UNITED STATES VIRGIN ISLANDS

DISASTER RECOVERY ACTION PLAN

Version 3.0

Prepared by:

Virgin Islands Housing Finance Authority

Governor Albert Bryan Jr.
Effective: November 19, 2020

Public Comment Period: September 3, 2020 through October 3, 2020
Submitted to HUD: October 6, 2020
Modified Version: November 13, 2020
Approved by HUD: November 19, 2020

For CDBG-DR Funds under the Supplemental Appropriations for Disaster Relief Requirements Act 2017, Bipartisan Budget Act 2018 and Supplemental Appropriations Act of 2019 (Public Law 115-56, Public Law 115-123 and Public Law 116-20**)**

TABLE OF CONTENTS

1. ACRONYMS AND AGENCIES 7
2. EXECUTIVE SUMMARY 10
3. INTRODUCTION 37
4. IMPACT AND UNMET NEEDS ASSESSMENT 47
4.1 BACKGROUND 47
4.2 SUMMARY OF IMPACT AND UNMET NEEDS 49
4.3 DEMOGRAPHIC PROFILE OF MOST IMPACTED AND DISTRESSED AREAS 51
4.3.1 Alternative Method of Determining Low- and Moderate-Income in the U.S. Virgin Islands for the CDBG-DR and CDBG-MIT Grants 56
4.3.1.1 HUD Approval of Adopting St. John Limits Territory-wide 63
4.3.2 Characterization of Populations with Unmet Needs 67
4.3.3 Impact on Homeowners 68
4.3.4 Impact on Rental Stock 70
4.3.5 Impact on Public Housing 72
4.3.6 Analysis of Unmet Housing Need 74
4.3.6.1 Methodology for Calculating Total Need 74
4.3.7 Funding 77
4.3.8 Unmet Need 80
4.4 IMPACTS ON VULNERABLE POPULATIONS 83
4.4.1 Impact on Seniors 83
4.4.2 Special Need 83
4.4.3 Homelessness 84
4.4.4 Public Facilities 84
4.5 UNMET INFRASTRUCTURE NEEDS 85
4.5.1 Energy 92
4.5.2 Roads 96
4.5.3 Educational Facilities 98
4.5.4 Healthcare Facilities 100
4.5.5 Government Facilities 101
4.5.6 Waste and Wastewater 102

4.5.6.1 Waste 102
4.5.6.2 Wastewater 103
4.5.7 Telecommunications 104
4.5.8 Ports and Airports 106
4.5.9 Water 107
4.6 UNMET ECONOMIC NEEDS 109
4.6.1 Lost Wages 117
4.6.2 Lost Government Revenues 119
4.6.3 Commercial Property Damage 120
4.6.4 Analysis of Unmet Economic Needs 122
4.7 UNMET PUBLIC SERVICES NEED 123
5. METHOD OF DISTRIBUTION, PROGRAMS, & ALLOCATIONS 126
5.1 METHOD OF DISTRIBUTION 126
5.2 CONNECTION TO UNMET NEEDS 126
5.2.1 Housing 128
5.2.2 Public Services and Public Facilities 132
5.2.3 Infrastructure 134
5.2.4 Economic Revitalization 138
5.2.5 Future programs 139
5.3 HOUSING PROGRAMS 141
5.3.1 Owner Occupied Housing for Disaster Impacted Households 147
5.3.2 Homeowner Rehabilitation and Reconstruction Program (**EnVIsion Tomorrow**) 149
5.3.3 New Housing and Infrastructure Construction Program (Homeownership) 152
5.3.4 Rental Rehabilitation and Reconstruction (**EnVIsion Tomorrow**) 157
5.3.4.1 Owner Rental Infill 160
5.3.5 Public and Affordable Housing Development 162
5.4 PUBLIC SERVICES AND PUBLIC FACILITIES PROGRAMS 163
5.4.1 Services for Vulnerable Populations Program (this was previously included in the Housing Sector) 165
5.4.2 Rehabilitation, Reconstruction or New Construction of Public Facilities (previously listed as Supportive Housing for Vulnerable Populations) 167
5.5 INFRASTRUCTURE PROGRAMS 169

5.5.1 Non-federal Share (Match) for Disaster Recovery Program 180
5.5.2 Infrastructure Repair and Resilience Program 183
5.5.3 Electrical Power Systems Enhancement and Improvement Program 188
5.6 ECONOMIC REVITALIZATION PROGRAMS 192
5.6.1 Ports and Airports Enhancement Program 196
5.6.2 Tourism Industry Support Program 199
5.6.3 Workforce Development Program 202
5.6.4 Neighborhood Revitalization Program 206
5.6.5 Small Business and Entrepreneurship Technical Assistance Program 208
6. GENERAL ADMINISTRATION 210
6.1 PROGRAM REQUIREMENTS 210
6.1.1 Building Standards and Construction Methods 210
6.1.2 Fair Housing 211
6.1.3 Flood-Resistant Housing 211
6.1.4 Anti-Displacement and Relocation 213
6.1.5 “Demonstrable Hardship” and “Not Suitable for Rehabilitation” 214
6.1.6 Ineligible Activities 215
6.1.7 LMI and Overall Benefit Requirement 215
6.1.8 Urgent Need 215
6.1.9 Section 3 215
6.1.10 Environmental Review 217
6.1.11 Cost Verification 217
6.2 ADMINISTRATION AND PLANNING 220
6.2.1 Reimbursement of Disaster Recovery Expenses 220
6.2.2 Consultation with Local Governments and Public Housing Authority 220
6.2.3 Planning and Coordination 221
6.2.4 Program Income 222
6.2.5 Performance Schedule 222
6.2.6 Assessment of Natural Hazard Risks 222
6.2.7 Administrative Capability 222
6.2.8 Public Services Activities 223
6.2.9 Amendments 223

6.2.10 Website 223
6.3 MONITORING AND COMPLIANCE 224
6.3.1 Prevention of Duplication of Benefits 224
6.3.2 Fraud, Waste, and Abuse 225
6.4 CITIZEN PARTICIPATION 225
6.4.1 Citizen Participation Plan 228
6.4.2 Application Status 230
7. APPENDICES 232
7.1 INDEX OF FIGURES, TABLES, AND IMAGES 232
7.2 ACTION PLAN CERTIFICATIONS 235
7.3 PROJECTIONS OF EXPENDITURES AND OUTCOMES 238
7.3.1 Financial Projections 238
7.3.1.1 Methodology 238
7.3.1.2 Assumptions 238
7.3.2 Performance Projections 242
7.3.2.1 Methodology 242
7.3.2.2 Assumptions 242
7.4 CDBG-DR PROJECTS LIST EFFECTIVE MAY 31, 2020 249

1. ACRONYMS AND AGENCIES

ADA – Americans with Disabilities Act
ADC – Activity Delivery Cost
AMI – Area Median Income
DR-4335 – Major Disaster Declaration for Hurricane Irma
DR-4340 - Major Disaster Declaration for Hurricane Maria
DRGR – Disaster Recovery Grant Reporting System
DR-4340 - Major Disaster Declaration for Maria
DRGR – Disaster Recovery Grant Reporting System
BIR – Virgin Islands Bureau of Internal Revenue
BIT – Virgin Islands Bureau of Information Technology
CDBG-DR - Community Development Block Grant Disaster Recovery
CDBG-MIT – Community Development Block Grant Mitigation
CoC – Virgin Islands Continuum of Care
DAC – [FEMA] Direct Administrative Cost
DHS – Virgin Islands Department of Human Services
DOA – Virgin Islands Department of Agriculture
DOB – Duplication of Benefits
DOC – U.S. Department of Commerce
DoD – U.S. Department of Defense
DOE – Virgin Islands Department of Energy
DOF – Virgin Islands Department of Finance
DOI – U.S. Department of the Interior
DOL – Virgin Islands Department of Labor
DPNR – Virgin Islands Department of Planning and Natural Resources
DPP – Virgin Islands Department of Property and Procurement
DPW – Virgin Islands Department of Public Works
DSPR – Virgin Islands Department of Sports, Parks and Recreation
ED – U.S. Department of Education
EDA – U.S. Economic Development Administration [part of the U.S. Department of Commerce]
EIA – U.S. Energy Information Administration
EPA – U.S. Environmental Protection Agency
FAPs – Fiber Access Points
FEMA – Federal Emergency Management Agency [part of the U.S. Department of Homeland Security]
FEMA IA – FEMA's Individual Assistance Program
FEMA PA – FEMA's Public Assistance Program
FHWA-ER – U.S. Federal Highways Administration Emergency Relief Program
FVL – Full Verified Loss
GDP – Gross Domestic Product

GIS – Geographic Information Systems
HBCU – Historically Black Colleges and Universities
HCDA – Housing and Community Development Act of 1974
HCV – Housing Choice Voucher
HMGP – [FEMA] Hazard Mitigation Grant Program
HMIS – Homeless Management Information System
HQS – Housing Quality Standards
HUD – U.S. Department of Housing and Urban Development
IHP – Individual and Household Programs
IP – Internet Protocol
ISP – Internet Service Provider
LEP – Persons of limited-English proficiency
LIHTC – Low Income Housing Tax Credit
LMA – Low- to Moderate- income Area
LMI – Low- to Moderate- income Individual
LMR – Land Mobile Radio
LSS – Lutheran Social Services
MA – [FEMA] Mission Assignments
NFIP – National Flood Insurance Program
NG911 – Next Generation 911
NIST – National Institute of Standards and Technology
OIA – U.S. Department of Justice's Office of Insular Affairs
PAAP – FEMA Public Assistance Alternatives Procedures
PAC – Program Administration Cost
PDM – FEMA Pre-Disaster Mitigation Grant Program
PDVSA – Petróleos de Venezuela
PFA – Virgin Islands Public Finance Authority
PP FVL – Personal Property Full Verified Loss
PV – Solar Photovoltaic System
PW – [FEMA] Project Worksheet
QPR – Quarterly Performance Report
RARAP – Residential Anti-displacement and Relocation Assistance Plan
RDA – U.S. Department of Agriculture's Rural Development Program
RP FVL – Real Property Full Verified Loss
SBA – U.S. Small Business Administration
SCADA - System Control and Data Acquisition system
STEP – FEMA's Sheltering and Temporary Essential Power Program
STJ – Shorthand for St. John
STT – Cyril E. King International Airport, also shorthand for St. Thomas
STX – Henry E. Rohlsen Airport, also shorthand for St. Croix
TIGER - U.S. Department of Transportation's Transportation Investment Generating Economic Recovery Grants

UFAS – Uniform Federal Accessibility Standards
URA – Uniform Relocation Assistance and Real Property Acquisition Policies Act
USACE – U.S. Army Corps of Engineers
USDA – U.S. Department of Agriculture
USPS – U.S. Postal Service
UVI – University of the Virgin Islands
VICS – Virgin Islands Community Survey
VIDE – Virgin Islands Department of Education
VIHA – Virgin Islands Housing Authority
VIHFA – Virgin Islands Housing Finance Authority
VITEMA – Virgin Islands Territorial Emergency Management Agency
viNGN – Virgin Islands Next Generation Network
VIPA – Virgin Islands Port Authority
WAPA – Virgin Islands Water and Power Authority
WICO – West Indian Company, Ltd.
WIFIA – Water Infrastructure Finance and Innovation Act
WIIN – Water Infrastructure Improvements for the Nation
WMA – Virgin Islands Waste Management Authority
WTTC – World Travel and Tourism Council

2. EXECUTIVE SUMMARY

Hurricanes Irma and Maria had a devastating impact on the United States Virgin Islands (hereafter referred to as the U.S. Virgin Islands or the Territory). The two back-to-back Category 5 storms in September 2017 caused significant destruction to housing, infrastructure, and the economy; the current total damage is estimated at $11.3 billion, marking a $540 million increase from the initial Action Plan. The entire population—over 100,000 residents—was impacted by the devastation brought on by the storms, with winds of over 185 miles per hour and up to 20 inches of rain in some areas.[1] Irma crossed the islands as a windstorm tearing the roofs off buildings in her path; Maria came behind and caused water damage to all of the unprotected structures in the St. Thomas and St. John district, while inflicting severe damage on St. Croix.

The devastation brought by the 2017 storms was staggering. Five Virgin Islanders lost their lives to the storms. Thousands of residents were displaced and over 85% of *households* reported damage to their homes, with many structures rendered uninhabitable. Most residents had no potable water or electricity for weeks. At its peak, 95% of the Territory was without power and 90% of customers lost internet access due to damage to telecommunications infrastructure.[2] The main airports on St. Croix and St. Thomas were closed for two weeks due to extensive damage to facilities, and all seaports were shut down for three weeks due to the sinking of over 400 vessels in and around the islands during the hurricanes.[3] Roadways experienced washouts, debris, mudslides, and downed power lines. In total, the storm created more than 825,316 cubic yards of debris—more than local landfills could handle.[4] Many government offices were rendered unusable, impacting the delivery of vital government services for several weeks. All primary healthcare facilities were left in need of *reconstruction*, while hundreds of patients had to be evacuated off-island to receive critical medical attention. Almost all public schools were damaged and according to the U.S. Virgin Islands Department of Education, 17 schools—half of all public schools in the Territory—suffered more than 50% damage to their facilities.

Over two years after Irma and Maria, their effects continue to disrupt the lives of Virgin Islanders. Although dialysis patients evacuated from the Territory have been able to return, the projected increase in patients requiring chronic dialysis in the near future requires an assessment of the current medical care infrastructure and established capacity limits. Additionally, over 9,000 students, or nearly 60% of all K-12 students enrolled in public schools, attended school on a reduced schedule for over a year due to limited classroom space.[5] While the students were back to a full time schedule in temporary portable buildings in October 2019, they continue to suffer from interrupted class

[1] Most recent 2014 VI Community Survey estimates population in the Territory at 102,007.
[2] Virgin Islands Next Generation Network (viNGN).
[3] U.S. Virgin Islands Port Authority.
[4] U.S. Federal Emergency Management Agency.
[5] U.S. Virgin Islands Department of Education.

scheduling and disruption to curriculum. According to findings of the 2019 Caribbean Exploratory Research Center Community Needs Assessment, there is evidence that elementary aged students across the Territory may have future issues with Post-Traumatic Stress Disorder (PTSD) as result of experiencing Hurricane Irma and/or Hurricane Maria and that girls may have more challenges with future PTSD than boys. Additionally, approximately 42.5% of the secondary students may be at risk for PTSD.[6]

In addition, while in the third quarter of 2019 the number of visitors to the Territory has regained the pre-storm levels[7], the economy as a whole has been slow to recover. This is especially evident in the tourism sector, the single most important stream of revenue for the Territory, with many of the large hotels still closed for reconstruction or repairs.

On March 13, 2020 Governor Albert Bryan Jr. declared a State of Emergency for the Territory in response to the global Coronavirus Disease 2019 (COVID-19) pandemic. In a March 30, 2020 press conference, Governor Bryan announced the State of Emergency would be renewed through May 12, 2020, with the "Stay at Home" order and closure of non-essential businesses to be extended until April 30, 2020. The Virgin Islands Department of Labor began accepting unemployment insurance and workers' compensation applications online.

On April 2, 2020, President Donald J. Trump declared that a major disaster exists in the Territory of the U.S. Virgin Islands and ordered federal assistance to supplement local recovery efforts in the areas affected by the Coronavirus Disease 2019 (COVID-19) pandemic beginning on January 20, 2020 and continuing. The President's action made federal funding available to the U.S. Virgin Islands for emergency protective measures, including direct federal assistance, for all islands in the Territory impacted by COVID-19.

Although the President has activated emergency funding for the Coronavirus Disease 2019 pandemic under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.) (Stafford Act), the funds outlined in this Action Plan Amendment cannot be utilized to address the COVID-19 emergency.

The CDBG-DR funds described in this Action Plan Amendment were appropriated to cover the costs related to disaster relief, long term recovery, restoration of housing, infrastructure and economic revitalization resulting from Hurricanes Irma and Maria, pursuant to the Stafford Act. Using funds for disasters that are outside of the disaster events cited in the respective appropriations acts is strictly prohibited.

---

[6] February 2019 Caribbean Exploratory Research Center COMMUNITY NEEDS ASSESSMENT: Understanding the Needs of Vulnerable Children and Families in the U.S. Virgin Islands Post Hurricanes Irma and Maria.
[7] U.S. Virgin Islands Bureau of Research.

This Amendment fully allocates the $53,588,884 for unmet infrastructure needs, including activity and general administration costs, and aligns Tranche 1 funds to a sufficient level for completing both phases of the Randolph Harley Power Plant (RHPP) New Generation project in the Electric Power Systems Enhancement and Improvements program.

Additional budgetary changes reflected in this Amendment increase funding for housing activities, which include the reconstruction or rehabilitation of owner-occupied and rental housing units, the repair or replacement of public housing units, and the creation of new housing units to be made available as homeownership opportunities for low- and moderate-income households. Projects that are eligible for funding in the programs with budget reductions will be evaluated to determine the best funding sources; Trance 1, 2, 2A or 3 (Mitigation).

This Substantial Amendment does not outline the programs, projects or activities to be funded with CDBG-Mitigation funds; a separate Action Plan will be issued upon completion of the mitigation unmet needs assessment and processes, as outlined in FR-6109-N-03.

The proposed allocations for the U.S. Virgin Islands' CDBG-DR program from Tranches 1, 2 & 2A ($1,075,489,884) are summarized in Table 1 Program Allocations from Tranches 1, 2 and 2A.

Table 1 Program Allocations from Tranches 1, 2 and 2A

Programs		Tranche 1			Tranche 2			Tranche 2A	TOTAL of Revised Allocation Tranches 1 and 2, plus 2A
		Allocation: Tranche 1	Variance to Tranche 1	Revised Allocation Tranche 1	Allocation: Tranche 2	Variance to Tranche 2	Revised Allocation Tranche 2	Allocation: Tranche 2A	
		(a)	(b)	(a + b = c) (c)	(d)	(e)	(d + e = f) (f)	(g)	(c + f + g = h) (h)
Housing	Homeowner Rehabilitation and Reconstruction	$10,000,000	$6,965,433	$16,965,433	$50,000,000	$68,237,605	$118,237,605		$135,203,038
	New Housing and Infrastructure Construction (Homeownership)①	$10,000,000	($3,515,000)	$ 6,485,000	$40,000,000	$38,515,000	$78,515,000		$85,000,000
	Rental Rehabilitation and Reconstruction	$5,000,000		$5,000,000	$20,000,000		$20,000,000		$25,000,000
	Public and Affordable Housing Development	$32,000,000	($14,029,500)	$17,970,500	$40,000,000	$23,529,500	$63,529,500		$81,500,000
Public Services and Public Facilities ②	Public Services for Vulnerable Populations ③		$500,000	$500,000					$500,000
	Rehabilitation, Reconstruction or New Construction of Public Facilities ④	$15,000,000	($15,000,000)		$75,000,000	($38,000,000)	$37,000,000		$ 37,000,000
Infrastructure	Non-Federal Share (Match) for Disaster Recovery ⑤	$45,549,800	($23,808,463)	$21,741,337	$123,256,150	$221,843,073	$345,099,223	$50,909,440	$417,750,000
	Infrastructure Repair and Resilience	$30,000,000	($7,015,800)	$22,984,200	$275,000,000	($237,234,200)	$37,765,800		$60,750,000
	Electrical Power Systems Enhancement and Improvement	$45,000,000	$50,903,330	$95,903,330	$90,000,000	($90,000,000)			$95,903,330
Economic Revitalization	Ports and Airports Enhancement	$23,000,000		$23,000,000	$17,000,000	($1,890,978)	$15,109,022		$38,109,022
	Tourism Industry Support	$5,000,000		$5,000,000	$5,000,000		$5,000,000		$ 10,000,000
	Workforce Development	$5,000,000		$5,000,000	$5,000,000	$7,000,000	$12,000,000		$ 17,000,000
	Total Programs	$225,549,800	($5,000,000)	$220,549,800	$740,256,150	($8,000,000)	$732,256,150	$50,909,440	$1,003,715,390
	Planning	$5,000,000	$5,000,000	$10,000,000		$8,000,000	$8,000,000		$ 18,000,000
	Administration*	$12,134,200		$12,134,200	$38,960,850		$38,960,850	$2,679,444	$ 53,774,494
	TOTAL	$242,684,000		$242,684,000	$779,217,000		$779,217,000	$53,588,884	$1,075,489,884

*Administration costs are capped at 5% of the overall allocation

① Previously titled, "New Construction for Homeownership Opportunity and First Time Homebuyer Assistance"
② New sector previously included in Housing as, "Supportive Housing and Sheltering Programs"

③ and ④ New programs created from the "Supportive Housing and Sheltering Programs"
⑤ Previously titled, "Local Non-Federal Match for Federal Disaster Recovery"

Table 2 CDBG-DR Program Eligibility Details for Tranches 1, 2 and 2A

HOUSING PROGRAMS			TOTAL ALLOCATION: $326,703,038
Homeowner Rehabilitation and Reconstruction	**Program Budget:**	$135,203,038	**Eligibility Criteria:**
	Planned Projects:	Repair and reconstruct hurricane-damaged owner-occupied homes (1 – 2-unit properties)	Priority 1: Low- and Moderate-Income Households Reconstruction: • The impacted home was destroyed or substantially damaged • The homeowner applicants meet federal LMI requirements • Evidence of cost to repair storm damage requires demolition and does not exceed $250,000 Rehabilitation (will be considered if it is determined to be feasible and more cost effective than reconstruction): • The impacted home experienced major/severe damages • The applicant household meets federal LMI requirements • Evidence of cost to repair storm damage does not exceed $250,000 Priority 2: (if funding is available) 80% - 120% AMI Households
	Project Location:	Territory-wide	
	Implementing Agency:	V. I. Housing Finance Authority	
	Eligible Activities:	Code Enforcement; Clearance, Rehabilitation, Reconstruction and Construction of Buildings (including Housing); Public Services; Planning	
	National Objectives:	Low- to Moderate-Income Housing; Urgent Need	
	Eligible Applicants:	Occupant Homeowners	

New Housing and Infrastructure Construction (Homeownership)	**Program Budget:**	$85,000,000	**Eligibility Criteria:**	
	Planned Projects:	Off-site improvements such as streets, curbs, gutters, lighting, sidewalks, flood and drainage improvements, sewer, and utilities necessary for development of new housing. On-site construction of single-family homes for qualified homebuyers.	**Construction activities** for both off-site subdivision development and on-homesite building of single-family homes: • Developers and contractors licensed in the Virgin Islands; • Development of single-family housing for mixed income communities; a minimum of 51% of the homebuyers must be low- to moderate-income (≤80%AMI) households, which must be prioritized • Subdivision costs may include streets, curbs, gutters, lighting, sidewalks, flood and drainage, sewer and utilities necessary for development of single-family housing units • Costs for constructing single-family residential units	**Homebuyer assistance** for qualified purchasers: Low- to Moderate-Income homebuyer households Eligible applicants must agree to occupy home as primary residence for 20 years, as per HFA's existing affordability period for homeownership programs
	Project Location:	Territory-wide		
	Implementing Agency:	V. I. Housing Finance Authority		
	National Objectives:	Low- to Moderate-Income Housing		
	Eligible Activities:	Listed to the right under each component	Acquisition; Clearance, Rehabilitation, Reconstruction and Construction of Buildings (including Housing); Public Services; Public Facilities; Planning	Acquisition; Public Services; Homebuyer Assistance; Homebuyer Counseling; Housing Services; Planning
	Eligible Applicants:	Listed to the right under each component	Non-profit and for-profit developers of housing units	Homebuyers

Rental Rehabilitation and Reconstruction	**Program Budget:**	$25,000,000	**Eligibility Criteria:**
	Planned Projects:	Forgivable loans to landlords of rental properties with one (1) to twenty (20) units to repair and reconstruct rental units damaged by the hurricanes; Must rent to Low- to Moderate-Income households	Round 1 Priorities: Due to limits in the funding available in the initial allocation, the Territory will prioritize the Program rental units meeting the criteria outlined below. If funds are not fully expended during the first round of the Program for the prioritized populations below, the Territory may open Round 2 for the prioritized populations as stated in the following section. Round 1, priority 1 applicants must meet the following criteria: • Units that are Majorly/Severely Damaged and vacant. All units served must be reserved for LMI tenants; Landlords who offer properties to Housing Choice Voucher holders will have priority; and • Rental Units with outstanding needs not met by insurance proceeds or other disaster recovery benefits Round 1, priority 2 applicants must meet the following criteria: • Units that are Majorly/Severely Damaged and occupied. All units served must be reserved for LMI tenants; Landlords who offer properties to Housing Choice Voucher holders will have priority; and • Rental Units with outstanding needs not met by insurance proceeds or other disaster recovery benefits Round 2 Priorities: Recognizes the pre-storms shortage of affordable rental units, and due to damages sustained in the storms reducing the overall long-term rental supply, Round 2 will be made available (if funds remain from Round 1) to increase the affordable rental stock.
	Project Location:	Territory-wide	
	Implementing Agency:	V.I. Housing Finance Authority	
	Eligible Activities:	Code Enforcement; Clearance, Rehabilitation, Reconstruction and Construction of Buildings (including Housing); Public Services; Planning	
	National Objectives:	Low- to Moderate-Income Housing; Urgent Need	
	Eligible Applicants:	Owners of properties with between 1 – 20 rental units that are: Private Landlords, or Landlords of HUD assisted, USDA-assisted, or LIHTC housing units	

			Round 2, priority 1 applicants must meet the following criteria: • Units that are Majorly/Severely Damaged not served in Round 1. All units served must be reserved for LMI tenants with a priority for Housing Choice Voucher holders; and • Rental Units with outstanding needs not met by insurance proceeds or other disaster recovery benefits. Round 2, priority 2 applicants must meet the following criteria: • Units that are acquired after the storm; or • Units that were under construction; and • The award amount must be able to bring the unit to an occupancy level; and • All units served must be reserved for LMI tenants with a priority for Housing Choice Voucher holders. NOTE: **All** rental properties require an affordability period. Properties with 1 – 7 units require a five-year affordability period; 8 – 20 unit properties require a 15-year affordability period; and rents must be restricted throughout the affordability period.
Public and Affordable Housing Development	**Program Budget:**	$81,500,000	**Eligibility Criteria:**
	Planned Projects:	Repair and reconstruction of hurricane-damaged public housing; build new public and affordable rental housing	• The projects must help replenish the supply of affordable rental units; and • Units developed by this program will require compliance with long-term rental use requirements, renters must have a minimum lease term of one year. • Affordability Period: New construction of multi-family rental projects with five or more units will be required to adhere to
	Project Location:	Territory-wide	

			an affordability period of 20 years. Rehabilitation or reconstruction of multi-family projects (five or more units) will be required to adhere to an affordability period of 15 years.	
	Implementing Agency:	V.I. Housing Finance Authority; V.I. Housing Authority	**National Objectives:**	Low- to Moderate-Income Housing; Urgent Need; Preventing or Eliminating Slums or Blight
	Eligible Activities:	Acquisition of Real Property; Public Facilities and Improvements; Clearance, Rehabilitation, Reconstruction and Construction of Buildings (including Housing); Public Services; Planning	**Eligible Applicants:**	V.I. Housing Authority; For-profit Developers of Affordable Housing: Non-profit Developers of Affordable Housing; Landlords of HUD-assisted, USDA- assisted and Low-Income Housing Tax Credit Housing properties
PUBLIC SERVICES AND PUBLIC FACILITIES PROGRAMS			**TOTAL ALLOCATION: $37,500,000**	
Services for Vulnerable Populations	**Program Budget:**	$500,000	**Eligibility Criteria:**	
	Planned Projects:	Public services to enhance the support service network for vulnerable populations including services to the homeless, at-risk youth, victims of domestic violence, disabled and/or the elderly	All apply: • Applicants must demonstrate the existence of an unmet need. Unmet need is determined after accounting for all federal, Territorial, local, and/or private sources of disaster-related assistance to the applicant, including but not limited to FEMA, SBA, and insurance proceeds; • Applicants must show the service is new or the measurable increase in existing service based on the expenditure of the CDBG-DR funds;	
	Project Location:	Territory-wide		

	Implementing Agency:	V.I. Housing Finance Authority; V.I. Department of Human Services; Other qualified entities yet to be determined	• Applicants must utilize program funds to serve vulnerable populations; • CDBG-DR funds are prohibited from being used for continuous income or non-emergency payments for more than 3 consecutive payments (such as rent subsidies or utility bills); and • CDBG-DR funds are prohibited from being used for political or religious activities	
	Eligible Activities:	Public Services; Planning		
	National Objectives:	Low- to Moderate-Income Individuals; Low- to Moderate-Income Limited Clientele; Low- to Moderate-Income Area	**Eligible Applicants:**	Non- and for-profit providers; providers of supportive services for the vulnerable; public agencies that support housing for the vulnerable (including the V.I. Department of Human Services)
Rehabilitation, Reconstruction and New Construction of Public Facilities	**Program Budget:**	$37,000,000	**Eligibility Criteria:**	
	Planned Projects:	Redevelop or repair facilities that provide senior care, emergency or supportive transitional housing for disadvantaged populations, and develop multi-purpose facilities which will provide emergency sheltering in disasters and other emergency situations	• Applicants must demonstrate the existence of an unmet need. Unmet need is determined after accounting for all federal, Territorial, local, and/or private sources of disaster-related assistance to the applicant, including but not limited to FEMA, SBA, and insurance proceeds; Priority Criteria: Funding will be allocated to ensure that the most vulnerable are served expediently and effectively. Due to limits in the funding available, the Territory will prioritize the rehabilitation, reconstruction and new development of facilities for the elderly,	

	Project Location:	Territory-wide	youth at risk of homelessness, and other vulnerable populations, especially properties managed by the Department of Human Services. The Territory reserves the right to include additional vulnerable populations. Emergency shelter projects must: • Increase the number of congregate shelter options for individuals and families who cannot or choose not to shelter in place during storms; and • Be developed or hardened with emergency sheltering standards, including number of restroom facilities. Shelter project selection will include cost effectiveness, speed with which shelters can be developed, number of individuals served, location and accessibility, and proposed use(s) outside of hurricane season or other disaster event.	
	Implementing Agency:	V.I. Housing Finance Authority; V.I. Department of Human Services; University of the Virgin Islands; Private developers Nonprofit and for-profit institutions and community organizations; Other qualified entities yet to be determined		
	Eligible Activities:	Acquisition; Clearance, Rehabilitation, Reconstruction and Construction of Buildings (including Housing); Public Services; Public Facilities and Improvements; Planning	**Eligible Applicants:**	Nonprofit and for-profit providers of supportive services for the vulnerable; Public agencies that support housing for the vulnerable (including the V.I. Department of Human Services)
			National Objectives:	Low- to Moderate-Income Limited Clientele; Urgent Need

INFRASTRUCTURE PROGRAMS		TOTAL ALLOCATION: $574,403,330		
Non-Federal Share (Match) for Disaster Recovery	**Program Budget:**	$417,750,000	**Eligibility Criteria:**	
	Planned Projects:	Match FEMA funds for CDBG-DR eligible projects	• Projects must be under a federal recovery funding source requiring a local non-federal share (match) and be able to meet additional CDBG-DR cross-cutting requirements • All projects are subject to a duplication of benefits review and limits • The amount of CDBG-DR funding that may be contributed (including as match) to a USACE project is limited to $250,000 or less	
	Project Location:	Territory-wide		
	Eligible Activities:	Payment of nonfederal share; Acquisition of Real Property; Public Facilities and Improvements; Clearance, Rehabilitation, Reconstruction and Construction of Buildings; Public Services; Relocation; Assistance to institutions of Higher Education	**National Objectives:**	Low- to Moderate-Income Housing; Low- to Moderate-Income Area; Low- to Moderate-Income Limited Clientele; Urgent Need
	Eligible Applicants:	All entities eligible for FEMA PA, FHWA, EPA, USACE and other federal agencies funding	**Implementing Agency:**	V.I. Housing Finance Authority; V.I. Territorial Emergency Management Agency
Infrastructure Repair and Resilience	**Program Budget:**	$60,750,000	**Eligibility Criteria:**	
	Planned Projects:	Projects under development	The projects must demonstrate a tie to the storm or have clear evidence of resiliency functions to prevent future damage	
	Project Location:	Territory-wide	**National Objectives:**	Low- to Moderate- Income Area; Low- to Moderate-Income Limited Clientele; Urgent Need

	Implementing Agency:	V.I. Housing Finance Authority V.I. Territorial Emergency Management Agency	**Eligible Activities:**	Reconstruction and Construction of Buildings; Public Services; Relocation; Assistance to Higher Education; Planning
	Eligible Applicants:	Any GVI agency, including agencies providing critical services associated with health and safety for the community		
Electric Power Systems Enhancement and Improvements	**Program Budget:**	$95,903,330	**Eligibility Criteria:**	
	Planned Projects:	Projects under development	Prior to the commitment or expenditure of Tranche 2 CDBG-DR funds for Electric Grid activities (enhancement or improvement of electrical power systems) HUD must provide a statement to the USVI that its consultation with federal partners regarding electric systems has been completed. Individual projects will be prioritized based on metrics in the following categories: • LMI: Projects that benefit low- and moderate-income persons or communities; • Shovel-ready: Projects that are ready to begin rehabilitation or construction. A project is considered "shovel-ready" if environmental review and engineering have already been completed, were required; • Criticality: Based on the overall need of customers.	
	Project Location:	Territory-wide		
	Implementing Agency:	V.I. Housing Finance Authority V.I. Territorial Emergency Management Agency		
	Eligible Activities:	Acquisition; Clearance, Rehabilitation, Reconstruction and Construction of Buildings; Public Services; Relocation; Assistance to Institutions of Higher Education; Planning		

	National Objectives:	Low- to Moderate- Income Area; Low- to Moderate-Income Limited Clientele; Urgent Need	Prioritization will be given to projects that have potential to reduce rates to customers, particularly in LMI areas; • Severity: Duration and frequency of outages in areas where the most strain on capacity, load and demand exists; • Resilience: Resilience measures considered in the project to improve and harden the electric line infrastructure to prevent vulnerability in the future; • Technical Feasibility: The degree of specialized equipment, and the use of innovative technology (e.g. industry standard vs. leading edge); • Sustainability: Degree to which green, LEED, Energy Star, sustainable materials and other similar measures are taken into consideration for the project; • Execution Timing: Project environmental study status, permitting, design and construction timeline ensure project meets CDBG-DR funding, disbursement and drawdown requirements, and • Economics: Cost benefit analysis for the project
	Eligible Applicants:	V.I. Water and Power Authority; Any agency, including agencies providing critical services associated with health and safety for the community, particularly those used as shelters	
ECONOMIC REVITALIZATION PROGRAMS			**TOTAL ALLOCATION: $60,109,022**
Ports and Airports Enhancement	**Program Budget:**	$38,109,022	**Eligibility Criteria:**
	Planned Projects:	Dredging to allow access of quantum class cruise ships	For dredging projects, seaport operators must provide evidence of direct engagement with cruise lines aimed at reaching preferential berthing agreements when said agreements are necessary to increase utilization of existing berths. Similarly, airport operators will be expected to show direct engagement with airlines to increase airlifts upon expansion of passenger processing capacity
	Project Location:	St. Croix: Schooner Bay Channel; St. Thomas: Charlotte Amalie Harbor and Crown Bay	

	Implementing Agency:	V.I. Port Authority; V.I. Housing Finance Authority	**Eligible Activities:**	Public Facilities and Improvements; Clearance, Rehabilitation, Reconstruction and Construction of Buildings; Special Economic Development Activity; Planning
	National Objectives:	Urgent Need	**Eligible Applicants:**	V.I. Port Authority; West Indian Company Limited; Ports and airports operators in the U.S. Virgin Islands
Tourism Industry Support	**Program Budget:**	$10,000,000	**Eligibility Criteria:**	
	Planned Projects:	USVI Tourism Marketing and Business support	The projected use of funds for national marketing and outreach efforts will be focused as follows: event and festival planning and sponsorship in impacted areas within the Territory; advertising creation; niche marketing; and media placement (social media/ television/ radio/ digital and out-of-home advertising) in targeted markets. Funds for small business and entrepreneurial technical assistance and workforce training must support the stabilization and enhancement of tourism-related businesses. Eligible businesses are those that: -Qualify as Section 3 businesses OR -Employ one or more workers that would qualify as Section 3 workers AND -Provide goods or services that support the tourism industry	
	Project Location:	Territory-wide		
	Implementing Agency:	V.I. Department of Tourism		
	Eligible Activities:	Waiver Request Approved for Tourism marketing and advertisement campaigns; Product Development Technical Assistance; Planning		
	Eligible Applicants:	Potential training entities for the Industry Support portion of the program	**National Objectives:**	Low- to Moderate-Income Jobs; Low- to Moderate- Income Limited Clientele; Low- to Moderate-Income Area; Urgent Need

Workforce Development	**Program Budget:**	$17,000,000	**Eligibility Criteria:**	
	Planned Projects:	Coordinated workforce development with Education and UVI led by Department of Labor	Priority will be given to applicants that can meet the following conditions: • Serving predominantly LMI individuals; • A documented job placement program for trainees; • A curricular plan that is demonstrably tailored to meet market labor demand and is clearly connected to a career path and available jobs, apprenticeships, and on-the-job training opportunities; and • When appropriate, incorporation of digital literacy and soft skills training in the program's curriculum	
	Project Location:	Territory-wide		
	Eligible Activities	Public Services; Planning; Assistance to For-Profit Entities		
	Implementing Agency:	V.I. Department of Labor; V.I. Economic Development Authority; Other qualified entities	**Eligible Applicants:**	• A consortium of accredited educational institutions • Certified vocational program providers; private businesses, including but not limited to those with in-house, certified on-the-job training programs • Certified apprenticeship program providers and nonprofit workforce and soft skills providers • Other organizations approved for workforce training by the U.S. Virgin Islands Workforce Development Board. • Individual workers seeking vocational training not offered by the training providers otherwise funded through this program.
	National Objectives:	Low- to Moderate-Income Limited Clientele; Urgent Need		
	Planned Projects:	Planning expenses for projects; Administration expenses for projects		

Planning	**Total Allocation:**	**$18,000,000**	**Implementing Partners:**	V.I. Housing Finance Authority; Other implementing agencies
	Project Locations:	Territory-wide	**Implementing Partners:**	V.I. Housing Finance Authority; Other implementing agencies
Administration	**Total Allocation:**	**$53,774,494**	**Project Locations:**	Territory-wide
CDBG-DR TRANCHES 1, 2 AND 2A			**TOTAL ALLOCATION: $1,075,489,884**	

The U.S. Virgin Islands has established criteria within most programs to prioritize funds to initiatives that benefit low- and moderate-income individuals and households (LMI). LMI percentages in ***Error! Reference source not found.*** represent both projected beneficiaries of certain projects, such as the housing and economic revitalization programs, as well as an initial analysis of projects within the infrastructure program. Every funded program is projected to include LMI activity. All programs will be monitored on a routine basis for their impact on LMI individuals and communities.

Table 3 Low- to Moderate-Income Projections for Tranches 1, 2 and 2A

Program		Tranche 1		Tranches 2 & 2A		Total	
		Low- and Moderate- Income Projections (Dollar amounts reflected below represent the total anticipated funding to benefit low- and moderate-income individuals)					
		$	%	$	%	$	%
Housing	Homeowner Rehabilitation and Reconstruction Program	$16,965,433	100%	$118,237,605	100%	$135,203,038	100%
	New Housing and Infrastructure Construction Program (Homeownership)	$6,485,000	100%	$78,515,000	100%	$85,000,000	100%
	Rental Rehabilitation & Reconstruction	$5,000,000	100%	$20,000,000	100%	$25,000,000	100%
	Public & Affordable Housing Development	$16,173,450	90%	$57,176,550	90%	$73,350,000	90%
Public Services and Public Facilities	Public Services for Vulnerable Populations	$500,000	100%			$500,000	100%
	Rehabilitation, Reconstruction or New Construction of Public Facilities			$33,300,000	95%	$33,300,000	95%
Infrastructure	Non-Federal Share (Match) for Disaster Recovery	$14,131,869	65%	$257,405,631	65%	$271,537,500	65%
	Infrastructure Repair & Resilience	$14,939,730	65%	$24,547,770	65%	$39,487,500	65%
	Electrical Power Systems Enhancement and Improvement	$95,903,330	100%			$95,903,330	100%
Economic Revitalization	Ports and Airports Enhancement	$0	0%	$0	0%	$0	0%
	Tourism Industry Support Program	$0	0%	$0	0%	$0	0%
	Workforce Development	$5,000,000	100%	$5,000,000	100%	$10,000,000	100%
	Planning		N/A		N/A		N/A
	Administration*		N/A		N/A		N/A
	TOTAL	**$158,133,379**	**71.7%**	**$594,183,556**	**75.9%**	**$769,281,368**	**76.6%**

* Administration costs are capped at 5% of the overall allocation

In the wake of the storms, the President announced a Major Disaster Declaration for Irma (DR-4335) and another for Maria (DR-4340) to make federal disaster assistance available to the Territory. In response, Congress approved the Supplemental Appropriations for Disaster Relief Requirements,

2017 (Pub. L. 115-56) on September 8, 2017, which made available $7.39 billion in *Community Development Block Grant Disaster Recovery (CDBG-DR)* funds to assist in long-term *recovery* from 2017 disasters.

On February 9, 2018, Congress approved the Further Additional Supplemental Appropriations for Disaster Relief Requirements Act (Pub. L. 115-123), appropriating an additional $28 billion CDBG-DR funds, of which $11 billion was set aside to address the remaining unmet needs from Hurricane Maria. An additional $12 billion was set aside for mitigation activities proportional to the amount of CDBG-DR funding received for qualifying disasters.

The Supplemental Appropriations for Disaster Relief Act, 2019 (Pub. L. 116-20), passed June 6, 2019, provided $2.431 billion for disaster relief, long-term recovery, restoration of infrastructure and housing, economic revitalization, and mitigation activities that address impacts of major disasters that occurred in 2018 and 2019. Pub. L. 116-20 includes a provision that $431,000,000 be allocated to meet the unmet infrastructure needs for 2017 disasters, of which $331,442,114 is to be allocated to grantees affected by Hurricane Maria. Federal Register 6182-N-01, issued January 27, 2020, allocated $53,588,884 in additional CDBG-DR funds to the U.S. Virgin Islands for unmet infrastructure needs. FR-6182-N-01 also provided the common application, waivers, and alternative requirements for these additional funds.

Emergency relief and recovery efforts by both federal and local authorities were able to address some of the most urgent emergency response needs, but much remains to be done to recover and rebuild. After accounting for the disaster recovery assistance provided by the Federal Emergency Management Agency (FEMA), the U.S. Small Business Administration (SBA), private insurance, nonprofits, and other funding sources, the remaining unmet needs exceed $6.41 billion, down $1.17 billion from the initial Action Plan. These amounts were calculated through the use of best available data as of May 2020.

The U.S. Virgin Islands has a plan in place to maximize the federal and private assistance available to the Territory in response to the storms. The Office of Disaster Recovery and VIHFA continue to work closely with stakeholders and agencies to establish the needs and resources for disaster recovery.

To address these unmet needs, the U.S. Department of Housing and Urban Development (HUD) has awarded $1,917,330,884 of CDBG-DR funds to the U.S. Virgin Islands. CDBG-DR funds are intended by HUD to address (i) unmet needs in housing, infrastructure, and economic revitalization from the 2017 hurricanes, as well as (ii) *mitigation* activities to protect the Territory from the damage of future events. The total *award* for the U.S. Virgin Islands was announced in multiple separate *tranches*. First, $242,684,000 was announced on February 2, 2018 for unmet needs (Tranche 1). Additional awards have been made to the Virgin Islands to address unmet needs and mitigation; see table below.

