nurture the culture and unique set of characteristics and values that form the social fabric of its communities.

PROGRAM DESCRIPTION: The Multi-Sector Community Mitigation Program **(MSC-MIT/MSC)**²⁴ has been is designed to provide socially vulnerable communities (or community sectors) who experience socioeconomic and environmental disparities the opportunity to relocate away from high-risk zones while ensuring maintaining their communities stay together. Most, if not all, of the socially vulnerable communities in Puerto Rico have also suffered significant hardships and damages from past natural disasters and are disproportionately located in high-risk zones, such as coastal zones threatened by rising sea levels, floodplains, landslides, and liquefaction-prone areas among others.

The MSC Program recognizes that Puerto Rican communities face a pressing need to reduce environmental risks. The types and degree of natural hazards that threaten the health, safety, and well-being of these communities can vary greatly. By a Addressing these risks locally, and at a community level, (rather than an individual), level, by relocating neighborhoods and communities out of high-risk zones, allows the MSC Program promotes neighborhoods and communities relocation to help its residents thrive in a lower risk environment. The MSC Program primarily considers mitigation needs for households in high-risk areas, but it also seeks to incorporate a holistic community

 $^{^{24}}$ For the purposes of this document, these terms will be used interchangeably to refer to the Multisector Community Mitigation Program.

perspective that can minimize the impact of risk reduction activities which could otherwise displace individuals or disrupt communities.

Due to the complexities of relocating residents and businesses while maintaining the community together, the MSC Program will fund a wide range of activities, including planning and feasibility studies, job creation and retention for relocated businesses, public infrastructure improvements, housing construction, reconstruction and rehabilitation, acquisition, relocation, public services, demolition, and buyout (voluntary acquisition), among other activities.

Targeted Communities that participatinge in the MSC Program will enter a Participatory Design process facilitated by PRDOH through which community residents will decide: where they wish to relocate, which housing typology they wish to have, which communal infrastructure they wish to incorporate, and which values and priorities they wish to apply to their new community project design. PRDOH aims to engage with community-based organizations and community stakeholders to collaborate on the implementation of the Participatory Design processes. Targeted communities will be assisted by a Targeted Community Representative (TCR) who will assist the community through all phases of the MSC Program. The TRC will be entrusted with decision making authority on behalf of the community and will serve as a liaison between the community, the MSC Program and PRDOH.

The MSC Program stands to offer the following benefits:

- Raise community awareness of regional risks Engage vulnerable communities and their stakeholders to discuss the specific natural threats they face, including the current and projected impacts of climate change. Partner with trusted voices and leaders in the communities to facilitate information-sharing across their networks and promote resident participation.
- Relocate communities out of harm's way Work with residents, stakeholders, and leaders to ensure a community-driven relocation to safer, low-risk areas and away from high-risk zones.
- Provide Technical Assistance Provide equitable access to participatory planning, design, construction, and other related technical assistance as needed, thereby facilitating direct citizen participation and implementation of communityscale relocation projects.
- **Keep communities together** Respect and safeguard the integrity of each community by incorporating resident participation in all phases of the relocation project's development (from design to implementation). Together, identify the community's values, priorities, and needs, ensuring these serve as the project's foundation and maintain the essence of the community intact in the process.

• **Restore floodplains** – Reinstate the natural absorption capacity of floodplains.

PROGRAM PRIORITIES: The MSC Program will target approach Eligible Entities wishing to collaborate with socially vulnerable communities (or community sectors) in high-risk zones who experience socioeconomic and environmental disparities and who have expressed the desire to reduce environmental risks and mitigate loss of life and property through relocation. PRDOH aims to leverage CDBG-MIT funds allocated for the MSC Program with other CDBG-DR Programs by building upon recently established or ongoing disaster recovery efforts that can complement and further support community-wide revitalization and risk mitigation. PRDOH will review Municipal Recovery Plans submitted by municipalities participating in the CDBG-DR Municipal Recovery Planning (**MRP**) Program to identify other proposed community relocation projects that are in an advanced planning stage and can be prioritized for potential implementation through the MSC Program.

PROGRAM IMPLEMENTATION: Through research using various data-gathering strategies, evaluations, community and stakeholder outreach and consultations with subject-matter experts in related fields, the MSC Program will prioritize and approach socially vulnerable communities with a high-risk score rating (as determined by the Puerto Rico Risk and Hazards Dashboard) that have previously expressed a desire to relocate out of their current high-risk zones. Once approached, these communities will decide if they wish to join the MSC Program and engage in a PRDOH-facilitated Participatory Design process, which aims to empower and provide technical assistance with the development of the Community Relocation Proposal (including relocation project strategy, site location and community design) and its submission to PRDOH for final review and approval. PRDOH-procured vendors and contractors will implement the final PRDOH-approved MSC projects, which will consider community "Buy In" and project feasibility, among other evaluation criteria specified in the Program Guidelines.

Through various data-gathering strategies and evaluations, community and stakeholder outreach, and expert group consultations, the MSC Program will target socially vulnerable communities that propose to relocate out of high-risk zones. The Program's targeted approach will mainly consider a community's environmental and social vulnerability and the TCR's preparedness to execute the relocation project. Targeted communities, in coordination with their TCR, will enter a PRDOH-facilitated Participatory Design process with the aim of empowering and providing technical assistance with the relocation project strategy, site location, and community design. PRDOH-procured vendors and contractors will implement the final MSC projects selected by PRDOH, which will be primarily based on the highest percentage of community and stakeholder support, as well as project feasibility considerations. Additional details on how the Program will assess community support will be further described in the Program Guidelines.