While the awards are announced by HUD through press releases (as detailed above), the funding allocations are announced in Federal Register (FR) Notices that include the specific amounts, common

application, waiver and alternative requirements associated with the funding. The U.S. Virgin Islands' awards, initially announced in HUD press releases, were allocated in the following FR Notices:

Table 4 Federal Registers Awarding Disaster Funds to U.S. Virgin Islands

FR Notice	Date Issued	Amount	Use
FR-6066-N-01	February 9, 2018	$242,684,000	Disaster recovery (Tranche 1)
FR-6109-N-01	August 14, 2018	$779,217,000	Disaster recovery (Tranche 2)
FR-6182-N-01	January 27, 2020	$ 53,588,884	Disaster recovery unmet infrastructure need (Tranche 2A)
		$1,075,489,884	Disaster recovery total to date
FR-6109-N-03	September 10, 2019	$774,188,000	Mitigation (Tranche 3)
Funds Allocated in Federal Registers		$1,849,677,884	Disaster recovery and mitigation total to date
Federal Register not yet released		$67,653,000	Electric grid activities (Tranche 4)
		$1,917,330,884	Total disaster recovery and mitigation amount

On September 10, 2019, HUD released Federal Register Notice FR-6109-N-03, which outlined the common application, waiver and alternative requirement for the Territory's $774,188,000 CDBG-Mitigation (CDBG-MIT) funds.

An additional award of CDBG-DR funding was announced for the US Virgin Islands in HUD Federal Register Notice FR-6182-N-01 released on January 27, 2020. FR-6182-N-01 awarded $53,588,884 to the Territory to use for unmet infrastructure needs resulting from Hurricane Maria. This allocation was appropriated by the Supplemental Appropriations for Disaster Relief Act, 2018, and the Additional Supplemental Appropriations for Disaster Relief Act, 2019, for disasters that occurred in 2017, 2018 and 2019. FR-6182-N-01 states that the waivers and alternative requirements from previous Notices, as well as those contained in future Notices, apply to this appropriation. Grantees are required to submit a plan that will address long-term recovery and restoration of infrastructure based on an assessment of community impacts and unmet needs, and are encouraged to coordinate and align the funds with other projects funded with CDBG-DR, CDBG-MIT, FEMA, USACE and other agencies, as appropriate.

This Substantial Amendment outlines the proposed use of the additional $53,588,884 (Tranche 2A) for unmet infrastructure needs. A separate Action Plan will be developed for the CDBG-MIT funding.

The U.S. Virgin Islands Community Development Block Grant Disaster Recovery Action Plan proposes a portfolio of programs to address unmet housing, public service, public facilities, infrastructure, and economic needs for the first, second and additional unmet infrastructure allocations of CDBG-DR funds of $1,075,489,884, which is consistent with HUD guidance, in a ratio that reflects the overall ratio of unmet needs.

This funding will only begin to address the significant unmet needs for the U.S. Virgin Islands following Hurricanes Irma and Maria. Unless extended, all CDBG-DR funds must be expended within six years

of a signed grant agreement between HUD and the Virgin Islands Housing Finance Authority, the CDBG-DR *grantee*. With the additional allocations of CDBG-DR funding for unmet needs (Tranche 2 and Tranche 2A, the unmet infrastructure allocation in 2020), all the programs herein proposed will begin to address remaining unmet needs. The Government of the U.S. Virgin Islands and VIHFA have collaborated with community, nonprofit, and business leaders throughout the Territory and leveraged the expertise of its agencies to design these programs. In accordance with HUD's requirement that 70% of all program funds be used primarily to benefit *low- and moderate-income (LMI)* individuals, these programs will address the needs of the Territory's most vulnerable and hardest-hit residents as effectively as possible.

The Homeowner Rehabilitation and Reconstruction component of the EnVIsion Tomorrow Program was launched in April 2019, allowing residents to apply for much needed funding to address disaster damage.

The Rental Rehabilitation and Reconstruction component was open for applications between July and September 2019. Inspections of the properties are underway, with construction anticipated to begin early in the third quarter of 2020.

The Territory prioritized programs to address unmet needs based on data gathered on damages and based on the requirements and processes for the CDBG-DR funds.

Table 5 Proportionality Between Share of Unmet Needs and Share of Tranche 1, 2 and 2A Program Allocations

Sector	Unmet Needs Assessment		Tranche 1, 2 + 2A Program Allocation*	
	$	%	$	%
Housing	$849,861,321	14.5%	$326,703,038	32.5%
Public Services and Public Facilities	(previously included in Housing Sector)		$37,500,000	3.7%
Infrastructure	$4,685,847,621	80.0%	$574,403,330	57.3%
Non-Federal Share (Match) for Disaster Recovery Program**			$417,750,000	41.6%
Infrastructure Resilience & Repair; Electrical Power Systems			$156,653,330	15.6%
Economic Revitalization	$322,766,670	5.5%	$65,109,022	6.5%
Total	**$5,858,475,612**	**100%**	**$1,003,715,390**	**100%**

*Excludes Administrative and Planning costs
** Includes non-federal share (match) for housing.
Since permanent work PWs are currently being developed, the match amount allocated specifically for public housing is still being determined.

The Action Plan and Amendment 1 included public facilities and services in the Housing sector for calculations. This Amendment moves these activities into a separate category of activities called "Public Services and Public Facilities," as the facilities will provide temporary housing and other facility opportunities, as opposed to permanent housing options. For example, a public facility that provides temporary shelter for victims of domestic violence, or health facilities that provide long term senior care will be eligible under this category.

One of the programs funded through FEMA's Public Assistance is the Sheltering and Temporary Essential Power (STEP) program. The STEP program was administered by the Virgin Islands Housing Finance Authority as the Emergency Home Repairs Virgin Islands program (EHRVI) and ended April 15, 2019.

STEP, known locally as EHRVI, allowed people to live in their homes while repairs were being made from damages due to hurricanes Irma and Maria. The STEP/EHRVI program was designed to provide emergency assistance for life sustaining, public health and safety needs, not a program that would complete all the work required for full rehabilitation of the property. Emergency repairs may have included walls, roof, electricity and plumbing. Phase 2 of the STEP/EHRVI program allowed the facilitation of code compliant roofs for those with storm related damages. Although FEMA extended the program past the initial January 31, 2019 deadline, all STEP/EHRVI work was required to be completed by April 15, 2019.

By the April 2019 completion of FEMA's STEP program, contractors had completed immediate repairs on 7,993 homes, with the installation or repair of 1,650 code-compliant roofs. Unfortunately, approximately 750 homes were so badly damaged that repairs and roofs remained untouched. Although the Disaster Recovery Reform Act of 2018, enacted in October 2018, allowed FEMA to allow states and territories to operate their own FEMA-funded Permanent Repair and Construction programs (including retroactive to 2017 disasters) under Section 408 of the Stafford Act, FEMA's May 13, 2019 denial of the Territory's application effectively ended FEMA's involvement in the repairs or reconstruction of single family housing damaged in the 2017 hurricanes.

Homeowners that were not served in the STEP/EHRVI program and homeowners whose repairs were not completed by STEP are eligible to apply to the CDBG-DR funded EnVIsion Tomorrow homeowner rehabilitation program, which launched April 2019.

The following information is from Amendment 1:
As detailed within the Unmet Needs analysis in Section 3.0, the remaining unmet need for Housing is $1.08 billion and $4.99 billion for Infrastructure, meaning the infrastructure unmet need is almost 5 times the housing unmet need. The GVI is working across all federal resources to bring to bear a full recovery. This includes a coordinated approach across FEMA funding and the CDBG-DR allocation to address outstanding housing needs. One concurrent unmet need is the requirement that certain federal funding for infrastructure be matched by a local source. The current estimate for this non-federal share (match) requirement is upwards of $500 million. Since the GVI does not have a financial

reserve to meet the non-federal share (match) requirement, the GVI is dedicating a portion of each CDBG-DR allocation to meet its non-federal share (match) requirement. The GVI has requested a waiver of the non-federal share (match) requirement on the FEMA Public Assistance program as allowable under the Insular Areas Act. The request for a waiver has been granted under the Insular Areas Act for FEMA's Hazard Mitigation Grant Program but not yet for the Public Assistance program. Such a waiver would allow the GVI to spend the CDBG-DR funding reserved for the non-federal share (match) program to meet other remaining needs, including enhanced housing programs.

Housing for displaced Virgin Islanders and those living in damaged homes remains the Territory's highest priority. As identified in the Unmet Needs analysis below, the total impact on housing, including rental and public housing, is estimated at $2.5 billion with 86% of households that suffered "major" or "severe" damage occupied by LMI households. More than 12,000 owner-occupied and approximately 8,000 rental households received some level of damage. Of those, approximately 2,500 owner-occupied and 2,800 rental households were determined to have Major or Severe damage.

As of February 2020, $1.43 billion has been disbursed from federal sources, insurance and other sources of funds. In total, $900 million is anticipated from FEMA Permanent Construction, PA, Sheltering and Temporary Essential Power (STEP) and HMGP programs as well as the first and second allocation of CDBG-DR to address the remaining unmet needs of $1.08 billion.

In Amendment 1, the overall remaining unmet housing need represented 17% of total unmet needs; approximately $900 million from multiple sources, primarily FEMA and HUD, had been committed by the GVI, but not yet spent, to address the unmet housing needs of residents in the Territory. The Territory's unmet need for housing includes a multiplier for mitigation recognizing the critical importance of hardening homes against future disasters. With this goal in mind, the GVI plans to invest a portion of its third allocation to further meet the housing and sheltering needs of its residents and to mitigate homes against future disasters.

Additionally, matching funds for housing will be allocated as the funds are needed. If the non-federal share (match) is not waived by FEMA, as has been requested, the U.S. Virgin Islands will have to set aside several hundred million dollars in Tranche 3 for match.

Understanding the sequencing of funding from available federal sources for housing repairs, the GVI has developed a multi-pronged strategy to maximize resources from multiple federal agencies, primarily FEMA and HUD, to address immediate, short and long-term housing needs. The GVI also understands that CDBG-DR funds should not be used for "activities reimbursable by or for which funds are made available by the Federal Emergency Management Agency" or other federal agencies. In order to prevent this duplication of resources and efforts, immediately following the hurricanes, the GVI worked with FEMA, which is the first source of available funds to meet housing needs, to address temporary sheltering needs and to request that FEMA establish the Sheltering and Temporary

Essential Power (STEP) and that FEMA maximize its Section 408 Permanent Housing Construction Program to repair and reconstruct damaged owner-occupied units.

As part of the first phase of housing recovery, the GVI initiated the STEP program in January 2018 to repair owner-occupied homes. In an ideal circumstance, the STEP program, known locally as the Emergency Housing Repair Virgin Islands (EHRVI), would have been deployed one month after the hurricanes, but was not initiated in earnest until January 2018.

While all residents with storm damage from either hurricane are eligible for STEP, hundreds of homeowners were initially not able to complete the program due to the level of damage to their roofs. While the U.S. Army Corps of Engineers placed temporary Blue Roofs in the early days after the storms, the temporary roofs have a shelf life of approximately 60 days. Prior to the onset of the 2018 hurricane season in June, the Government of the U.S. Virgin Islands requested that FEMA, in recognition of the urgent need to rebuild homes and the deterioration of many of the Blue Roofs, allow the STEP program to complete repairs to roofs that were damaged by the hurricanes.

In a major step towards the rebuilding of homes in the Territory, on August 9, 2018, FEMA authorized the STEP program to repair or reconstruct roofs for homes that had roof damage from the storms. FEMA also approved the ability for the Federal Coordinating Officer to make a case-by-case exception to increase the $25,000 program cap. Following submission of the Amendment to HUD on November 20, 2018, FEMA approved the inclusion of roof repair and replacement under the STEP program. This is a transformative step in the repair of homes and allows the GVI to further refine the CDBG-DR resources to the remaining unmet needs such as reconstructing homes that were destroyed by the 2017 hurricanes.

As of September 5, 2018, the STEP program had analyzed approximately 2,400 of the 4,000- plus homes that may be eligible for roof repair or replacement that will meet the local building code.[8] Of these homes, 1,000 will need full replacement, while the remaining 3,000 will need some level of repair. This includes many homeowners that may have been ineligible for the STEP without this solution.

The inclusion of roof repairs and replacements is unprecedented and acknowledges the vulnerability of the Territory's residents in the wake of another storm. It is estimated that the roof repair/replacement solution will result in up to $300 million being invested to repair hurricane-damaged homes.

Current estimates as of December 31, 2018, are that approximately 6,000 homes have been repaired with an estimated 1,300 homes within the STEP program to receive much needed roof repairs.

---

[8] *Per the Department of Planning & Natural Resources, there are currently 18 inspectors deployed territory- wide.*

As detailed in this Action Plan, the Territory is in a unique position to take advantage of FEMA's full authority under the Insular Areas Act through the Section 408 Permanent Housing Construction program which allows full repairs and reconstruction for both owner- occupied and rental housing. FEMA's unique Permanent Housing Construction authority under the Section 408 of the Stafford Act allows them to do repairs and reconstruction in Insular Areas well beyond what the normal programs permit.[9] Since the hurricanes, the GVI has repeatedly requested that FEMA utilize its full authority under the Insular Areas Act to repair damaged housing for Virgin Islanders to establish the Permanent Home Construction Program. The recently enacted Disaster Recovery Reform Act of 2018 provides FEMA with the authority to make grants to states/territories to run their own Section 408 (IA) Permanent Housing Construction programs. On October 30, 2018, the Governor of the Virgin Islands submitted a letter requesting that FEMA allow the GVI to follow provisions of the Disaster Recovery Reform Act of 2018 (DRRA) to implement the Section 408 Permanent Home Construction Repair and Reconstruction Program to complete full repairs and reconstruction. As mentioned above, with FEMA's May 2019 denial of the GVI's request, approximately 750 homes throughout the Territory remained damaged, as they required repairs beyond what the STEP/EHRVI program allowed. Owners were eligible to apply to the EnVIsion Tomorrow program.

Rental housing needs have also been supported by FEMA through the Public Assistance program for the repair and replacement of the damaged public housing and other HUD-assisted housing. The amount of funding obligated or dispersed for repair and replacement of public housing under the Public Assistance program has increased from $330,275 in March 2018 to more than $23 million as of August 11, 2018, and over $97 million by May 4, 2020. FEMA has also agreed to full replacement of the five most damaged buildings at the Tutu complex; the base cost is $73 million and is expected to increase. The Territory currently owes more than $65.4 million in match for critical infrastructure repair, reconstruction, and mitigation needs and public housing and other publicly assisted housing. Currently it is estimated that Phase I of the Tutu High Rise Public Housing development will require a match of approximately $11 million for PA repairs.[10] The Territory will prioritize critical infrastructure payments for WAPA and other entities as well as dedicate up to $30 million for public and publicly-assisted housing over the first and second tranches depending on the need.

In total, approximately $573 million dedicated through FEMA programs beyond Individual Assistance for housing repairs. This includes approximately $500 million dedicated to the STEP program including the roof solution; $23 million under the FEMA PA program to repair public and publicly assisted housing; and $15 million from the HMGP program for buyouts. An additional HMGP allocation towards housing mitigation is under consideration.

---

[9] *Permanent Housing Construction - The President may provide financial assistance or direct assistance to individuals or households to construct permanent or semi-permanent housing in insular*

[10] The non-federal share (match) calculation for housing is based on a 10% match requirement.

In addition to the FEMA funding that was invested through STEP and requested, but denied, through the FEMA Section 408 program, and as this Amendment demonstrates, the GVI has dedicated at least $326.7 million of CDBG-DR funding from Tranches 1 and 2 of the CDBG-DR allocations to be used to support housing programs. This is a $117.7 million increase above the Amendment 1 funding level for housing programs. In addition, the potential of up to $30 million of non-federal share (match) contribution may be available for public housing across both Tranches 1 and 2. This portfolio includes rehabilitation and reconstruction of owner-occupied homes, rehabilitation or reconstruction of affordable rental units, and the development of affordable owner-occupied and rental units.

The GVI also intends to utilize the third (Mitigation) allocation to make housing more resilient. Further, the GVI has aligned its infrastructure and economic revitalization investments to support housing needs as described further herein.

The CDBG-DR housing programs will prioritize the most vulnerable Virgin Islanders, especially those who remain displaced or living in severely damaged homes more than two years after the 2017 hurricanes. The Territory will further prioritize reconstruction for owner-occupied low- and moderate-income households whose homes were either destroyed or sustained major or severe damage with no other resources to complete rehabilitation or reconstruction. The roof repair solution under STEP has drastically reduced the number with unmet needs. Households not eligible for STEP are being evaluated for eligibility in the CDBG-DR funded home rehabilitation or reconstruction EnVIsion Tomorrow program.

The proposed housing program will also support the repair and development of affordable rental and public housing as well as sheltering initiatives. The program will support landlords who continue to make repairs or build new rental housing to more quickly repair and expand the availability of affordable rental. Additionally, the Territory will build new affordable housing for eligible owners and renters. The program will case manage disaster-impacted, low- to moderate-income households that may be ready to move up to home ownership or are interested in subsidized and affordable rental housing.

New public housing and affordable rental units, the need for which predates but was exacerbated by the storms, will be built to provide long-term housing for LMI families throughout the U.S. Virgin Islands. New housing units funded through this Action Plan will meet the U.S. Virgin Islands' enhanced building codes and HUD's resilience standards, which will reduce the future need for emergency sheltering.[11] Still, new and stronger sheltering facilities will be necessary to guarantee the safety of residents in the likely event of future disasters.

Public facilities, which will address the need of residential units for particularly vulnerable populations—the homeless, disabled, mentally ill, and elderly—will also be prioritized. This includes

[11] https://www.vihfa.gov/sites/default/files/reports/SIGNED_USVI_STRONGER_HOMES_2018-4-13.pdf

developing critical disaster shelters and providing critically needed public services for the targeted populations.

Although the GVI requested an additional extension for STEP, FEMA denied the request and the program ended April 15, 2019, leaving over 400 homes with damaged roofs unrepaired. In addition, the GVI continues to monitor the housing needs of its residents. With the completion of the STEP program, the denial from FEMA for the GVI to implement the Section 408 program, and the implementation of the Homeowner Rehabilitation and Reconstruction Program as well as the Territory's other CDBG-DR funded housing programs, the GVI has a clearer picture of the remaining resources needed to meet unmet housing needs.

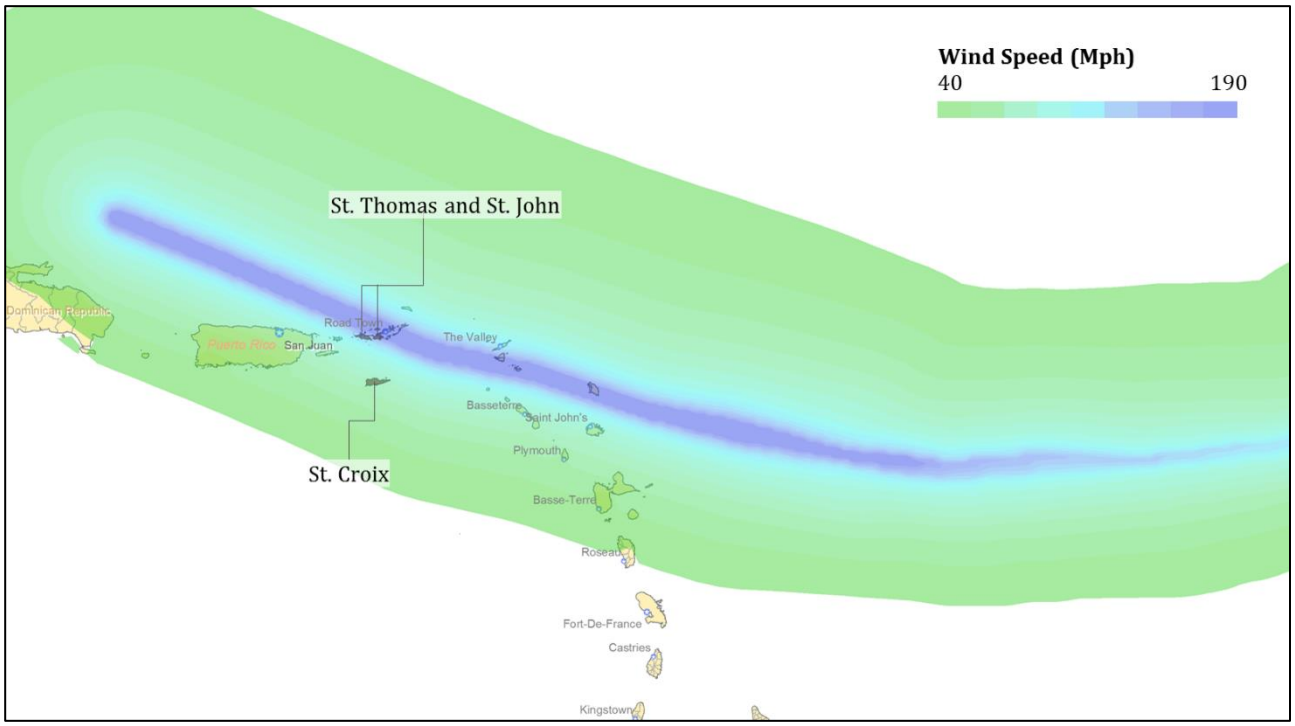
Hurricanes Irma and Maria caused over $11.3 billion in damages. Claims for losses of residential and commercial property, autos, business interruption, flood and other lines of coverage exceeded $2.5 billion by July 30, 2019, with $2.12 billion paid for those claims. By April 2020 FEMA obligations reached over $5.23 billion for over 570 projects to address damages sustained in the 2017 storms.

The FEMA obligations include $409,823,786 for education; $954,005,044 for health and human services; $117,608,674 for housing; $162,581,158 for public buildings; $233,501,603 for transportation; and $3,360,517,403 for utilities projects.

3. INTRODUCTION

In a 12-day period beginning September 5, 2017, Category 5 storms Irma (DR-4335) and Maria (DR-4340) swept across the Eastern Caribbean, causing severe damage to the U.S. Virgin Islands.[12] It is difficult to overstate the impact of these Presidentially-declared disasters throughout the Territory. While damage levels differ, the storms heavily impacted the main islands of St. Croix, St. Thomas, St. John, and Water Island, as well as about 50 other uninhabited small islands that make up the U.S. Virgin Islands. St. Thomas, St. John, and Water Island bore the brunt of Hurricane Irma (***Error! Reference source not found.***, *Map 2, and Map 3)*. Less than two weeks later, Hurricane Maria caused more destruction on all of the islands, especially on St. Croix (*Map 4*, *Map 5*, and *Map 6*).

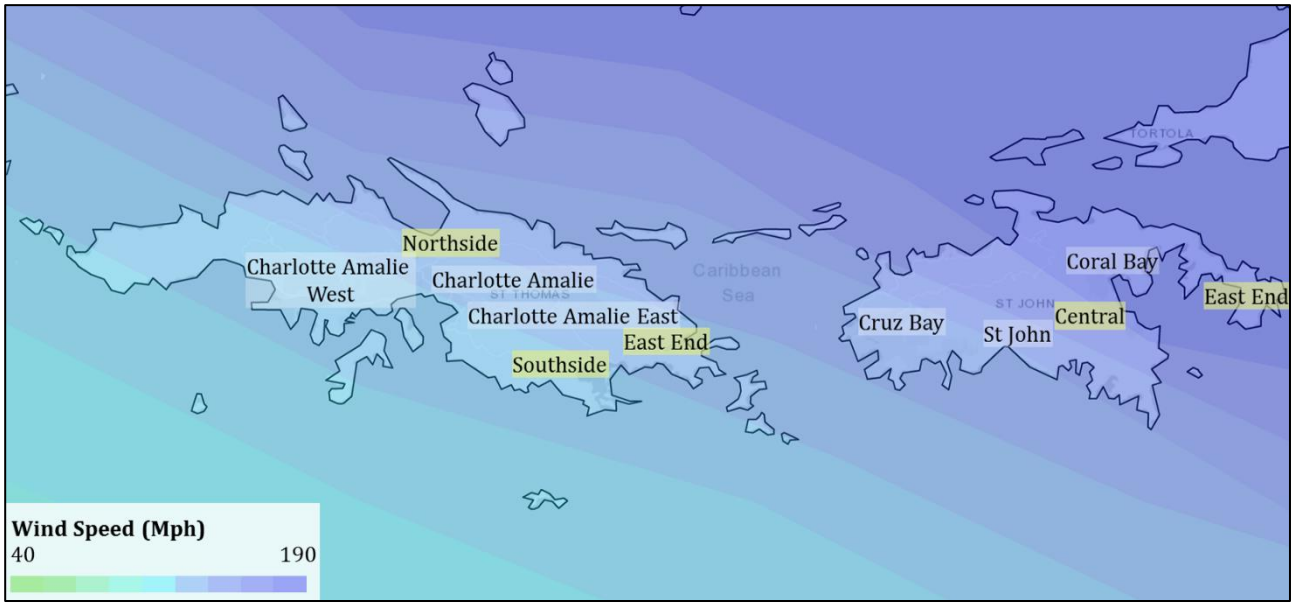
Map 1 Hurricane Irma Wind Gusts: Eastern Caribbean



Source: Pan American Health Organization/World Health Organization and Applied Research Associates.

[12] Based on incident period dates in the Federal Emergency Management Agency (FEMA) Disaster Declarations for Hurricanes Irma and Maria.

Map 2 Hurricane Irma Wind Gust: St. Thomas and St. John

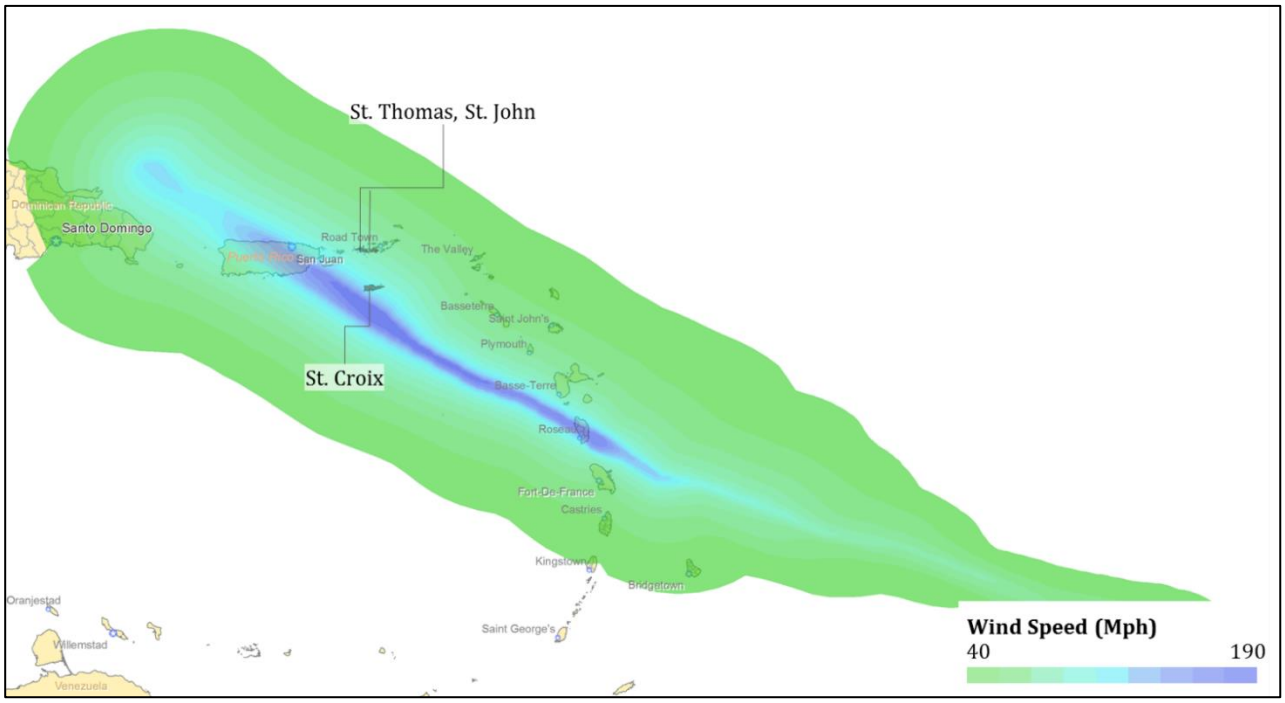


Source: Pan American Health Organization/World Health Organization and Applied Research Associates.

Map 3 Hurricane Irma Wind Gust: St. Croix

Source: Pan American Health Organization/World Health Organization and Applied Research Associates.

Map 4. Hurricane Maria Wind Gust: Eastern Caribbean

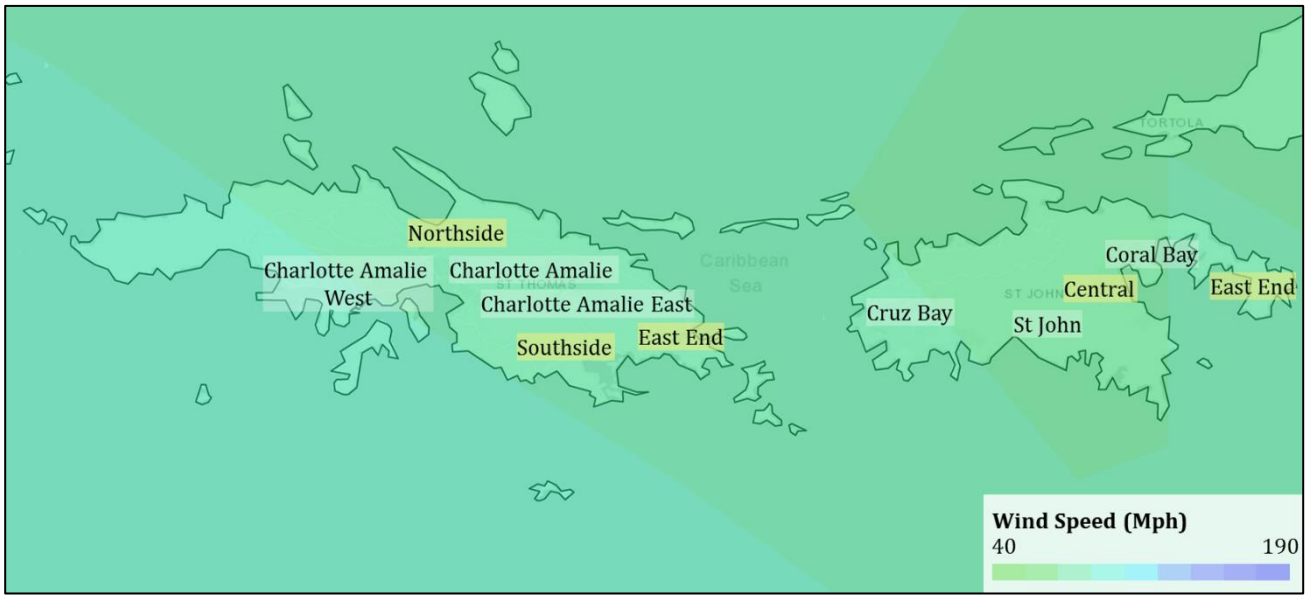


Source: Pan American Health Organization/World Health Organization and Applied Research Associates.

Map 5. Hurricane Maria Wind Gust: St. Croix

Source: Pan American Health Organization/World Health Organization and Applied Research Associates.

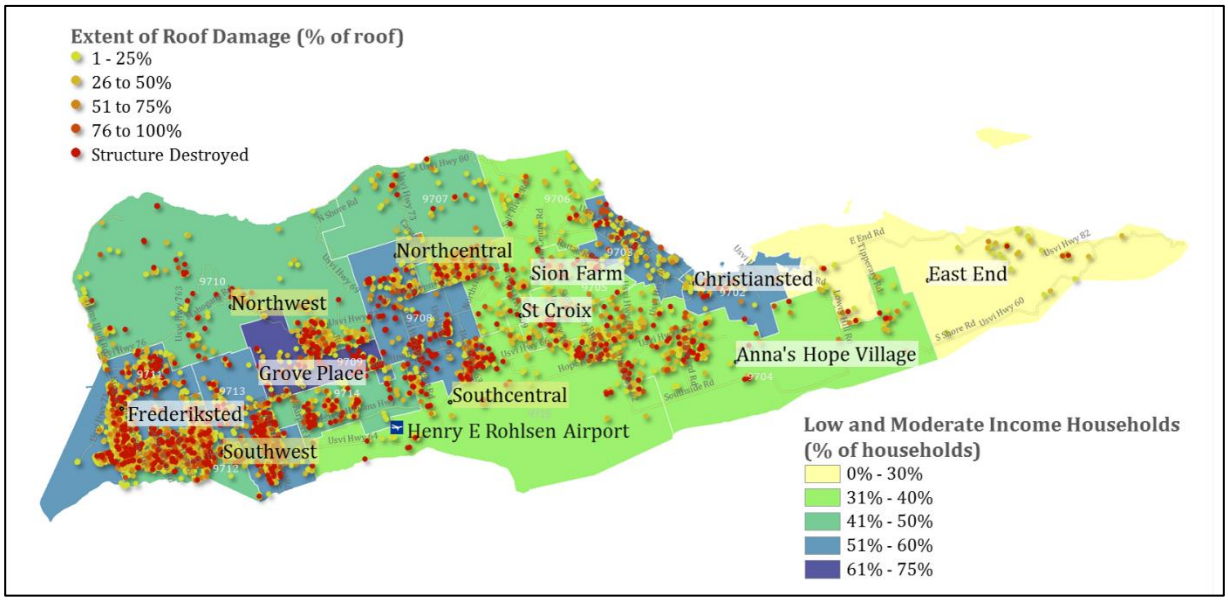
Map 6. Hurricane Maria Wind Gust: St. Thomas and St. John



Source: Pan American Health Organization/World Health Organization and Applied Research Associates.

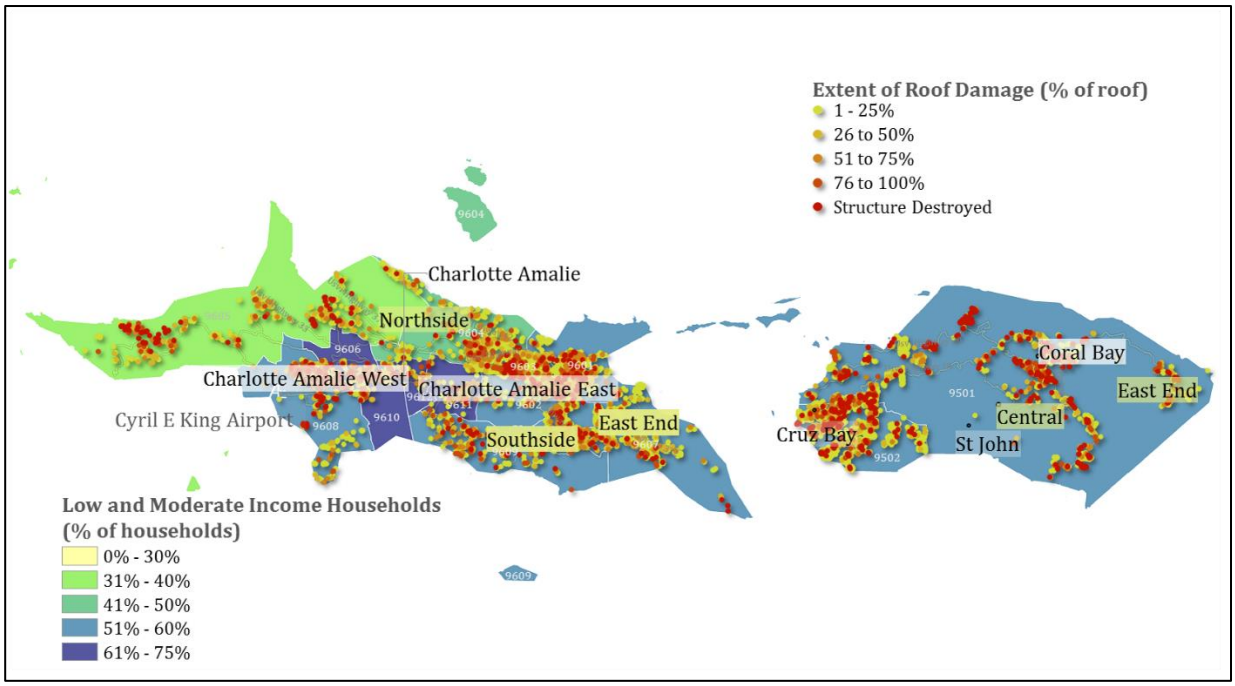
Although the storms have passed, their effects continue to disrupt the lives of Virgin Islanders. As of August 10, 2018, *FEMA's Individual Assistance program* indicated that of the 35,508 applicants 23,301 households sustained damage to their primary residences as a result of the storms, representing 59% of all households on the islands. As shown in *Map 7* and *Map 8*, a significant number of damaged households are located in census tracts with high LMI population density, largely due to the paths of each of the hurricanes. Furthermore, as illustrated in *Map 9* and *Map 10*, many of the islands' populous and low-income urban areas, such as downtown Frederiksted on St. Croix, Cruz Bay on St. John, and Charlotte Amalie on St. Thomas, are located in high-risk flood zones, thereby exacerbating the damage incurred by the populations residing there.

Map 7. LMI Households and Extent of Roof Damage: St. Croix



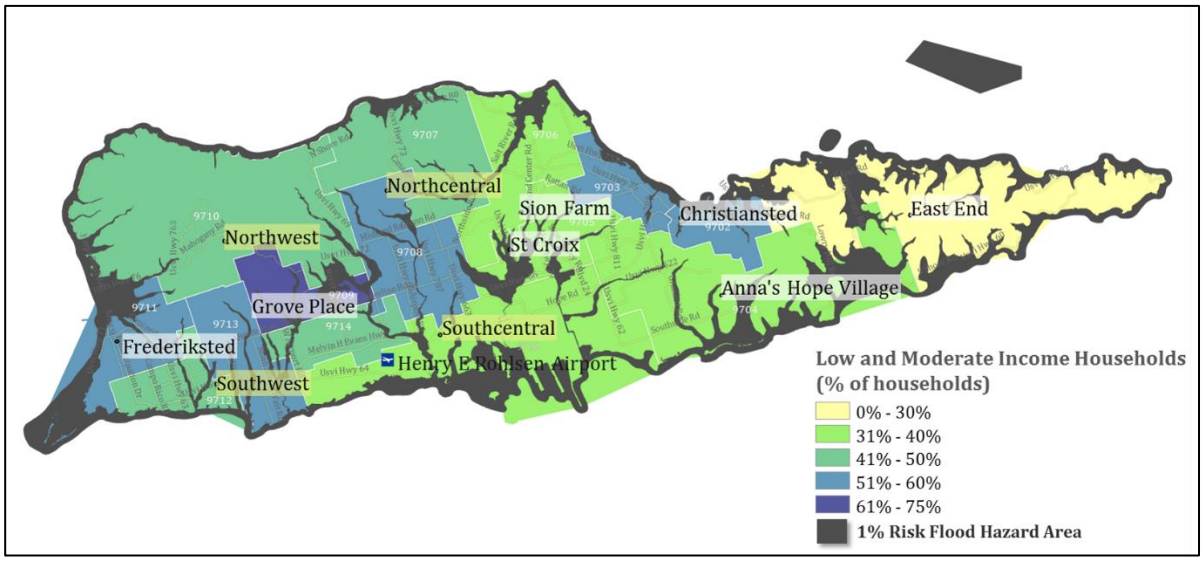
Source: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018); NOAA Hurricane Aerial Imagery

Map 8. LMI Households and Extent of Roof Damage: St. Thomas and St. John



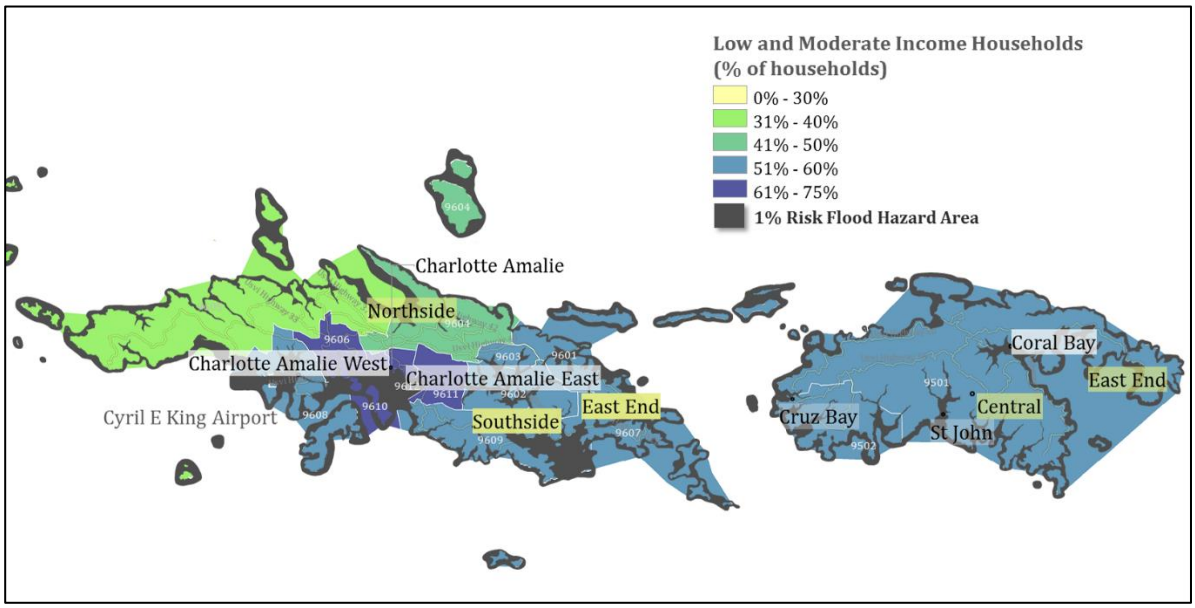
Source: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018); NOAA Hurricane Aerial Imagery

Map 9. LMI Households and 1% Flood Zone: St. Croix



Source: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018); FEMA.

Map 10. LMI Households and 1% Flood Zone: St. Thomas and St. John



Source: HUD FY 2017 LMISD by State - All Block Groups, based on 2006-2010 American Community Survey (Accessed: March 5, 2018); FEMA.

Damage to critical infrastructure also hindered the ability of businesses to reopen and operate normally. At its peak, 95% of the Territory was without power. The main airports on St. Croix and St. Thomas were closed for two weeks due to extensive damage to facilities, and all seaports were shut down for three weeks due to the sinking of over 400 vessels in and around the islands during the

hurricanes.[13] Roadways experienced washouts, debris, mudslides, and downed power lines. In total, the storm created more than 825,316 cubic yards of debris—more than local landfills could handle.[14] Damage to telecommunications infrastructure severely limited cellular and broadband network connectivity, with 90% of customers losing internet access.[15]

The unprecedented damages caused by the storms compounded challenges for an already-fragile economy. Pre-storm, the economy had experienced a decline of 14% in gross domestic product (GDP) between 2006 and 2016 and public debt had mounted to 74% of GDP.[16] Further, the islands' small domestic market and narrow natural resource base has resulted in an over-reliance on one or two economic sectors and limited private sector development. The economy's lack of growth can also be attributed to an aging population and overall population loss—5% from 2000 to 2010—driven by families leaving for mainland jobs. One key result is an increased need for workforce skills that often cannot be met locally.

The physical damages caused by the storms brought tourism—the single most important stream of revenue for the Territory—to a complete halt and recovery has been slow. Most of the large hotels were significantly damaged and remain closed for repairs. Many of the largest hotels will not be back online until late 2019 or 2020.[17] The impact of the storms on tourism has had a ripple effect on the local economy, hurting small businesses, retailers, tax revenues, and, most importantly, low- and moderate-income residents that depend on visitor spending and the hospitality industry at large for employment. The hurricanes made the Territory even more economically vulnerable than it already was before September 2017.

Ordinarily difficult, long-term recovery efforts are complicated further by the geography of the U.S. Virgin Islands. Distances between islands vary from two miles between St. Thomas and St. John to less than a mile between St. Thomas and Water Island to over 40 miles from these islands to St. Croix. Land evacuation is not possible for the Territory. Evacuation must occur by ship or aircraft, which makes it more difficult, especially for the most vulnerable among the population. Its position also makes response, recovery, and rebuilding logistically challenging and more expensive for the Territory which sits at the end of the supply chain from the mainland. This is a primary driver of the high cost of imported goods and materials, which mean higher-than-average costs of reconstruction—with construction costs nearly 1.4 times the U.S. national average—and contributes to the high cost of power, almost three times the U.S. average.[18] Finally, the distances between the islands result in the need for more localized solutions, such as an emergency *shelter* or a separate electrical power system on each island.

---

[13] U.S. Virgin Islands Port Authority.
[14] U.S. Federal Emergency Management Agency (FEMA) Incident Storyboard as of April 23, 2018.
[15] Virgin Islands Next Generation Network (viNGN).
[16] U.S. Virgin Islands Bureau of Economic Research; U.S. Government Accountability Office.
[17] U.S. Virgin Islands Department of Tourism and U.S. Virgin Islands Hotel and Tourism Association.
[18] U.S. Department of Defense, UFC3-701-01 DoD Facilities Pricing Guide (Revision Date: 07-01-2017); U.S. Energy Information Administration, Territory Profile: U.S. Virgin Islands: April 2018.

Despite these challenges, the Territory, no stranger to natural disasters, has time and time again proven its resilience and commitment to improving the lives of its inhabitants, rebuilding better and stronger than before after each storm. After each modern-day disaster, the U.S. Virgin Islands has improved its infrastructure and has invested in *hazard* mitigation strategies. Particularly after Category 3 Hurricane Marilyn in 1995, which left 8 dead and an estimated 10,000 homeless on the islands, the Territory shifted its focus from disaster response to disaster preparedness, adopting and implementing stronger building codes and strengthening piers, water production, and the electric distribution system.[19] In a testament to the effectiveness of these measures, it is noted that most homes and businesses rebuilt to the post-Marilyn standards withstood the most recent storms.[20]

This same commitment to recovery has been on display after Irma and Maria, when the Territory moved swiftly to restore critical public services. After the hurricanes knocked out power to almost all the islands, electricity was restored to 90% of eligible homes and businesses by Christmas. Over 22.3 million cubic feet of debris were cleared in less than 6 months and an emergency repair program to assist people living in temporary shelter or storm-damaged homes has been implemented.[21]

As with all previous modern-day disasters, the Territory recognizes that the key to moving beyond recovery will be rebuilding with a focus on resilience. Thus, the Territory is pursuing a holistic approach to identify and realize opportunities to address vulnerabilities and make recovery more resilient in the face of future extreme weather events and other hazards. To support the commitment to resilient recovery, in October 2017, Governor Kenneth E. Mapp established the U.S. Virgin Islands Hurricane Recovery and Resilience Task Force, an expert advisory committee intended to set the framework for reconstruction and resilience efforts in the U.S. Virgin Islands. The Task Force's 2018 Report was published on July 20, 2018 for public comment and was finalized September 6, 2018 with 288 recommendations.[22]

In addition, the U.S. Department of the Interior granted $3 million in 2018 Hurricane Supplemental Funding for the U.S. Virgin Islands (USVI) to create and fund an Office of Disaster Recovery (ODR). Established by the Governor of the U.S. Virgin Islands within the Virgin Islands Public Finance Agency (PFA), ODR provides reporting oversight and centralized coordination across the government to maximize coordination and integration among governmental entities and departments administering recovery dollars. Information sharing, and cross departmental coordination is essential as disaster resiliency projects get underway. The ODR tracks all federal expenditures for disaster assistance programs and transmit collected data through an electronic

---

[19] U.S. Department of Commerce National Institute of Standards and Technology (NIST); "Losses from Hurricane Total $875 Million," *The New York Times* (September 28, 1995).
[20] Federal Emergency Management Agency News Release, March 28, 2018.
[21] FEMA Incident Storyboard as of April 23, 2018.
[22] USVI Hurricane Recovery and Resilience Task Force Report, September 6, 2018 https://www.usvihurricanetaskforce.org/

system and publication on a website to be updated monthly for transparency and awareness.[23] The Territory understands federal relief funds are a precious resource and is fully committed to carrying out recovery in the most efficient, cost-effective, and resilient manner.

On September 8, 2017—after Hurricane Irma had made landfall and before Hurricane Maria had arrived—Congress approved the Supplemental Appropriations for Disaster Relief Requirements, 2017 (Pub. L. 115-56), which made available $7.39 billion in Community Development Block Grant Disaster Recovery (CDBG-DR) funds to assist in long-term recovery from 2017 disasters. CDBG-DR provides resources to address a community's wide-ranging recovery needs. On February 9, 2018, Congress approved a bill appropriating an additional $28 billion CDBG-DR funds, of which $11 billion was set aside to address the remaining unmet needs including those of the U.S. Virgin Islands and Puerto Rico from Hurricane Maria. Of that amount, $2 billion is for the repair and reconstruction of the electricity systems in Puerto Rico and the U.S. Virgin Islands. On February 14, 2018, the U.S. Department of Housing and Urban Development (HUD) published Federal Register 6066-N-01, which detailed the guidelines for the first round of CDBG-DR funding for the U.S. Virgin Islands from the aforementioned appropriation. Since data were not available for the U.S. Virgin Islands and Puerto Rico until late December 2017, the first allocation of CDBG-DR funding addressed only a portion of the total unmet need amounted to $242,684,000. FR-6066-N-01 also established the requirements and processes pertaining to the first allocation of CDBG-DR funds (Tranche 1).

The second allocation of CDBG-DR funds for the U.S. Virgin Islands was announced on April 10, 2018 in the amount of $779,217,000. FR-6109-N-01 established the requirements for the second allocation (Tranche 2) to address the Territory's remaining serious unmet housing, infrastructure, and economic needs, including the enhancement and improvement of the electrical power system. The Territory has amended its Action Plan accordingly to ensure compliance and allocate Tranche 2 funds to programs.

On January 27, 2020, FR 6182-N-01 announced a total of $3,831,428,000 in additional CDBG-DR funds to address unmet infrastructure needs across the country in response to disasters in 2017, 2018 and 2019; the Territory was awarded $53,588,884. FR-6182-N-01 also contains the requirements for the use of these funds, including a stipulation they be used for infrastructure activities.

A remaining tranche of funds for $841,188,000 is intended to support mitigation activities that protect communities against predictable damage from future natural disasters as well as an enhanced electrical grid. Federal Register Notice FR-6109-N-03, released September 10, 2019, awarded $774,188,000 to the U.S. Virgin Islands in Community Development Block Grant Mitigation (CDBG-MIT) funds. The guidance has not yet been released for the remaining $67,000,000.

---

[23] Press Release, August 28,2018, DOI OIA. https://www.doi.gov/oia/interior-provides-3-million-hurricane-supplemental-funding-create-office-disaster-recovery-us

This Substantial Amendment does not outline the programs, projects or activities to be funded with CDBG-MIT funds; a separate Action Plan will be issued upon completion of the mitigation unmet needs assessment and processes, as outlined in FR-6109-N-03.

The U.S. Virgin Islands CDBG-DR Action Plan lays out programs to address unmet housing needs, rebuild critical infrastructure, and revitalize the local economy. The Action Plan describes the Territory's proposed allocation of the $1,021,901,000 in Tranches 1 & 2. The Territory will use later allocations to fund programs that will help increase overall community resilience and further enable economic growth. These programs have been designed to promote sound, sustainable long-term recovery in coordination with other planning efforts such as the Hurricane Recovery and Resilience Task Force report, the hazard mitigation plan update, and flood plain management studies.

The Impact and Unmet Needs Assessment section of this Action Plan details the most up-to-date unmet needs assessment, currently estimated at $6.41 billion, decreased from $7.58 billion as previously reported in the initial Action Plan. As indicated in the demographic profile of the most impacted areas (Section 4.3), the vast majority of the LMI population of the U.S. Virgin Islands endured major and severe damage as defined by HUD (83 FR 5869). The unmet needs assessment estimates the impact of Hurricanes Irma and Maria on housing, infrastructure, and the economy and is sensitive to the particular challenges of reconstruction and resilience due to high labor and construction costs in the Territory.

The Method of Distribution, Programs, and Allocations section of this Action Plan identifies the method of distribution of these funds as well as the programs proposed to address housing, infrastructure, and economic unmet needs. Each program description identifies the corresponding eligible activities and *national objective*s per the 1974 Housing and Community Development Act, as well as eligible applicant and eligibility criteria, total program allocation, and additional program-specific measures to ensure compliance with high-quality, resilience, sustainability, environmental, administrative, and other applicable standards. The program design is highly sensitive to the urgency of needs and HUD's mandate to prioritize assistance for LMI individuals, defined by HUD as those whose yearly income does not exceed 80% of the *area median income (*AMI).

The General Administration section of this Action Plan summarizes and reviews the Action Plan's compliance with each of HUD's high quality, resilience, sustainability, environmental, administrative, and other applicable standards, criteria, and certifications. The Government of the U.S. Virgin Islands is committed to detecting and preventing fraud, waste, and abuse of funds. All programs have been designed to ensure the most transparent and cost-effective use of public funds to address unmet needs and provide benefits to low- and moderate-income residents.

4. IMPACT AND UNMET NEEDS ASSESSMENT

4.1 BACKGROUND

HUD requires that the Territory assess impact and unmet needs to quantify the funding needed for recovery from the 2017 disasters. The assessment is used to identify the type and location of community needs and thus informs the prioritization of CDBG-DR funds to address the most distressed areas as effectively as possible. The assessment must evaluate all aspects of recovery, with an emphasis on housing, infrastructure, and economic revitalization. An understanding of the impact of natural disasters is necessary to identify the most appropriate and effective programs to spur sustainable recovery and reconstruction. Since CDBG-DR funds are meant to contribute to long-term recovery and resilience, the unmet needs assessment takes into account the costs of mitigation and resilience measures that can reduce the impact of future natural disasters.

To ensure that CDBG-DR funds go towards needs that are not likely to be addressed by other funding sources, the assessment accounts for the various forms of assistance available to, or likely to be available to, the affected communities and individuals within the Territory using the most up to date data. During the development of the Action Plan, meetings were held with stakeholders to gather information about the impact of the storms and to gather data. Email and phone follow ups were made with these stakeholders to discuss programmatic assumptions and to verify data. The unmet needs assessment draws on the data and input provided by the following federal and local authorities as well as non-governmental sources.

Table 6. Agencies and Organizations Engaged in Preparation of CDBG-DR Action Plan (Updated September 6, 2018)

Federal Agencies	
• Environmental Protection Agency (EPA)	• U.S. Army Corps of Engineers (USACE)
• Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program	• U.S. Census [2000 and 2010 data]
• FEMA Individual Assistance Program	• U.S. Department of Agriculture (USDA)
• FEMA Inundation Shapefiles	• U.S. Department of Commerce (DOC)
• FEMA Pre-Disaster Mitigation Program	• U.S. Department of Defense (DoD)
• FEMA Public Assistance Program	• U.S. Department of Education (ED)
• FEMA Shelter and Temporary Essential Power (STEP) Program	• U.S. Department of Housing and Urban Development (HUD)
• Federal Highway Administration Emergency Relief (FHWA-ER) Program	• U.S. Department of the Interior, Office of Insular Affairs
• Federal Reserve Bank of New York	• U.S. Energy Information Administration (EIA)
• National Center for Education Statistics	• U.S. Postal Service (USPS)
• Small Business Administration (SBA)	
International and Multilateral Organizations	
• Euromonitor International	• World Bank

• Florida-Caribbean Cruise Association	• World Travel and Tourism Council
• U.S. Virgin Islands Salvation Army	
Local Agencies and Authorities	
• University of the Virgin Islands	• Virgin Islands Economic Development Authority
• Virgin Islands Bureau of Economic Research	• Virgin Islands Housing Authority
• Virgin Islands Bureau of Information Technology	• Virgin Islands Housing Finance Authority
• Virgin Islands Community Survey (VICS) 2014	• Virgin Islands Hurricane Recovery and Resilience Task Force
• Virgin Islands Division of Banking, Insurance, and Financial Regulation	• Virgin Islands Next Generation Network
• Virgin Islands Department of Education	• Virgin Islands Port Authority
• Virgin Islands Department of Health	• Virgin Islands Public Services Commission
• Virgin Islands Department of Human Services	• Virgin Islands Territorial Emergency Management Agency
• Virgin Islands Department of Labor	• Virgin Islands Waste Management Authority
• Virgin Islands Department of Property and Procurement	• Virgin Islands Water and Power Authority
• Virgin Islands Department of Public Works	• The West Indian Company, Ltd. (WICO)
• Virgin Islands Office of Management and Budget	• Virgin Islands Department of Finance
• Virgin Islands Department of Planning and Natural Resources	• Virgin Islands Department of Tourism
• Virgin Islands Public Finance Authority	
Community Organizations and Private Businesses	
• American Red Cross	• Methodist Training and Outreach Center
• Catholic Charities of the Virgin Islands	• Gov. Juan F. Luis Hospital & Med Center
• Coldwell Banker	• My Brother's Workshop
• Community Foundation of VI	• Rialto
• Continuum of Care	• St. Thomas Senior Housing
• Crucian Heritage and Nature Tourism, Inc	• St. Croix Foundation for Community Development
• Cruzan Rum	• St. Croix Mission Outreach
• Disability Rights Center of the Virgin Islands	• St. Croix Renaissance Group, LLP
• Downtown Charlotte Amalie Revitalization Project	• St. John Community Foundation
• DWH Business Services Inc.	• Sugar Mills Villas
• Eagle's Nest Men's Shelter	• Sunny Isles Elderly Housing
• East Caribbean Center at the University of the Virgin Islands	• Ten Thousand Helpers of St. Croix
• Family Resource Center	• The Carambola Hotel
• Frederiksted Health Care	• The Salvation Army of the Virgin Islands
• Gold Coast Yachts, Inc.	• The Village – VI Partners in Recovery

• Island Therapy Solutions	• Virgin Islands Hotel and Tourism Association
• Jackson Development Inc.	• Virgin Islands Ja Goju Jitsu-Ryu Federation STT Parental Committee, Inc
• Limetree Bay Terminals, LLC	• WestCare Foundation
• Lutheran Social Services of the VI	• Women's Coalition of St. Croix
• Renaissance St. Croix Carambola Beach Resort & Spa	

4.2 SUMMARY OF IMPACT AND UNMET NEEDS

HUD defines unmet needs as the financial resources necessary to recover from a disaster that are not likely to be addressed by other public or private sources of funds, including, but not limited to FEMA Individual Assistance, FEMA Public Assistance, FHWA Emergency Relief Program, SBA Disaster Loans, and private insurance. *Table 7* reflects the Territory's unmet needs for housing, infrastructure, and economic revitalization based on the most recently available data as of April 2020.

Table 7. Estimated Unmet Needs for the U.S. Virgin Islands

Sector	Total Need	Funding Awarded or Obligated	Unmet Need
Housing	$2,557,748,360	$1,707,887,039	$849,861,321
Public Services and Public Facilities	(Previously included in Housing Sector)		
Infrastructure	$7,175,262,720	$2,489,415,099	$4,685,847,621
Economic Revitalization	$1,568,356,952	$1,245,590,282	$322,766,670
Total	**$11,301,368,032**	**$5,442,892,419**	**$5,858,475,612**

Note: 'Funding Obligated' refers to funds awarded or known through an obligated PW (in the case of FEMA Public Assistance). This does not include 'anticipated' funding such as an estimated PW that has not yet been obligated.

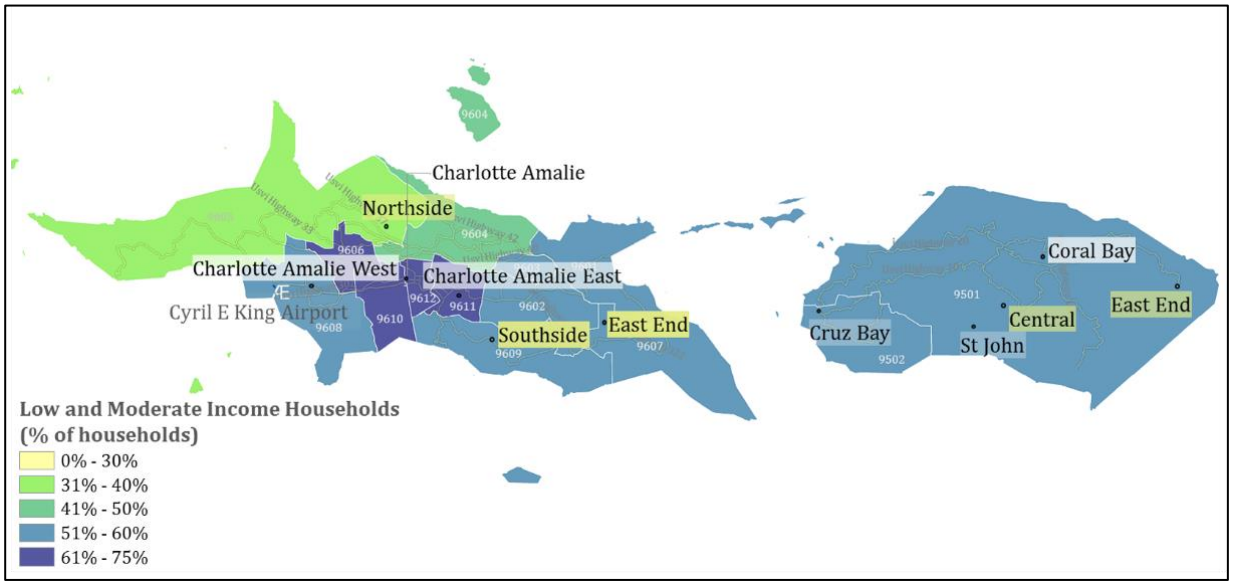
Sources: FEMA Individual Assistance, Public Assistance, Hazard Mitigation Grant Program, Mission Assignments, and Pre-Disaster Mitigation program data; Federal Highway Administration Emergency Relief Program, SBA disaster loan approvals; U.S. Virgin Islands Division of Banking, Insurance, and Financial Regulation; effective February 2020.

The total need for the U.S. Virgin Islands is currently estimated to be $11.3 billion, an increase of $540 million from the initial Action Plan. With $5.44 billion in recovery funding awarded, obligated or received to date, there is a current total unmet need of $5.8 billion, down from the $7.58 billion reported in the initial Action Plan. These estimates will be more refined as more recent, geographically specific, and precise data are collected and analyzed, and as additional funding is committed and disbursed.

To grasp the severity of housing, infrastructure, economic and public services unmet needs, it is important to understand the demographic characteristics of the U.S. Virgin Islands, including the level and distribution of low- and moderate-income persons and other vulnerable populations. Pursuant to HUD's Notice for 2017 CDBG-DR Grantees, no less than 70% of the aggregate CDBG-DR funds must be used to support activities benefitting LMI (83 FR 5855). Per HUD requirements, LMI households with up to 80% of the AMI may qualify as meeting the low- and moderate-income person benefit national objective. For the U.S. Virgin Islands, HUD estimates the 2019 one-person household AMI by island at: $39,563 for St. Croix; $58,938 for St. John; and $45,875 for St. Thomas. Accordingly, LMI individuals are those whose yearly income does not exceed $31,650 for St. Croix; $47,150 for St. John; and $36,700 for St. Thomas.[24]

An area is determined to meet the low- and moderate-income area (LMA) benefit when at least 51% of its residents are LMI persons. Areas that qualify as low- and moderate-income were identified using the 2010 U.S. Census data, the most recently available data at the census tract level for the U.S. Virgin Islands. As seen in *Map 11*, which shows percentage of LMI households by census tract, the majority of census tracts on St. Thomas and St. John exceed the threshold of 51% LMI residents. Accounting for population density, St. Thomas (57.9% LMI) and St. John (54.8% LMI) both qualify for the LMA benefit at the island level. Although St. Croix does not meet the LMA threshold at the island level according to the 2010 census data (46.3% of its residents are LMI), a third of the census tracts in that island do qualify for LMA benefit, as shown in *Map 12*. The location and concentration of LMI households are important considerations in the Impact and Unmet Needs Assessment as well as program design.

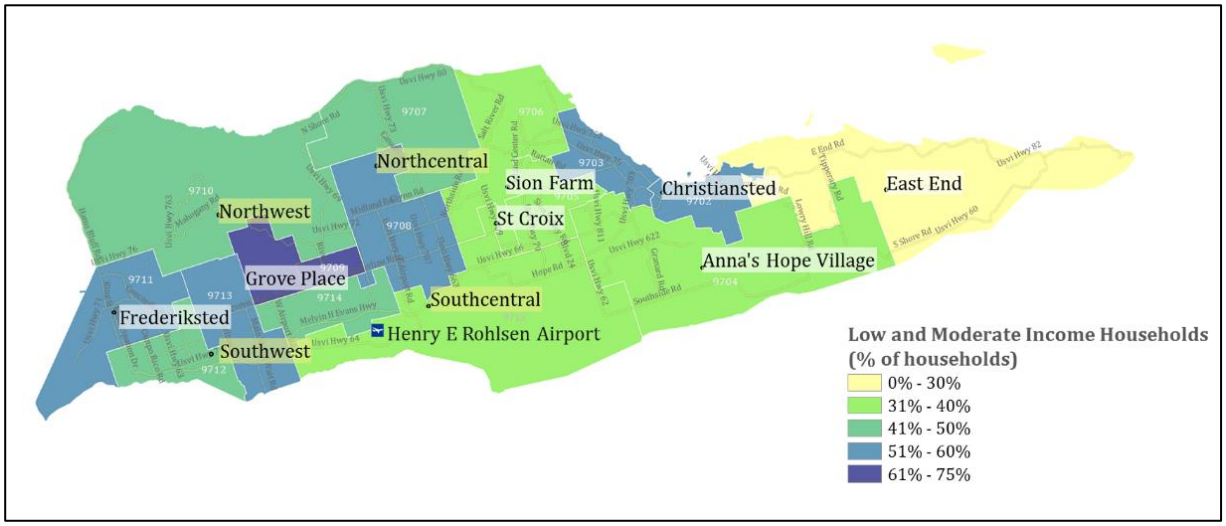
Map 11. Percentage of LMI Households by Census Tract: St. Thomas and St. John



[24] HUD FY 2019 Income Limits for the U.S. Virgin Islands.

Source: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018)

Map 12. Percentage of LMI Households by Census Tract: St. Croix



Source: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018)

4.3 DEMOGRAPHIC PROFILE OF MOST IMPACTED AND DISTRESSED AREAS

The demographic profile for the U.S. Virgin Islands was generated using data from the 2010 U.S. Census, which is the latest and best available dataset at the census tract level given that the American Community Survey is not conducted in the Territory. However, to ensure a more accurate and comprehensive view of the socioeconomic characteristics of the U.S. Virgin Islands' population, 2010 data were supplemented with insights from the 2014 U.S. Virgin Islands Community Survey conducted by the University of the Virgin Islands (available at the island level) and various U.S. Virgin Islands government agencies, including the Bureau of Economic Research and the Department of Labor.

The Territory has unique demographic characteristics, largely due to its geography. Located over 40 miles of east of Puerto Rico and southwest of the British Virgin Islands, the U.S. Virgin Islands is composed of the main islands of St. Croix, St. Thomas, and St. John. The Territory also encompasses Water Island, a small island off the coast of St. Thomas with less than 200 residents, and Hassel Island, an even smaller island in the Charlotte Amalie harbor south of St. Thomas and east of Water Island. Hassel Island is nearly all property of the Virgin Islands National Park and has only a few private residences.[25] The Territory extends to approximately 50 other small uninhabited islands and cays, encompassing a total of 737 square miles.

[25] Throughout the Action Plan, references to St. Thomas may include damage or recovery efforts in Water and Hassel Islands.

According to the 2010 Census, there are 106,405 residents in the U.S. Virgin Islands; however, the most recent data reported in the 2014 Virgin Islands Community Survey estimates total population at 102,007. The demographic analysis that follows is based primarily on 2010 Census data because it is the most recent available data reported at the census tract level. The three main islands have relatively similar demographic profiles. Both St. Croix and St. Thomas have approximately 50,000 residents each, though St. Croix has 60% of the Territory's land mass while St. Thomas has only 30%. St. John, the smallest of the main islands, has a population of just over 4,000 and most of the land on the island is owned by the National Park Service as a part of the Virgin Islands National Park.

The population of the U.S. Virgin Islands is considerably more vulnerable than that of the U.S. mainland. The median income in 2010 was $37,254, approximately 25% lower than the U.S. as a whole,[26] and it is estimated to have decreased by about $5,000 between 2010 and 2014.[27] In fact, 22% of the U.S. Virgin Islands population is below the poverty level, compared to 14.4% of the overall U.S. population. A large share of households lack access to critical water and telecommunications infrastructure: only 47% of households are connected to the municipal potable water network (instead, many residents rely on cisterns for their primary water supply), and 14% do not have internet access.[28] Furthermore, 15% of the population of the U.S. Virgin Islands have disabilities, compared with 12% in the U.S. overall.[29] In terms of race, the population is 73% Black or African American and 19% White. In terms of ethnicity, Hispanics and Latinos account for 17% of the population. A striking 48% of U.S. Virgin Islands families are led by single parents. A more detailed breakdown of these statistics by 2010 U.S. Census tract is provided in *Table 8*.

The population of St. Croix is the most economically vulnerable with a median household income of $36,042, as compared to $38,232 in St. Thomas and $40,644 in St. John. Lastly, 26% of St. Croix's residents live below the poverty level compared to 19% in St. Thomas and 15% in St. John.

[26] 2010 median U.S. household income was $51,914.
[27] 2014 Virgin Islands Community Survey.
[28] There is no privately-owned comparable activity in the Territory, thus the other 53% of residents are not connected to any water network. Homes not connected to any water network are built with a large capacity cistern as a catchment for rainwater.
[29] U.S. percentage of individuals with disabilities from 2010 Census.

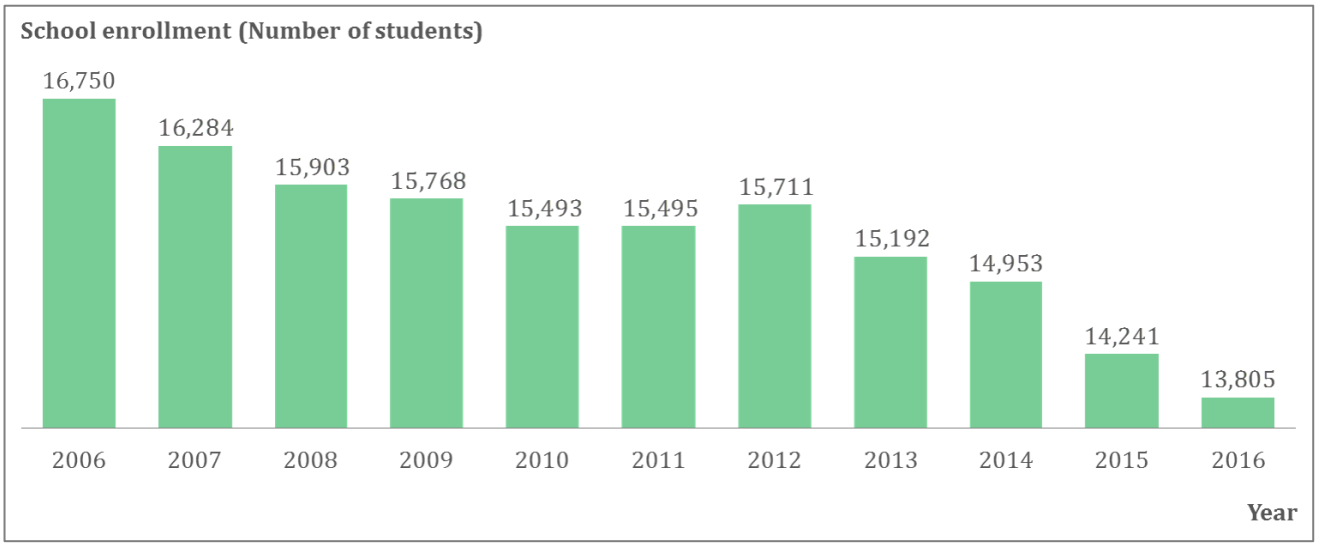
Table 8. Additional 2010 Demographic Statistics for the U.S. Virgin Islands

Census Tract	Total households	% of HH damaged*	% below poverty level	Avg. pop. per sq. mile	% families w/ single parents	% of pop. w/ disabilities	Median rent	% homes built before 1990	% of homes using public water	% of homes without internet
USVI	**43,214**	**12%**	**22%**	**1,605**	**48%**	**15%**	**$621**	**67.8%**	**47%**	**14%**
St. Croix	**19,765**	**9%**	**26%**	**885**	**47%**	**15%**	**$535**	**67.2%**	**50%**	**14%**
9701	894	3%	12%	171	22%	17%	$861	67.6%	25%	10%
9702	1,346	40%	34%	1,640	59%	20%	$433	85.2%	80%	19%
9703	1,996	1%	36%	2,251	60%	11%	$395	84.9%	78%	20%
9704	1,842	1%	15%	427	39%	15%	$675	64.7%	29%	11%
9705	1,297	1%	17%	1,464	45%	13%	$686	70.1%	32%	9%
9706	1,705	3%	13%	824	34%	15%	$722	64.4%	27%	11%
9707	934	0%	20%	369	41%	13%	$603	75.9%	39%	10%
9708	1,492	12%	37%	810	56%	11%	$402	54.7%	56%	20%
9709	807	14%	49%	865	70%	24%	$305	66.0%	70%	21%
9710	822	34%	23%	140	37%	21%	$535	56.6%	21%	13%
9711	1,589	15%	36%	1,087	60%	19%	$435	73.1%	68%	16%
9712	1,729	9%	23%	1,813	48%	19%	$582	69.4%	54%	14%
9713	1,260	13%	26%	978	44%	11%	$501	58.4%	51%	15%
9714	730	3%	26%	963	48%	11%	$370	19.1%	65%	14%
9715	1,322	1%	18%	360	42%	14%	$514	54.6%	42%	14%
St. John	**1,894**	**30%**	**15%**	**364**	**40%**	**13%**	**$835**	**44.8%**	**22%**	**15%**
9501	676	64%	15%	85	44%	13%	$811	39.3%	13%	14%
9502	1,218	11%	15%	1,007	38%	12%	$858	47.6%	26%	15%
St. Thomas	**21,555**	**13%**	**19%**	**2,778**	**49%**	**15%**	**$693**	**71.3%**	**47%**	**13%**
9601	1,532	1%	18%	1,577	44%	16%	$743	64.1%	37%	13%
9602	1,672	18%	18%	1,627	53%	14%	$719	71.6%	30%	16%
9603	1,768	0%	17%	6,601	54%	17%	$687	85.0%	29%	13%
9604	2,061	32%	11%	1,042	36%	22%	$795	60.6%	22%	9%
9605	2,459	2%	10%	603	33%	14%	$901	62.5%	7%	11%
9606	1,753	0%	19%	3,248	50%	16%	$669	67.9%	56%	11%
9607	1,545	5%	16%	1,632	46%	23%	$791	66.7%	34%	16%
9608	1,559	5%	21%	1,387	53%	11%	$636	78.2%	64%	14%
9609	1,934	4%	21%	1,550	46%	15%	$642	65.8%	49%	11%
9610	2,256	3%	27%	6,436	59%	11%	$614	78.7%	85%	17%
9611	1,860	22%	27%	3,210	64%	15%	$579	83.0%	85%	13%
9612	1,156	92%	28%	7,200	68%	14%	$545	81.1%	88%	15%

* Based on FEMA Individual Damage assessments and including all homes with major or severe damage as defined by HUD in 83 FR 5869.
Source: 2010 U.S. Census. Excludes Census Tract 9900 (uninhabited bodies of water).

The population of the U.S. Virgin Islands has been steadily decreasing since 2000, largely due to emigration to the mainland U.S. [30] By 2019, the population is projected to have decreased by 5% since 2010. [31] In addition to emigration, the decrease in population can be attributed to declining birthrates and overall aging.[32] In fact, while individuals over the age of 65 made up 8.4% of the population in 2000, they made up 13.5% of the population in 2010, and 17.5% in 2014.[33] The overall downward trend in population is evident in decreasing school enrollment as seen in *Figure 1*, which may be considered a good proxy for population size given the lack of more recent Territory-wide census data.

Figure 1. School Enrollment in the U.S. Virgin Islands from 2006 to 2016



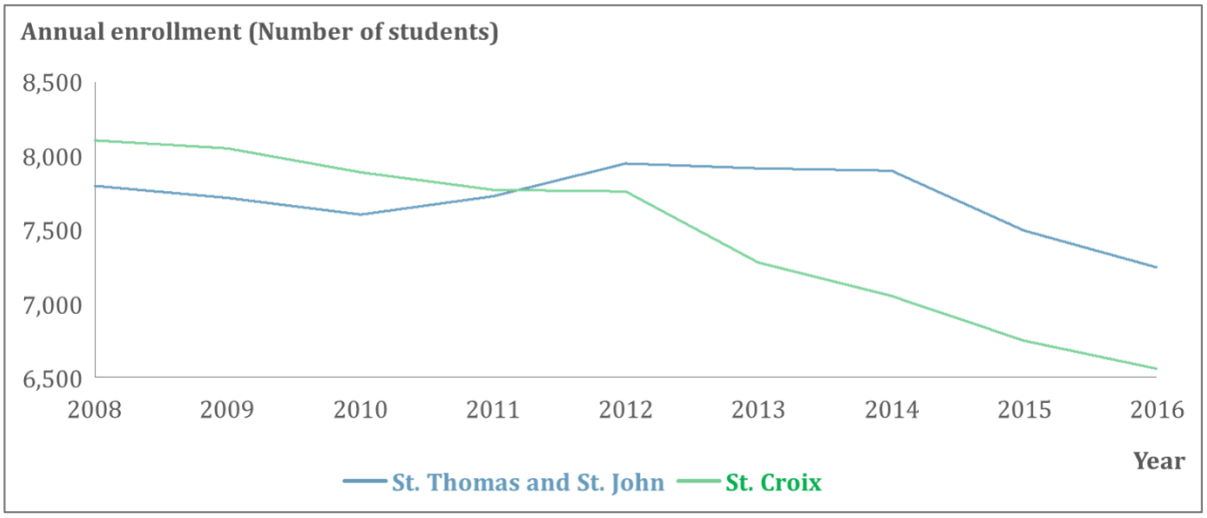
Source: National Center for Education Statistics (Accessed 3/27/2018)

As shown in *Figure 2*, school enrollment, which correlates to population, has declined more significantly on St. Croix, where it dropped by 11% from 2010 to 2014, compared to St. Thomas and St. John, where enrollment increased by 4%.[34] One key difference between the islands, which may account for St. Croix's proportionately greater population decrease, is their historic economic drivers. St. Croix experienced an economic downturn sparked by the 2012 closure of HOVENSA, one of the ten largest oil refineries in the world. At its peak, HOVENSA employed 2,200 residents or about 10.9% of the workforce on St. Croix.[35] By contrast, the largest sector for employment on St. Thomas and St. John is tourism, which grew from 2009 to 2014, as seen in *Figure 3* below.

---

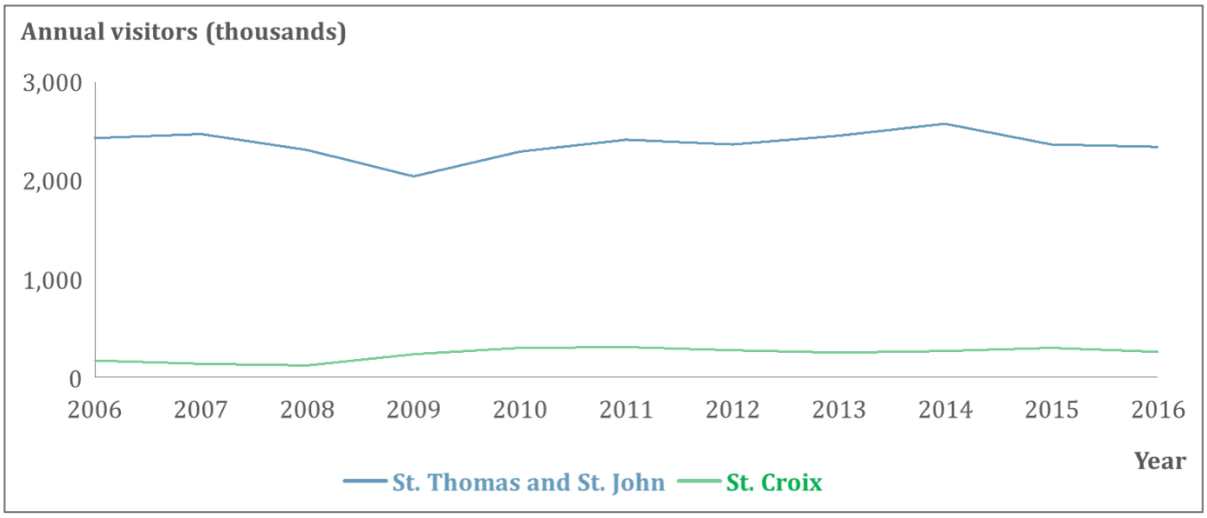
[30] World Bank.
[31] U.S. Postal Service.
[32] U.S. Virgin Islands Housing Demand Study (Community Research Services, LLC).
[33] 2000 U.S. Census, 2010 U.S. Census, 2014 Virgin Islands Community Survey.
[34] National Center for Education Statistics (Accessed 4/3/2018).
[35] "One Year Later: Refinery Closure Scattered HOVENSA Family Across the Map" (1/18/2013), "One Year Post-HOVENSA: Worse Before It Gets Better?" (1/26/2013), *St. Croix Source*. HOVENSA's share of St. Croix's workforce based on U.S. Virgin Islands Division of Labor sector data.

Figure 2. School enrollment in St. Thomas, St. John, and St. Croix from 2008 to 2016



Source: National Center for Education Statistics (Accessed 4/3/2018).

Figure 3. Annual visitors to St. Thomas, St. John, and St. Croix from 2006 to 2016



Source: U.S. Virgin Islands Bureau of Economic Research (Accessed 4/3/2018).

The combined trends of an aging, declining population with low median income have led to some challenges in the housing market, including abandonment of properties, particularly in St. Croix, and declining incomes causing a housing affordability challenge. The housing stock is relatively expensive compared to median incomes. The median home value in the Territory is $254,300 and the median monthly rent is $631, making affordability a serious concern for the U.S. Virgin Islands' low-income population.[36] In fact, 49% of renter households are "cost-burdened," spending over 30% of their

[36] U.S. 2010 Census.

income on rent.[37] Recent estimates show that of the 43,214 households on the islands, 48% are owner-occupied, well below the national average of 63.9%.[38]

4.3.1 Alternative Method of Determining Low- and Moderate-Income in the U.S. Virgin Islands for the CDBG-DR and CDBG-MIT Grants

As the grantee responsible for administering eligible use of CDBG-DR and CDBG-MIT grant funds for the U.S. Virgin Islands, the Virgin Islands Housing Finance Authority carefully reviews proposed programs and projects to establish a national objective and record associated beneficiaries.

The process of establishing a household's low- and moderate-income level for a household activity (LMH) or the income for limited clientele (LMC) national objectives are straightforward. However, a review of the project scope, geospatial and demographic data must be conducted, as well as a careful analysis and evaluation of all available data from federal, local and non-governmental agencies when establishing the low- and moderate-income area (LMA) income levels for projects with specific service areas.

During the process of establishing the geospatial methodology for defining service areas VIHFA encountered findings that did not align with pre-storm and current conditions within the Territory. Specifically, the data utilized for income designation of households is uniquely outdated and misrepresents the current economic and income profile of residents of the U.S. Virgin Islands.

According to the U.S. Code of Federal Regulations at 2 CFR 91.5, a "Moderate-income family" is a family whose income does not exceed 80 percent of the median income for the area, as determined by HUD with adjustments for smaller and larger families, **except that HUD may establish income ceilings higher or lower than 80 percent of the median for the area on the basis of HUD's findings that such variations are necessary because of prevailing levels of construction costs or fair market rents, or unusually high or low family incomes**. (Emphasis added.)

This regulatory exception allows HUD to alter the previously established income ceilings for a specific geographic area if it is determined that the area experiences a representation of higher construction costs, fair market rents that do not align with associated wage rates for the area, or an over-representation of higher and/or lower incomes.

Due to the discrepancies between the high costs of living in the U.S. Virgin Islands (including the fair market rents that do not align with the wages, the higher construction costs, and the average costs of electricity paid by Territory residents in mid-2019 being three times higher rates than the average

[37] U.S. Virgin Islands 2015 Housing Demand Study, based on 2010 Census data.
[38] 2010 U.S. Census.

power costs in the 50 U.S. states,) and the income limits set by HUD, VIHFA developed an alternative method of documenting income using information from the FEMA Individual Assistance income data that more accurately represents incomes in the Territory.

On February 27, 2019, the VIHFA submitted a waiver request to HUD outlining how these specific conditions apply to the U.S. Virgin Islands, in which the application of the St. John's Neighborhood Stabilization Program 120% Area Median Income (AMI) limits, if applied, would accurately capture Virgin Island residents' income status. As result of continued dialog with HUD, the request was amended January 16, 2020 to apply the 2019 upper income limits for St. John (≤80% AMI) Territory-wide, and without consideration of the 120% limits.

When determining the direct beneficiary's low- and moderate-income, the chart below is proposed for use throughout the Territory (in St. Croix, St. John and St. Thomas).

Household Size	1	2	3	4	5	6	7	8
St. John 2019 Limit	$47,150	$53,900	$60,650	$67,350	$72,750	$78,150	$83,550	$88,950

In addition to the request for universally applying the St. John income limits Territory-wide, VIHFA provided a description of the alternative data to be used in determining low- and moderate-income in the U. S. Virgin Islands in the Waiver submitted to HUD January 16, 2020.

Income Information in the U.S. Virgin Islands

The data set HUD uses to set area median incomes (AMI) and the associated income limits for the U.S. Virgin Islands is uniquely outdated compared to data sets HUD uses for other grantees due to the lack of recent American Community Survey (ACS) data from the U.S. Census Bureau. While the contiguous states and the Commonwealth of Puerto Rico experience periodic reviews and updates of key demographic information that informs adjustments to the ACS datasets utilized for annual allocations of federal funds, the U.S. Virgin Islands is not subject to ACS reviews and updates due to the low overall population in the Territory. Instead, federal agencies, including the Congressional Research Office (CRO) solely utilize information, data and analysis derived from the decennial Census, most recently conducted in 2010. This results in compounding inaccuracies as estimates are based on data collected over a decade ago.

Prior to 2010, the U.S. Census Bureau utilized a "long form" survey for collecting detailed employment, wage and household income information by extrapolating results from 1 in 6 survey respondents across the representative population pool when the gathering of census information. The 2010 Census abandoned the "long form" to encourage greater participation in the information gathering process. However, because of the unique population characteristics of outlying islands of

the US (including the U.S. Virgin Islands), and the absence of ACS data efforts, the "long form" survey was used to collect employment[39]

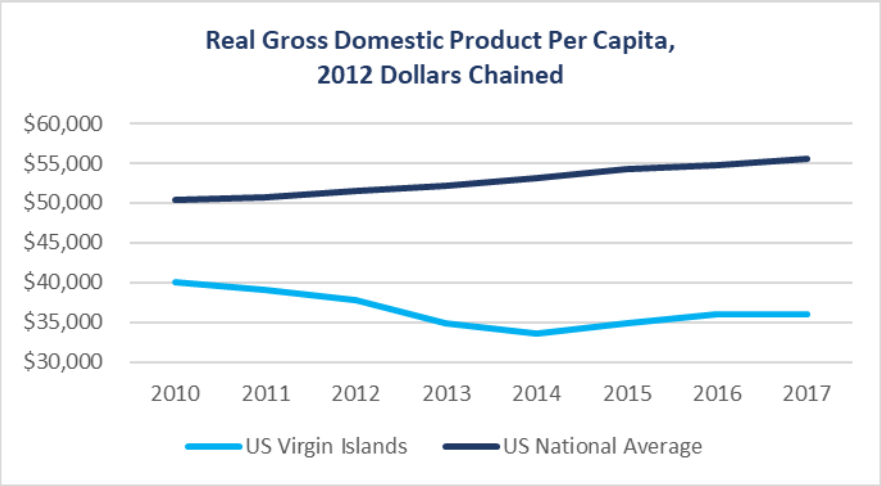
Although the comparatively limited population of the Territory presents a clear-cut opportunity for a more accurate representation of demographic markers, the result of collecting and evaluating data on a 10-year cycle presents challenges in accurately reflecting acute changes in economic and housing conditions and trends. Additionally, the method utilized by the U.S. Census Bureau to extrapolate similar characteristics across common demographic markers such as race, ethnicity, educational level and residence is ripe for misrepresentation in areas with overwhelming similarities across these demographic markers.