SUSTAINABLE AND RESILIENT CONSTRUCTION: PRDOH will implement resilient housing design and construction methods that follow sustainable architecture principles to emphasize quality, durability, energy sustainability, and adaptability. Additional information regarding construction standards can be found in the HUD Compliance Requirements section of this Action Plan at (under the "Protection of People and Property and Construction Methods") section in this Action Pan.

ELIGIBLE ACTIVITIES:

- Section 105(a)(1) Acquisition of Real Property
- Section 105(a)(2) Public Facilities and Improvements
- Section 105(a)(3) Code Enforcement
- Section 105(a)(4) Clearance, Rehabilitation, and Reconstruction of Buildings
- Section 105(a)(5) Architectural Barrier Removal
- Section 105(a)(7) Disposition of Real Property
- Section 105(a)(8) Public Service
- Section 105(a)(9) Payment of Non-Federal Share
- Section 105(a)(11) Relocation
- Section 105(a)(12) Planning Activities
- Section 105(a)(14) Activities Carried Out through Non-profit Development Organizations
- Section 105(a)(15) Assistance to Eligible Entities for to Neighborhood Revitalization, Community Economic Development and Energy Conservation
- Section 105(a)(17) Economic Development Assistance to For-Profit Business
- Section 105(a)(19) Assistance to Public or Private Non-profit Entities
- Section 105(a)(22) Microenterprise Assistance, Economic Development; Job Creation and Retention
- 84 FR 45838, 45863, V.B.1 Housing-related eligibility waiver permitting new housing construction that addresses disaster risks identified in the grantee's Mitigation Needs Assessment.

INELIGIBLE ACTIVITIES:

- Development within the floodway is prohibited.
- Proposed new construction located in the 100-year floodplain, as identified on in the most current Federal Emergency Management Agency (FEMA) Flood Maps, must comply with 24 C.F.R. Part 55.

METHOD OF DISTRIBUTION: Subrecipient Distribution Model and Direct Distribution Model

During implementation of the MSC Program, PRDOH may use reasonable criteria to directly select a nonprofit organization or community-based organization as a subrecipient. The subrecipient distribution model allows PRDOH to delegate roles and responsibilities such as project management, program operational support, data

gathering, community outreach and engagement, participatory design process implementation, and project closeout, among others.

To manage the Caño Martín Peña (CMP) communities' set-aside, the Corporación del Proyecto ENLACE del Caño Martín Peña (ENLACE) and the Compañía para el Desarrollo Integral de la Península de Cantera (CDIPC) will serve as MSC Subrecipients.

NATIONAL OBJECTIVE: LMI, UNM

ELIGIBLE APPLICANTS: Subrecipients must be one (1) of the following types of entities:

- Unit of General Local Government (Municipal Governments);
- Non-governmental organization (501(c)(3)) or Not for Profit Entities; for example:
 - Faith Based or Community Based Development Organizations
 - Conservation or Natural Resource Organizations
- Public Housing Authorities
- Public Private Partnerships with one or more of the above entities

MAX AWARD: \$100,000,000.

<u>Note</u>: The MSC Program's total allocation is **\$300,000,000**, which includes a \$52,000,000 set-aside designated for the Caño Martín Peña Communities. Therefore, the remaining total MSC Program allocation is \$248,000,000. Final award amounts will be based on the selected projects' design and needs. Allocations are subject to change per amendments and funding availability, as determined by PRDOH.

CAÑO MARTÍN PEÑA (CMP) COMMUNITIES SET-ASIDE: Located within the San Juan Municipality, the CMP Communities at-large is comprised of an estimated 30,000 residents across eight (8) distinct neighborhoods or community sectors: ²⁵

- 1. Las Monjas
- 2. Barrio Obrero San Ciprián
- 3. Barrio Obrero Marina
- 4. Buena Vista Santurce
- 5. Buena Vista Hato Rey
- 6. Parada 27
- 7. Israel-Bitumul
- 8. Península de Cantera

The CMP Community at-large is currently living with an environmental crisis which that affects the more than 26,000 residents who live below the poverty line and are experiencing recurrent flooding. In recognition of their initiative to formally unite under a flagship community-scale dredging project that is in an advanced planning stage,

²⁵ As identified in Act 489-2004 and Act 20-1992.

PRDOH designated an MSC-MIT funding set-aside totaling \$52,000,000 to assist the CMP Communities with the targeted implementation of MSC projects that will better serve their residents' housing needs. The Corporación del Proyecto ENLACE del Caño Martín Peña (ENLACE) and the Compañía para el Desarrollo Integral de la Península de Cantera (CDIPC) will serve as MSC Subrecipients (\$46,000,000 and \$6,000,000, respectively) to manage the set-aside. Both entities have proposed to use the set-aside funds to relocate selected households that lie within the footprint of the Martín Peña channel's dredging path. This is an ongoing process which is being implemented through civic engagement and Participatory Design processes led by both entities, ENLACE and CDIPC. These entities will be responsible for completing their Participatory Design processes, acquiring Architecture and Engineering (A/E) services for project design and construction (among any other services needed for project development and implementation), and for the overall implementation and closeout of their projects.

ALIGNMENT WITH CDBG-DR PROGRAMS:

- Aligns with the City Revitalization Program, which has as a major objective the revitalization of urban centers, downtown areas, and key corridors.
- Provides a long-term and complementary program to the CDBG-DR Gap to Low-Income Housing Tax Credits Program and the Social Interest Housing Program, both of which are currently underway operation.
- Coordination with these three (3) programs provides the opportunity to address housing, supportive services, infrastructure, and economic needs of the benefitting community in a holistic manner.