Changes in Economic Conditions Between 2009 and 2017

A challenge in utilizing data as dated as the U.S. Census Bureau decennial census in representing the *current* conditions of economic status, average household income and/or racial/ethnic makeup of a community is that it fails to accurately capture acute changes in a finite geographic area, such as the U.S. Virgin Islands.

The U.S. Virgin Islands experienced a drop in economic activity immediately after the 2010 Census was conducted, deviating from an upward national trend.

Real Gross Domestic Product Per Capita, U.S. Virgin Islands and U.S. National Average



Source: U.S. Department of Commerce, Bureau of Economic Analysis (BEA)
Chained price index used to adjust for inflation.

[39] A Description of the 2010 Census Operations and Data Products of the Island Areas, and How they Compare to the 50 States and District of Columbia https://www.doi.gov/sites/doi.gov/files/migrated/oia/igia/2012/upload/11-Commerce-Census-2020-Operations-and-Data-Products-in-Insular-Areas-2012Feb14.pdf

When the U.S. national average experienced a nearly 10% increase in the Gross Domestic Product (GDP) per capita between 2010 and 2017, the U.S. Virgin Islands experienced an 11% decrease during that same period. The U.S. Department of Commerce, Bureau of Economic Analysis's (BEA) 2018 GDP for the U.S. Virgin Islands[40] reflects this downward trend, not just in general economic activity, but also a significant reduction in wages across all industries.

Specifically, the total compensation of employees by industry is estimated to have been reduced by a net of $260 million between 2010 and 2017. This represents an 11.5% reduction in total compensation from the time the Census information was collected in 2010 until the time the storms impacted the Territory in 2017.

Table 2.6 from the BEA report outlines the Compensation of Employees by Industry in Detail.

Table 2.6. Compensation of Employees by Industry

	Line	[Millions of dollars]										
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total compensation	1	**2,139**	**2,185**	**2,114**	**2,245**	**2,198**	**2,042**	**1,880**	**1,881**	**1,920**	**1,969**	**1,985**
Private industries	2	**1,399**	**1,411**	**1,318**	**1,393**	**1,386**	**1,319**	**1,157**	**1,150**	**1,151**	**1,182**	**1,197**
Goods-producing industries	3	369	340	309	317	302	275	110	102	109	108	166
Services-producing industries	4	1,030	1,070	1,008	1,076	1,084	1,045	1,047	1,048	1,042	1,074	1,030
Wholesale and retail trade	5	201	205	197	198	209	209	236	222	212	206	196
Accommodation and food services	6	208	217	191	204	208	212	214	221	243	247	233
Other services, except government	7	621	649	620	674	668	624	597	604	588	622	601
Government	8	**741**	**774**	**797**	**852**	**812**	**722**	**724**	**731**	**769**	**787**	**788**
Federal	9	118	123	129	140	138	137	137	133	142	139	137
Territorial	10	622	651	668	712	674	585	586	598	627	648	651

NOTE. Detail may not add to total because of rounding.

The above notwithstanding, a general reduction in economic activity disproportionally impacts St. Croix versus St. John and St. Thomas, both of which subsist on services-producing industries such as hospitality and tourist-based activities. St. Croix, however, has relied on goods-producing industries such as agriculture, forestry, fishing, and hunting; mining; construction; manufacturing and refining. During the sharp decline in GDP between 2010 and 2017, goods-producing industries saw a disproportionate reduction against the overall average, with an aggregated $10 billion+ in 2010 being nearly halved by 2017 to just $583 million.

Table 2.1 from the BEA report outlines the GDP Contribution by Industry.

[40] U.S. Department of Commerce, Bureau of Economic Analysis (BEA) 2018 Gross Domestic Product for the U.S. Virgin Islands https://www.bea.gov/system/files/2019-12/vigdp-121719.pdf

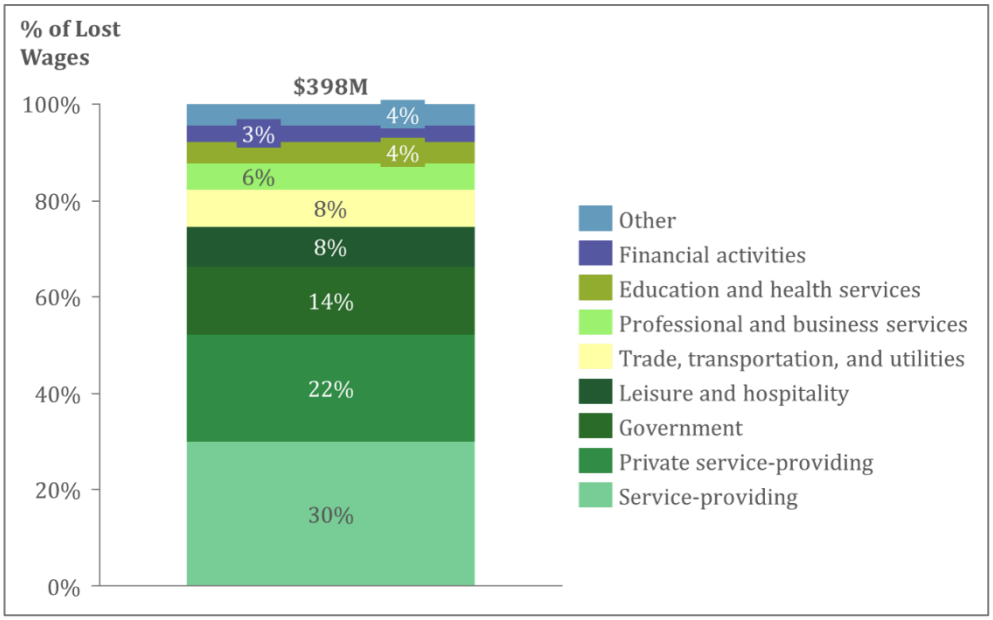
Table 2.1. Value Added by Industry

	Line	[Millions of dollars]										
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gross domestic product	1	**4,803**	**4,250**	**4,203**	**4,339**	**4,239**	**4,095**	**3,762**	**3,622**	**3,748**	**3,873**	**3,893**
Private industries	2	**4,020**	**3,443**	**3,374**	**3,461**	**3,398**	**3,331**	**3,006**	**2,867**	**2,945**	**3,040**	**3,079**
Goods-producing industries	3	1,487	993	1,042	1,035	955	824	593	519	513	509	583
Services-producing industries	4	2,533	2,450	2,332	2,426	2,443	2,507	2,413	2,348	2,432	2,531	2,496
Wholesale and retail trade	5	449	435	408	413	422	411	402	393	386	381	352
Accommodation and food services	6	405	424	400	428	436	450	463	489	517	531	487
Other services, except government	7	1,678	1,591	1,524	1,585	1,585	1,646	1,547	1,466	1,529	1,619	1,656
Government	8	**783**	**807**	**829**	**878**	**841**	**764**	**757**	**755**	**804**	**833**	**814**
Federal	9	120	125	130	141	139	139	140	136	145	143	142
Territorial	10	663	682	699	738	702	626	617	619	658	689	672

NOTE. Detail may not add to total because of rounding.

These conditions were further exacerbated by the devastation wrought by Hurricanes Irma and Maria in 2017. According to the Virgin Islands Department of Labor, the total wages lost due to the 2017 storms is estimated to be approximately $398.2 million, with over half of the expected impact concentrated on service providing sectors. This is likely an underestimate as many informal, unreported jobs (i.e. the cash economy) were probably also lost as result of the storms.

Lost Wages in the U.S. Virgin Islands by Sector



Source: U.S. Virgin Islands Department of Labor

In addition, the impacts of the 2017 hurricanes on the unemployment and underemployment rate and resulting financial burdens on residents of the Territory cannot be underestimated. According to the Federal Reserve Bank of New York, Economic Press Briefing: February 22, 2018, the Territory's job loss impact of 8% places Hurricane Irma and Maria amongst the most impactful in recent U.S. history, right after Katrina and Hugo – the latter of which also hit the U.S. Virgin Islands. In fact, 5,070 individuals claimed unemployment between September 2017 and February 2018, compared with

1,196 unemployment claims in the same period the prior year.[41] While the unemployment rate has improved in the Territory since the storms, at an average of 9.06%[42] from December 2017 through November 2018, it is still higher than the national average at 4.0%.[43]

Identifying Alternate Data Sources for Evaluation

Because the data available from the U.S. Census Bureau cannot be considered as an accurate representation of the pre- or post-storm characteristics in the U.S. Virgin Islands, all available data from federal, Territorial, non-profit organizations, as well as academic institutions, was analyzed to evaluate the most complete source of income information of the Territorial residents.

A review of the Federal Emergency Management Agency (FEMA) Individual Assistance (IA) data provided to VIHFA through a data sharing agreement executed April 2, 2018 found that information for nearly 80,000 of the estimated 106,000 residents of the U.S. Virgin Islands was captured. This represents a nearly 75% sample size, which upon preliminary review, would demonstrate a more than satisfactory sample interval and ratio to conduct representative analysis on the various data elements collected.

Sample Representation of Total Population

Island	FEMA IA Pop based on HH Comp	2010 Census Pop based on HH Comp	IA Sample Representation
STT	36,865	51,634	71.40%
STX	36,052	50,601	71.25%
STJ	4,846	4,170	116.21%
USVI Total	77,763	106,405	73.08%

The analysis concluded the information collected during the FEMA IA application process represents a more than proportionate sample size to be used as an adequate replacement for comparable self-reported demographic and income data efforts. Namely, FEMA's application asked applicants to report their *household* composition and income; a standard similar to income surveys allowable by HUD when seeking alternative means for establishing the percentage of households for service areas that are at or below 80% AMI to determine compliance with the Low- and Moderate-Income Area (LMA) national objective requirements.

[41] U. S. Virgin Islands Department of Labor
[42] Labor Force, Employment, Unemployment Trends for Virgin Islands, Labor Force Compared Over 12 Months, (2/20/18) https://www,vidolviews.org/vosnet/analyzer/trend.aspx?enc=HofuwY22SoLTS/uC+bpmi7ntbB42L7XyypLjx+HEeK0=
[43] National Employment Monthly Update, January 2019 http://www.ncsl.org/research/labor-and-employment/national-employment-monthly-update.aspx

Evaluation of FEMA IA Data

Because the U.S. Virgin Islands lacks a standardized addressing system, all agencies conducting widespread data collection efforts have trouble in accurately representing the location of homes, businesses, schools, government buildings and other structures. While the development of an addressing system is a key recovery initiative, it is evident that historical information collected is prone to geographical proximity errors. During the preliminary analysis of the FEMA IA data, it was apparent that FEMA had utilized approximations when determining the specific location of a registrant's damaged property. This became further apparent when the locations of all FEMA IA registrants were mapped and aggregated to the Census Tract, and further, the Census Block Group level.

The use of approximations withstanding, the 2010 Census population counts assigned to these Census Block Groups geographic boundaries may be inadequate for geospatial comparison. When evaluating data collection methodologies of the 2010 Census, it was discovered that much of the canvasing was primarily performed at the *estate* geographical boundary level, and desk review assigned individual residents to Census Tracts and Block Groups.[44] The Census Bureau has also recognized this is an inconsistent and unreliable way to represent population figures in the U.S. Virgin Islands and intends to align estate boundaries as block group boundaries in the 2020 Census.[45]

To ensure the use of the most reliable property location information, an alternate source of data for cross-referencing geographical proximity includes:

- Eligible applicants for the FEMA Sheltering and Temporary Essential Power (STEP) program who received a residential damage inspection, and
- Tax Parcel Information from the U.S. Virgin Islands Lieutenant Governor's Geographic Information System (GIS) Office

After a comprehensive and methodologically sound comparison between FEMA's IA registrant information, Tax Parcel and STEP data to align like names and comparable addresses, evaluating FEMA IA registered applicant names and structure addresses with a greater than 80% similarity threshold.

For example:

- FEMA Registered Address: 148 ESTATE RD #30
- Tax Parcel Recognized Address: 148-30 ANNAS RETREAT NEW QTR

These matches were manually evaluated and assigned a corresponding Estate using the Tax Parcel data.

- Tax Parcel Recognized Address: 148-30 ANNAS RETREAT NEW QTR

---

[44] U.S. Virgin Islands Detailed Crosstabulations, 2010 Census of Population and Housing https://www.census.gov/prod/cen2010/doc/dct2vi.pdf

[45] Block Groups for the 2020 Census – Final Criteria https://www.federalregister.gov/documents/2018/11/13/2018-24570/block-groups-for-the-2020-census-final-criteria

- Tax Parcel Associated Estate: ANNAS RETREAT
- Tax Parcel Census Tract for HUD Comparison: 780309602001

As a result of this analysis, over 88% of the addresses supplied during FEMA IA application intake were assigned definitive census tract identifications.

The self-reported household income and household composition supplied as part of the FEMA IA registration was then evaluated. Of the 39,800 FEMA IA applications received, approximately 34,700 households disclosed income information, which were compared to the 2017 HUD Income Limits tables[46] for the registrant's corresponding geographical area to determine the applicants' percentage of AMI. The analysis validated the hypothesis that the percentage of LMI families living in the U.S. Virgin Islands is overwhelming under-reported when projections are made using the 2010 Census data.

Results of IA Data Analysis and LMI Percentages Comparison

	Total IA HHs	HH Is LMI	HH Is LMI %	HUD % LMI
STT	16,293	10,085	61.90%	57.86%
STX	16,076	10,673	66.39%	46.30%
STJ	2,335	1,526	65.35%	54.82%
Total	**34,704**	**26,566**	**64.21%**	**52.26%**

Methodology for Determining Low- and Moderate-Income Area Benefit and Service Areas

As is now well established, the use of 2010 Census Bureau data for evaluating the projected income status of the beneficiaries within the existing established geographical boundaries unfairly represents the pre-storm and current community characteristics of the U.S. Virgin Islands. Utilizing the FEMA IA data collected immediately after the storm, which represents approximately 75% of the total U.S. Virgin Islands population, is a more comprehensive and representative income data set for the CDBG-DR funding.

4.3.1.1 HUD Approval of Adopting St. John Limits Territory-wide

In Federal Register FR–6219–N–01, released September 28, 2020, HUD announced that effective October 5, 2020, the St. John income limits may be applied territory-wide. Specifically, HUD stated: "In order to establish consistent LMI income limits across all three islands of the USVI and recognizing the high cost and other unique characteristics of the USVI identified above, the Department finds that good causes exists and waives 42 U.S.C. 5302(a)(20)(A) to the extent necessary to standardize the AMI across the entire territory of the USVI by allowing the USVI to use the area median income (as published by HUD annually with adjustments for smaller and larger families) of the Island of St. John

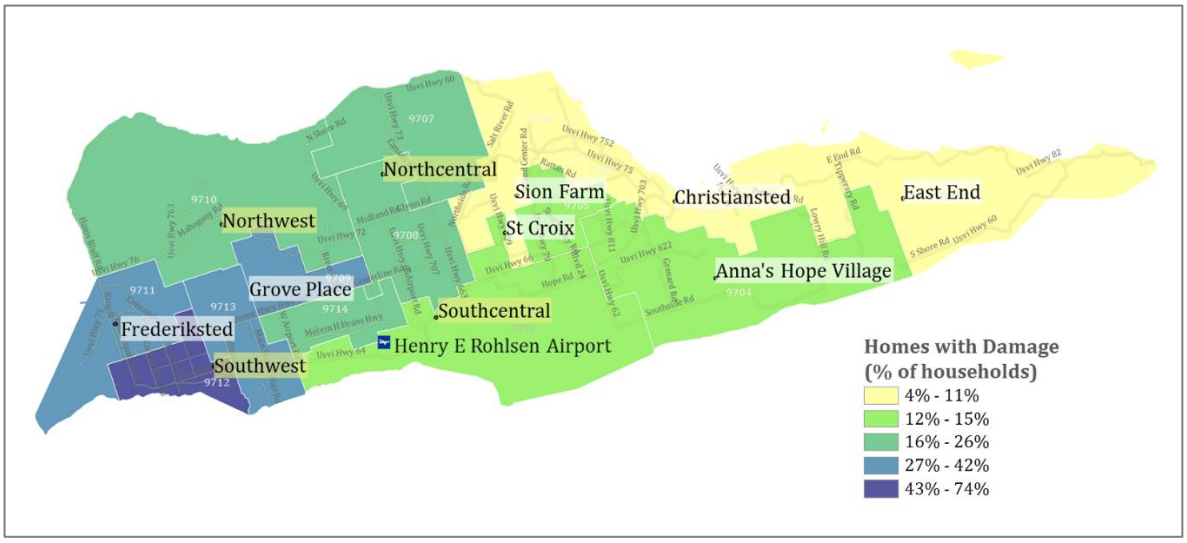
[46] HUD 2017 Income Limits https://www.huduser.gov/portal/datasets/il/il2017/2017summary.odn

for all islands in the territory, since those LMI income limits are the highest of the three islands within the Territory. This waiver also permits the use of AMI of the Island of St. John (as published by HUD annually with adjustments for smaller and larger families) for all islands in the territory whenever grant requirements necessitate the application of AMI, including when it may be necessary to calculate 120 percent of AMI. In granting this flexibility, the Department will not consider any request to lower the USVI's requirement in regard to the overall percentage of funds that must be used for activities that benefit low- and moderate-income persons."

UNMET HOUSING NEEDS

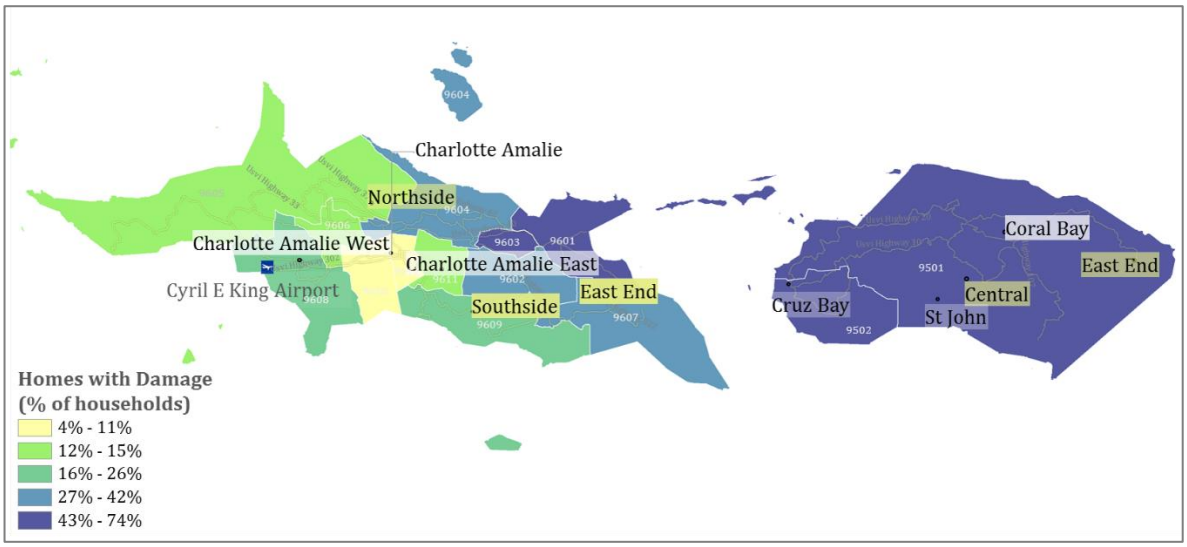
Hurricanes Irma and Maria significantly impacted the Territory's housing sector, as illustrated in *Map 13* and *Map 14*, below. Damage to housing was quantified using the methodology outlined by HUD (83 FR 5868), which categorizes damage as Minor, Major or Severe depending on the levels of flooding and/or Full Verified Loss (FVL) to either real or personal property as reported by FEMA's Individual Assistance (IA) Program. Based on the FEMA IA data as of August 10, 2018, the Territory estimates that approximately 23,301 households sustained some damage to their primary residences from one or both hurricanes, representing 54% of all housing stock on the islands. Of the 23,301 households that were impacted, 5,340 suffered Major or Severe damage; of these, approximately 2,510 are the owners' primary residences and 2,830 are renter-occupied homes. Current data also indicate an additional 12,394 owner-occupied residences and 5,567 rental units sustained Minor damage. *Table 9* describes housing damage by severity among FEMA IA applicants.

Map 13. Homes with Damage (% of Households) in St. Croix



Source: FEMA Individual Assistance Data, effective March 30, 2018.

Map 14. Homes with Damage (% of Households) in St. Thomas and St. John



Source: FEMA Individual Assistance Data, effective March 30, 2018.

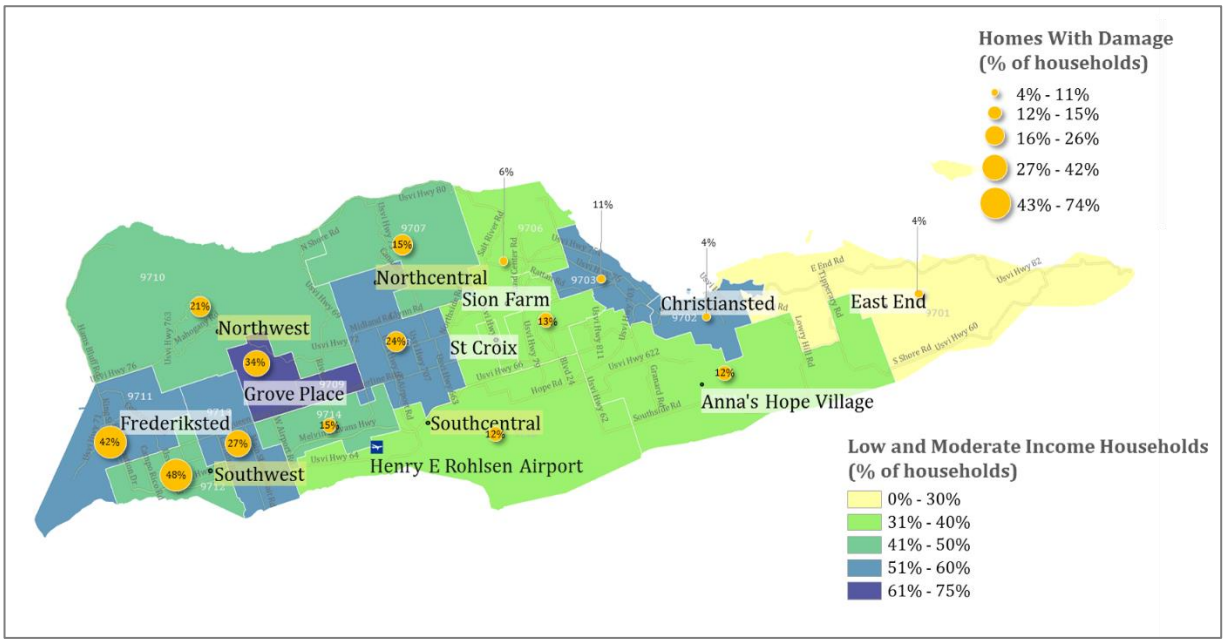
Table 9. Housing Units Damaged by Severity and Occupant Type for FEMA IA Applicants

Level of Damage	Owner		Renter		All Households		
	No. of Households	% of Damaged Households	No. of Households	% of Damaged Households	No. of Damaged Households	% of Damaged Households	% of Total Households
Minor Damage	10,022	83%	10,304	86%	20,326	84%	47%
Major Damage	1,598	13%	1,661	14%	3,259	14%	8%
Severe Damage	455	4%	52	0%	507	2%	1%
Total	**12,075**	**100%**	**12,017**	**100%**	**24,092**	**100%**	**56%**

Source: FEMA Individual Assistance Data, effective October 29, 2019.

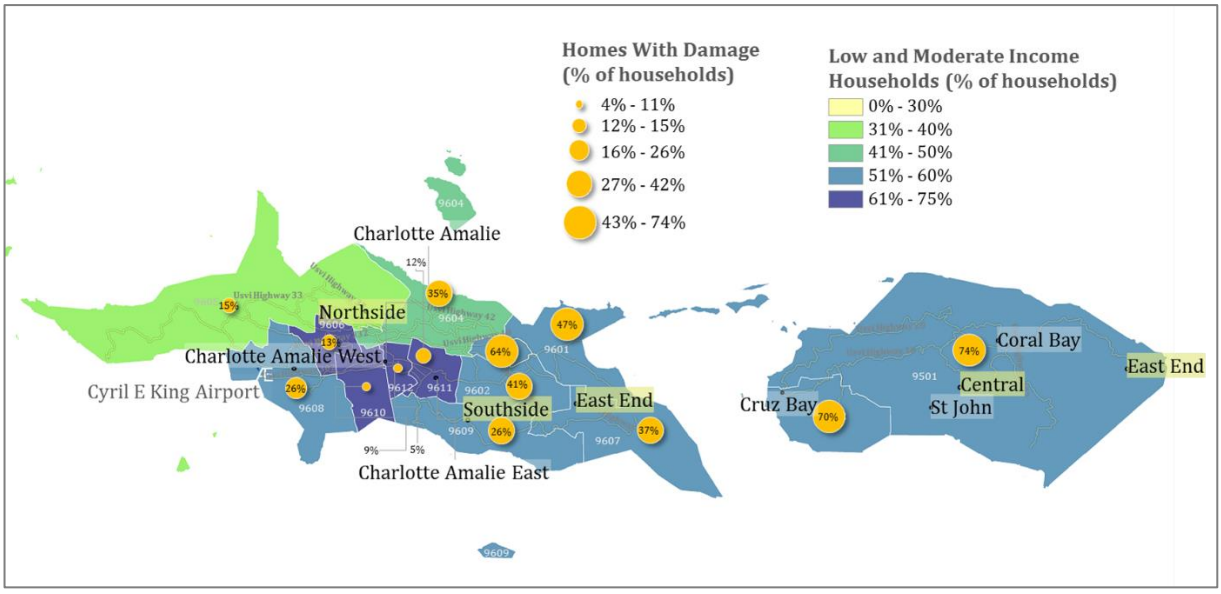
Although 12% of the housing stock on the islands suffered Major to Severe damage, the worst damage was disproportionately inflicted upon LMI households, as shown in Maps 15 and 16 as well as *Table 10* below. For this reason, the Territory is especially focused on understanding the unmet housing needs of the most vulnerable.

Map 15. LMI Households (%) and Damaged Households (%) in St. Croix



Source: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018); FEMA Individual Assistance Data, effective March 30, 2018.

Map 16. LMI Households (%) and Damaged Households (%) in St. Thomas and St. John



Source: HUD FY 2017 LMISD by State - All Block Groups, Based on 2006-2010 American Community Survey (Accessed: March 5, 2018); FEMA Individual Assistance Data, effective March 30, 2018.

Table 10. Percent of Housing Stock with Major to Severe Damage and Impact on LMI

Tenure	No. of Households with Major to Severe Damage	No. of Households with Major to Severe Damage that are LMI	% of Households with Major to Severe Damage that are LMI
Owner	2,053	1,428	70%
Renter	1,713	1,382	81%
Total	**3,766**	**2,810**	**75%**

Source: FEMA Individual Assistance Data, effective October 29, 2019.

Developing a clear picture of the impact of natural disasters on housing stock is always a challenge. While there is no single data source on damage for all types of housing, FEMA's IA program gives an initial view of losses to owner and renter-occupied housing. However, to arrive at a more comprehensive assessment of the damages to the Territory's housing stock and outline the remaining unmet needs, information has been collected directly from the following entities: (i) the Virgin Islands Housing Finance Authority (VIHFA), the Virgin Islands Housing Authority (VIHA), and the U.S. Virgin Islands Department of Human Services (DHS); (ii) organizations investing in housing recovery such as SBA and USDA; and (iii) private property managers, nonprofits, and other stakeholders involved in providing housing.

The analysis of damages and unmet housing needs was based initially on the best available data as of April 27, 2018, updated as of August 10, 2018. Using the methodology outlined in Section 4.3.6 below, the total need identified via damages to the Territory's housing stock is now estimated at $2.50 billion, an increase of approximately $210 million from the initial Action Plan. Of that amount, $1.43 billion is now currently obligated in FEMA PA for housing recovery, marking a $180 million increase from the initial Action Plan. The remaining unmet need for housing is estimated at $1.08 billion. As additional data is compiled and analyzed, the Territory expects this figure to become more accurate, though significant increases to total housing unmet need are not expected at this point.

Because of the availability of data at the time of the initial Action Plan and subsequent Amendment being developed, the unmet needs reported did not identify or exclude public housing residents in the rental universe. Now that more detailed information is available from both the Virgin Islands Housing Authority and FEMA, the unmet needs now excludes those FEMA Individual Assistance applicants who have an address associated with a VIHA property. While this reduces the assessed unmet need for renter occupied housing, a special effort has been made to reflect the remaining need associated with bringing the VIHA units to HUD's housing quality standards.

4.3.2 Characterization of Populations with Unmet Needs

Damages calculated using FEMA IA data merely scratch the surface of the level of damage that Hurricanes Irma and Maria caused to the Territory's housing stock. To begin to address the extent of

the storms' impact, it is necessary to examine their effects on homeowners, rental stock, public housing, displaced populations, LMI populations, and the most vulnerable households.

The U.S. Virgin Islands is especially focused on understanding the impact of the 2017 hurricanes on (i) the stock of affordable housing and (ii) interim and permanent supportive housing given the limited availability of both prior to the storms.

4.3.3 Impact on Homeowners

Homeowners throughout the Territory were significantly affected by Hurricanes Irma and Maria. As displayed in *Table 11* below, FEMA data indicates that 12,075 owners' primary residences sustained some degree of physical damage; of those, 2,053 owner-occupied homes sustained Major to Severe damage. These numbers reflect a reduction, from the initial analysis, based on duplicative applications, addresses, or both.

Table 11. FEMA Damage to Owner Stock

HUD-Defined Damage Categories*			No. of Damaged Housing Units	% of Total Damaged Housing Units
Level of Damage	Real Property FVL Range	Personal Property FVL Range		
Minor – Low	$1 to $2,999	$1 to $2,499	7,723	64%
Minor – High	$3,000 to $7,999	$2,500 to $3,499	2,299	19%
Major – Low	$8,000 to $14,999	$3,500 to $4,999	1,009	8%
Major – High	$15,000 to $28,800	$5,000 to $8,999	589	5%
Severe	$28,801 or more	$9,000 or more	455	4%
Total			**12,075**	**100%**

* For any given household, the Level of Damage is deemed to be the highest one in which it is placed by either Real Property or Personal Property FVL.
Source: FEMA Individual Assistance Data, effective October 29, 2019; FR 6066-N-01

The first source of funding to address the damage to homeowners was provided by FEMA IA through the Individual and Household Programs (IHP), which help owners return their homes to decent, safe, and habitable conditions. FEMA provided funding to homeowners for repairs as well as rental assistance to eligible displaced homeowners. Of the 12,075 owner-occupied households with damage on the islands, 33% accessed two or more months of rental assistance through FEMA, indicating a significant number of displaced households, at least shortly following the storms.

Homeowners who were not able to fund their temporary repairs through FEMA IA or have needs more than the $33,300 FEMA IA grant cap may be referred to the FEMA PA-funded Sheltering and Temporary Essential Power (STEP) program for emergency home repairs. STEP provided free repairs to eligible owner-occupied homes to supplement other FEMA repair programs. The STEP program was designed to allow individuals and families to find safe shelter in their own homes instead of staying at public shelters, hotels, or rentals while awaiting permanent repairs to their homes.

Although FEMA's Full Verified Loss (FVL) to real property includes the cost of restoring homes to decent, safe and habitable standards, STEP conducted a broader damage assessment for habitability. The STEP program accepted applications from homeowners beginning early February 2018. As of May 18, 2018, 9,326 applications had been received. From May, the total number of applicants increased by 1,024 for a total of 10,350 applicants as of September 5, 2018. Application review was completed for 8,962 homes and construction completed on 5,129 homes. For the 1,632 households with both FEMA and STEP damage estimates, STEP estimates were found to be $9,013 higher on average than the FEMA estimates for the same home. This confirms HUD's assertion that FEMA's FVL underrepresented the level of damage to homes (83 FR 5869) and suggested that STEP continued to address unmet needs for owner repairs, as STEP assistance does not duplicate the benefits given to homeowners by FEMA IA and can thus independently provide up to $25,000 in eligible repair expenses per households.

More than 7,000 homes were repaired through the FEMA-funded STEP program, along with 1,650 permanent roofs. There were more properties needing repairs, but FEMA did not support or approve the Virgin Islands' request for a time extension past the April 15, 2019 deadline, leaving over 750 heavily damaged homes unrepaired, needing major repair or reconstruction beyond the STEP program parameters.

No owners of homes assisted in the STEP program reported damage to their roofs in the 2019 Hurricane season, which saw Hurricane Dorian make landfall in St. Thomas before moving on to the Bahamas.

Based on current available data, as well as input from local agencies and community organizations, the Territory's owner-occupied housing needs include:

- Assisting homeowners with the reconstruction or rehabilitation of their homes, following the support of other existing programs;
- Providing case management and technical assistance to help homeowners navigate the rebuilding and reconstruction process; and
- Providing interim rental assistance to displaced homeowners based on an optional relocation policy under development.

EnVIsion Tomorrow received almost 1,600 applications for the Homeowner Rehabilitation and Reconstruction program between April 2019 and February 2020; approximately 550 either withdrew or were determined to be ineligible based on the household's income, property ownership, primary residence status or other program eligibility criteria. Of the remaining 1,045 applications reviewed for program eligibility and site inspections, a duplication of benefits review must be completed to ensure CDBG-DR funding does not pay for costs covered by other resources, such as insurance or a Small Business Administration loan.

The Rental Rehabilitation and Reconstruction component of EnVIsion Tomorrow received applications from owners of over 340 rental units, with 115 determined to be ineligible or withdrawn. Applications for the remaining 226 units are being reviewed for program eligibility, having site inspections conducted and a duplication of benefits review completed.

4.3.4 Impact on Rental Stock

Renter-occupied households were likewise affected by the storms. An estimated 8,397 rental units sustained some amount of physical damage. Of the renter-occupied households that incurred damage, 2,829 or 34% of those sustained Major or Severe damage, as indicated in *Table 12*.

Table 12. FEMA Damage to Rental Stock

HUD-Defined Damage Categories*			No. of Damaged Housing Units	% of Total Damaged Housing Units
Level of Damage	Real Property FVL	Flooding Threshold		
Minor – Low	Less than $1,000	N/A	9,062	75%
Minor – High	$1,000 to $1,999	N/A	1,242	10%
Major – Low	$2,000 to $3,499	1-4 feet of flooding on the first floor	973	8%
Major – High	$3,500 to $7,499	4-6 feet of flooding on the first floor	688	6%
Severe	$7,500 or more	Destroyed and/or 6 or more feet of flooding on the first floor	52	0%
Total			**12,017**	100%

* For any given household, the Level of Damage is deemed to be the highest one in which it is placed by either Real Property FVL or Flooding Threshold.
Source: FEMA Individual Assistance Data, effective October 29, 2019; FR 6066-N-01.

Beyond damage to their units, renters were often displaced and unable to find alternative rental units in which to live. Approximately 6,800 renter households received rental assistance from FEMA for at least two months to address this need.

The significant loss of rental units exacerbated an already constricted rental market. Even before the hurricanes, there was a significant shortage of affordable housing for LMI households. Affordable rent is defined as rent (including utilities) that is no more than 30 percent of a household's pre-tax income. The 2010 Census, which is the most recent comprehensive survey of the U.S. Virgin Islands, showed that 49% of renter households were "cost burdened," spending more than 30% of their income on housing. In fact, 25% were spending more than 50% of their income on rent.[47] The level of cost-burdened renter households by island is summarized in *Table 13*.

[47] Most recently available in 2015 Housing Demand Study; with data from the 2010 Census.

Table 13. Cost-Burdened Rental Households

Rent as % of Pre-Tax Income	% of Households in St. Croix	% of Households in St. John	% of Households in St. Thomas	% of Total USVI Households
Less than 30%	55%	42%	51%	51%
30% to 49%	22%	28%	24%	24%
50% or more	23%	30%	25%	25%

Source: 2010 U.S. Census.

In 2015, VIHFA published a Housing Demand Study, which estimated that the gap in affordable rental units was between 2,020 and 4,900 units for the U.S. Virgin Islands. The shortage of affordable rental units was exacerbated by the 2017 storms, as numerous rental units have been taken off-line during repairs while the influx of recovery contractors and volunteers coming to the Territory has increased upward pressure on rental housing stock prices, especially due to hotel closures due to storm-caused damages. As a result, a significant number of renters have been forced to "double-up" with friends or family.

Demand for rental stock is not isolated to renters: homeowners with damaged homes have themselves entered the housing market to find temporary rental housing until their homes can be adequately repaired. The market for purchasing homes also faces a supply shortage.[48] VIHFA holds a waiting list of mortgage-ready families for their first-time home buyer programs. As of March 2018, 49 families on St. Croix and 92 families on St. Thomas were on the waitlist. Currently, there are 50 households on the waiting list on St. Croix and 103 on St. Thomas. Even more households were mortgage-ready but dropped out of the program due to a long waiting period for available inventory.

Efforts to increase the supply of rental units in the U.S. Virgin Islands have been hindered by the particularly high costs of construction in the Territory. Construction costs can be prohibitively high due to both a lack of skilled labor and the high cost of shipping materials to the islands, which sit at the end of the supply chain. On St. Thomas, the cost to build can exceed $250 per square foot according to the Global Property Guide.[49] The Territory is committed to the development of affordable housing through private and public financing to combat these affordability challenges, leveraging tools like Low-Income Housing Tax Credits, Project-based Vouchers, and Rural Development Loans to spur private development.

The hurricanes also took a significant toll on federally supported housing, including public housing, Housing Choice Voucher (HCV) recipients, LIHTC properties, and other HUD-assisted housing initiatives throughout the Territory. All four of the VIHFA-managed HUD-assisted communities with 368 units on St. Croix were damaged. Current repair estimates for the properties are quoted at $20

[48] Updated in 2015 Housing Demand Study, original source 2010 Census.
[49] April 2016 Global Property Guide Property Market Report.

million. Many developers of these communities are facing spikes in insurance two to three times pre-hurricane conditions.

In addition to insurance, VIHFA is working with FEMA to secure PA resources in addition to insurance to make the repairs. The damage assessment for public housing is further described in the following section.

Based on available data and input from VIHA, VIHFA, DHS, and local communities, the Territory's rental housing needs include:

- Enabling the development of new affordable rental housing in a diverse set of ways; including small and *multi-family*, affordable and market rate rentals;
- Assisting renters in the financial position to become first time homebuyers, freeing up critical rental stock; and
- Buying down the cost of rent, thus creating affordable units.

4.3.5 Impact on Public Housing

The hurricanes caused notable damage to housing that is subsidized by the federal government, which includes public housing as well as housing financed primarily for older adults and Housing Choice Voucher (HCV) recipients. Public housing in the Territory is managed by VIHA, which oversees 26 public housing communities or 3,014 units. These units are shared between St. Thomas (9 communities, 48% of units) and St. Croix (17 communities, 52% of units).

According to preliminary estimates from mid-April 2018, 24 of 26 public housing communities in the U.S. Virgin Islands were damaged. At least four public housing communities were damaged beyond repair and are scheduled for demolition. FEMA, in conjunction with the Virgin Islands Housing Authority, continues to assess Public Housing needs in the USVI, both due to pre-existing conditions and storm related, to develop more finalized cost estimates for repair and replacement of housing developments and communities. As of March 2020, FEMA PA estimates the damage to public housing throughout the Territory is $160 million.

In St. Thomas, 119 of the 304 units at the Estate Tutu housing community were damaged beyond repair. In addition, 85 units at Lucinda Millin Home, a housing community for seniors, were seriously damaged and have now been proposed for demolition. A significant portion of the damages sustained by public housing are expected to be covered by FEMA PA. A total of 284 households displaced from Tutu were provided housing choice vouchers by HUD to lease privately owned housing. As of April 2020, 314 housing units remain vacant and uninhabitable due to damage sustained in the Hurricanes.

On the eve of the hurricanes, VIHA's waiting list for public housing units consisted of a total 587 households. On January 31, 2018 – more than four months after the hurricanes – VIHA recorded a 53% increase in demand, with 903 households in search of a public housing unit. The VIHA reported

1,106 households were waiting for a public housing unit as of February 3, 2020 (717 in the St. Thomas district and 389 in St. Croix district). This is an 88% increase in demand above pre-storm needs.

Although demand may increase, the number of households that can be served may decrease because the number of households served is limited by the HCV program annual budget. When the housing units supply is plentiful and the per unit cost is competitive, more households can be assisted within the HCV annual budget. However, after the 2017 storms, demand for the undamaged units caused higher market rents, resulting in higher per unit costs and thus reducing the number of households that VIHA can assist within the HCV annual budget.

As of March 20, 2018, VIHA was managing 1,733 tenant-based vouchers for households. By August 30, 2018, this number decreased to 1,555. A decrease in the number of vouchers may be due to residents displaced from their units moving in with family or friends, households leaving the territory after the storms, families being relocated into a VIHA housing unit, households no longer qualifying for assistance, or households leaving the program for other reasons. As of February 2020, the number of tenant-based vouchers being administered by VIHA was 1,582, representing a 2% increase over August 2018; the number of portable vouchers is 189.

The HUD-Veterans Affairs Supportive Assistance (VASH) program combines HCV and Veterans Affair's supportive services, which allocates 24 vouchers to the Territory. As of February 28, 2020, eleven families are utilizing VASH vouchers, with thirteen VASH vouchers available to eligible homeless veterans.

Similar to the renter population, voucher holders were challenged to find available rental units. While demand for vouchers remains high, VIHA reported in April 2018 that about 30% of vouchers are being returned unused, and that many households with vouchers are choosing to "port" their voucher and move away from the Territory to the mainland to find affordable housing. As of the end of August 2018, approximately seven households a week are choosing the option to port their vouchers. The storm damage to privately-owned rental units reduced the availability of rental units for households with tenant-based housing vouchers, expanding the number of households and time spent on the waiting list as estimated in *Table 14*.

The number of damaged renter-occupied housing units exceeds 12,000, based on FEMA Individual Assistance Data reported October 2019.

VIHA reported the number of families utilizing the portability feature of the HCV program as of February 28, 2020 at 196; VIHA processed 57 requests for portability for HCV participants and applications in fiscal year 2019. A participant porting their voucher in another location may stay in the relocated location until they are no longer eligible for HCV assistance. The jurisdiction where the family has relocated may accept the family into their program; however, the family may return to the Virgin Islands and continue to utilize their voucher in the Territory.

Table 14. Virgin Islands Housing Authority Units and Vouchers

Program	Number of units or vouchers	Number on Wait List
Public Housing	3,014	1,106
Housing Choice Vouchers	1,582	2,394

Source: Virgin Islands Housing Authority, February 2020; updated Number on Wait List, February 3, 2020.

Based on available data, as well as input from local departments and agencies, public housing needs include:

- Repair and rehabilitation of damage to existing public housing not covered by FEMA or other first-in funding sources; and
- Redeveloping vacant public housing and developing new public housing to increase the number of affordable units for rent.

4.3.6 Analysis of Unmet Housing Need

4.3.6.1 Methodology for Calculating Total Need

Following HUD's guidelines, the U.S. Virgin Islands used data from FEMA's IA program to quantify the total amount and severity of unmet need for housing on the islands. Homes are divided into HUD's five damage categories based on their level of real property or personal property Full Verified Loss, which FEMA quantifies based on inspections of the properties. The number of homes in each damage category is then multiplied by the expected cost to repair and reconstruct homes in that category less any assumed assistance from FEMA, SBA, and private insurance. Total unmet need is then calculated by combining the amount of unmet need in each category.