ALIGNMENT WITH HUD POLICY OBJECTIVES:

- Support data-informed investments in high-impact projects that will reduce risks
 attributable to natural disasters, with particular focus on repetitive loss of property
 and critical infrastructure.
- Increase the resiliency of housing that typically serves vulnerable populations, including the following housing: transitional housing, permanent supportive housing, permanent housing serving individuals and families (including subpopulations) that are homeless and at-risk of homelessness, and public housing developments.
- Maximize the impact of available funds by encouraging leverage, public-private partnerships, and coordination with other Federal programs.

RECOVERY PLAN ALIGNMENT:

The wide range of activities contemplated for the Multi-Sector Community Mitigation Program aligns with the following courses of action from Puerto Rico's Recovery Plan:

- WTR 1 Resilient Repair or Replacement of the PRASA Drinking Water System
- WTR 6 Expand PRASA Services to Unconnected Areas

- WTR 11 Repair, Replace, and Improve PRASA Wastewater Treatment Plants and Sanitary Sewer Collection Systems
- WTR 20 Relocate or Redesign Assets in Flood Zones
- WTR 23 Evaluate, Repair, and Improve Flood Control Infrastructure
- WTR 24 Reduce Sedimentation of Water Bodies
- HOU 1 Assess, Repair, Rehabilitate, or Relocate Substantially Damaged Owner-Occupied Homes
- HOU 2 Assess, Repair, and Mitigate Damaged Subsidized Rental Housing
- HOU 7 Assess Need for —and Adopt and Implement Programs to Provide— Additional Subsidized Rental Housing and Special Housing
- **ECN 14** Direct Small Business Investment
- ECN 23 Implement Job Creation Initiative
- ECN 32 Create Business Resiliency Hubs

Economic Development Investment Portfolio for Growth – Lifeline Mitigation Program

RISK-BASED NEED: Private industry owns a large majority of critical and secondary infrastructure assets including, but not limited to, communications towers, privately-owned hospitals and other medical facilities, privately-owned transportation infrastructure, modernized energy solutions that harness the natural resources of Puerto Rico, and privately-owned utilities.

Lifeline strengthening projects coupled with job creation and long-term economic return offer increased resilience benefits for Puerto Rico. The economic impacts of disaster events create a state of crisis for Puerto Rico, reducing the ability of the Government of Puerto Rico and households to take control of their own recovery and mitigation needs. Puerto Rico's ability to bounce back after a disaster event is crippled by the lack of available funds at the state, municipal, and household levels. Mitigation in the shape of economic stability forms the foundation upon which the Island can move toward self-reliance for future disaster events.

PROGRAM DESCRIPTION: The Economic Development Investment Portfolio for Growth – Lifeline Mitigation (**IPGM**) Program is a mitigation-focused extension of the CDBG-DR program that will target funding for privately owned lifeline infrastructure to support Risk-Based Mitigation Needs. The launch of this program will also take into account for the changing economic landscape, as benefits of economic recovery efforts tied to the hurricanes are realized.

Revitalizing Puerto Rico through economic investment is more than a program. It is a commitment to the renewal and expansion of quality-of-life opportunities for Puerto Rican citizens, empowering them to take charge of ewn their ewn recovery from future hazard events. The means to accomplish such a goal are not found in a one-dimensional approach to economic funding, but rather in laying the foundation for ongoing evaluation, planning, and formulation of adaptive investment strategies that take into consideration the present economic constraints and opportunities at that time.

Much like CDBG-DR, this mitigation-focused extension of the program is intended to fund large-scale redevelopment projects that are transformative in nature and create jobs as well as cascading economic impacts. Projects under this program are key to a comprehensive mitigation strategy to enable and nurture strategic growth nodes and strengthen economic vitality.

ELIGIBLE PROJECTS: The objective of the program is to develop a series of projects that foster investment in lifeline infrastructure improvements. To achieve this objective and meet the lifeline mitigation targets, it may be necessary to establish specific project review requirements, This objective may require more distinct requirements for project

Projects are expected to result in improved outcomes for the lifeline infrastructure described below while generating economic benefit. This may include, but is not limited to the development/redevelopment of one or more of the following lifelines:

- Strengthening of resilience corridors within the **Transportation** lifeline to include seaports, airports, and other maritime transportation.
- Large-scale private investment in renewable energy projects that capitalize on Puerto Rico's the natural resources of Puerto Rico and serve to reduce the dependence on fossil fuel to generate energy.
- Improving the resilience of privately owned **Communications** lifeline infrastructure.
- Strengthening, modernizing, replacing, or building water/wastewater infrastructure
 to withstand high-risk hazardous activity that poses a threat to asset stability in a
 disaster event.
- Support food security through agribusiness infrastructure that facilitates the
 development and indigenous crops resilient to disasters and important to fulfilling
 food supply needs locally.
- Improving, expanding, or constructing **healthcare and medical** facilities to fortify and innovate buildings and permanent equipment.
- Divert waste from landfills by creating recycling centers or other eco-conscious infrastructure. Improving or fortifying solid waste (or sustainable management of materials) to reduce the health threats associated with landfills overfill and instances of clandestine dump sites that only increase with every hazardous event.
- Improving or fortifying **Safety and Security** lifeline infrastructure.

These projects will require large levels of financial investment, of which the CDBG-MIT portion may range from minor to significant. Projects with a substantial external funding match and high percentage of owner equity will be evaluated positively as increased leverage to maximize available CDBG-MIT funding. The projects will have a large community impact, whether in terms of job creation, service to the neighborhood services, or renewal of a given area. Depending on the nature of the project, they may involve real estate development, whether it is the construction of a new facility or the expansion of an existing building, and will be expected to involve various types of financing and sources of funds. For example, large-scale projects often have a combination of private lender financing, various types of public financing, and business owner cash injections.

²⁶ Projects for alternative energy infrastructure solutions that reduce Puerto Rico's fossil-fuel dependence should apply to the Community Energy and Water Resilience Incentives Program. Energy projects that directly improve the electrical power grid should be funded through PRDOH Energy Programs included in the CDBG-DR Action Plan for Electrical Power System Enhancements and Improvements.

The Program will be established for the funding of projects that will significantly impact and enable the long-term economic growth and sustainability of the Island. This program has the capacity to be a funding stream for projects determined by the Government of Puerto Rico to be key drivers for Puerto Rico's new economy and to align with the economic recovery plan. As such, funds will be directed to forward-looking, cost-efficient, and socially transformative innovative solutions that are forward-looking, cost-efficient, and socially transformative. PRDOH will apply a priority classification to project types to be further described in the Program Guidelines. Additionally, the program expects entities to provide key services related to the project, which will result in the creation of activities that support LMI workers and key strategic growth sectors as outlined in the Recovery Plan and Fiscal Plan.

Projects must contribute to long-term growth potential and modernize privately-owned infrastructure that directly supports one (1) or more of the seven (7) community lifelines. Such projects must prove to institute one (1) or more of the following mitigation themes:

- **Establish redundancy**: defined as multiple connections to lifelines' infrastructure lifeline, which to prevent the potential consequences of losing service through a single connection.
- **Establish alternatives**: defined as a diverse set of infrastructure types and locations that reduces the danger of overdependence on infrastructure assets that could become single points of failure during emergencies.
- **Establish independence**: defined as local control and management of lifeline assets and infrastructure that can reduce the possibility of widespread systemic failure.
- Must be based on coordination: defined as collaboration between communities, industries, governmental entities, and utilities, that proposes changes to critical infrastructure, which would yield more successful outcomes and be more likely to create solutions that meet the needs of communities.

All applicants are required to submit a long-term operations and maintenance plan.²⁷

Applicants are encouraged to incorporate innovative nature-based solutions and natural or green infrastructure solutions during project development that reduce the negative impacts on the surrounding human and natural environment. These solutions should include the preservation of natural infrastructure and other eco-conscious measures included in project design to minimize the unintended consequences of grey infrastructure and other development.

Projects will be evaluated for level of project readiness, representing an opportunity to comply with HUD requirements in 84 FR 48538, 45862, Section V.A.26, which requires

²⁷ Although unlikely, where it may apply, the long-term operations and maintenance of an infrastructure project must identify reasonable milestones for any plan that will be reliant on proposed changes to existing taxation policies or tax collection practices.

grantees to expend fifty percent (50%) of their allocation of CDBG–MIT funds on eligible activities within six (6) years of HUD's execution of the grant agreement. Indicators of readiness may include but are not limited to:

- Details of the implementation plan and schedule
- Status of Permits
- Projects that do not result in the displacement of individuals or businesses through acquisition in order to be completed
- Status of project design
- Status of environmental review and level of environmental impact
- Status of BCA, if applicable

COVERED PROJECTS. For Covered Projects, defined as \$100 million dollars or more in total project cost with \$50 million dollars or more in match funds from CDBG-MIT, CDBG-DR or CDBG, the project benefits must outweigh the costs. The preferred method for demonstrating this benefit is through the utilization of FEMA's BCA model, and the analysis must result in a benefit-to-cost ratio greater than one point zero (1.0). HUD also allows for alternative methods for Covered Projects. The requirements for this type of infrastructure projects are discussed further in the Covered Project section of this Action Plan.²⁸

RISK BENEFIT SCORE ANALYSIS: PRDOH will utilize a competitive selection process that maximizes the mitigation of risks to life and property through a scoring system that directly ties to the data-based Risk Assessment. Evaluation of project eligibility and competitive qualities will include criteria focused on mitigation of threats identified within the jurisdiction(s) where the project provides benefit. By utilizing the results of the risk assessment, each project will be given an RBS. This score is based on potential mitigated risk, or a MIT Index Ratio, project beneficiaries, and project cost.

Equation 10: Risk-Benefit Score

$$RBS = \frac{(MIT\ INDEX)(AOB\ BENEFICIARIES)}{(PROJECT\ COST)}\ x\ 100$$

By basing project selection on the RBS, projects that reduce risk to the greatest number of people at the lowest cost will be prioritized. Furthermore, because critical lifelines were intrinsic to the calculation of risk as part of the risk assessment, and because of the interdependent nature of critical lifelines, projects that mitigate risk to one (1) or more of the critical lifelines will receive a higher RBS than those that mitigate risk to only secondary lifelines. Applicants can predict their RBS by utilizing the Risk Assessment Tool.

In general, projects that address the following will inherently score better:

²⁸ United States, Department of Housing and Urban Development. Allocations, Common Application, Waivers, and Alternative Requirements for Community Development Block Grant Mitigation Grantees. Federal Register Vol. 84, No. 169 (August 30, 2019), 84 FR 45838.

- Projects that Mitigate multiple risks under one project activity.
- Projects that Reduce risk for socially vulnerable populations.
- Projects that Reduce risk on a regional scale rather than at the site level.
- Projects that serve to Mitigate risk to critical lifeline infrastructure will score better rather than those that servinge secondary infrastructure.