The Territory also took into account the large number of eligible households that registered with FEMA but did not receive damage inspections. Over thirty-two hundred (3,207) owner-occupied homes and 2,530 renter-occupied homes fell into this category. To include these households in the total need of the Territory, the distribution of damage categories among the inspected homes in each census tract was applied to the eligible uninspected homes. This was done separately for owner-occupied homes and for renter-occupied homes in order to apply the most accurate distribution. Using this methodology, 3,774 uninspected homes are included in the total number of damaged homes.

To estimate the expected cost to repair and reconstruct homes less assistance from FEMA and SBA for each damage category, the Territory used repair costs for major and severe damage provided in HUD's "Methodology for Funding Allocation under Public Law 115-123" Memorandum of April 10, 2018.

Standard HUD methodology only accounts for "serious unmet need," i.e. unmet need of homes that incurred major or severe damage. This assumes households with minor damage have been, or will be, covered by the network of existing support available from FEMA, SBA, and other early funding sources. However, in the U.S. Virgin Islands, households with minor damage often still have unmet housing needs, as a significant portion of households do not have insurance or are unable to pay for repairs because they are unable to afford their insurance deductibles. This is especially pronounced for homeowners, approximately 50% of whom do not hold mortgages[50], which indicates low fixed costs budgeted for housing and influences their decision to purchase insurance.

The U.S. Virgin Islands used a two-pronged approach to calculate unmet needs for homeowners and renters. First, serious unmet need is quantified by calculating damages for homes with major and severe damage. Then, remaining unmet need is quantified by calculating damages for homes with minor damage. The damage for homes with minor damage is estimated using the same multiplier used for homes with major-low damage to get from FVL to the cost of repair less assistance.

CDBG-DR funds are usually used to not only support rebuilding to pre-storm conditions, but also to build back much stronger and more resilient. For damages incurred as a result of Hurricanes Irma and Maria, the U.S. Virgin Islands will use their funds to build stronger housing infrastructure in order to mitigate the risk of damage from future disasters. Following Hurricane Sandy, HUD calculated resilience costs by multiplying estimates of total repair costs for seriously damaged homes, small businesses, and infrastructure by 30% (Docket No. FR–5696–N–06). Total repair costs are the repair costs including costs covered by insurance, SBA, FEMA, and other federal agencies. The resilience estimates of 30% of damage is intended to reflect some of the unmet needs associated with building to higher standards, especially hardening. The Territory chose to follow this precedent by adding 30% to repair costs for all levels of damage for mitigation and resilience measures.

The Territory initially compiled all funding that has been disbursed to address housing needs as of April 27, 2018. Disbursed funding has been updated as of September 2, 2018. This includes funding from FEMA IA, FEMA PA, FEMA's National Flood Insurance Program (NFIP), SBA Disaster Loans, and private insurance. The total need for housing is calculated by adding all disbursed funding for housing to the total amount of unmet housing need. To both ensure adequate representation of housing damages and avoid any *duplication of benefits*, the U.S. Virgin Islands will continue to evaluate housing needs and funding sources as more information becomes available and update its figures accordingly.

[50] Reported in the 2015 Housing Demand Study commissioned the Virgin Islands Housing Finance Authority

Table 15. Median Family Income (MFI)

Household (HH) Size by Location	Median Family Income	50% of MFI	80% of MFI	120% of MFI
St. Thomas *				
HH size: 1	$58,300	$22,950	$36,700	$55,000
HH size: 2		$26,200	$41,950	$62,900
HH size: 3		$29,500	$47,200	$70,750
HH size: 4		$32,750	$52,400	$78,600
St. Croix *				
HH size: 1	$51,900	$19,800	$31,650	$47,450
HH size: 2		$22,600	$36,200	$54,250
HH size: 3		$25,450	$40,700	$61,000
HH size: 4		$28,250	$45,200	$67,800
St. John *				
HH size: 1	$62,600	$29,500	$47,150	$70,750
HH size: 2		$33,700	$53,900	$80,850
HH size: 3		$37,900	$60,650	$90,950
HH size: 4		$42,100	$67,350	$101,050

Source: HUD 2019 Median Family Income.

*St. John Median Family Incomes to be used Territory-wide with HUD approval of Waiver Request.

4.3.6.1.1 Owner Methodology

FEMA IA data as of March 30, 2018, reports a Full Verified Loss to Real Property (RP FVL) of $82,497,516 for owner-occupied homes, and a Full Verified Loss to Personal Property (PP FVL) of $14,992,556. An owner-occupied home is determined to have unmet needs if the owner reported damage, has no insurance to cover that damage, and the home is outside the 1% flood risk hazard areas. For homeowners inside the 1% flood risk hazard area, only homeowners that do not have insurance and have an income ≤120% of AMI are considered to have unmet needs.

4.3.6.1.2 Renter Methodology

FEMA IA data as of March 30, 2018, reports a Full Verified Loss to Personal Property (PP FVL) of $22,962,186 for renters. A renter-occupied home is determined to have unmet needs if they reported damage and have a household income that is less than the higher of 50% of AMI or the federal poverty level. For properties with renters who have incomes that are higher than the higher of 50% of AMI or the federal poverty level, their landlords are presumed to have adequate insurance coverage.

Table 16. Federal Poverty Level

Household size	Poverty Threshold
1	$13,300
2	$17,120
3	$19,998
4	$26,370
5	$31,800
6	$36,576
7	$42,085
8	$47,069

Source: 2019 United States Census Bureau.

4.3.7 Funding

The main federal funding sources that are available to support impacted residents with impacts to their housing in the immediate aftermath of a disaster are FEMA Individual Assistance, low-interest loans from SBA, and insurance proceeds from NFIP. These funding streams account for the majority of the housing recovery funds made available before CDBG-DR. Other sources of funding include private insurance, philanthropic gifts, and additional programs such as STEP, which is funded by FEMA Public Assistance.

Table 17. Housing Funding Sources as of October 2019

Entity	Funded activities	Obligated or Disbursed
FEMA	Individual Assistance for Homeowners: Repair and Replacement awards	$39,628,584
FEMA	Individual Assistance for Renters: Rental Assistance awards	$12,290,261
FEMA	Individual Assistance for Homeowners and Renters: Other Needs Assistance awards	$10,055,149
FEMA	Public Assistance (Public Housing. HUD-assisted housing, and other affordable housing)	$86,177,237
FEMA	STEP - Temporary repairs to homes**	$284,448,316
SBA	Approved Disaster Loans for homes	$398,811,200
NFIP	Publicly funded flood insurance	$14,225,103
Private insurance	Payout for private insurance	$620,251,188
CDBG-DR Tranche 1 & 2	Rehabilitation and Reconstruction, New Construction, Public Affordable Housing	$367,909,440
Total		**$1,833,796,478**

***** Obligated or Disbursed are combined given some complexities in separating them for some funding sources, such as SBA. This does not included funds anticipated but not yet obligated or disbursed. **Source:** FEMA Individual Assistance Data, effective October 29, 2019; FEMA Public Assistance PWs effective November 12, 2019; SBA Disaster Loan Data from November 1, 2019; NFIP data from October 1, 2019; Division of Banking, Insurance and Financial Regulation, July 2019.

**Amount represents costs attributable to construction activities that directly benefit households; project management and other soft costs are not included.

FEMA Individual Assistance (IA)

The FEMA IA program consists of a multitude of services for individual households that have sustained losses due to disasters. Specifically, housing funds are for bridging the gap from sheltering to the return to permanent housing. These funds can be used for limited basic home repairs and replacement of essential household items as well as rental payments for temporary housing. Importantly, FEMA IA is limited to bringing a home back to a basic level of "safe and sanitary living or functioning condition" and may not account for the full extent of the home's damage or need.

FEMA Public Assistance (PA)

The FEMA PA grant program provides supplemental federal disaster grant assistance for debris removal, life-saving emergency protective measures, and the repair, replacement, or restoration of disaster-damaged publicly owned facilities, and the facilities of certain private non-profit organizations. The PA program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process. For FEMA PA Categories C – G work, as well as Category B (excluding STEP), FEMA PA requires a non-federal share or "match" of 10% on its projects. For housing, FEMA PA funds public housing and publicly assisted housing, as well as the FEMA STEP temporary repairs program. The FEMA Public Assistance

program anticipates additional *Project Worksheets* (PWs) from entities that offer affordable housing for vulnerable populations, in addition to HUD-assisted housing such as DHS, VIHFA, and nonprofit organizations.

FEMA Direct Housing Mission

FEMA's Direct Housing Mission provides support for Permanent Construction and *Reconstruction* for homes and rental properties. FEMA's unique Permanent Housing Construction authority under the Section 408 of the Stafford Act allows repairs and reconstruction under the Insular Areas Act, well beyond what the normal programs permit. This is a critical addition to the network of FEMA housing services, given it offers support with permanent (instead of temporary) construction of owner-occupied homes. In addition, the Direct Housing Mission provides Direct Leasing and Multi Family Lease and Repair programs for rental properties.

Small Business Administration (SBA) Disaster Loans

SBA provides low-interest disaster loans to businesses of all sizes, nonprofit organizations, homeowners, and renters. SBA disaster loans can be used to repair or replace items damaged or destroyed in a declared disaster, including real estate, personal property, machinery and equipment, and inventory and business assets. Homeowners may apply for up to $200,000 to replace or repair their primary residences, and both renters and homeowners may borrow up to $40,000 to replace or repair personal property, such as clothing, furniture, cars and appliances.

National Flood Insurance Program (NFIP)

NFIP aims to reduce the impact of flooding on private and public structures by providing affordable insurance to property owners, renters and businesses and by encouraging communities to adopt and enforce floodplain management regulations. These efforts help mitigate the effects of flooding on new and improved structures. Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of flood insurance.

U.S. Department of Agriculture (USDA)

USDA considers the entirety of the U.S. Virgin Islands a "rural area," making governmental agencies, individuals, businesses, and nonprofits eligible for several grant and loan programs through USDA's Rural Development program. Their most popular program, the 502 Direct Single-Family Housing Program, is focused on expanding homeownership. The agency has observed an increase in applicants who have received assistance from FEMA or SBA looking for this program to fill in the gaps for repair.

Private insurance (Division of Banking, Insurance and Financial Regulation)

Homeowners, renters and businesses may receive private insurance payments for any of their real estate and personal property that is insured. As of August 23, 2018, 1.66 billion had been disbursed in insurance claims according to the Territory's Division of Banking, Insurance, and Financial Regulation. Of this $1.66 billion in insurance claims, $620.3 million went to households with 4,420 claims settled with payments from Irma and 3,189 from Maria.[51]

Philanthropic funding

Foundations and nonprofit organizations are engaged in the *recovery* efforts in the Territory, both by channeling their existing resources and programming toward recovery and by building new capacity to address unmet needs. The Community Foundation of the Virgin Islands is one example of such organization. To date, $11 million in disaster-related grants (as of September 7, 2018) have been disbursed via their Fund for the Virgin Islands, which was established just after the storms to support a broad set of recovery efforts. An increase of $6.8 million since the initial Action Plan. Their recipients range from those that are supporting at-risk youth to case management for families to transportation of critical resources between islands. While there is a network of philanthropic and nonprofit support on the islands, funding has largely been dispersed across a diverse portfolio of recovery efforts, not targeted at housing recovery. For this reason, philanthropic contributions have not been accounted for in reducing total need in the housing sector.

4.3.8 Unmet Need

Using the methodology outlined above, the U.S. Virgin Islands currently has an identified total need of $2.5 billion, with its unmet housing need as approximately $1.08 billion. These amounts mark an approximate increase of $210 million and $40 million, respectively, from the initial Action Plan. 12,075 owner-occupied homes incurred damage because of the storm, including 2,510 that incurred serious damage. Using estimated costs to reconstruct less assumed assistance from the SBA, this amounts to an unmet need for owner-occupied homes of $575.7 million. Similarly, 8,397 renter-occupied homes incurred damage as a result of the storm, including 2,830 that incurred serious damage. Using the estimated cost to reconstruct less assumed assistance from the SBA, this amounts to an unmet need for renter-occupied homes of $499.7 million, up $3.1 million from the initial Action Plan. The figures are detailed below in *Table 18* and *Table 19*.

[51] Information on residential property private insurance compiled by Office of the Lieutenant Governor, Division of Banking, Insurance and Financial Regulation. Total numbers exclude flood insurance.

Table 18. Serious Unmet Housing Need

Category	Number of units	Serious Unmet Housing Need Multipliers	Estimated unmet need for mitigation	Total unmet need ($ value)
Owner				
Major-low	1,230	$80,142	$24,043	$128,138,104
Major-high	725	$97,672	$29,302	$92,006,400
Severe	555	$116,351	$34,905	$83,995,792
Renter				
Major-low	1,630	$80,142	$24,043	$169,872,340
Major-high	1,073	$97,672	$29,302	$136,231,891
Severe	126	$116,351	$34,905	$19,124,603
Total	**5,340**			**$629,369,130**

Source: FEMA Individual Assistance Data, effective August 10, 2018; FR 6066-N-01

Table 19. Total Unmet Housing Need

Category	Number of units	Unmet Housing Need Multipliers	Estimated unmet need for mitigation	Total unmet need ($ value)
Owner				
Minor-Low	7,723	$10,453	$3,136	$104,950,130
Minor-High	2,299	$38,329	$11,499	$114,553,233
Major-low	1,009	$80,142	$24,043	$105,122,261
Major-high	589	$97,672	$29,302	$74,787,450
Severe	455	$116,351	$34,905	$68,821,617
Renter				
Minor-Low	9,062	$10,453	$3,136	$123,146,197
Minor-High	1,242	$38,329	$11,499	$61,885,652
Major-low	973	$80,142	$24,043	$101,371,616
Major-high	688	$97,672	$29,302	$87,357,837
Severe	52	$116,351	$34,905	$7,865,328
Total	**24,092**			**$849,861,321**

Source: FEMA Individual Assistance Data, effective October 29, 2019; FR 6066-N-01

Current funding amounts to approximately $1.43 billion, consisting largely of private insurance, SBA Disaster Loans, and FEMA's STEP program for temporary home repair. By aggregating unmet need with existing funding (met need), the U.S. Virgin Islands currently calculates its total housing need as $2.5 billion, a $210 million increase from the initial Action Plan.

It should be noted that $2.5 billion is likely an underestimate of the Territory's housing needs. It does not represent the entirety of damaged homes, but rather, it is limited to individual FEMA applicants determined by FEMA to have sustained damage. It also excludes households that did not register with FEMA. Many of these households were able to apply to the STEP program after the FEMA IA period closed. As a result, it is assumed that most households that sustained damage have entered an existing program for resources. As the Territory identifies the full impact of outstanding first-in

funding support from programs like FEMA's Temporary Sheltering and Direct Lease programs, its Multi-Family Lease and Repair program for rental housing, the Permanent Housing Construction program for owner-occupied units, and the STEP program it will compile and analyze data to understand ongoing repair needs.

Notably, this needs assessment purposefully includes only owners' primary residences and rental properties. Per guidance provided by HUD, providing CDBG-DR funds to assist owners of vacation homes or non-primary residences that were damaged during the storm is prohibited.

In recognition of the extreme unmet housing needs in the U.S. Virgin Islands, the Government of the Virgin Islands (GVI) is committed to allocating substantive federal funding to ensure that Virgin Islanders have suitable permanent housing solutions. To this end, the GVI has committed more than $940 million to address a portion of overall unmet housing needs across the full range of housing programs as outlined in this Action Plan. This includes $367 million in CDBG-DR as well as more than $573 million in FEMA (Public Assistance Program, STEP, Hazard Mitigation Grant Program, Permanent Housing Construction, etc.). The Territory also plans to invest a portion of its third allocation to further meet the housing and sheltering needs of its residents. In addition, over $120 million in insurance proceeds have come to the Territory. This includes over $30 million being applied to the VI Department of Education, over $25 million to the Department of Public Works, and over $9 million to Hospital & Community Health Centers.

Efforts are also underway to analyze the GVI's non-federal contribution to the disaster. Extensive analysis is required among over 50 governmental agencies and semi-autonomous entities to determine the cost of expenses for disaster-related efforts in the Territory.

Addressing the impacts and needs of the full scope of destruction, which includes housing; public facilities; infrastructure (roads, water, electric power, wastewater, and solid waste); and the economic engines provides a holistic recovery to the Territory's residence. This Amendment dedicates a substantial percentage of the overall CDBG-DR funding to housing, in the amount of $326.7M, representing over 32% of the funding while housing is 14.5% of the total need. The percentage of CDBG-DR funding for the Infrastructure structure is 57.3%, while the percentage of the total need is 80%; the Economic Revitalization sector receives 6.5% of the CDBG-DR funding when economic impacts are 5.5% of the total need.

While housing remains the Territory's primary recovery priority, housing is not the US Virgin Islands residents' only needs. To be successful, individuals need all facets of their environment to be strengthened; they need safe and sanitary housing, viable employment opportunities, access to damage-free schools, availability of health care, drivable roads, reliable utilities, and an environment free of pollution. Hardening all of these components will ensure the resilient Virgin Islanders have an opportunity to succeed and thrive, and to withstand impacts of future disasters.

In addition to the funding identified in this Amendment, the annual allocations the Territory receives for federal Low-Income Housing Tax Credits, and assistance programs that include the Housing Trust Fund and Home Investment Partnerships Program (HOME) programs, along with HOME program income, are utilized for housing activities throughout the Territory. The CDBG-Mitigation Action Plan, currently released for public comment, contains $60,000,000 for new construction of resilient single-family homes and $100,000,000 for resilient multifamily housing units.

4.4 IMPACTS ON VULNERABLE POPULATIONS

4.4.1 Impact on Seniors

According to the 2010 Census, 10% of households in the Virgin Islands are single households comprised of an individual 65 or older. FEMA IA data bolsters this estimate of the elderly population in Territory: as of March 30, 2018, 12% of registered households were individuals 65 or older living alone, and 30% of registered households had at least one individual 65 or older in their household. Based on past experiences from other disasters, the U.S. Virgin Islands recognizes that certain senior households may face special challenges after natural disasters. For example, senior owner-occupied households in the Territory are likely to have larger unmet needs following a disaster as large proportion have fully paid off their mortgages and thus are not frequent purchasers of home insurance. Hurricanes Irma and Maria have highlighted the need to increase the resilience of seniors' homes and utilities so that vulnerable senior residents can remain housed safely during future severe weather events. Furthermore, there is a need to ensure a safe potable water supply and prevent the loss of power to maintain medicines at correct temperatures. The senior population is expected to grow significantly, as described in Section 4.3, intensifying the need for special considerations and accommodations for the aging population.

4.4.2 Special Need

According to the 2010 U.S. Census, approximately 15% of the population of the U.S. Virgin Islands have disabilities. Hurricanes Irma and Maria had a particularly negative affect on these individuals, who are more likely to have a difficult time navigating assistance programs and finding accommodating housing. Moreover, the storms also inflicted damages on support facilities and impacted service delivery for the special-needs population. For example, VIHFA's Emergency Housing Program provides close to 40 units of temporary housing for victims of domestic violence, natural disaster, catastrophic incidents and financial hardships across four complexes – three in St. Croix and one in St. Thomas. All four complexes sustained damages as a result of the hurricanes. According to the service providers managing the complexes, residents had to be either relocated to other housing. Other residents chose to leave the Territory for the mainland. Estimates of the total amount of damage incurred to the Program's facilities are still being developed. Another example is Lutheran Social Services (LSS), which is the largest provider of housing for adults and children with developmental disabilities and vulnerable seniors with 166 individuals housed in 8 properties. LSS experienced at least some amount of storm-damage to all 8 properties, requiring them to temporarily

move some of their vulnerable residents to less damaged units in partially repaired facilities or to place them with local families.

Based on available data, as well as input from relevant Territorial departments, organizations and agencies, the needs of vulnerable populations include:

- Assisting providers of housing for the vulnerable to repair or replace their damaged units;
- Supporting the expansion or new development of units for the vulnerable, especially for the aged and the mentally ill; and
- Enabling providers to support the most vulnerable through provision of services including those for mental health and crisis counseling, legal counseling and case management, enabling individuals to access the programs they need.

4.4.3 Homelessness

According to a January 2017 study conducted by the Virgin Islands Continuum of Care consortium (CoC), the organization of service providers, advocacy groups and other stakeholder agencies charged with preventing and ending homelessness, there are 381 individuals across the Territory who were homeless, 81% of whom were unsheltered. Both figures have likely increased as a result of the storms. Regardless, the hurricanes had a devastating impact on this population, many of whom were unable to find shelter during the storms. The storms caused severe damage to homeless facilities and providers serving vulnerable populations. According to the Homeless Management Information System (HMIS) maintained by the CoC, there were 14 homeless facilities operating in the Territory as of January 2017, providing a total of 136 beds. As of March 2018, only 11 of these facilities were in operation and offered only 99 beds. The lack of insurance or sufficient insurance has left several providers without the resources to repair facilities. Furthermore, several shelters are in floodplains, thereby inhibiting their ability to consistently provide assistance.

Facilities are in need of immediate and longer-term assistance to return to the level of repair they were before the storm. Few have been able to repair the structures with their own funds and all need improvements to make them more resilient for future disasters.

Based on emerging contractor estimates of repair costs for existing facilities, the unmet need for the Territory's homeless population is approximately $2 million, including efforts aimed at bringing existing facilities back to pre-storm condition and increasing the resilience of those facilities. CoC has further indicated interest in expanding facilities in order to accommodate more homeless individuals and in pursuing permanent supportive housing, transitional housing, mental health services, and substance abuse services.

4.4.4 Public Facilities

Although the risk of hurricanes and other storms are seasonally predictable, the Territory faces a lack of adequate disaster shelters where individuals and families can weather future storms and live as they transition back into permanent housing in the aftermath of a natural disaster. The current cost

estimate for constructing repairing facilities as saferoom shelters is over $70 million. Saferooms can be provided as community saferooms or as individual saferooms located in residential homes in areas that do not have community centers or other shelters.

FEMA requires an analysis of the future benefits compared to the costs of hazard mitigation projects. The FEMA Budget Cost Analysis toolkit includes a formula for establishing the benefits of saferooms to arrive at a benefit pool represented in dollars. The formula includes the number of people to be sheltered, the useful life of the shelter (typically 30 years), and the necessary construction standards such as withstanding windspeeds of 200 miles per hour (mph), to arrive at a benefit pool represented in dollars. For example, a saferoom shelter designed to withstand 200 miles per hour for a maximum of 500 people with a 30-year useful life is approximately $118 million.

4.5 UNMET INFRASTRUCTURE NEEDS

Hurricanes Irma and Maria damaged much of the critical infrastructure of the U.S. Virgin Islands. The delivery of core utility services was substantially impaired, and due to the high winds and heavy rains, the electric grid suffered catastrophic losses. The telecommunications broadband network lines, attached to the same poles as the grid's transmission and distribution lines, were destroyed. All emergency backup power generation was in overdrive, which put an excessive amount of stress on the telecommunications system. The water systems also suffered physical damage resulting in leaks and had no capacity to pump water to refill tanks because of the lack of power. Within days, the water supply ran out for entire communities, in some cases for more than a month.

Historically, addresses within the Territory were based on the Estate name and plot numbers for each parcel of land, assigned as the parcels were split or developed. This has resulted in addresses that are in a confusing pattern making it difficult to find an individual house or business, especially in the event of an emergency. The Territory has two Emergency Communications Centers (ECCs), (one located on St. Croix and one on St. Thomas), operated by VITEMA. ECC dispatchers must rely on memory of road layouts and other identifying landmarks to direct first responders, including police, fire and emergency medical services, to an incident location. Storm events may alter the environment, making the continued reliance on landmarks problematic.

The development of a consistent addressing system throughout the Territory is essential for public safety in the event of an emergency, as well as being beneficial for utility, delivery and mail services. A comprehensive addressing system would result in each property being assigned an address that will include an address number, street name, Estate name, the Island name and ZIP Code. Erecting street signs throughout the Territory will assist first responders, utility companies, delivery companies, residents and visitors in locating homes and businesses.

In addition to the utility interruptions, the storms caused extensive damage to transportation infrastructure with roads flooded, washed out, and cut off. The main airports on St. Croix and St. Thomas were closed for two weeks due to extensive damage to facilities. All seaports were shut down for three weeks due to the sinking of over 400 vessels in and around the islands due to the

hurricanes.[52] Vessel removal operations were completed by the U.S. Coast Guard and its federal partners, working with the U.S. Virgin Islands Department of Planning and Natural Resources, on February 21, 2018.[53]

The Territory has had to contend with extensive damage to other public infrastructure. Its hospitals and clinics were compromised, and hundreds of patients had to be evacuated to the mainland for essential lifesaving procedures such as dialysis. All public schools were closed for just over one month; 17 schools were severely affected with damages to more than 50% to their facilities.[54] Through the remainder of the 2017-18 school year, those schools that were open operated on a split session schedule with shortened class schedules. The new school year began on September 4th for 21 schools across the Territory, but construction delays for modular facilities postponed the start of classes for 13 others until after September 17-27th. With the threat of Tropical Storm Beryl in July and Tropical Storm Isaac in September 2018, schools were once again being prepared as emergency shelters for the Territory. This yet again demonstrates that there's a need for emergency shelters that do not impact schools and schoolchildren.

In the U.S. Virgin Islands, all major utilities are owned and operated by the government. These public utilities include power, water, waste (landfills), wastewater, and telecommunications broadband middle mile infrastructure. Transportation infrastructure is also owned and maintained by the government, including roads (both federal-aid highways and local), ports, and airports. Critical facilities and services for public safety, healthcare, and education are primarily provided by the government as well.

The repair and reconstruction of the transportation network, utility infrastructure, education system, and public health system is critical to the long-term recovery effort. Given the insular nature of the Territory, plans to improve resilience in the event of another disaster must be at the forefront of the U.S. Virgin Islands' recovery efforts. The Territory has thoroughly assessed the infrastructure damage incurred across agencies and has prioritized funding for repair and mitigation projects that are critical to operating, maintaining, and sustaining facilities and services for the public.

The U.S. Virgin Islands' primary existing sources of funding for infrastructure projects are described briefly below.

a. FEMA Public Assistance Program

The FEMA Public Assistance (PA) Program is designed to provide immediate assistance to the impacted jurisdictions for *emergency work* (under FEMA Sections 403 and 407) and *permanent work* (Sections 406 and 428) on infrastructure and community facilities. While we anticipate over $5 billion

[52] U.S. Virgin Islands Port Authority.
[53] U.S. Coast Guard.
[54] U.S. Virgin Islands Department of Education.

in PA to come to the Territory, only one-third of that amount is currently captured in approved Project Worksheets (PW). The remaining two-thirds will be identified in the coming months and years.

For the 2017 disasters, the Territory's local cost share, initially set at 25%, was reduced to 10% for (i) permanent work, and (ii) emergency work (except for STEP) beyond May 18, 2018. The STEP Program was extended to include additional funding for permanent roof repair for qualified homes of a pool of about 4,000 homes. As of August 27, 2018, $187 million in FEMA PA has been obligated and $49,248,083 is pending *obligation* for this expanded program.

As of August 27, 2018, $1,557,482,393 in FEMA PA project costs have been identified, marking an approximate decrease of $48 million decrease from the initial Action Plan. This includes $924,872,323 in emergency work and $632,610,070 in permanent work, not including administrative costs. The Territory estimates a final total of $5 billion in PA permanent work. Based on the current federal cost share requirements, the current match required for PA work is $63.4 million, including $90,414 for emergency work and $63.3 million for permanent work (see *Table 20)*. In addition, Direct Administrative Costs are anticipated to be $200,000,000 requiring a 10% local cost share of $20,000,000, see *Table 21.*

Table 20. Local Share Need for FEMA Public Assistance as of August 25, 2018

FEMA Public Assistance work	Total Project Cost	FEMA Share 90%	Local Share 10%
Permanent Work PWs already obligated that requires a non-federal share (match)	$691,681,071	$622,512,964	$69,168,107
Permanent Work PWs pending obligation that requires a non-federal share (match)	$95,036,193	$85,532,573	$9,503,619
Emergency work already obligated that requires a non-federal share (match)	$174,260,938	$156,834,843	$17,426,094
Emergency work pending obligation that requires a non-federal share (match)	$2,494,086	$2,244,677	$249,409
Total	**$963,472,288**	**$867,125,057**	**$96,347,229**

Source: FEMA Public Assistance data as of May 2020.

The local share information is based on the public assistance project worksheets currently written and either obligated or awaiting obligation. It is possible additional permanent work will develop over the next few years and new project worksheets will be written and obligated. Obligations for permanent work are anticipated to increase substantially in the coming months and years.

The FEMA PA local match estimates are based on current best available data. The Territory will work with government agencies, nonprofit organizations, and other entities eligible for FEMA PA to gather additional information related to local match. The running estimate of unmet needs will be updated as projects are reviewed and approved through the PW process. The Territory will update the actual

unmet needs related to the FEMA PA match once the CDBG-DR-funded Non-Federal Share (Match) for Disaster Recovery Program is underway and information is received directly from applicants to that program.

b. FEMA Hazard Mitigation Grant Program

The FEMA Hazard Mitigation Grant Program (HMGP) will be a critical part of the long-term recovery process in both rebuilding and protecting housing stock and vital infrastructure. These grant funds are calculated as 15% of the total FEMA IA and PA allocations attributable to the disasters. As of September 9, 2018, FEMA's HMGP projected funds ceiling for the Territory is $456 million. On May 18, 2018, the White House announced that FEMA will cover 100% of the federal cost share for HMGP. To date, $26.5 million has been obligated in HMGP funds, an increase of $14.5 million from the initial Action Plan. HMGP projects provide support across multiple infrastructure sectors and fund hazard mitigation planning activities; thus, HMGP the federal obligation will be included in the total unmet needs in Table 19 but not split across specific sectors.

c. FEMA Pre-Disaster Mitigation Program

The FEMA Pre-Disaster Mitigation Program (PDM) is designed to assist territories in implementing a sustained pre-disaster natural hazard mitigation program. The goal is to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on federal funding in the event of future disasters. This program awards planning and project grants and provides opportunities for raising public awareness reducing future losses before disasters strike.

PDM grants are funded annually by Congressional appropriations and are awarded on a nationally competitive basis. FEMA has awarded the U.S. Virgin Islands $8.2 million in PDM grants for four projects for FY 2017, including the Territorial Hazard Mitigation Plan Update. FEMA announced the availability of $235.2 million in FY 2018 for grant applications, which could be an additional source of funding for the Territory. For PDM, the Territory's local match obligation has been established at 25 percent of eligible project costs.

d. FEMA Mission Assignments

FEMA Mission Assignments (MA) are one of the most significant mechanisms FEMA uses to coordinate federal assistance under the National Response and Recovery Frameworks for mission critical emergency protective measures and debris removal. There are two types of Mission Assignments: Direct Federal Assistance (DFA) and Federal Operational Support (FOS). DFA is assistance requested from FEMA by the Territory. FOS tasks federal agencies to provide federal-to-federal support allowing FEMA to execute its response and recovery missions. For the purposes of unmet needs calculations, DFA applies to the Territory. MAs provide emergency support across multiple sectors; thus, MA obligations will be included in the total unmet needs (Table 19) but not split across specific sectors (Table 20). As of September 1, 2018, there have been 46 DFA Mission

Assignments awarded to the U.S. Virgin Islands totaling $486 million. Approximately six MAs are still operational (as of September 2018). The federal share for MAs was 100% until the extension for emergency federal cost share expired on May 3, 2018 for Hurricane Irma and May 14, 2018, for Hurricane Maria. There is no time limit for the Territory to request assistance through DFA for disaster related support.

e. Federal Highway Administration Emergency Relief (FHWA-ER)

The Federal Highway Administration (FHWA) also offers several funding programs, including an Emergency Relief program (FHWA-ER). FHWA-ER is for the repair or reconstruction of federal-aid highways and roads on federal lands which have suffered serious damage as a result of (i) natural disasters or (ii) catastrophic failures from an external cause. For this disaster, the U.S. Virgin Islands' federal share is 100%.[55] As of August 27, 2018, $32 million in FHWA-ER quick release funds have been approved for 86 total projects. This FHWA funding is expected to increase with the addition of several FHWA BUILD Transportation Discretionary Grants, for which applications were submitted on July 10, 2018.

[55] Confirmed with DOT on 9/5/18.

Table 21 Required Non-Federal Share (Match) for Disaster Recovery Programs by Category as of August 25, 2018

Disaster Relief Program	Total Project Amount	Total Amount Awarded or Obligated (Federal Share)	Federal Share of Total Project Amount		Non-federal Share Estimate of Total Project Amount	
			%	$	%	$
FEMA PA Category A (Debris Removal) [Emergency]*	$135,488,102	$93,220,650	100%	$135,488,102	0%	$0
FEMA PA Category B STEP [Emergency]*	$235,898,083	$186,650,000	100%	$235,898,083	0%	$0
FEMA PA Category B (except STEP-100%) [Emergency]*	$552,581,996	$538,870,183	100%	$552,581,996	0%	$0
FEMA PA Category B (except STEP-90%) [Emergency]*	$904,141	$904,141	90%	$813,727	10%	$90,414
FEMA PA Categories C-G [Permanent]*	$632,610,070	$407,024,700	90%	$569,349,063	10%	$63,261,007
FEMA PA Direct Administrative Costs [DAC]	$16,821	$16,821	90%	$15,139	10%	$1,682
CAT Z	$59,706,927	$7,413,548	100%	$59,706,927	0%	$0
FEMA HMGP **	$455,920,388	$26,469,377	100%	$455,920,388	0%	$0
FEMA PDM	$8,222,164	$0	75%	$6,166,623	25%	$2,055,541
FEMA MA	$486,000,000	$486,000,000	100%	$486,000,000	0%	$0
FHWA-ER	$32,000,000	$32,000,000	100%	$32,000,000	0%	$0
TOTAL	**$2,599,348,693**	**$1,778,569,420**		**$2,533,940,049**		**$65,408,644**

* Cat A is 100% Federal Share until September 15, 2018, 90% thereafter; Cat B STEP is 100% Federal Share until November 30, 2018, 90% thereafter; Cat B non-STEP and Cat C-G 90% federal share began May 18, 2018. The White House statement says "Under the President's order today, the Federal share for Other Needs Assistance under section 408 of the Stafford Act and all categories of Public Assistance is authorized at 90 percent, except for assistance previously approved at 100 percent; the 100 percent Federal cost share for debris removal and emergency protective measures is extended for 120 days, with the extension of emergency protective measures being limited to Sheltering and Temporary Essential Power (STEP); and the Federal share for hazard mitigation measures under section 404 of the Stafford Act is authorized at 100 percent of total eligible costs."[56]

** Includes 6-month lock-in amounts of $33,324,269.32 for Hurricane Irma & $422,596,118.68 for Hurricane Maria.

Source: FEMA Public Assistance data as of August 25, 2018; Hazard Mitigation Grant Program, Pre-Disaster Mitigation, and Mission Assignments program data; and Federal Highway Administration Emergency Relief program effective April 21, 2018.

f. U.S. Department of the Interior

The U.S. Department of the Interior's Office of Insular Affairs (OIA) carries out the administrative responsibilities of the Secretary of the Interior and the Assistant Secretary for Insular Areas in coordinating federal policy for U.S. territories, including the U.S. Virgin Islands. The office has indicated that it will provide the U.S. Virgin Islands with hurricane recovery funds of $4 million to $6 million.[57] On March 13, 2018, the OIA announced that $2.8 million of these funds will be dedicated to structural repairs at public schools, road rehabilitation in St. Croix, and upgrades for meter-reading technology for the Virgin Islands Water and Power Authority (WAPA).[58] On August 28, 2018, the office announced an additional $3 million in 2018 Hurricane Supplemental Funding for the U.S. Virgin Islands (USVI) to create and fund an Office of Disaster Recovery. The Office of Disaster Recovery (ODR) will monitor assess expenditures of all federal disaster assistance programs and transmit collected data through an electronic system and publication on a website to be updated monthly for transparency and awareness.[59]

Summary

Based on available data for total needs and funding sources, the current unmet need for the Territory's infrastructure is $4.99 billion, a decrease of approximately $88 million from the initial Action Plan. A sector-by-sector breakdown of the infrastructure unmet need as of August 25, 2018 is summarized in *Table 22*. [60]

[56]https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-amends-u-s-virgin-islands-disaster-declarations-2/

[57] U.S. Department of Interior.

[58] "During Two-Day Visit to USVI, Dept. of Interior Assistant Secretary Provides $2.8M in Funding," *The Virgin Islands Consortium* (March 13, 2018).

[59] Press Release, August 28,2018, DOI OIA. https://www.doi.gov/oia/interior-provides-3-million-hurricane-supplemental-funding-create-office-disaster-recovery-us

[60] Note that this analysis was done prior to Table 18 figures.

Table 22. Infrastructure Unmet Needs by Sector* as of May 2020

Sector	Emergency & Temporary Repairs	Permanent Repairs & Resilience	Total Need	Total Awarded or Obligated	Unmet need
Energy**	$594,000,000	$1,688,000,000	$2,282,000,000	$1,085,022,311	$1,196,977,689
Roads	$45,862,720	$1,200,000,000	$1,245,862,720	$50,228,165	$1,195,634,555
Education	$112,000,000	$793,000,000	$905,000,000	$140,303,174	$764,696,826
Healthcare	$225,000,000	$572,000,000	$797,000,000	$106,771,224	$690,228,776
Public and Community Facilities	$69,000,000	$700,000,000	$769,000,000	$704,443,776	$64,556,224
Waste and Wastewater	$176,300,000	$291,000,000	$467,300,000	$19,765,811	$447,534,189
Telecom	$15,600,000	$424,500,000	$440,100,000	$3,714,583	$436,385,417
Ports and Airports	$35,000,000	$111,000,000	$146,000,000	$4,935,223	$141,064,777
Water	$10,000,000	$113,000,000	$123,000,000	$1,195,339	$121,804,661
Direct Administrative Costs (DAC)	$30,000,000	$180,000,000	$210,000,000	$209,529,921	$470,079
CDBG-DR Tranches 1 and 2 - Infrastructure				$574,403,330	($574,403,330)
FCC				$197,000,000	($197,000,000)
FEMA HMGP				$461,877,749	($461,877,749)
FEMA MA				$486,000,000	($486,000,000)
Total	**$1,312,762,720**	**$6,072,500,000**	**$7,385,262,720**	**$4,045,190,606**	**$3,340,072,114**

* Most totals are rounded with the exception of total awarded and obligated.
** This only captures the emergency needs of Energy (not funds received but total damage).
Sources: FEMA Public Assistance, Hazard Mitigation Grant Program, Mission Assignments, and Pre-Disaster Mitigation program data; and Federal Highway Administration Emergency Relief program effective May 2020.

The sections below provide a detailed damage and unmet needs assessment for each infrastructure sector, ordered by highest to lowest unmet need excluding FEMA HMGP and FEMA MA funding obligations.

4.5.1 Energy

Hurricanes Irma and Maria had a devastating impact on the supply of electricity to residents and businesses across the U.S. Virgin Islands. Over 90% of all aerial power lines were damaged during the

storms, and about 13,478 poles were damaged.[61] The full extent of damage to transmission and distribution infrastructure is summarized in *Table 23*.

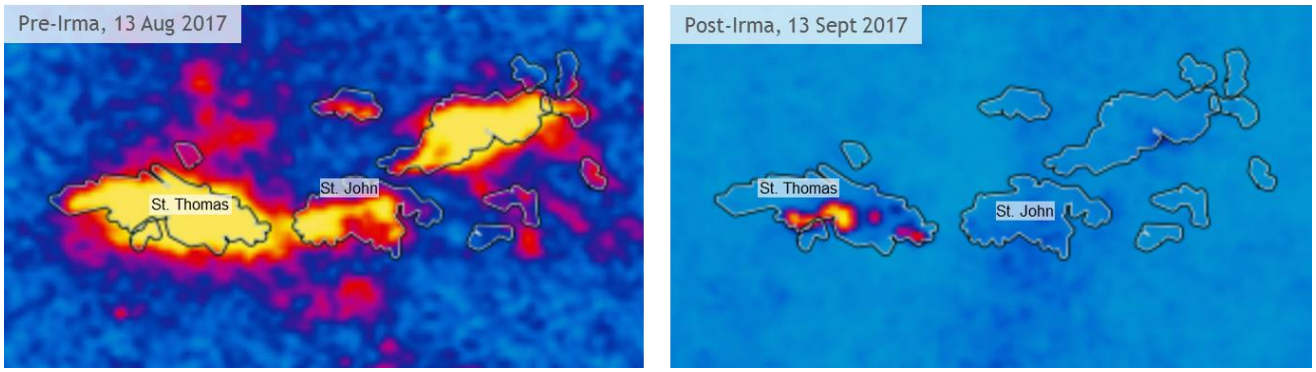
Table 23. Damage to Transmission and Distribution Infrastructure

Island	Damaged poles	Damaged line spans*	Damaged transformers
St. Croix	7,534	15,026	2,945
St. Thomas	4,408	7,968	1,900
St. John	1,536	2,313	491
Total	**13,478**	**25,307**	**5,336**

***** A line span is the distance from one pole to another. It is not a standard unit of measurement.
Source: Virgin Islands Water and Power Authority (WAPA).

Approximately 20% of generation capacity was lost for almost one month. The two 4-megawatt utility-scale solar installations in the U.S. Virgin Islands were seriously impacted: Solar I in Estate Donoe on St. Thomas incurred almost total damage and was rendered inoperable, while the Estate Spanish Town Solar Project on St. Croix experienced damage as well, although less by comparison. Damaged submarine transmission lines from St. Thomas to St. John resulted in the entire island of St. John losing its main source of power for more than 40 days. In total, more than 52,000 electric utility customers (about 95%) were left without power as a result of the hurricanes.[62] The storms' decimation of the Territory's electric grid infrastructure is illustrated by *Map 17* and *Map 18*, which show geospatial images of night-time light intensity before and after each of the storms. The before and after images, in which the most intense light appears yellow, demonstrate how much of each of the islands lost access to electricity as a result of damage to the electric grid.

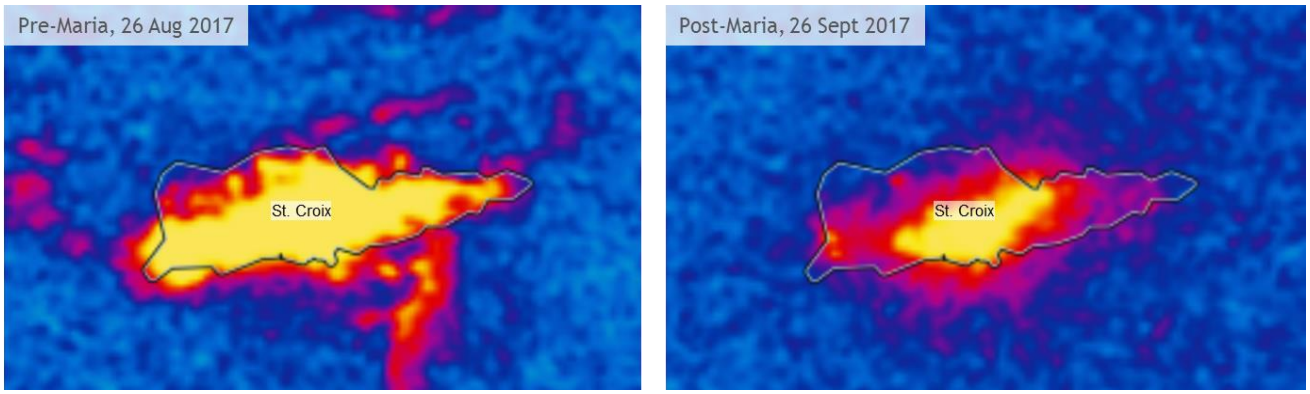
Map 17. Pre- and Post-Irma Night Lights Variation in St. Thomas and St. John



Source: NASA.