High Scoring Contributors	Low Scoring Contributors
 Mitigates risk from multiple hazards Mitigates risk regionally Mitigates risk to critical infrastructure 	 Does not mitigate risk from multiple hazards Risk mitigated in a limited area Does not mitigate high risk
 Mitigates risk to large numbers of people 	 Does not mitigate risk to critical infrastructure
Result	Result
 Low-cost relative to risk mitigated and people receiving benefit 	 High-cost relative to risk mitigated and people receiving benefit

ELIGIBLE ACTIVITIES:

Pursuant to the HCDA, the following are eligible activities:

- Section 105(a)(1) Acquisition of Real Property
- Section 105(a)(2) Public Facilities and Improvements
- Section 105(a)(3) Code Enforcement
- Section 105(a)(4) Clearance, Rehabilitation, Reconstruction, and Construction of Buildings
- Section 105(a)(5) Removal of Material and Architectural Barriers
- Section 105(a)(7) Disposition of Real Property
- Section 105(a)(8) Public Services
- Section 105(a)(9) Payment of Non-Federal Share
- Section 105(a)(11) Relocation
- Section 105(a)(12) Planning and Capacity Building
- Section 105(a)(14) Activities Carried Out through Nonprofit Development Organizations
- Section 105(a)(15) Assistance to Eligible Entities for Neighborhood Revitalization,
 Community Economic Development and Energy Conservation
- Section 105(a)(16) Energy Use Strategies Related to Development Goals
- Section 105(a)(17) Economic Development Assistance to For-Profit Business
- Section 105(a)(21) Assistance to Institutions of Higher Education
- Section 105(a)(22) Microenterprise Assistance

METHOD OF DISTRIBUTION: Direct and Subrecipient Distribution

NATIONAL OBJECTIVE: UNM; LMI

ELIGIBLE ENTITIES:

Public or private entities that are a part of public-private partnerships for lifeline projects include:

- Units of general local government/municipalities (including departments and divisions)
- Government of Puerto Rico Agencies, Authorities, Trusts, and Boards
- Community-Based Development Organizations and private non-profits
- Non-governmental organization (501(c)(3)) or other non-profit entities
- Private for-profit businesses

For-Profit Businesses not part of a public-private partnership are eligible entities pursuant to Section 105(a)(17) of the HCDA, "Economic Development Assistance to For-Profit Business".

Privately owned entities include:

• For-Profit Businesses, as eligible under applicable activity.

All applicants are encouraged to seek community support for proposed projects. Community support can be evidenced with documentation of consultation with the local municipality (ies) in which the project area and persons of benefit reside, letters of support from community organizations or leaders representing the project area and persons of benefit, or through instruments such as formalized consortia or executed memoranda of agreement (MOA). All applicants will be required to submit an operations and maintenance plan to qualify.

MAX AWARD: \$100,000,000. No exceptions to the max award will be considered.

LARGE-SCALE ECONOMIC DEVELOPMENT PROJECTS: As The IPG-MIT Program is intended to fund large-scale development projects that are transformative in nature, create jobs, and economic benefits. Based on the targeted economic benefits provided by certain projects, PRDOH may choose to grant funding to selected projects that demonstrate evaluate to award grants to directly selected projects demonstrating a continuation of the goals and strategies presented in the CDBG-DR Action Plan for IPG-DR projects supporting the urban renewal of the Puerta de Tierra area and the adjacent coastline development, including the San Juan Harbor. Program funds will be directed to innovative, long term transformative projects which are deemed to be key drivers for new economy development.

ALIGNMENT WITH CDBG-DR:

• Similar to the **Economic Development Investment Portfolio for Growth Program**, but fosters lifeline-centric investments for long-term economic resilience potential.

- Increases the reach of resilience improvements initiated under the Community
 Energy and Water Resilience Installations Program by requiring new construction
 to incorporate sustainability measures.
- Provides community-based solutions for needs identified through the MRP Program.
- Further research completed through the WCRP Program.

ALIGNMENT WITH HUD POLICY OBJECTIVES:

- **Support data-informed investments** in high-impact projects that will reduce risks attributable to natural disasters, with particular focus on repetitive loss of property and critical infrastructure:
- Maximize the impact of available funds by **encouraging leverage**, **public-private partnerships**, **and coordination** with other Federal programs.

ALIGNMENT WITH ECONOMIC RECOVERY PLAN:

- CPCB 3 Capacity Building to Incorporate Hazard Risk Reduction into Planning and Design
- **CPCB 4** Resilience Building in Collaboration with High-Risk Communities
- CPCB 6 Public Information and Communication Capability for Coordinated Recovery
- CIT 22 Use Federal Programs to Spur Deployment of Broadband Internet Island-Wide
- **HSS 3** Implement Integrated Waste Management Program and Expand Programs to Increase Recycling Rates
- **PBD 3** Establish Integrated Service Centers
- TXN 2 Harden Vulnerable Transportation Infrastructure
- TXN 4 Repair Airport Damage
- TXN 7 Incentivize a Variety of Mobility Options
- TXN 10 Develop Redundant Seaport Capacity
- TXN 12 Repair Damage to Ports and Ferry Terminals
- TXN 19 Extend PR-5
- TXN 20 Extend PR-22
- TXN 21 Complete PR-10
- TXN 22 Increase Port Facility Resilience
- **ECN 9** Invest in Agricultural Recovery Assistance
- ECN 23 Implement Job Creation Initiative

Community Energy and Water Resilience Installations Program

RISK-BASED NEED: Historically, it's been proven that the legacy energy infrastructure in Puerto Rico is unreliable and does not meet the needs of citizens. This reality is made clear when a disaster event occurs and prolonged power outages pose health and safety threats that increase every day as the power and the services it fuels, remain unavailable to households, hospitals, and critical services facilities. Citizens must have additional options to meet this critical need.

The fragile and aging Energy²⁹ and Water and Wastewater sector infrastructure, and the lack of access to quality utilities for remote communities, each pose a threat to basic service utilities that generate, store, and distribute essential products to the people of Puerto Rico. Restoring power to every customer impacted by power disruptions due to disasters or infrastructure damages is one of the most significant challenges Puerto Rico continues to face. Despite the increasing disruptions, Puerto Rican energy customers pay approximately 27 to 29 cents per kilowatt hour, double the U.S. average of cents per kWh.³⁰

The population is increasingly relying on power generators during long power outages. Power generators, though intended to be a short-term solution, have become a more permanent substitute. The incremental use of generators is an expensive, unhealthy, and perilous alternative for citizens to mitigate the lack of power. The amount of power generators is increasing and posing higher security threats among residents and neighbors.

As established in the Risk Assessment, Energy and Water and Wastewater lifeline sectors are central to the stability of Puerto Rican communities. The Energy sector and the Water and Wastewater Systems sector have significant interdependencies: water is used in all phases of energy production and electricity generation, while electricity and other fuels are used to extract, convey, and deliver water, and to treat wastewater, prior to its return to the environment. Fragility within these lifeline sectors makes them extremely vulnerable to naturally occurring and human-caused hazards in that localized events can cause a systemic and cascading failure. Both the electric grid and water infrastructure are aged and costly to redevelop.

Remote rural communities across Puerto Rico are either served by the Water Utility or decentralized with independent community water supply systems. In both cases, communities struggle to receive uninterrupted, health-compliant potable water supply. After Hurricane María, these challenges have grown exponentially. Rural Communities under the service of the Water Utility in Puerto Rico often deal with interruptions. They also face the challenges of deteriorated infrastructure, sedimentation of water bodies and

²⁹ The power grid is a main sector within the Energy lifeline.

³⁰ U.S. Energy Information Administration. Puerto Rico Profile. Accessed at: https://www.eia.gov/state/print.php?sid=RQ (August 2022).

artificial lakes, increased water demand, and damages caused by disasters. Swift repairs in last-mile, remote communities are a challenge due to complexities including accessibility, but also due to the prioritizing of repairs in densely populated areas.

Due to this, For this reason, we recognize that these communities face more delays in recovery thus having an increased need to mitigate their water and energy vulnerabilities.

Need for Energy Resilience. Energy is the one lifeline upon which all others depend; yet it is primarily dependent on imported fossil fuel sources. Ninety-eight percent (98%) of the power grid functions on gasoline, coal, and natural gas, while only two percent (2%) functions on renewable sources. A continuation of this dependence, coupled with a centralized system of fragile infrastructure, could likely be the single most significant obstacle to resilience for Puerto Rico. Furthermore, emergency generators are a prevalent solution for backup energy in the event the power grid becomes unstable, but they also depend on imported fuels and a functioning complex supply chain. This fragility in the Energy lifeline and backup energy sources leaves households vulnerable to health and safety risks, especially those residents, such as the elderly or infirm, whose life expectancy is directly affected by the loss of power which is required to refrigerate medications such as insulin and run medical equipment such as oxygen machines and nebulizers.

At this pivotal point in time when Puerto Rico is expecting billions of dollars³¹ for energy grid repair and improvements, PRDOH is focusing critical mitigation funds on the resilience of communities and individual households by furthering the goals set by the Puerto Rico Energy Public Policy Act, Law 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. Projects should focus on clean energy technology and can employ wind, solar, storage hybrids, or other technology appropriate to the environmental attributes of the project location and cost and/or performance advantages.

³¹ As a result of Hurricanes Irma and María, HUD has acknowledged an almost \$2 billion unmet need for the energy grid, while and the Government of Puerto Rico, in consultation with PREPA, originally estimated a \$17 billion need to overhaul its outdated power plants and reduce its reliance on imported oil. Billions in federal funding have been expended on repairs, yet Island-wide power outages continue to contribute to an unmet need for reliable power.

Transportation Natural Gas Petroleum Systems Power for Power for Fuel for generators Power for pumping stations, Fuel transport, Fuel for and maintenance, signaling, compressor, storage, storage, shipping aenerators **lubricants** switches control systems control systems ELECTRICITY Power for pumps, SCADA Power for Cooling, lift stations Communications switches emissions reduction control system Water & Communications & Wastewater System Information Technology

ELECTRIC POWER INTERDEPENDECY EXAMPLES

Figure 114: Illustration of how the power grid dependence on fossil fuel creates an interwoven vulnerability for other lifelines that depend on the power grid to function. Source: U.S. Department of Energy, "Energy Resilience Solutions for the Puerto Rico Grid".

The necessity for redundant, alternative, and independent power systems, remains an unmet need today, and will may even continue to represent an unmet need long after Puerto Rico can implement the forthcoming \$2 billion energy system allocation from HUD.

Need for resilience and increased access to Water & Wastewater services. There is a direct correlation between energy and water vulnerability in remote rural communities across Puerto Rico, therefore, the need to store water during service disruptions plays a significant role in helping many homes in far-to-reach communities.

PROGRAM DESCRIPTION: There are three (3) subprograms within the Community Energy and Water Resilience Installations (**CEWRI**) Program; Home Energy Resilience Improvements, Incentive Program, and Community Installations. Household assistance through the Home Energy Resilience Improvements Program and the Incentive Program will be administered under one (1) unified structure referred to in the Program Guidelines as Community Energy and Water Resilience Installations – Household (**CEWRI – HH**) Program:

I. HOME ENERGY RESILIENCE IMPROVEMENTS. Max Award: \$30,000. The maximum award can be raised for households in Vieques and Culebra in tandem with the islands' market conditions. Homes unprepared for the natural threats to the power grid were left vulnerable in the aftermath of Hurricanes Irma and María. Rebuilding to protect federal investment and to sustain recovery efforts requires resilient design and improvements that incorporate modern technology for life-sustaining purposes during off-grid events.