[61] U.S. Virgin Islands Water and Power Authority.
[62] U.S. Virgin Islands Water and Power Authority.

Map 18. Pre- and Post-Maria Night Lights Variation in St. Croix



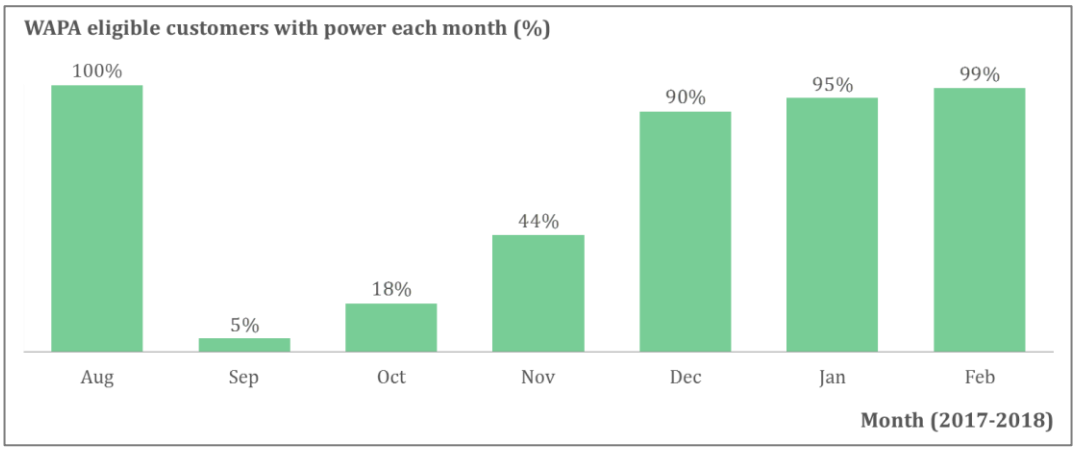
Source: NASA.

Initial recovery efforts focused on providing uninterrupted energy to hospitals and restoring power to water treatment plants and other critical facilities. Emergency activities included installing over 20,000 temporary wooden poles; repairing 1,100 miles of transmission and distribution lines; replacing 5,300 distribution transformers; and repairing four generation units to restore two plants to normal operations.[63]

Three months after Hurricane Maria, only 44% of customers had access to power. Service was restored to 90% of eligible customers by late December 2017 thanks to joint efforts by WAPA, FEMA, mutual aid utilities, other off-island contractors (including over 800 linemen and support personnel), and on-island contractors. Eligible customers are those whose homes or businesses were deemed safe for power restoration and/or reconnection; 93% of all pre-storm WAPA customers were deemed eligible. As shown in *Figure 4*, by February 2018, electricity was restored to approximately 100% of the eligible electrical customers.[64]

[63] Virgin Islands Water and Power Authority.
[64] Virgin Islands Water and Power Authority.

Figure 4. Trajectory of Power Restoration*



*Based on electrical customers deemed safe for power restoration and/or reconnection
Source: U.S. Virgin Islands Water and Power Authority.

Structural, non-storm related challenges to power delivery in the U.S. Virgin Islands affected the resilience of the electric grid. Energy infrastructure is managed by the U.S. Virgin Islands Water and Power Authority (WAPA), an autonomous government agency and the public-power utility for the Territory. WAPA produces and distributes electricity for approximately 55,000 electrical customers. The U.S. Virgin Islands has two electric grids separated by 40 miles of ocean: the system on St. Croix has a generation capacity of 100 megawatts, and the system serving St. Thomas and St. John has a capacity of 138 megawatts.[65] Residents and businesses on St. John and Water Island must rely on an underwater cable originating in St. Thomas to receive power. The isolation of the systems requires a high level of redundancy in both networks: average loads are less than half of each system's capacity in order to maintain sufficient backup power and reserves.

The high costs of purchasing and shipping fuel to the U.S. Virgin Islands, combined with inefficient and aging infrastructure, have contributed to an exceedingly high cost of electricity for residents and businesses on the islands. In 2018, the residential cost of electricity averaged more than 38.0 cents per kilowatt-hour, almost 3 times the U.S. national average (12.9 cents) and 1.8 times higher than Puerto Rico.[66] Like other remote areas, the Territory's primary source of electricity are combustion and steam turbines powered by fuel oil or propane. WAPA has made some efforts to improve generator efficiency, shift towards propane, and install more renewable generation, but fuel costs continued to add up to approximately half of the residential electricity rate as of February 2017.

High electricity rates substantially increase the cost of living and cost of conducting business in the U.S. Virgin Islands. In fact, high energy costs have deterred many hotels and businesses from opening in or relocating to the Territory. Moreover, many of the islands' existing businesses and a small

[65] U.S. Energy Information Administration.
[66] U.S. Energy Information Administration.

percentage of residential customers use their own generators for electricity, thereby further driving up the price of electricity as fixed costs of maintaining the infrastructure are spread across fewer customers.[67]

Given the dependence of emergency response, basic health and safety infrastructure, and economic activities on the provision of power, additional resilience measures will be required to ensure that the grid can withstand future hazards. Resilience and mitigation measures will also help to reduce risk to federal and state investment from future severe weather events. Such measures could include burying hundreds of miles of wires and installing composite poles to replace or upgrade wooden poles.

The costs of building a more resilient electrical power system will be significant. WAPA has identified a need of $594 million for emergency and temporary repairs to utility infrastructure from Hurricanes Irma and Maria, in addition to $1.69 billion for permanent repairs and measures to prevent future storm damage to generation, transmission, and electricity delivery infrastructure. As of August 25, 2018, $1,001,044,927 in federal funding has been awarded.[68] Hazard Mitigation Grant Program and Pre-Disaster Mitigation funding projects have also been proposed for energy infrastructure and as of August 25, 2018, $174 million in permanent work is awaiting obligation for electrical distribution system-wide repairs.

Additional sources of funding for energy infrastructure will be continuously assessed and unmet needs will be updated accordingly to ensure no duplication of benefits. Therefore, excluding the federal share, the U.S. Virgin Islands' current estimate of its unmet energy infrastructure needs totals approximately $1.28 billion, a decrease of roughly $600 million from the initial Action Plan.

4.5.2 Roads

Damage to roadways from washouts, debris, mudslides, and downed power lines caused by the hurricanes disrupted traffic and limited road access, reducing mobility in the U.S. Virgin Islands for over 30 days.

The storms brought torrential rainfall, creating runoff that entered storm water systems from roadways through culverts and ghuts. For example, Carlton Road on St. Croix reached a point of full saturation to the extent that ghuts were full and residents had to place pallets on the road in order to reach their homes. The footprints of residents in the mud filled immediately with water, demonstrating high levels of saturation. Moreover, ghuts were filled with debris and became blocked, thereby flooding nearby areas.

---

[67] U.S. Virgin Islands Hotel & Tourism Association.

[68] In the initial Action Plan, only the "obligated" amount was presented. This version presents an "awarded" amount, which is a more accurate representation.

Saturated soil and excess water created mudslides, erosion, and potholes. In some locations, roads were washed out completely. Roads experienced increased stress and damage due to both flooding and increased traffic loads. As recovery efforts continue throughout the islands, increased load from debris removal trucks and repair equipment, increased traffic due to re-routing, and road closures continue to affect roads throughout the islands. In fact, many roads remain impassable further hindering the rebuilding of homes.

The U.S. Virgin Islands has 1,120 miles of public roads across St. Croix, St. John, and St. Thomas, including 885 miles in local roads and 235 miles in federal highways. All the Territory's public roads are operated and maintained by the U.S. Virgin Islands Department of Public Works (DPW), and 21% of public roads are also federal-aid highways.[69] One of the challenges the Territory faces is of many private roads that do not belong to the government but are nonetheless critical for access (often to residential property owners in an area) that have sustained heavy damages. In some cases, the owners of these private roads lack the financial resources necessary to effectuate the appropriate repairs, while in other instances, the corporations that owned certain roads have gone defunct. This challenge is present is several instances across the Territory and has resulted in severely damaged roads in residential neighborhoods that remain unaccounted for, increasing the challenge of accessing homes for repairs.

On average, federal-aid highways fared better than local roads, because of their construction requirements in accordance with Federal Lands Highway codes. Due to the constraints of area, elevation, and population density, local roads are essential to providing access throughout the Territory. As an example, on a hillside, there could be federal-aid highways running parallel along the upper and lower ridge with a local road connecting the two, thereby providing access to homes on the hillside. The drainage design for federal-aid highway on top is not tied to the local road and thus creates more damage to the latter in the event of heavy rain by exacerbating erosion and increasing the overflow that the local road is then expected to manage through its ghuts.

DPW has completed surveying the islands to create a comprehensive view of roads damages and identify remaining emergency needs, permanent repair and reconstruction projects incorporating resilience and mitigation. DPW continues to work on developing the scope of work and cost estimates to address eroded shoulders, filled ditches and culverts, pavement settlement, mud and debris deposits, slope sloughing, and slip-outs in cut or fill slopes. As per a gubernatorial mandate established December 20, 2017, DPW will repair all roads not maintained by federal funds in accordance with FHWA's Standard Specifications for Construction from FP-14. Drainage, slope stabilization, and durable materials must be used to increase resilience for roadways, especially on major roads and routes identified for tsunami evacuation. Wind-resistance signs and traffic signals are also necessary, as well as GIS systems for tracking operations.

[69] Federal Highway Administration.

DPW expects the cost of resilience and mitigation measures to be up to $1.25 billion, an $80 million increase from the initial Action Plan, for projects to permanently repair, build up to code, and make resilient the islands' road system. This is based on a $1 million per mile cost estimate and does not include the additional anticipated costs of building in stormwater management structures and utilities, which is estimated could increase costs to $10 million per mile. As of August 25, 2018, $56.8 million in FEMA PA has been obligated for roads, marking a $10.3 million increase from the initial Action Plan. There has also been an identified need for HMGP, though the exact amount of funding has yet to be finalized. FHWA is anticipated to be an important source of funding for federal-aid roads. As of March 12, 2018, $32.2 million in FHWA-ER quick release eligible projects have been approved. The U.S. Army Corps of Engineers has the potential to fund additional drainage and stormwater management projects. The U.S. Department of Transportation's Transportation Investment Generating Economic Recovery (TIGER) grants, the Federal Transit Administration, the U.S. Department of the Interior's Office of Insular Affairs, and the Natural Resources Conservation Service's Emergency Watershed Protection Program are other potential sources of funding.

Other sources of funding for roads will be continuously assessed and unmet need will be updated accordingly to ensure no duplication of benefits. The current total unmet need for U.S. Virgin Islands' roads is approximately $1.18 billion. This amount marks an approximate increase of $60 million from the initial Action Plan.

4.5.3 Educational Facilities

The U.S. Virgin Islands' education system consists of its K-12 schools, the University of the Virgin Islands, and a few adult learning and vocational programs. The Virgin Islands' Department of Education (VIDE) serves as the U.S. Virgin Islands' largest public facility tenant with over three million square feet of space. It has over 30 schools and that served 13,805 students in the K-12 system in 2016. The University of the Virgin Islands (UVI), a public, Historically Black College and University, has campuses on all three main islands and serves as the Territory's primary institution for higher education. UVI enrolls approximately 2,500 students and has 47 undergraduate and graduate degree programs across its five colleges and schools.[70] UVI is in fact the only college or university in the USVI, with campuses on St. Croix and St. Thomas. UVI has been a Historically Black College (HBCU) since 1986. It is available to everyone and has a 98% acceptance rate. Resident tuition is an affordable $4,631. A vast majority of students (92.25%) are residents of the Territory. Finally, as the only university in the USVI, it serves an important role in the Territory, providing a variety of research and services for the community, and holding a number of events that are open to the public.

Hurricanes Irma and Maria substantially impacted the students, faculty, administration, and educational facilities. In terms of impact on facilities, the Department of Education estimates that nearly every K-12 public school suffered damage. As of August 27, 2018, 52 schools were in need of permanent work, with several schools possibly needing full reconstruction. At this time, FEMA is still

[70] University of the Virgin Islands.

determining if the 50% damage threshold was met in these instances. The need for permanent work is currently estimated at approximately $793 million, marking an increase of $117 million from the initial Action Plan. This includes contingency and resilience. The extent of damages includes leaks in roofs, flooding, structural damage, and broken windows.

Other sources of funding for healthcare infrastructure will be continuously assessed and unmet need will be updated accordingly to ensure no duplication of benefits. The total unmet need for the U.S. Virgin Islands' healthcare infrastructure is $786 million.

Table 24. Damage to the U.S. Virgin Islands' Public K-12 Educational Facilities

Percentage of school area damaged	Number of schools	Estimated cost of repair and reconstruction*
0-20%	7	$5,521,806
20-40%	14	$134,513,094
40-60%	8	$80,864,625
60-80%	13	$320,129,668
80-100%	5	$247,765,376
Not categorized	0	$0
Total	**47**	**$788,794,569**

* Estimated cost includes resilience work.
Source: U.S. Virgin Islands Department of Education (accessed on May 2020).

The U.S. Virgin Islands Department of Education has deployed temporary facilities, comprising 246 modular buildings and 6 sprung structures. As of September 4, 2018, 21 schools across the Territory opened for regular classes, but construction delays for modular facilities postponed the start of classes for 13 others until September 17-27th, with Central High School having to close again within the first week due to electrical outages. An estimated completion date for all modular facilities currently set for September 24, 2018.

As a result of the damage, most schools were closed for over a month immediately following the storms. Moreover, as of December 2017, over 9,000 students were placed in split-sessions due to lack of classroom space.[71] Based on a faculty survey conducted by the American Red Cross, the mental health of students remains a challenge in the U.S. Virgin Islands' public schools as a result of the storms. While respondents typically stated that students were coping well with school closures, part-time schedules, and the complete loss of after school programs, more than 80% of teachers in St. Thomas and. St Croix reported difficulties engaging with students and problems with morale. UVI and

[71] U.S. Virgin Islands Department of Education.

the Community Foundation of the Virgin Islands announced on March 14, 2018, that they are collaborating on a six-month survey of post-storm health, education, human services, and housing status and needs of children to fully understand this concern.[72]

UVI also suffered damages to their facilities on St. Croix, St. Thomas, and St. John, including the main campuses, the St. Croix Technology Park, and St. John Environmental Research Station. Ten of its buildings were severely damaged or destroyed, amounting to an estimated cost of $117 million to repair and reconstruct, including resiliency measures. Furthermore, all classes were cancelled for a month and 325 of nearly 2,400 enrolled students never returned after the storms. Four primary facilities for adult education and vocational training also sustained damage.

VIDE and UVI have identified emergency repair needs of $112 million, with permanent reconstruction and additional resilience and mitigation needs of $793 million. As of August 25, 2018, $1.46 million in FEMA PA project costs have been identified for VIDE and UVI. Hazard mitigation projects have also been submitted by VIDE for HMGP funding. VIDE also has several other potential funding sources, including the U.S. Department of the Interior's Office of Insular Affairs, the U.S. Department of Agriculture's Rural Development programs, and the U.S. Department of Education's Pell Grant and charter school programs.
Other sources of funding for education infrastructure will be continuously assessed and unmet need will be updated accordingly to ensure no duplication of benefits. The current total unmet need for the U.S. Virgin Islands' education infrastructure is $800 million, a $104 million decrease from the initial Action Plan.

4.5.4 Healthcare Facilities

The U.S. Virgin Islands healthcare system incurred direct damage from the hurricanes to care networks and facilities on St. Croix, St. Thomas, and St. John. This created a chain reaction of costly emergency actions required to support patients with critical care needs, including the evacuation of 784 patients to the U.S. mainland. As of March 28, 2018, some 200 residents of the U.S. Virgin Islands must remain in other U.S. jurisdictions to meet their medical needs, as life-saving procedures such as dialysis are still not available in the Territory.

The Virgin Islands Department of Health functions as both the Territory's regulatory agency and the Territorial public health agency for the U.S. Virgin Islands. The Commissioner of Health is also a member of the Virgin Islands' Territorial Hospital Board. The three main hospital facilities are the Governor Juan F. Luis Hospital on St. Croix, the Schneider Regional Medical Center on St. Thomas, and the Myrah Keating Smith Community Health Center on St. John. St. Croix also has the Charles Harwood Complex, a smaller medical clinic and primary location for Department of Health administrative staff. All these facilities were damaged during Hurricanes Irma and Maria.

[72] University of the Virgin Islands, Press Release, March 14, 2018.

Although the damaged facilities are still being used for noncritical patients, temporary clinics, including three portable operating rooms, have been built on St. Thomas and St. Croix to provide supplementary patient care and a 4,000-square foot temporary clinic is expected to be completed by the end of May 2018. The estimated cost of all emergency measures, such as these, is $225 million.

There is a critical need for permanent rebuilding of existing facilities with a safe and more resilient structure. The estimated need amounts to $572 million for permanent repair, resilience, and mitigation activities making a total need of $797 billion. As of August 25, 2018, $10.5 million has been obligated in FEMA PA for healthcare facilities, marking an $8.3 million increase from the initial Action Plan. The Department of Health has also requested HMGP funding. The Center for Disease Control, the U.S. Department of Agriculture's Rural Development programs, and private insurance are also possible sources of funding.

4.5.5 Government Facilities

The U.S. Virgin Islands' many public and community structures incurred significant damage as a result of Hurricanes Irma and Maria. Over 800 government properties were affected, including judicial, legislative, correctional, and many other types of public facilities. In fact, four historic government houses in Charlotte Amalie, Cruz Bay, Frederiksted, and Christiansted were also damaged. Moreover, essential public safety services, including police and fire service, were disrupted as a consequence of the storms.[73]

Government facilities on the islands are managed by the Territory's Department of Property and Procurement (DPP), which is also charged with printing materials for all branches of government, providing warehouse goods to all government departments, managing the government's fleet of vehicles, issuing bids and proposals, and awarding contracts.

DPP has identified repair and reconstruction needs of $69 million, of which about 60% corresponds to debris removal. It has also identified resilience and mitigation needs of $500 million. As of August 2018, $155 million has been obligated in FEMA PA. DPP also has several other potential funding sources, including FEMA's HMGP and PDM programs, as well as the Department of the Interior's Office of Insular Affairs and the U.S. Department of Agriculture's Rural Development programs.

Other sources of funding for government buildings will be continuously assessed, and unmet need will be updated accordingly to ensure no duplication of benefits. The total unmet need to date for the U.S. Virgin Islands' government facilities is $413 million, a decrease of $103 million from the initial Action Plan.

[73] U.S. Virgin Islands Department of Property and Procurement.

4.5.6 Waste and Wastewater

The U.S. Virgin Islands' waste management infrastructure was severely damaged by Hurricanes Irma and Maria. The hurricanes created an estimated 825,316 cubic yards of debris, a great deal more than the Territory's solid waste infrastructure could handle (see *Figure 5* below).[74] Furthermore, excessive storm flow and debris damaged 37 wastewater pumps, leading to an overflow of wastewater and disrupting 95% of WMA sewage service customers.[75]

Figure 5. Piles of Storm-related Debris on St. Thomas in March 2018

Source: The Washington Post.

The U.S. Virgin Islands' waste and wastewater infrastructure is managed by the Virgin Islands Waste Management Authority (WMA), a semi-autonomous government agency. WMA provides waste collection, treatment, and disposal services to protect public health and preserve the environment of the U.S. Virgin Islands. The Territory is served by two primary landfills, one in St. Croix and another in St. Thomas. There are no recycling facilities on the islands.

4.5.6.1 Waste

All of the U.S. Virgin Islands' landfills, which were almost at capacity before the storms, are now expected to reach capacity sooner than anticipated, even accounting for vegetative debris that will

[74] FEMA.
[75] U.S. Virgin Islands Waste Management Authority.

be chipped, mulched, composted, or incinerated, and other types of debris that will be shipped outside of the Territory. The sheer amount of debris was exacerbated by the over 400 destroyed vessels that required disposal. The landfills also lost power to their facilities, which halted their ability to compact waste as it arrived on sites. Illegal dumping of household waste has become widespread, requiring crews to work overtime to clear sites.

Due to limited road access and the sheer volume of debris, WMA has had to distribute at least 30 temporary bins in strategic locations across the Territory to create decentralized collection points. Costly barges were needed to transport debris to other islands, which were paid to accept the waste. Additionally, two of the U.S. Virgin Islands' four trash barges were lost during the storm, further slowing recovery efforts. Furthermore, there has already been at least one landfill fire due to lack of capacity to separate solid waste, creating more of an environmental challenge.

The current landfills must be expanded, or new sites must be found to handle additional waste. Though there is currently no recycling program on the islands, separating waste would bring multiple benefits. From an environmental perspective, recycled materials can have a second life through reuse, or commercial or industrial use. Recycling also lowers the amount of waste kept in the facility. Therefore, to improve and boost the resilience of the Territory's waste infrastructure, there should be composting to reduce the garbage, compaction to bale the metal into bundles that are easier to move, and recycling to collect the material that can be reused.

4.5.6.2 Wastewater

Most of the wastewater system suffered damage from excessive storm flows and debris caused by Hurricanes Irma and Maria. All 37 wastewater pumps were damaged. Twenty-five percent (25%) of treatment plants failed, and sludge had to be trucked to other plants for treatment. Electrical control panels and equipment had to be repaired to restart operations. Moreover, 65,000 linear feet of sewage line were significantly impacted. As a result, 95% of WMA customers experienced sewage service disruption, 30% of whom had disruptions lasting more than 30 days. At least 138,000 gallons of wastewater spilled over land and into waterways.[76]

After inspecting all wastewater systems, WMA has determined that it needs to replace and repair at least 50% of all wastewater lines and 37 wastewater pumps. To prevent storm water from backing up and overflowing the sewer system, ghuts (natural drainage waterways) and culverts (man-made drainage waterways) need to be cleaned and widened. Additional efforts are required to harden the system, including replacement of coastal conventional pumps with submersibles, burying of electrical feeder lines connected to pump stations, and backup generation for the lift stations, pump stations, and wastewater treatment plants. WMA has also identified other mitigation activities, such as creating redundant lift and pump stations with a minimum of two normal capacity pumps with backup generation. On the larger stations, there is a need for diesel pumps to provide the additional capacity

[76] Virgin Islands Waste Management Authority.

necessary during a storm event or when electrical supply and backup generation both fail. The diesel pumps should also be redundant, as no diesel pump is designed to run continuously without maintenance.

In addition to the redundant system, WMA plans to standardize equipment to more efficiently manage replacement inventory, which also increases the efficiency of the personnel by placing identical equipment at multiple facilities and reducing the amount of training required to operate non-standard plants. It also plans to extend the main lines to service areas where septic tanks or on-site treatment units are failing and implement telemetry, system control and data acquisition (SCADA) systems, or remote-control systems of the lift and pump stations for monitoring and for all plants in order to better manage outages.

To reduce storm water overflow, WMA and the U.S. Virgin Islands Department of Public Works (DPW) have proposed to eliminate combined sewers, separating storm water drainage pipes from the wastewater system. This will reduce or eliminate the potential for cross-contamination or discharge from the system. Sanitary sewer line replacement will eliminate material failure at Anna's Retreat (St. Thomas), Mon Bijou (St. Croix), and other areas. Upgrades will also include elevating controls at the stations that experienced control damage due to flooding and raising the sanitary sewer manholes on the lines in areas that flood or in the ghuts to reduce infiltration into the system. The manholes should also be lined or sealed to reduce the inflow of storm water in these areas.

Combining both waste and wastewater, WMA has identified emergency needs of $176 million, with additional repair and resilience needs of $291 million. As of August 25, 2018, $15.35 million in FEMA PA has been obligated to date. Other potential funding sources include the Environmental Protection Agency, the U.S. Department of Agriculture's Rural Development programs, and the U.S. Army Corps of Engineers, and $2.4 million for a 406 Hazard Mitigation project has been proposed to FEMA to improve an underground sewer pump station.

Other sources of funding for waste and wastewater infrastructure will be continuously assessed and unmet need will be updated accordingly to ensure no duplication of benefits. Currently, the total unmet need for the U.S. Virgin Islands' waste and wastewater infrastructure is $452 million, marking a $10 million increase from the initial Action Plan.

4.5.7 Telecommunications

Hurricanes Irma and Maria caused considerable damage to the U.S. Virgin Islands' telecommunications infrastructure, including emergency communications services, cellular service, and internet service. The damage ranged from downed radio towers to destroyed fiber optic cables, leading to halted internet, cellular, landline telephone, and radio connectivity for most residents and businesses. Intense winds damaged 11 of 50 radio towers for the U.S. Virgin Islands, thereby causing the emergency response network to lose coverage and severely hampering rescue operations. Landline telephone service was disconnected due to damages across the network, in particular aerial lines. Although it is a privately-owned service, the loss of landline telephone connectivity

disproportionately affected those who use it as their primary method of communication, such as the elderly. Furthermore, 57% of private cellular tower sites were not operable for the first month following the storms, leading to a significant decline in cellular coverage. Lastly, 75 miles of above-ground broadband fiber cables were destroyed, causing 90% of internet users to lose access. Because buoys were lost during the storms, underwater broadband cables are at a heightened risk of being damaged by marine activity. Several public computing centers were damaged by the storms, thereby halting an important access point for 40% of households that do not have at-home devices.[77]

The U.S. Virgin Islands' telecommunications infrastructure is managed by two public entities, as well as private providers. The broadband network is managed by Virgin Islands Next Generation Networks (viNGN), its radio towers are managed by the U.S. Virgin Islands Bureau of Information Technology (BIT), and its cellular network infrastructure is operated privately. According to the 2010 U.S. Census, over 13% of households did not have internet access, and many households still do not have cell phones. For broadband, the islands are connected to the U.S. mainland via underwater cables from New York and Miami, giving the Territory 20 gigabytes of bandwidth.[78] viNGN owns the middle mile fiber network and provides services to 23 Independent Service Providers (ISP), who are responsible for the last mile. The exception is last mile services to the public land mobile radio (LMR) towers, a wireless communications system that is intended for terrestrial users in vehicles and on foot. The LMR is an important piece of the public safety network that is maintained by BIT and was critical to the emergency services response efforts during the hurricanes.

In total, emergency repairs necessary to resume operations in the aftermath of the hurricanes will cost approximately 15.6 million. In preparation for future disasters, BIT has identified the need to upgrade both radio and 911 systems. The radio upgrade to P25 standards creates a common communications interface across all emergency responders, which is the industry standard. For 911 systems, BIT will upgrade to the nationally adopted digital or Internet Protocol (IP)-based 911 system, commonly referred to as Next Generation 911 (NG911). The success and reliability of 911 will be greatly improved with the implementation of NG911, as it will enhance emergency number services to create a faster, more resilient system that allows voice, photos, videos, and text messages to flow seamlessly from the public to the 911 network. NG911 will also improve public safety answering points' ability to help manage call overload, natural disasters, and transferring of 911 calls and proper jurisdictional responses based on location tracking.[79]

The telecommunications sector has estimated a need of $424 million for additional mitigation measures, which include both the planning study and implementation of an enterprise architecture which reduces the *vulnerability* and threat of cyber-attack by increasing the oversight of security and protective features for the government. Overall, BIT estimates permanent repairs and resilience measures, including upgrades to radio and 911 systems, at $31.2 million.

---

[77] Virgin Islands Next Generation Network.
[78] Virgin Islands Next Generation Network.
[79] http://www.911.gov

Recovery efforts for the government-owned broadband network emphasize hardening of viNGN's system. None of the buried cables were damaged, but approximately 75 miles of above-ground broadband cables were damaged. Proposed resiliency and mitigation projects to address the risk to viNGN infrastructure include burying aerial last-mile cable, burying and extending fiber to all radio towers, burying and extending fiber optic lines to cellular towers, burying the back-bone or middle mile of the system, burying aerial connectors to submarine facilities, and burying WAPA power lines at all fiber access points (FAPs) or continuous duty generators. viNGN has been awarded a grant from the DOI OIA for $497,000 in technology expansion and a possible grant for $500,000 for maintenance issues is pending.

As of May 4, 2020, the telecommunications sector has been awarded $3.7 million by FEMA. On September 30, 2019 the Federal Communications Commission (FCC) announced over $184 million in medium- and long-term funding for telecom recovery and improvements in the U.S. Virgin Islands. Of this, approximately $180 million will go to fixed networks for connectivity in the Territory over the next decade, and $4 million provided to mobile networks over three years.

Other sources of funding for telecommunications infrastructure will be continuously assessed and unmet need will be updated accordingly to ensure no duplication of benefits. The total unmet need for the U.S. Virgin Islands' telecommunications infrastructure is $438 million, a $1 million decrease from the initial Action Plan.

4.5.8 Ports and Airports

The airports in St. Croix and St. Thomas sustained considerable damage, including damage to terminals and radio towers, and were closed for two weeks. All seaports were closed for three weeks as a result of over 400 vessels sinking due to the storms. The damage and closures-imposed limitations on the pace of evacuation efforts and delayed the delivery of essential supplies for emergency relief. Furthermore, the closures led to a complete halt in tourism, the Territory's biggest industry.

Most of the U.S. Virgin Islands' ports are managed by the Virgin Islands Port Authority. The Port Authority operates all the main seaports on St. Croix and St. John, and 2 out of 3 of the main seaports on St. Thomas. The other port of St. Thomas is managed by The West Indian Company (WICO). Seaports play a crucial role on the islands as gateways for cruise ships, which are a large driver behind the U.S. Virgin Islands' economy.

The Territory has two international airports: The Henry E. Rohlsen Airport (STX) on St. Croix and Cyril E. King International Airport (STT) on St. Thomas. Henry E. Rohlsen Airport is served by three major domestic carriers and receives daily inter-island flights as well as cargo and military aircraft. The two-story terminal has 10 gates and sits on 1,455 acres. The Cyril E. King International Airport is one of the busiest airports in the eastern Caribbean, sometimes processing up to 900 passengers per hour. The

two-story terminal has 11 gates and sits on 280 acres. The runway at Cyril E. King Airport features one of the largest deep-water, dredged runways in the Caribbean.[80]

Some of the potential projects to support the Port Authority in repairs and resilience efforts at both the ports and airports include rebuilding facilities to meet building codes as well as hardening facilities to withstand future events. For example, inspections have finished at the STX airport and VIPA is proceeding with $8.9 million in roof replacement needs. The Port Authority has identified emergency repair needs of $35 million, with permanent reconstruction and additional resilience and mitigation needs of $111 million. The need to dredge the harbors is described in Section 4.5 in the context of Economic Revitalization Programs. As of August 25, 2018, the Port Authority had a total need of $146 million, of which $11,141,784 has been obligated in FEMA PA. Hazard mitigation projects have also been identified by the Port Authority for projected HMGP funding, though the exact amount has yet to be finalized. Other potential sources of funding include the Federal Aviation Administration, the Federal Transit Administration, the U.S. Department of Agriculture's Rural Development programs, and the U.S. Army Corps of Engineers.

Other sources of funding for airports and ports will be continuously assessed and unmet need will be updated accordingly to ensure no duplication of benefits. The current total unmet need for the U.S. Virgin Islands' airports and ports is $134.8 million, marking an approximate decrease of $10 million.

4.5.9 Water

As a result of Hurricanes Irma and Maria, the majority of residents connected to the public water network lost access to potable water.[81] Damage to the water utility network (e.g., pumps and tanks) and loss of power severely impacted water flow for over two weeks. Additionally, the sustained loss of power for over 90 days caused a loss of water in homes as electrical pumps and aerator cisterns could not operate. The lack of aeration can lead to the contamination of drinking water, especially in the event of wastewater overflows. As a precautionary measure, a boiling water advisory was implemented for 60 days. Portable backup generation had to be rented for water pumps and equipment. In many communities, tanks had less than two days of water by the time service was resumed.

The storms left lasting damage and vulnerability to water infrastructure, part of which continues to fail at higher rates post-storms. Due to the lack of adequate drinking water, approximately four million gallons of bottled water were distributed as a potable water source for domestic use. By December 2017, water service was for the most part restored throughout the Territory, though it remains intermittent in certain areas due to damages sustained by water pumps.[82]

---

[80] U.S. Virgin Islands Port Authority.
[81] U.S. Virgin Islands Water & Power Authority.
[82] U.S. Virgin Islands Water and Power Authority.

The U.S. Virgin Islands have a unique water system with no body of fresh water of its own and relative geographic isolation from other fresh water sources. The Territory's public water systems are managed by the U.S. Virgin Islands Water and Power Authority (WAPA), the same public power and water utility that manages the electric grid. Bottled water is largely imported, and most in-home water is either collected rainwater or water from the three desalination plants operated by private companies on each of the main islands. Rainwater collected in cisterns is the primary source of water for residents.[2] In fact, as of 2010, only 47% of households actually used public water and less than 30% of households relied solely on public water.[83] Instead, many residents rely on cisterns as their primary water supply, which are a critical part of their home. As of 2017, WAPA had approximately 13,000 potable water commercial and residential customers. [84]

One consequence of the low usage of public water can be illustrated by comparing the costs of using public water and private cisterns. The current WAPA rate is $25.62 for the first 1,000 gallons of water and $28.11 for the next 1,000 gallons; with an average consumption of 2,400 gallons per household per month, the average public water monthly bill is $64.97, amounting to approximately $779.69 per year.[85] By contrast, for a household that is not connected to the public water system, the household's cistern will occasionally run out of water due to a lack of rainfall and continued usage. That household will then need to purchase a water truck from a commercial provider; though there are varying sizes of water trucks, customers typically have to pay for an entire truckload of water for the service to be delivered. A 5,200-gallon truck costs between $400 and $500. These one-time, unpredictably high costs can be particularly taxing for the largely low- and moderate-income population of the Territory. If, in a given year, a household needs to purchase a water truck twice, that household's water costs will exceed the costs of an average household that is connected to the public water system. In many cases throughout the Territory, a cistern is a key component of a home.

In order to bring the U.S. Virgin Islands' water infrastructure back to its pre-hurricane capacity and boost its resilience for future disasters, the public water system will need to undergo significant repairs and improvements. Permanent repairs are required for network piping, relocating the lines to avoid cross-contamination with wastewater where required. Damaged equipment will have to be replaced at 12 pump and meter stations. To mitigate future risk, WAPA plans to extend water utility feeders to additional isolated communities. Hardened backup generators are needed at 18 pump stations to prevent loss of aeration and the associated contamination of drinking water in future cases of power loss. Segments of corroded iron distribution lines must be replaced with PVC to lower vulnerability due to soil erosion and six tanks must be restored and reinforced (e.g., sealant roofing, bracing).[2]

WAPA has identified potable water emergency repair and reconstruction needs of $10 million, with additional resilience and mitigation needs of $113 million. As of August 25, 2018, $3,392,069 has been

[83] 2010 U.S. Census.
[84] U.S. Virgin Islands Water and Power Authority.
[85] U.S. Virgin Islands Water and Power Authority.

obligated in FEMA PA for drainageways and water-related projects. Hazard mitigation projects have also been submitted by WAPA for HMGP funding. There is potential for WAPA and the U.S. Virgin Islands Department of Planning and Natural Resources (DPNR) to apply for additional funding from the Environmental Protection Agency (EPA) for programs for which the utility may qualify for such as Water Infrastructure Improvements for the Nation (WIIN) or the Water Infrastructure Finance and Innovation Act (WIFIA). However, at this time, qualification criteria are unknown.

The Environmental Protection Agency (EPA) has already allocated $100,000 to WAPA for protecting and improving water quality in the Territory.[86] The U.S. Army Corps of Engineers has authorized $400,000 (each) for two studies on flood control projects and has several potential projects under review for funding, three of which qualify for a feasibility study and carry an estimated total of $30 million for each.

These and other sources of funding for water infrastructure will be continuously assessed and unmet needs will be updated accordingly to ensure no duplication of benefits. The current total unmet need for the U.S. Virgin Islands' public water infrastructure is $119.9 million, a $3 million decrease from the initial Action Plan.

4.6 UNMET ECONOMIC NEEDS

While there is currently no single comprehensive data source that captures the full extent of damage to businesses affected by the storms, the negative impact of Hurricanes Irma and Maria on the overall economy, small businesses, and workforce in the U.S. Virgin Islands was significant and remains a critical area of concern. The vast majority of businesses, large as well as small, were impacted by the storms both directly, through damages to property, loss of inventory, and forced business closures, and indirectly, in the form of damages to critical enabling infrastructure (e.g., power outages and blocked roads).

The U.S. Virgin Islands' small businesses were hit particularly hard given their more limited access to finance and resources to withstand and recover from such devastation, further exacerbating the challenge of recovery efforts after the storms. The revitalization of the economy depends heavily on the renewed health of these small businesses, which account for approximately 85% of the U.S. Virgin Islands' businesses and 72.6% of the islands' 157 exporting companies as of 2013.[87] It is equally important to provide employment opportunities to the local workforce, which will require new skills to execute the Territory's recovery efforts.

[86] U.S. Environmental Protection Agency.
[87] 2012 Economic Census of Island Areas and Bureau of Economic Analysis, U.S. Department of Commerce.

Table 25. Number of Businesses in the U.S. Virgin Islands by Size

Size of company	Number of establishments	% of companies
All establishments	**2,414**	**100%**
Small Business (less than 20 employees)	2,053	85%
Medium and Large Business (20 or more employees)	295	12%
Establishments with no paid employees	66	3%

Source: 2012 Economic Census of Island Areas.

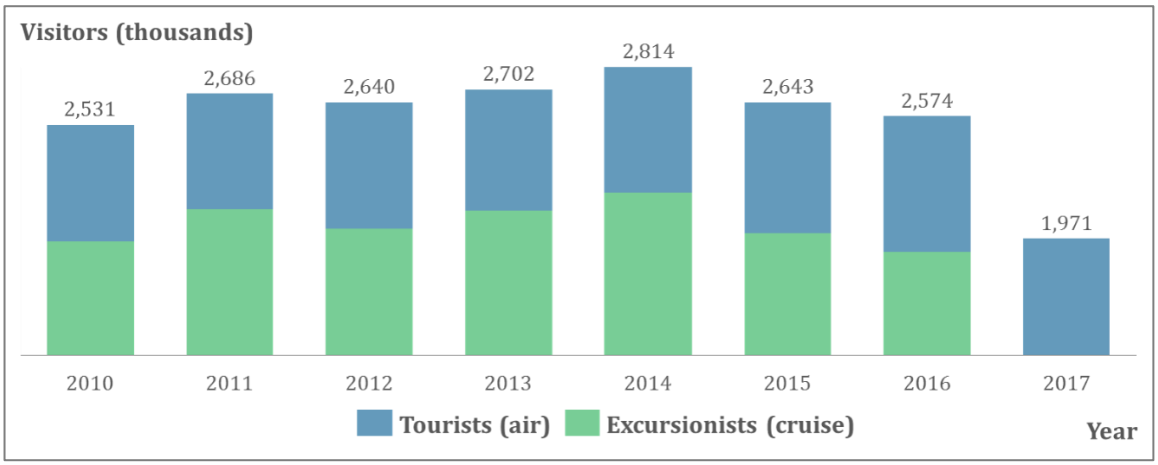
The Territory's economy has suffered significantly due to the widespread damage to infrastructure, as detailed in Section 3.6. This is particularly true for tourism, which is estimated to make up between 30% and 80% of the economy.[88] Tourism had already been on a slightly declining trajectory before the storm, as illustrated in *Figure 6* below. (Note that the 2017 data do not show the full effect of the hurricanes, as it also includes the eight months before the storm.)[89] This decline is largely driven by the emerging competition from newer, "shinier" destinations and the size of new cruise ships being too large to enter most of the Territory's ports.[90]

[88] The 30% estimate is from the World Travel and Tourism Council looking at indirect and direct effects and Euromonitor is 80%. The 80% is what was reported by different stakeholders, including the Hotel Association and the Commissioner of the USVI Department of Tourism.

[89] Note that we have used various sources to give a more nuanced picture of the complexities of the tourism industry in the USVI, a sector of great importance in the overall economy. According to one source, tourism is 28.5% of employment, but is a larger share of the economy as a whole. Our numbers look at direct and indirect impact to revenue and employment.

[90] U.S. Virgin Islands Department of Tourism.

Figure 6. Annual Visitors to the U.S. Virgin Islands, 2010-2017



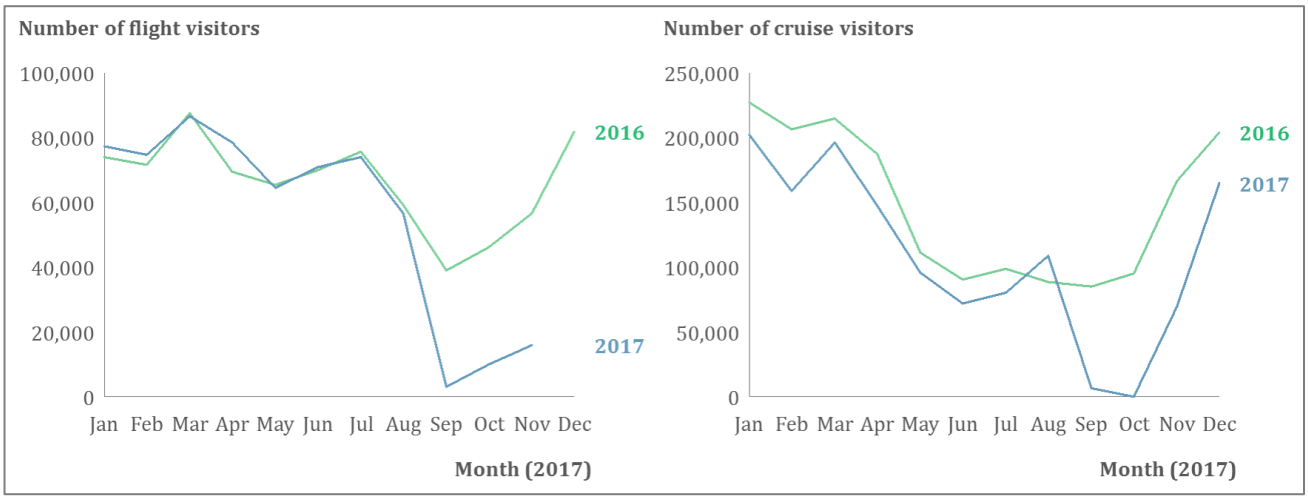
Source: U.S. Virgin Islands Bureau of Economic Research (Accessed 4/1/2018).

The storms brought tourism to a sudden halt, with all airports and seaports closing for several weeks due to the storms. Seaports on St. Croix, St. Thomas, and St. John closed on September 5, 2017 and did not reopen for three weeks. Both of the Territory's airports closed on September 6, 2017, and while the St. Thomas airport reopened on September 28, 2017, St. Croix's airport did not reopen until October 5, 2018.[91] Even as the ports reopened, tourism remained low because of a lack of accommodations (a result of disaster-caused damage to hotels) and the perception that the islands were completely decimated.[92]

The dramatic decrease in visitors to the islands, illustrated in *Figure 7*, led to a substantial decrease in revenue across the Territory. According to the U.S. Virgin Islands Bureau of Economic Research, tourists (arriving by air) spend an average of $1,373 on their visits to the islands, and excursionists (day visitors, mostly via cruises) spend an average of $224 on their visits to the Territory. Before the storms, that amounted to a total monthly spend of $84.8 million in October 2016. One year later, in October 2017, the month after the hurricanes, lost tourist spending was $49.8 million and lost excursionist spending was $21.3 million, amounting to a total lost spending of $71.1 million in that month alone. This is likely an underestimate of lost spending, as many of the visitors arriving by air in October 2017 were recovery workers, who spend significantly less than regular leisure tourists.[93]

[91] U.S. Virgin Islands Port Authority.
[92] U.S. Virgin Islands Department of Tourism.
[93] U.S. Virgin Islands Department of Tourism and U.S. Virgin Islands Hotel and Tourism Association.