Energy resilience efforts may include conducting a home energy evaluation and the promotion of energy efficiency and stability. Resilient design and improvements include things such as the installation of photovoltaic and battery storage systems at capacities aligned with household needs, including the consideration of critical medical needs.

Eligible applicants to this Program must own or have a proprietary interest in the single-family home structure and it must be their primary residence. Assistance will be provided directly to property owners as the eligible applicant. Households' income must also be below eighty percent (80%) AMFI.

PRDOH will further target the most vulnerable within the LMI population, starting with very low-income households. As "HUD regulations and guidance for CDBG generally do not define vulnerable populations, and definitions may vary",³² PRDOH has identified income as a key vulnerability indicator based on historical data from CDBG-DR R3 Program applicants. Very low-income applicants made up 86% of total applications and within that group, 56% were elderly residents. Furthermore, income is directly related to a household's ability to address high-risk energy security due to the high cost of systems.³³

Applicants will be evaluated on a rolling basis to facilitate steady flow of assistance to eligible households. Within each round of applicant evaluations, priority will be given to households with high-risk energy security need.³⁴ The Program will make assistance available through rounds. Each round will have a maximum eligible AMFI category.

II. INCENTIVE PROGRAM. Max Award: \$15,000 per household. An incentive program covering up to \$15,000 or up to thirty percent (30%) of household project costs, whichever is less, will be offered to enable the installation of renewable energy systems, including storage, which provide electricity to the property during times of electric grid failure. The maximum award can be raised for households in Vieques and Culebra in tandem with the islands' market conditions.

Eligible applicants must own or have a proprietary interest in the single-family residential structure, and it must be their primary residence. Eligible households are those with a household income of up to 200% AMFI.

Applicants will be evaluated on a rolling basis to facilitate steady flow of assistance to eligible households under the urgent need mitigation national objective. Within each

³² U.S Government Accountability Office (2021). Better Data Are Needed to Ensure HUD Block Grant Funds Reach Vulnerable Populations. Accessed at: https://www.gao.gov/assets/720/717468.pdf.

³³ National Renewable Energy Laboratory (NREL). Puerto Rico Low-to-Moderate Income Rooftop PV and Solar Savings Potential (2020). Accessed at: https://www.nrel.gov/docs/fy21osti/78756.pdf.

³⁴ High risk considers residents whose life expectancy is directly affected by the loss of power. (i.e., Residents with a need to refrigerate medications such as insulin and run medical equipment such as oxygen machine and nebulizers, would be considered high-risk energy security). This will be further defined in the Program Guidelines.

round of applicant evaluations, priority will be given to households with high-risk energy security need. The Program will make assistance available through rounds.

III. COMMUNITY INSTALLATIONS. Max Award: \$40,000 per household. Exceptions to the maximum award will be evaluated on a case-by-case basis taking into consideration unforeseen site conditions or incidental improvements required to meet the program's intent of community resilience. Community installations of energy production and storage systems solutions may be offered to complement alongside home-based improvements or reduce household barriers to mitigation. Community scale projects may include individual household renewable energy and water storage systems that are installed in targeted communities as part of a collective.

Energy-related institutions, agencies, and utility providers developed relevant data on the communities that long suffered power outages after recent disasters. For example, on August 14th, 2018, Bo. Real Anón, Raíces sector, a rural community in Ponce, was declared the last community to restore have power restored by PREPA after 328 days since Hurricane María hit Puerto Rico.³⁵ Communities that suffered a prolonged period of power outages dealt with catastrophic outcomes, including death, emigration, health distress, and economic instability, among other issues.

Data collected from PREPA, LUMA, as the Transmission and Distribution Operator for the Grid, the University of Puerto Rico and the Department of Energy and its Labs, among others, will be used to identify the most vulnerable communities due to the lack of energy during extended periods of time. Through this data, the Subprogram will directly select these vulnerable communities through a targeted outreach strategy to offer the opportunity to collectively secure their well-being through resiliency improvements that may include installing water storage and photovoltaic systems with battery storage, at capacities aligned with household needs.

Eligible applicants to this Program must occupy a single-family home structure serving as their primary residence. Assistance will be provided directly to eligible occupants within targeted communities.

ELIGIBLE ACTIVITIES:

Pursuant to the HCDA, the following are eligible activities:

- Section 105(a)(2) Public works facilities and Improvements
- Section 105(a)(4) Clearance, demolition, removal, reconstruction, and rehabilitation (including rehabilitation which promotes energy efficiency) of buildings and improvements,

³⁵ Sullivan, E. (2018, August 15). Nearly A Year After Maria, Puerto Rico Officials Claim Power Is Totally Restored. Npr.org. Retrieved January 24, 2023, from https://www.npr.org/2018/08/15/638739819/nearly-a-year-after-maria-puerto-rico-officials-claim-power-totally-restored.

• Section 105 (a) (26) – Lead-based paint hazard evaluation and reduction

INELIGIBLE ACTIVITIES:

- Activities that directly improve the power grid infrastructure not to be confused with local renewable system tie-ins.
- Installation of equipment that is not permanent and integral to the structure as defined by the Puerto Rico Civil Code in Article 250 and Article 252.
- Communal energy or water systems that include shared ownership of assets.
- Activities in the floodway.

MEASURABLE MITIGATION OF RISK:

For the **Community Installations subprogram**, PRDOH will employ a competitive selection process that maximizes the mitigation of risks to life and property. A scoring system will be used to evaluate selected communities and directly tie them to the data-based Risk Assessment. Evaluation of project eligibility and competitive qualities will include criteria focused on mitigation of threats identified within the jurisdiction(s) where the project provides benefit. By utilizing the results of the risk assessment, each project will be given a Risk-Benefit Score. This score is based on potential mitigated risk, or a MIT Index Ratio, project beneficiaries, and project cost.

$$RBS = \frac{(MIT\ INDEX)(AOB\ BENEFICIARIES)}{(PROJECT\ COST)} \times 100$$

By basing project selection on the Risk Benefit Score, projects that reduce risk to the greatest number of people at the lowest cost will be prioritized. Furthermore, because critical lifelines were intrinsic to the calculation of risk as part of the risk assessment, and because of the interdependent nature of critical lifelines, projects that mitigate risk to one (1) or more of the critical lifelines will receive a higher Risk Benefit Score than those that mitigate risk to only secondary lifelines. Applicants can predict their Risk Benefit Score by utilizing the Risk Assessment Tool. See Project Examples in the Infrastructure Mitigation Program.

In general, projects that address the following will inherently score better:

- Projects that mitigate multiple risks under one project activity.
- Projects that reduce risk for socially vulnerable populations.
- Projects that reduce risk on a regional scale rather than at the site level.
- Projects that mitigate risk to critical lifeline infrastructure will score better than those that serve secondary infrastructure.

High Scoring Contributors	Low Scoring Contributors
 Mitigates risk from multiple hazards Mitigates risk regionally Mitigates risk to critical infrastructure 	 Does not mitigate risk from multiple hazards Risk mitigated in a limited area Does not mitigate high risk
 Mitigates risk to large numbers of people 	 Does not mitigate risk to critical infrastructure
Result	Result
 Low-cost relative to risk mitigated and people receiving benefit 	 High-cost relative to risk mitigated and people receiving benefit

METHOD OF DISTRIBUTION: Direct Distribution Model

NATIONAL OBJECTIVE: UNM; LMI

MIN AWARD: Based on cost reasonableness analysis.

MAX AWARD: Variable (see above). Policy exceptions for a max award will be considered by PRDOH and shall not exceed ten percent (10%) of the project value. Exceptions will be evaluated based on need which may include the number of beneficiaries, the profile of historical losses from past disaster events, operations and maintenance plan, and long-term mitigation potential. Policies and procedures governing maximum award amounts shall be communicated through Program Guidelines.

ALIGNMENT WITH CDBG-DR FUNDS FOR ELECTRICAL SYSTEM ENHANCEMENTS:

- Projects that directly improve the electrical power grid should be funded through PRDOH Energy programs described in the CDBG-DR Action Plan for the Electrical Systems Enhancements and Improvements³⁶, prior to being considered for CDBG-MIT
- The Electrical Systems Enhancements and Improvements Programs consist of two (2) lines of effort as follows:
 - The Energy Grid Rehabilitation and Reconstruction (ER1) Cost Share Program is designed to meet the non-federal cost-share need of FEMA's unprecedented PA allocation for PREPA's Island-wide FEMA Accelerated Award Strategy (FAASt) Project.³⁷

³⁶ The Action Plan for Electrical Power System Enhancements and Improvements is available in English and Spanish on the PRDOH website at https://cdbg-dr.pr.gov/en/power-grid-action-plan/ and https://cdbg-dr.pr.gov/plan-de-accion-de-red-de-energia/.

³⁷ ER1 pending approval of HUD.

- The Electrical Power Reliability and Resilience Program (ER2) will serve the needs of communities by funding projects that are not currently anticipated to be funded from other federal or local sources.
- Any projects funded under the CDBG-MIT allocation shall be limited to activities
 that meet the requirements for CDBG-MIT funds and that are not inconsistent with
 the requirements of HUD's electrical power systems notice and any additional
 requirements on the use of CDBG-MIT funds published in that notice.

ALIGNMENT WITH CDBG-DR PROGRAMS:

- Increases the reach of resilience improvements initiated under the CEWRI Program.
- Provides community-based solutions for needs identified through the MRP Program.

ALIGNMENT WITH HUD POLICY OBJECTIVES:

- Support data-informed investments in high-impact projects that will reduce risks
 attributable to natural disasters, with particular focus on repetitive loss of property
 and critical infrastructure.
- Support the adoption of policies that reflect local ³⁸ and regional priorities that will have long-lasting effects on community risk reduction, to include the risk reduction to community lifelines such as Safety and Security, Communications, Food, Water, Sheltering, Transportation, Health and Medical, Hazardous Material (management) and Energy (Power & Fuel).
- Maximize the impact of available funds by **encouraging leverage**, **public-private partnerships**, **and coordination** with other federal programs.

ALIGNMENT WITH ECONOMIC RECOVERY PLAN:

- CPCB 4 Resilience Building in Collaboration with High-Risk Communities
- WTR 3 Enhance the Efficiency and Resilience of PRASA Electricity Services
- WTR 12 Enhance Electricity Reliability and Redundancy for Non-PRASA and Nonregulated Systems
- WTR 14 Improve Equity in Drinking Water Provision for Nonregulated Systems
- WTR 15 Improve Reliability and Safety of Non-PRASA Systems
- WTR 16 Build Capacity of Non-PRASA Systems
- **HSS 1** Increased Use of Solar Backup Power Sources

³⁸ PRDOH interprets the word local to mean municipal in this context.