Figure 7. Reduced Cruise and Air Visitors to the U.S. Virgin Islands due to 2017 Hurricanes



Source: The U.S. Virgin Islands' Bureau of Economic Research (Accessed 4/1/2018)

The sharp decline in tourism had a ripple effect across much of the Territory's economy, which relies largely on visitors' spending. The World Travel and Tourism Council (WTTC) has captured the direct, indirect, and induced effects of tourism on the economy of the U.S. Virgin Islands. Direct impacts of tourism are felt through accommodations, transportation, entertainment, attractions, and retail. Tourism has an additional, indirect impact through travel and tourism investing, government spending, and impact of purchases from suppliers, as well as an induced impact, through spending of both direct and indirect tourism employees. For 2017, the WTTC estimated that the total contribution of tourism to the U.S. Virgin Islands' GDP was 31% and total contribution to employment was 28.5%.[94]

As expected, the reduction in visitors and closure of hotels has led to a significant drop in direct tourism revenue. Suppliers, such as food, laundry, and apparel, experienced a drop-in business as a result of the indirect effect of tourism. As a consequence of the high number of business closures and employees that were laid off from direct tourism businesses and indirect businesses, the local population has had less disposable income to spend. Therefore, even businesses that are not tourism related, such as gyms, dry cleaners, or beauty salons, are experiencing declining revenues.[95] This has had serious implications for tax revenue, small businesses, and the low- and moderate-income individuals who rely on tourism service industry jobs.

Total tourism-related losses caused by the 2017 disasters are expected to approach $1 billion over the 12 months following the storms, amounting to almost 70% of the total revenue generated by tourism in 2016.[96]

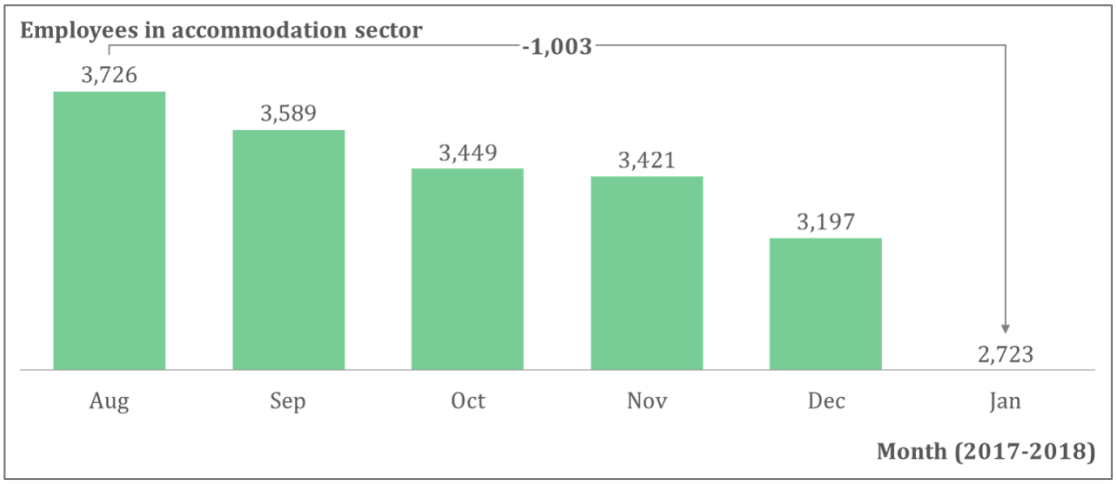
---

[94] WTTC U.S. Virgin Islands 2017 Report. This figure refers to sector-wide employment and includes direct contribution and indirect contributions including wider effects from investment, the supply chain and induced economic impacts.
[95] WTTC U.S. Virgin Islands 2017 Report.
[96] WTTC 2017 Travel and Tourism Economic Impact Report.

In terms of accommodations, hotels of all sizes, but especially large resorts, took a beating from the hurricanes. Of the top ten largest hotels on the islands, seven are still closed as of April 2018. Most have indicated that they will not be able to open until late 2018, if not early 2019. Marriott's Frenchman's Reef Resort on St. Thomas, one of the islands' largest employers, for example, sustained over $400 million in damages and will not reopen until 2020.[97]

Given the scale of hotel closures caused by the storms, the Territory-wide hotel occupancy rate averaged 11% in the first quarter of 2018 fiscal year compared to 51% in fiscal year 2017. Before the storm, there were approximately 4,500 accommodations available compared to an estimated amount of 1,800 currently available.[98] While some hotels are making ends meet despite the continued drop in tourism (largely thanks to the influx of recovery workers), many of the largest hotels that are part of hotel chains either relocated employees to other hotels outside the Territory or kept employees on payroll (primarily to help with cleanup work through the end of 2017).[99] Most of these hotels have had to lay off hundreds of employees while they rebuild, which is reflected in the monthly reduction in employment in the accommodations sector following the storms shown in *Figure 8*.

Figure 8. Monthly Employment in the U.S. Virgin Islands' Accommodations Sector



Source: Virgin Islands Department of Labor (Accessed 4/1/2018).

[97] "Estimated Cost to Rebuild Frenchman's Reef Marriott Resort Now $400 Million; V.I. Government Gets Access to Over $400 Million in Federal Loans," *The Virgin Islands Consortium* (November 11, 2017). ;"Frenchman Reef's Owner Request More EDC Benefits to Renovate," *The Virgin Islands Consortium* (August 8, 2017).
[98] US Virgin Islands Economic Review & Outlook Fiscal Year-to-Date May 2018
[99] U.S. Virgin Islands Hotel & Tourism Association.

Most importantly, the storms overwhelmingly affected low- and moderate-income households. With an average annual wage of $25,985, the majority of leisure and hospitality workers remain below the HUD-estimated one-person household low-income threshold for the U.S. Virgin Islands.[100]

Before the storms, the economy of the U.S. Virgin Islands already faced several challenges. Due to its remote location, the islands are at the end of the supply chain, resulting in a particularly high cost of imported goods and materials. Additionally, the cost of power in the Territory is almost three times the U.S. average, leading to both a higher cost of living and of doing business.[101] There are also regulatory challenges associated with the 2004 Jobs Act residency and income source requirements for tax exemption eligibility. Only income generated outside the Territory is eligible for exemptions and the IRS physical presence requirement for tax residency in the U.S. Virgin Islands is 50% higher than for any State. These restrictions are especially burdensome to businesses that require a moving sales force. Lastly, the economy is also hindered by a population which has been declining since 2000, largely as a result of emigration to the mainland U.S. (see demographic profile in Section 4.3).[102]

The U.S. Virgin Islands' economy also lacks a suitably skilled workforce which could help offset some of the competitive challenges described above. In a 2015 survey distributed by the Bureau of Economic Research to 81 local businesses, half or more rated the local workforce as "poor" in 11 of 12 categories of evaluation, including entry level skills, professionalism, productivity, and computer skills. Furthermore, there is limited offering for certified vocational training for interested residents in the Territory. The availability of skilled labor continues to preempt the relocation, growth, and creation of new, high-value businesses in the U.S. Virgin Islands.

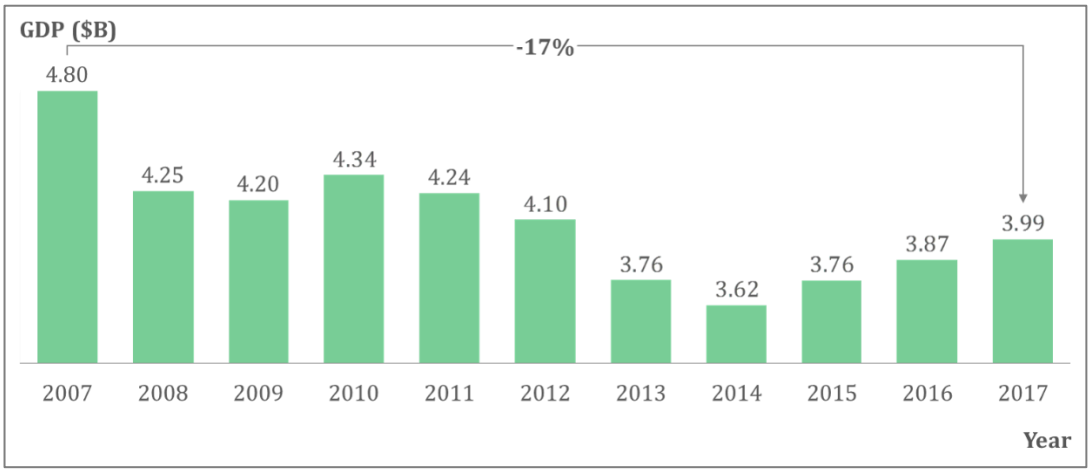
Even prior to the Hurricanes, the economy was on a downward trajectory, experiencing a declining GDP from 2007 to 2014, as shown in *Figure 9*. This downward trend was exacerbated by the 2012 closure of the HOVENSA oil refinery on St. Croix, previously the largest private employer on the islands.[103] The HOVENSA oil refinery, which opened on St. Croix in 1966, was a joint venture between the Hess Corporation and Petróleos de Venezuela (PDVSA) and employed approximately 2,200 workers. The refinery converted raw crude oil (primarily from Venezuela) into heating oil and gasoline, which it then sold to other Caribbean islands, the U.S. Gulf Coast, and the eastern seaboard.[104] HOVENSA started to struggle in the 2000s due to reduced demand for refined crude

[100] U.S. Virgin Islands Bureau of Economic Research. Average annual wage in leisure and hospitality industry is estimated on the basis of the 2013 Annual Wages Survey (reported in the 2015 Housing Demand Study commissioned the Virgin Islands Housing Finance Authority) and assumed to have increased along with inflation between 2013 and 2017 (7.4%). The HUD-estimated 2017 one-person household low-income threshold was $34,400 for St. Thomas, $38,550 for St. John, and $27,850 for St. Croix.
[101] U.S. Energy Information Administration.
[102] World Bank.
[103] U.S. Virgin Islands Bureau of Economic Research.
[104] The Puerto Rico Herald (April 2002).

products as natural gas became more popular and less expensive. This was exacerbated by the 2008 recession and a Clean Air Act penalty of $5.3 million in 2011.[105]

HOVENSA's closing in 2012 reduced employment on the Territory by almost 5%, increasing poverty levels and making the economy even more dependent on tourism.[106] The closure also reduced annual tax revenue by an estimated $92 million, contributing to the Territory's rising level of public debt, which is currently at 72% of GDP.[107]

Figure 9. U.S. Virgin Islands' Annual GDP, 2007-2017



Source: Euromonitor International (Accessed 3/20/2018)

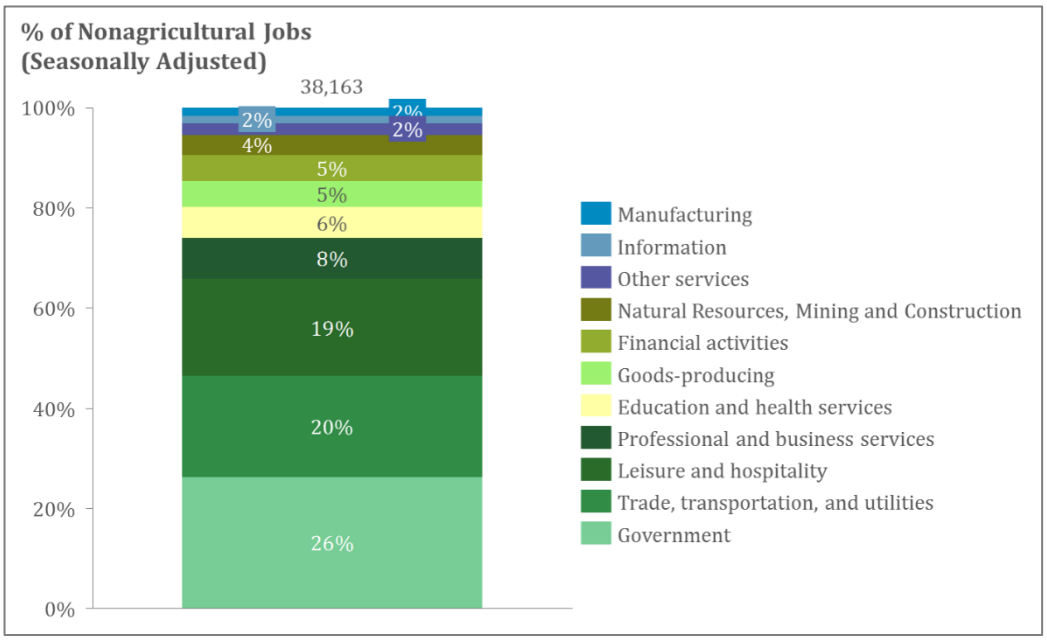
On July 31, 2018, The Government House announced Governor Kenneth Mapp's approval of an agreement with Limetree Bay Terminals, LLC to resume oil refining operations on St. Croix. The agreement is expected to create an estimated 1,300 construction jobs and as many as 700 long-term positions in addition to the hundreds of Virgin Islanders already employed at Limetree's oil terminal storage facility. The reopening of the refinery will inject hundreds of millions of dollars into the economy, providing support to new and existing businesses.

The closing of HOVENSA meant the loss of the U.S. Virgin Islands' primary import and export base, thereby turning the economy into one that was primarily locally-focused, with the exception of tourism.[108] Tourism is now the largest employer, making the Territory especially vulnerable to tourism-specific fluctuations. In fact, the World Travel & Tourism Council estimates that tourism is responsible for over 12,000 jobs, almost one-third of total employment in the Territory. While leisure and hospitality account for just 19% of nonagricultural jobs (see

[105] Environmental Protection Agency
[106] U.S. Virgin Islands Department of Labor (accessed 4/3/2018).
[107] U.S. Dept. of Labor ETA (2012); U.S. Government Accountability Office.
[108] The U.S. Virgin Islands Department of Labor market information

Figure 10 below), the total impact of tourism is felt across all different sectors, including trade, transportation, utilities, and services.[109]

Figure 10. Employment by Sector in the U.S. Virgin Islands (2017)



Source: The U.S. Virgin Islands Department of Labor

Government jobs also account for a large share of total employment (26%). One other industry of note is the U.S. Virgin Islands' rum manufacturing industry, consisting mainly of the Territory's two distilleries, Cruzan Rum and Diageo's Captain Morgan, each of which generates over $100 million in tax revenue annually.[110] During the first two quarters of fiscal year 2018, the amount of rum shipments to the United States declined approximately 11% compared to the first six-months of fiscal year 2017. March 2018 fiscal year-to-date rum excise tax collections were $125.7 million.[111]

Economic Damage and Loss Assessment

There are various ways to assess overall economic impact of disasters. HUD's standard approach is to estimate the total value of SBA Disaster Loans for small businesses. However, for the U.S. Virgin Islands, this would considerably underestimate the economic impact of the 2017 hurricanes, as small businesses on the Territory tend not to qualify for SBA loans. As of April 27, 2018, only 40% of small

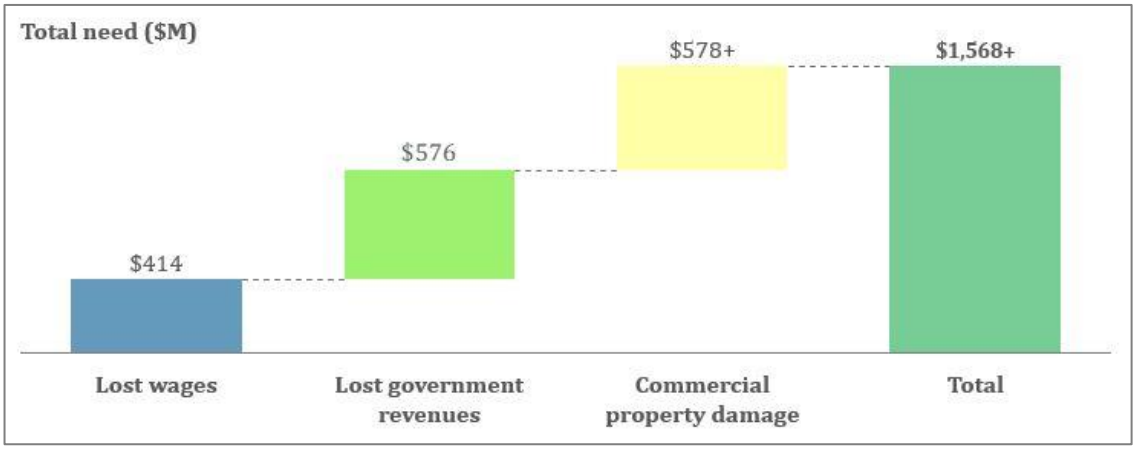
[109] 19% is only the direct impact in leisure and hospitality - the most measured NAICs code for a portion of the employment in the sector.
[110] The U.S. Virgin Islands Bureau of Economic Research (October 2010)
[111] US Virgin Islands Economic Review & Outlook Fiscal Year-to-Date May 2017.

businesses have qualified for SBA loans. The businesses that qualify for SBA loans tend to be larger or more established businesses with debt capacity.

Given the far-reaching impact of the storms, the total damages to the U.S. Virgin Islands' economy are calculated by aggregating lost wages, lost government tax revenue, and damage to commercial property. This approach yields approximately $1.57 billion in damages to the U.S. Virgin Islands economy as a result of Hurricanes Irma and Maria. This revised calculation marks an approximate increase of $30 million from the initial Action Plan.

Lost wages across the economy due to lower employment are calculated by multiplying the lost monthly employment figures by sector by the average pre-storm sector after-tax wage levels. Lost government revenue is estimated by adding projected storms-related tax receipt losses through 2020. Finally, the total amount of physical damage to businesses (real estate and content loss) is calculated by adding (i) the value of all approved as well as rejected SBA small business disaster loan applications and (ii) the total damage to some of the islands' largest businesses that are not ineligible for SBA small business disaster loans. The results of these calculations are illustrated in *Figure 11* below.

Figure 11. Economic Impact of Hurricanes Irma and Maria on the U.S. Virgin Islands

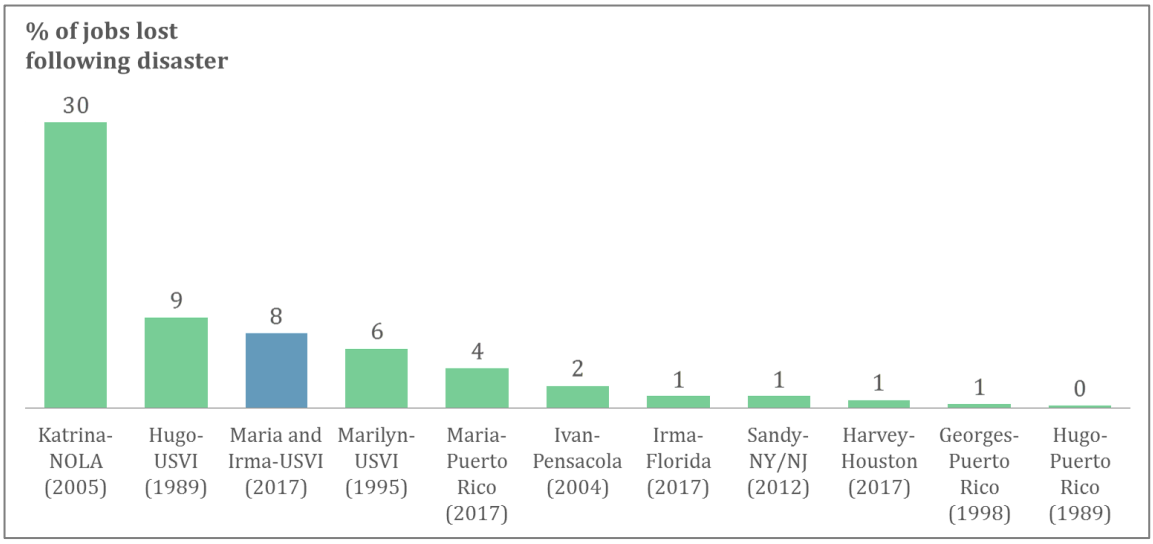


4.6.1 Lost Wages

Tourism, the U.S. Virgin Islands' biggest industry, continues to suffer as a result of the hurricanes. As mentioned before, the damage to the airports and seaports led to a halt in cruise and air tourist arrivals to the Territory. The hurricanes inflicted considerable damage to hotels and vacation rental properties, severely reducing the availability of accommodations. Compounding the impact from hotel closures and the decreasing number of tourists, local businesses have suffered direct damages from the storms; the overall outcome has been a pronounced increase in unemployment. In fact, 5,295 individuals claimed unemployment between September 2017 and April 2018, compared with

1,444 claims in the same period last year.[112] As shown in *Figure 12*, the Territory's job loss impact of 8% places Hurricanes Irma and Maria amongst the most impactful in recent U.S. history, right after Katrina and Hugo—the latter of which also hit the U.S. Virgin Islands.

Figure 12. Job Losses Caused by Natural Disasters



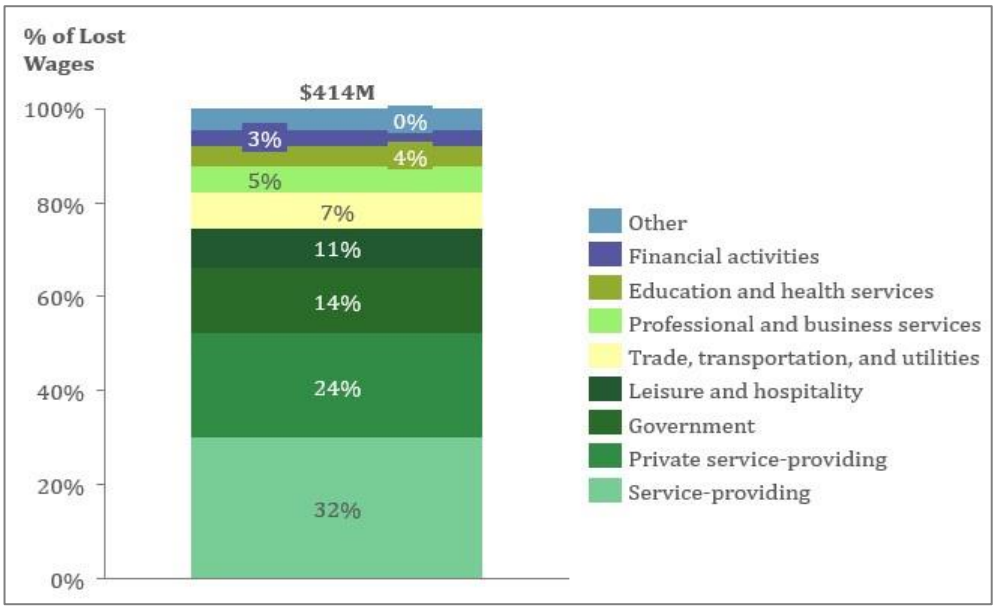
Source: Federal Reserve Bank of New York, Economic Press Briefing: February 22, 2018.

In order to calculate the storms' impact on lost wages, reduced monthly employment estimates by sector through 2020 are multiplied by each sector's average after-tax wage in 2016. The U.S. Virgin Islands' Department of Labor provides average wages as well as civilian employment numbers through June 2018. To supplement this information, projections of future employment by sector are made through 2020 by assuming that the U.S. Virgin Islands' current employment recovery will follow a similar trend as the Territory's employment recovery following Hurricane Marilyn in 1995.

As illustrated in *Figure 13,* the total amount of wages lost due to the 2017 storms is estimated to be approximately $414.1 million, with over half of the expected impact concentrated on service-providing sectors. This updated amount represents an increase of roughly $16 million from the initial Action Plan. This is likely an underestimate as many informal, unreported jobs (i.e. the cash economy) were probably also lost on account of the storms.

[112] U.S. Virgin Islands Department of Labor.

Figure 13. Lost Wages in the U.S. Virgin Islands by Sector through 2020



Source: U.S. Virgin Islands Department of Labor.

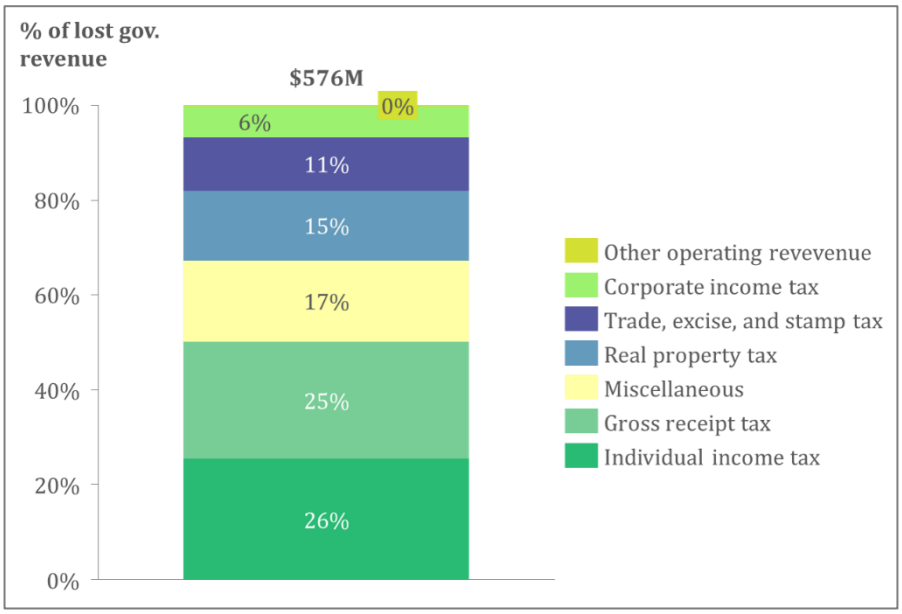
4.6.2 Lost Government Revenues

The combination of hurricane-related job losses decreased income for local businesses, and an acceleration of hurricane damage income tax credits is expected to lead to a considerable decrease in government revenues in the coming years. This will be only partially offset by disaster and recovery related jobs and funds.

To calculate lost government revenues, the U.S. Virgin Islands Finance Authority, using data from the U.S. Virgin Islands' Bureau of Internal Revenue, aggregated lost government revenues by subtracting actual and projected government revenue (by revenue type) from counterfactual revenue projections assuming no disaster had taken place.

The total amount of projected government revenue losses, shown below in *Figure 14*, will reach almost $576 million by 2020, driven primarily by reductions in revenues from individual income tax and gross receipts tax.

Figure 14. Lost Government Revenue in the U.S. Virgin Islands by Type through 2020



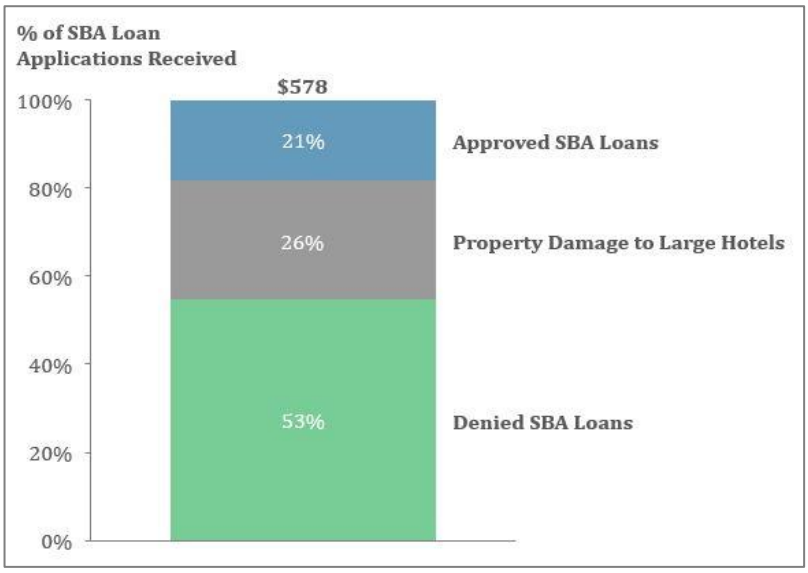
Source: U.S. Virgin Islands Finance Authority and U.S. Virgin Islands Bureau of Internal Revenue (model as of 3/21/2018).

4.6.3 Commercial Property Damage

Commercial property damage is estimated using the value of SBA disaster loans for small businesses and the value of property damage incurred by the Territory's largest hotels.

The total value of approved loans is combined with the estimated value of denied loans; the latter is estimated using HUD methodology outlined in the federal register. The current total amount of physical damage to businesses based on SBA loans is estimated to be over $426 million, an increase of $18 million from the initial Action Plan, as shown in *Figure 15*.

Figure 15. Value of SBA Small Business Disaster Loan Applications



Source: U.S. Small Business Administration. Includes all approved as well as denied applications.

To calculate the damage incurred by the Territory's top hotels and resorts, each of the ten largest hotels listed in *Table 26* was asked to provide their total real estate and content loss assessments and the portions which were covered by insurance. Property damage for three out of the ten largest hotels amounts to $152.8 million. Aggregating the damages to small businesses (based on SBA loan applications) and the damages to the biggest hotels, total commercial property damage amounts to $578 million, a $17 million increase from the initial Action Plan.

Table 26. Largest Hotels in the U.S. Virgin Islands

Hotel	Island
Frenchman's Reef and Morning Star Marriott Beach Resort	St. Thomas
Sugar Bay Resort and Spa	St. Thomas
The Ritz Carlton	St. Thomas
Marriott Frenchman's Cove	St. Thomas
The Westin St. John Resort Villas	St. John
Gallows Point Resort	St. John
Caneel Bay Resort	St. John
The Buccaneer	St. Croix
Divi Carina Bay Resort and Casino	St. Croix
Renaissance St. Croix Carambola Beach Resort and Spa	St. Croix

Source: U.S. Virgin Islands Hotel and Tourism Association.

4.6.4 Analysis of Unmet Economic Needs

To estimate the extent of unmet needs for the economy of the U.S. Virgin Islands, this assessment subtracts funding provided to date through private insurance payments, unemployment insurance payments, FEMA's Disaster Unemployment Assistance program, and SBA disaster loans for small businesses. So far, recovery funds disbursed amount to $1,245,590,282, an increase of $379,513,013 from the initial Action Plan. The U.S. Department of Agriculture's Rural Development Program (RDA) and the U.S. Department of Commerce's Economic Development Administration (EDA) are other potential sources of funding. The EDA announced a portfolio of approximately $600 million for Economic Development Assistance Program grants for necessary expenses related to flood mitigation, disaster relief, long-term recovery, and restoration of infrastructure. The Territory is in the process of coordinating with EDA on an update to the Comprehensive Economic Development Strategy and submitting applications for competitive grants under this program for repair and upgrade to the Territory's airports and seaplane terminals. The Territory will continue to coordinate with the EDA and other funding sources in addressing unmet economic needs.

Table 27. Disbursement of Funds for Economic Revitalization

Funding Source	Total Funding to Date
Private Insurance Payments	$1,361,868,569
SBA Small Business Disaster Loans	$119,265,800
Unemployment Insurance	$30,918,917
SBA Economic Injury Disaster Loans	$7,871,900
U.S. Dept. of Labor Dislocated Worker Grants	$3,000,000
FEMA Disaster Unemployment Assistance	$7,234,185
CDBG-DR Tranche 1	$33,000,000
Total	**$1,580,159,371**

Source: Small Business Administration, U.S. Virgin Islands Department of Labor, U.S. Virgin Islands Division of Banking, Insurance, & Financial Regulation.
Private Insurance Payments Data is as of July 30, 2019 and includes 384 commercial property claims settled with payment for Maria and 1,025 claims settled with payment for Irma, adding up to $1.343 billion. The remaining $18 million includes business interruption and commercial auto insurance.
The next compilation of private insurance claim settlement data for the 2017 Hurricanes will not take place until July 2021; standard procedures by regulators given that nearly 100 percent of related claims have now been settled.

Unmet need is calculated by estimating the total disaster-caused damage to the economy of the U.S. Virgin Islands and subtracting current sources of funding. This leaves a total unmet need for the Territory's economy at $322.8 million which will be updated accordingly to ensure no duplication of benefits. This amount marks a $346.3 million decrease from the initial Action Plan.

4.7 UNMET PUBLIC SERVICES NEED

To date, the Territory has identified resource needs that fall within the public services activities, including increased health and human services as a result of disaster, and critical hospital services such as dialysis and mental health services. Some of these needs are being addressed through FEMA's disaster case management and the rebuilding of the hospitals is being funded by both FEMA and the U.S. Department of Health and Human Services.

Acute public services needs include activities that will improve public safety by reducing crime, improving emergency response times, and the elimination of redundancies through multiple government agencies, as well as improving the coordination and implementation of the services.

A unique public service to the area is the need for improved water delivery services. As described in Section 3.5.9, cisterns are a critical part of homes in the Territory. However, they can also be a cost burden as the household's cistern will occasionally run out of water due to a lack of rainfall and continued usage. That household will then need to purchase a truck-full of water from a commercial

provider; though there are varying sizes of water trucks, customers typically have to pay for an entire truckload of water for the service to be delivered. A 5,200-gallon truck costs between $400 and $500. These one-time, unpredictably high costs can be particularly taxing for the largely low- and moderate-income population of the Territory. This is a pressing concern given the fact that the Territory experienced drought conditions as recently as 2015, requiring increased water services and imports.[113] The service and cistern re-fill options available to residents for water delivery may be a need to be addressed through the public services activities.

Another suite of activities that may be undertaken as public services are a wide variety of job training and young adult to adult educational opportunities facilitated by VIDOL and VIDE. An example of a pressing need in this area is the lacking availability of industry-certified trainers. In the past, employment centers and programs have provided training opportunities, particularly for larger industrial employers like HOVENSA. With the closing of HOVENSA in 2012, many jobs and trainers left the Territory. While VIDOL has worked to bring back these training programs, there is a distinct gap in individuals qualified to run certification and apprenticeship programs, as well as, businesses willing to commit to the expenses of a full certification program.

Despite the isolated geography and imminent concerns of overflowing landfills, there is no public recycling program in the U.S. Virgin Islands. The 825,316 cubic yards of debris from the storms overwhelmed current facilities but an advanced recycling service will help curb landfill waste significantly. This will be a necessity for enhancing both sustainability and resilience of larger public systems and may require CDBG-DR funding.

Additional public services needs include homelessness support systems, particularly for those needing shelter and supplies for coming storms. The Meals on Wheels program has been identified by the USVI DHS as a growing need, as staff has reduced despite an increased demand for services demand after the storms. Additionally, DHS must fill gaps in missing non-profit support services for the elderly and home bound. Their house-call and food delivery services are spread thin, resulting in long wait lists and delayed deliveries for the area's aging population.

Public services funded with CDBG-DR must clearly address an impact of Hurricanes Irma and Maria. To ensure there is no substitution of CDBG-DR funds for any other recent support for public services, an eligible public service must meet one of the following criteria:

- be a new service not yet operating, or
- there must be a quantifiable increase in the level of an existing service that has been provided for the services during the 12 months prior to the submission of the Action Plan. HUD may allow an exception to this limitation if the level of service from the previous period decreased for reasons beyond the USVI's control; the public service may not be funded until HUD has reviewed and granted an exception request.

[113] https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/pr/technical/?cid=nrcseprd390019

Although nine of the thirteen programs listed in this Plan have the potential to be operated as a standalone Public Services activity they are currently listed as an "Eligible Activities" under other programs. Additionally, the USVI has chosen to develop the standalone Public Services and Public Facilities program sector allowing other identified public services to be funded and implemented as needs and resources are identified. Where appropriate, some programs will continue to provide public services through their existing program structure and will be delineated within the DRGR Action Plan. However, some programs did not fit neatly within their current program sector and are more appropriately served within the standalone Public Services and Public Facilities Programs sector.

5. METHOD OF DISTRIBUTION, PROGRAMS, & ALLOCATIONS

5.1 METHOD OF DISTRIBUTION

All programs will be implemented by the Territory of the U.S. Virgin Islands, its *subrecipients*, and potentially other entities. Further details on program allocations, eligible applicants, implementing entity, prioritization and initial eligibility criteria are outlined within the programs below. Further details including application process and criteria used to select applicants for funding under each program, including the relative importance of each criterion, will be developed in program policies and procedures. VIHFA will oversee the entire portfolio of programs but certain projects will be implemented by the appropriate agency (Implementing Entities).

The grantee determined funding will be delivered through three primary methods based on the needs for services and the expertise of certain entities to complete specific projects. The first method will deliver funds directly to beneficiaries including primarily residents and landlords depending on the eligibility criteria detailed within respective programs. The second method will be a direct grant to implementing entities, or subrecipients, to oversee a specific program and/or projects as outlined within the Method of Distribution. A third method will utilize subrecipients selected through a competitive process to deliver a service to beneficiaries under a specific program.

In addition to allocating the Supplemental Unmet Infrastructure Need funds to programs and administration activities, this amendment primarily reflects program clarifications and adherences to requirements in Federal Register Notices which governs the announced allocations of CDBG-DR funding to the GVI.

For increased clarity on the distribution of funds, Table 2 CDBG-DR Program Eligibility Details for Tranches 1, 2 and 2A Table 2 CDBG-DR Program Eligibility Details for Tranches 1, 2 and 2A provides brief details on the programs, implementing entities, National Objectives, eligible activities, and eligible applicants for funding. Many projects are being further defined in direct coordination between VIHFA and the implementing entity through a Scope and Budgeting Process.

5.2 CONNECTION TO UNMET NEEDS

The Supplemental Appropriations for Disaster Relief Requirements, 2017 (Pub. L. 115-56) requires that all CDBG-DR funded activities address an impact of the disaster for which funding was appropriated. The Additional Supplemental Appropriations for Disaster Relief Act, 2019 (Pub. L. 115-254) provided funds to grantees to address unmet disaster recovery needs for presidentially declared disasters that occurred in 2017, 2018 or 2019. Federal Register 6182-N-01, which announced the Territory's $53,588,884, stipulates the supplemental funds be used for unmet infrastructure needs arising from the 2017 storms, and that grantees must comply with all requirements contained in prior Federal Register Notices covering the CDBG-DR funds.

The CDBG-DR provisions require that each activity: (i) be *CDBG* eligible (or receive a waiver); (ii) meet a national objective as defined by 24 CFR 570.483; and (iii) address a direct or indirect impact of the Presidentially-declared disaster on HUD-identified impacted and distressed areas. A disaster impact can be addressed through eligible CDBG activities listed in Section 105(a) of the Housing and Community Development Act of 1974, as amended. The Territory's recovery activities will make full use of the three national objectives under 24 CFR 570.483 which include benefitting LMI persons, preventing or eliminating slum or *blight*, and meeting urgent needs to implement a comprehensive recovery for the residents of the U.S. Virgin Islands.

Up to 5% of the overall allocation, which is $53,774,494 from Tranches 1, 2 & 2A, will be used for administration of the grant. Also, as required by FR 6066-N-01, the Territory will spend no less than 70% of funds allocated on activities that benefit LMI individuals.

As detailed in the **Impact and Unmet Needs Assessment** section, Hurricanes Irma and Maria caused extensive and lasting damage to the islands: approximately 52% of households had damage to their residences; critical utility services were disrupted for the majority of connected households and businesses; airports and ports closed for several weeks; and nearly all K-12 public schools and major hospitals suffered severe damages. The fact that the storms occurred less than two weeks apart added a number of unprecedented challenges to the emergency response and recovery operations that followed.

The Territory has identified approximately $11.3 billion in damages and, despite funds committed for emergency response and immediate recovery efforts, at least $5.8 billion in unmet needs remain based on the best available data. While the unmet needs far exceed HUD's CDBG-DR allocations, the Territory has developed a portfolio of programs to serve as a framework for its overall recovery. This portfolio prioritizes programs that will address (i) the unmet needs in homeowners' primary residences and rental housing, economic recovery and revitalization, and infrastructure, including enhancement and improvement of electrical power systems; as well as (ii) broader mitigation activities needed to protect the Territory from predictable damage of future hazard events. As identified, the provision of public services will be addressed within programs such as legal assistance to address title issues and supportive services for vulnerable populations. As further needs for public services are identified, additional program components will be added. All programs will be implemented on the islands of St. Croix, St. Thomas, St. John, and Water Island, as the Presidentially-declared disaster areas designated by HUD as the "most impacted and distressed areas" in the U.S. Virgin Islands (83 FR 5845).

All programs will first strive to meet the Low- to Moderate-Income National Objective. When this is not possible, other National Objectives may be needed, including Urgent Need. This will be determined as programs are implemented and documented as required. National Objectives are furthered defined by program and are detailed in Tables 29, 30, 31 and 32 below.

Table 28. Proportionality between Share of Unmet Needs and Share of Tranche 1, 2 and 2A Program Allocations

Sector	Unmet Needs Assessment		Tranche 1, 2 +2A Program Allocation	
	$	%	$	%
Housing	$849,861,321	14.5%	$326,703,038	32.5%
Public Services and Public Facilities	Included in Infrastructure		$37,500,000	3.7%
Infrastructure	$4,685,847,621	80.0%	$574,403,330	57.3%
Economic Revitalization	$322,766,670	5.5%	$65,109,022	6.5%
Total	**$5,858,475,612**	**100%**	**$1,003,715,390**	**100%**

In addition to the Workforce Development and Public Services for Vulnerable Populations programs, public services are an allowable activity within a number of programs including, but not limited to, the Homeowner Rehabilitation and Reconstruction; New Housing and Infrastructure Construction Program (Homeownership); Public and Affordable Housing Development; Rental Rehabilitation and Reconstruction; Services for Vulnerable Populations Programs; Rehabilitation, Reconstruction or New Construction of Facilities for Vulnerable Populations; Emergency Shelter Development; and the Infrastructure Repair and Resilience programs. Each program anticipates that public services may be needed such as legal services within the Homeowner Rehabilitation and Reconstruction, and emergency housing within the Rehabilitation, Reconstruction or New Construction of Residential Facilities for Vulnerable Populations program. VIHFA will assess requests for public services within a program on a case by case basis, as needed.

Nonprofits and agencies that provide public services for health identified within the updated Unmet Needs section, such as programs for youth and public health services, may be funded through a competitive application process within the Public Facilities program, which is part of the Public Facilities and Public Services sector. VIHFA conducted a survey of providers and will continue to assess additional needs for public services and potentially design programs to support these needs. For all public services, providers will be hired with skills or trained to accommodate diverse populations to ensure vulnerable residents can receive these public services. Differently-abled individuals, including physical and mental impairments, will also be accommodated in accordance with the Americans with Disabilities Act to facilitate access and receipt of the counseling, legal, workforce development, and any other services provided with CDBG-DR funds.

5.2.1 Housing

The need for safe, decent, and affordable housing is one of the Territory's top priorities and the Government of the U.S. Virgin Islands is working in coordination with federal agencies to bring to bear the full extent of resources available on this issue. To meet the residents' immediate, short, and long-term needs, the Territory is working closely with FEMA to fund its key priorities through separate

programs including FEMA's Temporary Sheltering and Direct Lease programs, its Multi- Family Lease and Repair program for rental housing, and the Permanent Housing Construction program for *owner-occupied* units.

The Territory initiated FEMA's STEP program to address immediate repair needs and allow sheltering at home while full repair programs were being developed. By the end of the STEP program in April 2019, 7,993 qualified homeowners received repairs to their homes out of 10,353 applicants, with 1,650 owners receiving code-compliant roofs.[114] Even though the 2019 hurricane season brought Hurricane Dorian and Tropical Storm Karen to the area; no reports of any issues on any the STEP roofs or repairs were received.

The Territory is also working with FEMA to prioritize public housing and residential housing for vulnerable populations through FEMA's Public Assistance program. Initially, the Territory submitted applications to the Hazard Mitigation Grant Program (HMGP) for a $75 million allocation to repair roofs and additional funds to support buyouts in repetitive flood areas and develop much-needed emergency shelters on each island. As of August 9, 2018, FEMA approved the roof replacement solution under the STEP program. Therefore, the HMGP program will dedicate approximately $15 million to buyout of homes in repetitive flood zones. This new solution within the STEP program will enable more than 4,000 homeowners to receive a repaired or replaced roof up to hurricane standards. It is estimated that the roof repair/replacement solution will result in an additional $300 million being invested to repair hurricane-damaged homes.

By the end of the FEMA STEP program, FEMA supported only a small number of homeowners and landlords through this expanded authority and notified the Territory on May 25, 2018, that it would not allow new construction under this authority. The Government of the Virgin Islands requested FEMA to use the fullest extent possible of its authority under the Insular Areas Act to allow much needed immediate repairs on owner-occupied and rental housing. While FEMA did not exercise its full power under the Insular Areas Act in the Permanent Housing Construction Program, the allowance of the roof repair through the STEP program was significant, contributing another approximately $300 million to households to provide permanent, hurricane proof roofs.

FEMA, by declining to use its authority under the Insular Areas Act to the fullest extent possible for disaster housing assistance programs in insular areas, left much of the unmet need for housing repairs unaddressed. The Territory has identified housing as a major priority and this Amendment reallocates valuable CDBG-DR funds to the housing programs that will benefit low- and moderate-income families.

The Government of the Virgin Islands has also dedicated a total of $326.7 million from the first and second tranches of CDBG-DR funds to address remaining unmet housing needs. Per the guidance in

[114] STEP Program Dashboard September 4, 2018.

the HUD Federal Register, the Territory understands the sequencing of funding which cautions that CDBG-DR funds should not be used for "activities reimbursable by or for which funds are made available by the Federal Emergency Management Agency" or other federal agencies.

In recognition of the extreme unmet housing needs in the U.S. Virgin Islands, the Government of the Virgin Islands is committed to allocating substantive federal funding to ensure that Virgin Islanders have suitable permanent housing solutions. To this end, the GVI has pledged approximately $900 million, to meet the $250 million identified by HUD as serious unmet housing need, and to continue to address a portion of overall unmet housing needs across the full range of housing programs as outlined in this Action Plan using federal funds that may be made available by FEMA (Public Assistance Program, Hazard Mitigation Grant Program, Permanent Housing Construction, etc.), HUD (CDBG-DR) or other federal agencies.

Lastly, to address infrastructure and overall needs for businesses, the Territory is also leveraging federal funding sources such as FEMA Public Assistance, SBA, HMGP, FHWA, and EPA.

In addition, a major driver of the first allocation of funds proposed by the Territory is the need for urgent action. With an additional CDBG-DR allocation for remaining unmet needs not anticipated until the summer of 2018, the Territory will prioritize "ready-to-go" projects that are expected to be most impactful for long-term recovery and viability of housing in the U.S. Virgin Islands. This includes identified housing projects that are "shovel-ready," as well as infrastructure and economic revitalization programs that can best help prevent future loss of critical services such as power and water essential to rebuilding homes. Additionally, economic revitalization programs are focused on stemming further job losses and economic destabilization. Prioritization will be given to projects that support the rebuilding of homes such as roads that need repair to provide access to homes in need of repairs and support to the tourism industry, the Territory's main industry, to retain and grow job opportunities. Workforce development efforts will focus on ensuring that residents can secure jobs within the recovery sectors such as construction, case management and grant administration.

To complement the federal assistance programs, and to ensure that CDBG-DR is used as the funding of last resort, the Territory is dedicating 32.5% of Tranches 1, 2 & 2A program funding to housing. Safe housing for displaced and vulnerable residents through new construction and the rehabilitation of damaged housing units is among the highest priorities for the U.S. Virgin Islands. This allocation to housing is leveraged by funds dedicated for the STEP and Permanent Construction programs as well as funds received by residents from FEMA and SBA to make repairs to homes.

The funding reallocations contained in this Amendment prioritizes housing programs that will repair or replace low- and moderate-income households' homes, create or repair private and public rental housing units, and build new housing units for homeownership opportunities. All these efforts will increase the number of housing units available to low- and moderate-income households.

As such, the Territory will prioritize the use of CDBG-DR funds for unmet housing needs to create the Rehabilitation, Reconstruction, and New Construction of Owner-Occupied and Rental Housing for Disaster-Impacted Households program. The program will offer a "one program, many paths" approach to rehabilitate disaster impacted housing and provide additional housing options for displaced residents.

Additionally, the Territory will build new affordable housing for new owners and for renters. The program will provide case management services to disaster-impacted, low- to moderate-income households that may be ready for home ownership or are interested in subsidized and affordable rental housing. The proposed housing program will support the repair and development of affordable rental and public housing and sheltering initiatives. The program will also support landlords that continue to make repairs or build new rental housing to more quickly repair and expand the availability of affordable rental. New publicly subsidized housing and affordable rental units – the need for which predates but was exacerbated by the storms – will be built to provide long-term housing for LMI families throughout the U.S. Virgin Islands, particularly those impacted by the disaster. Permanent supportive housing for particularly vulnerable populations – the homeless, disabled, mentally ill, and elderly – will also be prioritized. New and rehabilitated housing units funded through this Action Plan will meet HUD's resilience standards, which will reduce the future need for emergency sheltering. It is noteworthy to state that none of the single-family homes constructed under the VIHFA Affordable Housing Program lost their roofs as a result of the storms. This is a result of VIHFA's adherence to the building codes of the Territory. Still, new and stronger sheltering facilities will be necessary to guarantee the safety of residents in the likely event of future disasters.

The Virgin Islands Housing Authority (VIHA) is working with FEMA to identify buildings eligible for repair through the FEMA Public Assistance program. To date, approximately $22 million has been obligated in FEMA PA for repairs for public, HUD-assisted housing, and other affordable housing through this program. In addition, FEMA has recently agreed to full replacement of the five most damaged buildings at the Tutu complex; base cost is $73 million and is expected to increase. VIHA will continue identifying projects that may qualify for FEMA's HMGP program to fortify its housing stock against future disasters; this includes an emphasis on repairing public housing units that were damaged in the storms. VIHFA has worked with the VIHA to understand the impact of the storms on each of VIHA's properties and its status within FEMA's PA program and insurance proceeds.

In alignment with the USVI Hurricane Recovery Task Force's 2018 Plan, the CDBG-DR programs concur that steps must be taken to avoid buyouts. Several homes are anticipated to be require a buyout through the HMGP program to keep residents out of harm's way, but wherever possible, programs promote repairs over reconstruction. The housing programs in CDBG-DR have been designed to provide resources for homeowners and renters to make necessary repairs, but also provide temporary housing options and new shelters, which has been prioritized by the Task Force. All housing construction and repairs are projected to use sustainable building code standards as well as looking to opportunities to include retrofits, a program detail supported by the recommendations of the Task Force and in keeping with the Department of Natural Resource's *Stronger Home Guide*

released in May 2018. details the specific alignments with this, and other key Territorial planning initiatives.

Table 29 Housing Program Alignment with Local Planning Initiatives

CDBG-DR Programs		U.S. Virgin Islands 2015-2019 Consolidated Plan for Housing & Community Development	USVI Hurricane Recovery and Resilience Task Force Report 2018	2014 Territorial Hazard Mitigation Plan Update
Housing	Homeowner Rehabilitation and Reconstruction Program	Priority 1	Housing and Buildings: 1, 11	Objective 2.1
	New Housing and Infrastructure Construction Program (Homeownership)	Priority 1	Housing: 1, 2, 4, 11	Objective 2.1
	Rental Rehabilitation & Reconstruction	Priority 1	Housing: 2 & 4, 11	Objective 2.1
	Public & Affordable Housing Development	Priority 1	Housing: 5, 11	Objectives 2.1, 3.2

5.2.2 Public Services and Public Facilities

Hurricanes Irma and Maria significantly impacted the limited services and facilities that accommodate the most vulnerable populations in the U.S. Virgin Islands. This includes, but is not limited to the elderly, disabled, mentally ill, homeless, run-away youth, individuals with substance abuse and victims of domestic violence.

The rehabilitation and reconstruction of facilities to support vulnerable populations is a significant need. Further, the development of additional facilities is needed to serve the growing needs of the existing population, as well as the growing number of individuals who have become vulnerable as a result of the storms. The occurrence of the back-to-back Category 5 storms, and the displacement and chaos that followed, has also increased the need for supportive services for vulnerable populations. DHS has identified needs for repaired facilities for the aging and services for the home-bound.

According to the Homeless Management Information System (HMIS) maintained by the Continuum of Care consortium, there are 14 homeless facilities operating in the Territory as of January 2017, providing a total of 136 beds. As of March 2018, only 11 of these facilities were in operation and offered only 99 beds. A full lack of or insufficient insurance has left several providers without the

resources to repair facilities. Furthermore, several shelters are located in floodplains, thereby inhibiting their ability to consistently provide assistance.

Facilities are in need of immediate and longer-term assistance to return to the level of function they were before the storm. Few entities have been to repair the structures with their own funds and all need improvements to make them more resilient for future disasters. There is also a need to expand facilities to accommodate more homeless individuals and in pursuing permanent supportive housing, transitional housing, mental health services, and substance abuse services.

The Territory also faces a lack of adequate disaster shelters where individuals and families can weather future storms and live as they transition back into permanent housing in the aftermath of a natural disaster. Though the U.S. Virgin Islands faces the risk of hurricanes and other storms seasonally, the supply of shelters is radically insufficient.

Many of the Territory's emergency housing service providers have applied to the FEMA's PA program for support. The Territory is coordinating with FEMA to maximize these funds to get units back online quickly and to further determine the remaining unmet needs. The Territory has applied to HMGP for the construction of disaster shelters on each island.

The Territory is proposing two programs to further address the urgent sheltering needs as a result of Hurricanes Irma and Maria. Before the storms, the Territory already faced a shortage of emergency housing units for its most vulnerable residents, including the elderly, disabled, mentally ill, and homeless, as well as individuals with substance abuse issues and victims of domestic violence. The storms exacerbated the challenges these individuals regularly faced by damaging the properties in which they live and severely limiting access to mental and physical health services.

With this Amendment, the Territory is revising the Reconstruction or New Construction of Public Facilities (formerly the Supportive Housing for Vulnerable Populations) program to better meet the unmet needs of the Territory's most vulnerable populations. The below is a rewrite and expansion of the existing program into two separate programs to provide more complete solutions for meeting outstanding needs.

- Rebuild and create congregate housing and emergency housing unit for seniors and other vulnerable populations

- Increase availability of needed social services for vulnerable populations – homeless, at-risk youth, victims of domestic violence

The program allows funds to be allocated for the creation of new temporary and supportive housing, and for the expansion or development of support services. This housing will be available to assist those residents of the U.S. Virgin Islands who were homeless before the storms, those who became homeless as a result of the storms and those applicants who are in danger of becoming homeless as

a result of job loss in connection with the storm, the requirement to make higher than normal rental housing payments. It will also be developed to assist victims of domestic violence, drug abuse or developmental disabilities and mental illness. The VIHFA will use its emergency housing plan as a guide to prioritize potential projects for populations including domestic violence, natural disaster victims, catastrophic incident victims, and financial hardship victims.

The Emergency Shelter Development program will address this need by funding the creation of new emergency shelters and hardening existing community structures to become safe and secure shelters.

Table 30 Public Services and Public Facilities Program Alignment with Planning Initiatives

CDBG-DR Programs		U.S. Virgin Islands 2015-2019 Consolidated Plan for Housing and Community Development	USVI Hurricane Recovery and Resilience Task Force Report 2018	2014 Territorial Hazard Mitigation Plan Update
Public Services and Public Facilities	Public Services for Vulnerable Populations	Priority 1	Vulnerable Populations: 4, 6, 11	Objective 2.1
	Rehabilitation, Reconstruction or New Construction of Public Facilities	Priority 1	Vulnerable Populations: 1, 2, 5, 10 Education: 11	Objective 2.1

5.2.3 Infrastructure

As discussed in the Impact and Unmet Needs Assessment section, the hurricanes caused significant economic disruption, halting the tourism industry—its primary source of revenue—for months. High winds, torrential rainfall, and flooding from the storms had compounding effects on all of the U.S. Virgin Islands' infrastructure sectors, leading to widespread and prolonged failures and further delaying economic recovery. The Territory recognizes that without investment in efforts to make its infrastructure more resilient and revitalize the economy, residents will be vulnerable to loss of critical services such as power and water as well as further job loss and destabilization.

First, the Territory has identified multiple infrastructure priorities that must be addressed, and which directly support housing needs. Residents not only suffered from direct damage to their homes from the hurricanes, but also endured the loss of critical services such as power and water due to damaged public infrastructure. The Territory's reliance on the proper functioning of its infrastructure systems was evident when these systems failed in the aftermath of Hurricanes Irma and Maria. The Territory is committing $156 million from Tranches 1, 2 and 2A to make its infrastructure more resilient: a) the Repair and Resilience program, with a $60.75 million allocation, will be dedicated to repair and reconstruction of public infrastructure, including roads and hardening of critical facilities and networks; and, b) $96 million will be used for an Electrical Power Systems Enhancement program

focused on the transformation of the electrical power generation capacity, including renewables and the modernization of the transmission and distribution network. Additionally, $38 million will fund the Ports and Airports Enhancement Program to modernize the Territory's most critical access points for these tourists, as well as import/export commerce, allowing Virgin Islands' businesses to remain competitive in the Caribbean marketplace.

Second, the Territory is dedicating 41% ($417,750,000) of CDBG-DR Tranche 1, 2 and 2A program funds to cover projects deemed eligible for CDBG-DR funding under the Non-federal Share (Match) for Disaster Recovery Programs. Some federal recovery funds, including FEMA Public Assistance, require a "local match" contribution. Much of this infrastructure work will also have a direct tie to housing, with match funds going to federally funded projects that repair and mitigate key road, power, water, and drainage infrastructure in highly residential areas.

On May 18, 2018, the White House authorized an increase in the federal FEMA contributions to the U.S. Virgin Islands in response to Hurricanes Maria and Irma. It announced that the Federal share for "all categories of Public Assistance is authorized at 90 percent, except for assistance previously approved at 100 percent; the 100 percent Federal cost share for debris removal and emergency protective measures is extended for 120 days, with the extension of emergency protective measures being limited to Sheltering and Temporary Essential Power (STEP); and the Federal share for hazard mitigation measures under section 404 of the Stafford Act is authorized at 100 percent of total eligible costs."

Thus, the "match" for HMGP has been waived. While the non-federal match was reduced from 25% to 10% for FEMA PA emergency work and permanent work, the local match or non-federal cost-share is currently anticipated to reach over $507 million—a severe financial burden on general operating funds for the Government of the U.S. Virgin Islands, especially considering the storms' fiscal impact as described in Section 4.6.2.

The Territory currently owes more than $89 million in match for critical infrastructure repair, reconstruction, and mitigation needs and public housing and other publicly assisted housing. This is reduced significantly from the initial Action Plan which estimated $112 million because many Category B PWs were determined to fall under the 100% cost share. The Territory will prioritize critical infrastructure payments for WAPA and other entities as well as dedicate up to $30 million for public and publicly assisted housing. Investments will be made to roads, electrical power and other essential services needed for safe housing. Public utility services, especially electricity, potable water, wastewater, and telecommunications, have a significant impact on the ability of residents and businesses to rebound from the damage caused by the storms.

To align future CBDG-DR projects with existing Territorial capital improvement projects, DPNR's Division of Comprehensive and Coastal Zone Planning will be consulted for all relevant projects. As with all programs, an environmental review is required for infrastructure projects. This process includes coordination among multiple entities with relevant jurisdictions for coastal, historic

preservation, archaeological needs. It is also a requirement of the project scope and budget process for implementing agencies to demonstrate coordination with Territorial plans, agency-based plans, and relevant executive orders in the design of projects to receive funding under the Infrastructure Programs. Much of the proposed energy and water-related work anticipated under these programs already align with goals and previous capital projects envisioned by WAPA in their 2012 Power Generation Action Plan. Infrastructure projects will continue to build on this vision. Projects should comply with Executive Order No. 474-2015 which ensures that climate change adaptation policy and planning is conducted in a coordinated and collaborative manner through the U.S. Virgin Islands Climate Change Council under the authority of the Office of the Governor. Additionally, the Infrastructure Policies and Procedures detail recommendations for inter-agency liaisons, assisted by VIHFA program staff, to help provide dedicated coordination services for large, complex projects.

The *Table 31* demonstrates how the CDBG-DR programs align with specific goals and priorities of three key Territorial plans. The 2014 Territory Hazard Mitigation Plan Update is currently in effect but is being updated to stay in compliance with 44 CFR, §201.6, 2 CFR, Part 200. Additionally, the U.S. Virgin Islands 2015-2019 Consolidated Plan for Housing & Community Development is slated for an update beginning in 2019-2020. VIHFA will closely coordinate with and monitor these significant plan updates to ensure continued alignment to promote sound, sustainable long-term recovery planning informed by a post-disaster evaluation of hazard risk, especially in land-use decisions that reflect responsible floodplain management and consider future possible extreme weather events.

USVI Hurricane Recovery Task Force's 2018 Plan (Task Force Plan) prioritized the need for territory-wide studies and planning efforts and create the necessary information foundations to recover effectively.[115] The projects and programs under CDBG-DR align with many planning recommendations undertaken by the Territory. The Task Force Plan's infrastructure recommendations also prioritized hardening of infrastructure, burying telecoms and power lines, and improving pipelines and cistern infrastructure. CDBG-DR programs address many of these recommendations, further prioritizing systems-wide resilience in addition to physical hardening and mitigation activities. A major concern throughout the Task Force Plan is the impact of climate change and need for adaptation. The Territory's attention to climate impacts is a priority for infrastructure recovery as resiliency measures must consider the likelihood of more frequent and intense future storms. Much of the activities related to climate adaptation and resilience are ongoing through a variety of federal funding sources. FEMA's Public Assistance program allows for mitigation as does CDBG-DR resources. The CDBG-MIT program will also further address this need.

[115] https://first.bloomberglp.com/documents/257521_USVI_Hurricane+Recovery+Taskforce+Report_DIGITAL.pdf

Table 31 Infrastructure Program Alignment with Local Planning Initiatives

CDBG-DR Programs		U.S. Virgin Islands 2015-2019 Consolidated Plan for Housing & Community Development	USVI Hurricane Recovery and Resilience Task Force Report 2018	2014 Territorial Hazard Mitigation Plan Update
Infrastructure	Non-Federal Share (Match) for Disaster Recovery	Priorities 3 & 4	Energy: 1-11 Communications (Private): 1-4, 7 Communications (Public): 1-4 Transportation: 1-7, 18, 19 Water: 1-5, 7 Solid Waste and Wastewater: 5-8, 24 Health: 1-2 Education: 5, 7-10	Objectives 1.1, 2.1, 2.3, 3.1, 3.2
	Infrastructure Repair & Resilience	Priorities 3 & 4	Communications (Private): 1-4 Communications (Public) 1-4 Transport: 1-10, 20, 21, 24 Water: 1-5, 7 Solid Waste and Wastewater: 5-8, 24 Health: 1-2	Objectives 1.1, 2.1, 2.3, 3.1, 3.2
	Electrical Power Systems Enhancement and Improvement	Priority 4	Energy: 1-11 Communication (Private): 3, 7 Communication (Public): 2 Transportation: 22, 23 Health: 3 Vulnerable Populations: 7	Objectives, 1.1, 2.1, 2.3, 3.1, 3.2

While local agencies and authorities' plans will guide many projects, the funding should also provide opportunities for enhanced private investment. For example, mitigated road designs may include investment opportunities for broadband and telephone infrastructure with pre-fabricated channels to provide the foundations for future underground fiber optic cables.

Given the breadth and complexity of coordinating the multiple federal funding streams, planning processes, and capital investments, the Virgin Islands Office of Disaster Recovery (ODR) has been established under the USVI Department of Finance. The ODR provides critical financial management coordination across each agency and entity receiving disaster recovery funds. ODR will review expenditures of all federal disaster assistance programs and transmit collected data through an electronic system and publication on a website to be updated monthly for transparency and awareness.

5.2.4 Economic Revitalization

Lastly, the U.S. Virgin Islands will also invest in programs to catalyze the Territory's economy, prioritizing shovel-ready projects to revitalize tourism by boosting air and maritime connectivity. Given its reliance on tourism, by far the largest contributor to employment and GDP, the Territory will dedicate $10 million for a Tourism Industry Support Program focused on offsetting the negative perceptions of storm-related damages to the U.S. Virgin Islands and reinforcing the Territory's market position as a top sports and adventure, ecotourism, cultural, and romance destination in the U.S. The Territory recognizes that this program is only as strong as its tourism assets, many of which are still rebuilding.

The program will also support small businesses and entrepreneurs within the industry to increase opportunities as the industry rebounds. The Territory recognizes that revitalizing tourism while concurrently developing programs to expand economic activity into other sectors is critical to supporting thousands of LMI jobs and expanding opportunities for small businesses. Consequently, the Territory will administer a Workforce Development program with an allocation of $10 million from Tranches 1 & 2. This program seeks to generate opportunities for the local workforce to participate in recovery-related sectors such as construction as well as develop soft skills, digital literacy, and vocational skills training for tourism-related work and other key diversification sectors.

Beyond the tourism industry, this plan and the recommendations of the Task Force will together ensure that a diversified economy, education and training programs, workforce development, and entrepreneurship all contribute to a more resilient U.S. Virgin Islands. VIHFA coordinated with the USVI Hurricane Recovery Task Force and VIDOL to ensure the project-specific requests of the Task Force Plan are incorporated into the implementation of these Economic Revitalization programs. *Table 32* details the specific alignments with this, and other key Territorial planning initiatives.

As stated in Section 5.2.4 of this Plan, the U.S. Virgin Islands has invested additional resources in its economic revitalization programs to stem the significant losses in key economic sectors outlined in the Economic Unmet Needs (Section 4.6) and to provide opportunities to train Virgin Islands' residents to participate in recovery-related workforce opportunities. The previous update in Amendment 1 included an additional $5 million for a Tourism Industry Support Program focused on offsetting the negative perceptions of storm-related damages to the U.S. Virgin Islands and support small businesses and entrepreneurs within the industry to increase opportunities as the industry rebounds. In

Amendment 1, the Territory also increased the allocation to the Workforce Development program to support LMI residents in getting the skills necessary to participate in recovery-related sectors such as construction.

Table 32 Economic Revitalization Program Alignment with Local Planning Initiatives

CDBG-DR Programs		U.S. Virgin Islands 2015-2019 Consolidated Plan for Housing & Community Development	USVI Hurricane Recovery and Resilience Task Force Report 2018	2014 Territorial Hazard Mitigation Plan Update
Economic Revitalization	Ports and Airports Enhancement	Priority 4	Transportation: 4, 14, 15	Objective 3.2
	Tourism Industry Support Program	Priority 4	Economy: 5	-
	Workforce Development	Priority 4	Energy: 17 Health: 19-20 Transportation: 10 Vulnerable Populations: 12, 16 Economy: 3	-
	Neighborhood Revitalization	Priority 4	Transportation: 13	-
	Small Business and Entrepreneurship Technical Assistance	Priority 4	Economy: 6	-

5.2.5 Future programs

The Territory has developed two additional programs to revitalize the economy in the long-term: a Neighborhood Revitalization and a Small Business Technical Assistance program. While no funding from Tranche 1 & 2 has been allocated to these programs, both seek to create a more vibrant local economy that can foster small business growth, housing stock improvements, and new private investments.

The Territory is committed to increasing resilience in the face of natural hazards and addressing the risks of potential future natural hazards and how they might evolve with climate change. The U.S. Virgin Islands also recognizes that the success of long-term reconstruction and resilience involves collaboration across stakeholders. The Government of the U.S. Virgin Islands has been working closely with federal, local, nonprofit, and other partners to evaluate the extent of the impacts from the hurricanes. In October 2017, Governor Kenneth E. Mapp created an expert advisory committee to help guide short- and long-term recovery efforts for the Territory. The Virgin Islands Hurricane Recovery and Resilience Task Force is composed of local officials and community stakeholders,

experts in business and the environment, and thought leaders from across the country. On September 6, 2018, the Task Force released a final report. The U.S. Virgin Islands Housing Finance Authority (VIHFA), in its capacity as lead agency for the administration of CDBG-DR funds, will continue to coordinate with the Task Force as it develops its framework for recovery and resilience. VIHFA will also participate in the Task Force's efforts to update the Territory's Hazard Mitigation Plan.

The $1,621,058,000 allocation announced in HUD's press release on April 10, 2018, and any additional allocations, will enable the U.S. Virgin Islands to create much-needed affordable owner-occupied and rental housing, provide housing for the Territory's most vulnerable, and invest in emergency sheltering and needed public services while leveraging other funding sources and channeling funds to programs where other interventions are limited and the need is urgent. The Territory will also continue to make local match payments and develop programs to further repair and increase the resilience of its infrastructure, particularly its electrical power system and broadband networks. Finally, the Territory will invest in programs that benefit small businesses and workers and help restore the economic vitality of businesses and communities, an essential element of the long-term economic recovery and revitalization strategy for the islands. The Territory will also continue to update and analyze available data for changes in unmet needs. Additional connections to unmet needs are detailed in the Proposed Use of Funds under each program.

Table 33 Allocations from Tranche 1, 2 and 2A of CDBG-DR Funds

Programs		Funds Allocated: Tranche 1, 2 and 2A
Housing	Homeowner rehabilitation and reconstruction program	$135,203,038
	New Housing and Infrastructure Construction Program (Homeownership)	$85,000,000
	Rental rehabilitation & reconstruction	$25,000,000
	Public & affordable housing development	$81,500,000
Public Services and Public Facilities	Public Services for vulnerable populations	$500,000
	Rehabilitation, reconstruction or new construction of public facilities	$37,000,000
Infrastructure	Non-federal share (match) for disaster recovery	$417,750,000
	Infrastructure repair & resilience	$60,750,000
	Electrical power systems enhancement and improvement	$95,903,330
Economic Revitalization	Ports and airports enhancement	$38,109,022
	Tourism industry support	$10,000,000
	Workforce development	$17,000,000
	Neighborhood revitalization	$0
	Total Programs	**$1,003,715,390**
	Planning	$18,000,000
	Administration*	$53,774,494
	Total	**$1,075,489,884**

* Administration costs are capped at 5% of the overall allocation

5.3 HOUSING PROGRAMS

The myriad housing needs are uniform across the U.S. Virgin Islands; the need for home repairs, reconstruction, additional housing and rental units and emergency sheltering are not exclusive to one island more than another. The Territory's housing recovery programs are designed to meet unmet needs to support the most vulnerable residents impacted by Hurricanes Irma and Maria, including assistance for homeowners and tenants of rental properties to achieve permanent sustainable housing solutions. To address the multiple unmet needs, the Territory proposes to create programs that support rehabilitation and reconstruction efforts that are already in progress in the Territory, including rental assistance to displaced homeowners and renters. The program will also make funding available for new construction of affordable and project-based subsidized housing. The Territory will leverage the Local Match program from the Infrastructure portfolio to offset required match costs for publicly-assisted housing. The Territory also proposes to develop programs to address the Territory's permanent supportive housing for vulnerable populations and emergency sheltering needs for individuals and families to weather further storms and emergencies.

EnVIsion Tomorrow, the CDBG-DR housing recovery program designed to assist homeowners whose homes were damaged or destroyed, as well as landlords with small rental properties that were damaged or destroyed by the 2017 Hurricanes Irma and Maria, began taking applications in 2019. With store-front locations on St. Croix, St. John and St. Thomas, EnVIsion Tomorrow is processing applications for almost 1,600 homeowner and 350 rental properties for eligibility and damage assessment. Homeowner Rehabilitation and Reconstruction Program applications are being accepted on an on-going basis; the first round of Rental Rehabilitation and Reconstruction Program applications were accepted between July and September 2019. VIHFA is currently assessing the need for opening additional application periods for the Rental Rehabilitation and Reconstruction Program.

Programs to be funded in future tranches will focus on remaining rehabilitation, reconstruction, and mitigation needs for owner-occupied residences and rental units not covered by other funding sources.

The overall objectives of this Action Plan's housing programs directly address the unmet housing needs identified in *Section 0* in the following ways:

- Supporting residents, especially LMI residents, directly affected by the storms by rehabilitating or replacing housing units, including mitigation enhancements;
- Leveraging other funding sources and supporting community efforts to both address immediate gaps in rehabilitation of damaged homes with flexible funding and maximizing CDBG-DR dollars;
- Aiding in the rehabilitation and new development of housing for the most vulnerable, including temporary, emergency housing, and permanent supportive housing;
- Identifying opportunities to develop new housing stock to meet the urgent demand for affordable rental and owner-occupied housing; and
- Helping affected individuals by improving the resilience of their housing to reduce risk and strengthen neighborhoods for any future disasters while restoring their buildings and residences.

The Territory will prioritize LMI households and households that remain displaced. All planning decisions in relation to the following housing programs will address ways to prevent concentrations of poverty, including ways to create mixed-income housing and affordable housing in low-poverty, non-minority areas. Currently, income levels in affordable housing communities are most often defined by the *income limits* of the programs used to finance them. All efforts will be made to develop communities with a mix of affordable and market rate units that will support residents with varying income levels.

New construction or replacement of substantially damaged buildings will be done in accordance with the international building and residential zoning codes and local standards. For a detailed explanation of the building standards that pertain to the programs in this Action Plan, see *Section 6.1.1*. Further

detail on these requirements are below; additional requirements will be outlined in program policies and procedures.

Table 34 Summary of Housing Programs for Tranches 1, 2, & 2A

Beneficiary	Program	Total Allocation
Homeowners	Homeowner Rehabilitation and Reconstruction Program	$1135,203,038
Homeowners	New Housing and Infrastructure Construction Program (Homeownership)	$85,000,000
Landlords	Rental Rehabilitation & Reconstruction	$25,000,000
Tenants	Public & Affordable Housing Development	$81,500,000
Total Allocation for Housing Programs		**$326,703,038**

*Local Match funding will be administered in the Infrastructure Non-Federal Share (Match) for Disaster Recovery Program.

All the programs proposed herein undertake eligible activities per the Housing and Community Development Act of 1974 (HCDA). The proposed housing programs allow for activities such as: clearance, rehabilitation, reconstruction, reimbursement, replacement, and new construction; rental housing for LMI households; public housing; private market units receiving project-based assistance or Section 8 or any other HUD-assisted housing; interim rental assistance; housing incentives; public services; and buyouts. Per the Federal Register (FR-6066-N-01), funds may also be used for the creation of new units or rehabilitation of units not damaged by the flood events if the activity can be clearly linked to LMI populations.

Program activities will be reviewed to determine URA/104(d) compliance and required actions. The policies and procedures will be further developed in modifications to the existing Residential Anti-Displacement and Relocation Assistance Plan (RARAP) and a soon to be developed Optional Relocation Policy.

The following activities will not be eligible for funding under any of the proposed housing programs: forced mortgage payoffs; funding for second homes; assistance for homeowners or landlords who previously received Federal flood disaster assistance and did not maintain flood insurance; and compensation payments.

The Territory will further develop detailed program guidelines in the policies and procedures. The Territory will also develop exceptions to the policies and procedures to address situations not considered by the program during the program design phase. The exceptions policies and procedures will consider changes to the maximum award amounts for applicants who demonstrate undue hardship as well as other exceptional situations not currently known. Applicants in this situation will be reviewed by an independent panel to determine whether denial of program assistance further perpetuates circumstances attributing to such hardship. Demonstrable hardship may include but is

not limited to: prolonged job loss, substantial reduction of household income, death of a family member on whom the surviving household was financially dependent, illness, unexpected and extraordinary medical bills, disability, etc. VIHFA will further define "demonstrable hardship" in program policies and procedures.

All applicants located in the flood zone who receive federal assistance in the form of a grant under the housing programs must obtain and maintain flood insurance in perpetuity.

Proposed Use of Funds:
Within the Housing programs, residents will have a slate of solutions to choose from to address assist them in getting back into their homes or viable permanent housing solutions. Solutions include: rehabilitation or reconstruction of owner-occupied and rental units damaged by the storms; options for first time homebuyers; voluntary acquisition or buyouts of high-risk properties; increased affordability of rental stock; planning; and restoring and making more resilient the inventory of units for particularly vulnerable populations, especially those living in public and supportive housing. Priority will be given to low- and moderate-income households whose homes are still damaged from the 2017 hurricanes.

Rebuilding storm-damaged homes can bring a host of challenges, including the high costs of reconstruction and temporary housing arrangements for the occupants while displaced. In addition, homeowners and landlords both must navigate the best course to rebuild in a way that boosts resilience from future storms, while surmounting difficult building conditions, higher costs of building supplies, and the shortage of licensed contractors. The Territory is maximizing the available housing resources from FEMA and HUD to ensure that homeowners and renters get back on their feet and into their homes for the long term by rebuilding and repairing in a manner that is both safer and stronger. This includes, but is not limited to, FEMA's Individual Assistance program which provides resources to improve properties to decent safe, and sanitary conditions and temporary rental assistance for up to 18 months. Additionally, the Emergency Home Repairs VI Program (STEP) offers temporary repairs enabling homeowners to safely shelter in their homes until more permanent repair programs are in-place. While FEMA IA assistance for repair is the first path to housing assistance, STEP provides contractor support for repairs to make homes safe and sanitary and to allow homeowners to shelter in place. More than 10,350 homeowners applied to the STEP program, including requests for repairing or replacing roofs. The STEP program assisted 1,650 households in getting secure, hurricane-proof roofs, along with 6,343 households that received repair assistance, allowing them to remain in their homes.

Under Section 408 of the Stafford Act in keeping with the Insular Areas Act, FEMA has also deployed a Direct Housing Mission which allows FEMA to conduct permanent construction and reconstruction to owner-occupied homes as well as repairs to multi-family housing. The GVI continues to seek the full availability of resources to complete housing repairs and seek housing solutions for displaced residents. Since the hurricanes, the GVI has repeatedly requested that FEMA utilize its full authority under the Insular Areas Act to repair damaged housing for Virgin Islanders to establish the Permanent

Home Construction Program. Most recently, on October 30, 2018, the Governor of the Virgin Islands submitted a letter to FEMA Administrator William 'Brock' Long requesting that FEMA allow the GVI to follow provisions of the Disaster Recovery Reform Act of 2018 (DRRA) to implement the Section 408 Permanent Home Construction Repair and Reconstruction Program to complete full repairs and reconstruction. Since contractors are already deployed for the STEP program, the GVI contends this would realize a cost efficiency for the limited federal resources.

As of August 2018, the Territory has been approved for HMGP funding to support potential buyouts in targeted areas. While acquisition and voluntary residential buyouts are included as eligible activities below, an acquisition or buyout program component will be developed once the needs for such an effort are better understood. It is understood that buyouts will be conducted in floodplains in Disaster Risk Reduction Areas designated by FEMA to reduce risk from flooding in future disaster events.

Through case and construction management in the Homeowner and Rental Reconstruction and Rehabilitation programs, the Territory is coordinating across the available programs to ensure that unmet housing repair needs are met and that CDBG-DR resources are brought to bear to assist homeowners and renters who have an unmet need for repairs, reconstruction to determine the program solution that best fits their circumstance. Case management will be responsive to the specific needs of certain vulnerable populations and the Program recognizes that the rebuilding process may overwhelm some seeking resources, and case management will be tailored to assist these populations.

Case Management centers were set up on each of the three major islands. The Program continues to provide case management teams that provide mobile services to meet the needs of those that are not as able to travel to established case management sites. The Program will also require ongoing and sustained outreach in community centers, churches, community events, shopping centers, libraries, organizations active in the community, civic clubs, etc. Electronic, television, radio, print, and online media opportunities for mass and focused outreach will also be used.

From initial outreach to eligibility determinations, damage assessment and program design, calculation of benefits, construction management and closeout, the primary objective is to ensure the residents of U.S. Virgin Islands receive the highest level of customer service available. These Programs will put in place the personnel, facilities and systems required to ensure those eligible for the programs have a smooth and successful experience. The Authority will strive to have households work with a single case management team throughout the process so that as the needs of the applicants change from intake to construction, they will be directed to the appropriate member of their case management team.

Providing current, accurate, and clear information throughout the application process is the most important component of a successful housing program. The processes required to deliver benefits, particularly in housing related activities, are multi-step complex processes that require extensive

documentation. Not only do applicants need to keep up to date on any missing supporting documentation or impediments to their grant award, the program can also assist applicants in staying aware of other resources that may be available to them. Real time access to information about grant status is a priority, together with effective case management, including the ability to contact their case manager by appointment, mail, email or phone during operation hours. All applicants will select their preferred contact method and parameters will be established so that applicants will understand their expected return response times. Printed status updates to applicants who do not have access to electronic media and phone service will be provided.

A thorough appeals process will be documented in the program policies and procedures. This process will be provided on the Program website and a copy will be included with each applicant's award or ineligibility letter or notice of file closure. Applicants may appeal an award determination decision by filing an appeal within the prescribed deadlines.

In addition to an appeal process, a structured complaint management process has been developed and documented in the program policies and procedures. Applicants will have a clear path to address complaints about contractors who will be held accountable to meet contract deadlines and milestones. In addition, program contractors will be required to provide three months to one-year warranties, based on the scope of work.

In keeping with the requirement outlined in FR 6109-N-01, the Territory developed policies and procedures to outline the process to assess the cost-effectiveness of each proposed project through its residential rehabilitation or reconstruction programs funded under the CDBG-DR program. This includes a methodology to determine if potential alternatives such as elevation or buyouts are more suitable. The policies and procedures also include a process for determining exceptions to the amount of maximum assistance or cost effectiveness criteria.

As in all programs, VIHFA and other implementing entities will conduct a thorough review of the sources of funding received by all eligible applicants within the housing programs to prevent duplication of benefits. This includes an analysis of households that received support under FEMA's Permanent and Semi-Permanent Housing Programs.

The Territory may implement resilient home construction standards as part of the mitigation programs, including a focus on retrofits for housing to make it more able to withstand future disasters.

VIHFA will provide housing counseling services in the New Construction for First Time Homebuyer Program through existing funding. As needed, VIHFA may include within other programs such as the Homeowner Rehabilitation and Reconstruction program.

CDBG-DR Construction Standards for Housing Activities:
To ensure that housing activities result in resilient, energy efficient affordable housing units, VIHFA has developed CDBG-DR Construction Standards (Standards) which are required for housing activities and projects that include CDBG-DR funding. These Standards promote energy efficiency and green building practices for new construction or rehabilitation (retrofit) residential projects. VIHFA subrecipients and developers must utilize the VIHFA Green Building Retrofit Checklist in its entirety based on the type of structure (new construction or rehabilitation of single- or multi-family housing).

Program components are described in more detail below.

5.3.1 Owner Occupied Housing for Disaster Impacted Households

Homeowners across the Territory suffered great losses to their property as a result of hurricanes Irma and Maria. Repair and rebuilding of storms-damaged homes can bring a host of challenges: the high cost of construction and the significant costs of housing while displaced are just a few. While the cost of construction and building topography can differ from island to island, needs across the Territory are the same; individuals and families need assistance to navigate how to rebuild in a way that boosts resilience from future storms. The Territory's homeowner assistance programs will provide support to get homeowners back on their feet and into their homes for the long term – by rebuilding and repairing for them to be safer and stronger. This may include selective buyouts of properties and land with especially high risk of being damaged in future storms. Further, homeowner programs aim to boost homeownership, creating a permanent, equity building asset for individuals and families. Homeowners will be offered an additional opportunity via the Public Housing and Affordable Housing Development program to develop an infill unit within their existing footprint, which they can rent for an affordable price. While the primary objective of the Public Housing and Affordable Housing Development program is to create more affordable housing stock, it is considered among the suite of programs that homeowners are eligible for.

Reconstruction and rehabilitation of impacted housing must comply with VIHFA's CDBG-DR Construction Standards, creating more resilient structures than existed prior to the 2017 storms, incorporating modern building standards such as:

- *Reconstruction Standard*: Replacement and new construction will meet the Territory's Building Code and the green building standards by requiring compliance; and

- *Rehabilitation Standard*: As required by HUD, incorporates principles of sustainability, including water and energy efficiency, resilience, which will mitigate the impact of future disasters.

The program will conduct an inspection of each applicant's property to determine the percentage of damage, and to develop a proposed scope of work. Based on the percentage of damage, and the location of the property, (to determine if the property is in area of repetitive loss) an applicant will be

determined to be a candidate for the Rehabilitation and Reconstruction Program or the Buyout and Acquisition Program under the HMGP program or a future program.

Voluntary Buyouts: While it is understood that there are a handful of homes throughout the Territory that may benefit from a buyout, at this time, the Territory has not initiated a separate program for buyout or acquisitions under the Housing portfolio. The Territory has sought HMGP funding for voluntary buyouts in repetitive flood zones. If additional needs for buyouts are determined in an updated needs assessment, the Territory will consider creating programs to accommodate voluntary buyouts and acquisitions.

Based on further analysis of unmet needs once the HMGP buyout program is implemented, the Territory may execute voluntary buyouts in limited situations where it is more cost effective relative to other alternatives strategies to remove homeowners from Enhanced Buyout Areas which are at high risk of repetitive loss. The program will establish an average cost of a buyout using data from prior buyout programs implemented by HUD grantees, which will be used as a threshold for cost effectiveness to determine whether voluntary buyout should be considered in lieu of a repair or reconstruction.

The Territory understands it can be costly to implement a buyout program and will consider the costs of buying out a property at pre-storm value, potentially providing *interim housing* assistance to the family, ongoing property maintenance, title work, operational expenses and all other expenses necessary to reaching final disposition and national objective with the purchased properties.

Homeowners who participate in a voluntary acquisition or buyout are not eligible to receive temporary or permanent relocation assistance. If it is determined a needed solution, additional details of this program will be included within a future action plan *amendment*. VIHFA will also seek technical assistance from HUD on URA requirements if such a program is developed.

The Territory does not anticipate elevating homes given the cost and structural limitations of cisterns, which are structurally connected to the slab. However, new housing construction within the floodplain will be built in accordance with the existing local building codes. The existing code is consistent with HUD guidance to ensure all structures, as defined at 44 CFR 59.1, designed principally for residential use and located in the 1 percent annual (or 100-year) floodplain that receive federal assistance for new construction, repair of substantial damage, or substantial improvement, as defined at 24 CFR 55.2(b)(10), must be elevated with the lowest floor, including the basement, at least two to three feet above the 1 percent annual base floodplain elevation as determined by best available data. Residential structures with no dwelling units and no residents below two feet above the 1 percent annual floodplain, must be elevated or flood-proofed, in accordance with FEMA flood proofing standards at 44 CFR 60.3(c)(3)(ii) or up to at least two feet above the 1 percent annual floodplain. Thus, the Territory has put mechanisms in place to ensure all structures requiring elevation go through an in-depth structural analysis to determine how whether the rehabilitation or reconstruction is the most cost-effective approach to helping homeowner.

Property owners assisted through the recovery program will be required to acquire and maintain flood insurance if their properties are located in a FEMA-designated floodplain. This requirement is mandated to protect the safety of residents and their property and the investment of federal dollars. The elevation height of a house can significantly reduce the cost of flood insurance. The Territory will implement procedures and mechanisms to ensure that assisted property owners comply with all flood insurance requirements, including the purchase and notification requirements as a condition of receiving assistance.

An applicant that has previously received CDBG-DR assistance and who were required to keep the property covered by a flood insurance policy, will NOT be eligible to participate in any part of these housing recovery programs if they have not maintained flood insurance.

5.3.2 Homeowner Rehabilitation and Reconstruction Program (**EnVIsion Tomorrow**)

Eligible Activities: Code Enforcement (HCDA Section 105(a)(3)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12)); Activities Carried Out through Private or Public nonprofits (HCDA Section 105(a)(14)).

National Objective: Low- to Moderate-Income Housing; and Urgent Need.

Low- and Moderate-Income Projection: 100%; The program prioritizes LMI first but is available to displaced non-LMI homeowners in later priority groups as funding becomes available.

Program Allocation: $135,203,038 ($16,965,433 initial allocation; $118,237,605 second allocation)

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: Rehabilitation and reconstruction will be occurring territory-wide.

Proposed Use of Funds:

Given the time elapsed since Hurricanes Irma and Maria in September 2017, homeowners are in different stages of their rebuilding process depending on the extent of damage to their homes and the private and public resources that have been available for recovery.

The Territory will enter into grant agreements with homeowners that will result in the rehabilitation and reconstruction of storm-damaged residential owner-occupied structures. These grant agreements will clearly state the terms and conditions related to the applicant's receipt of financial assistance for the repair or replacement of their damaged property. It will state the duplication of benefits requirements, discuss the disbursement of grant funds, rights of access, and explain the

requirements to maintain flood insurance, if applicable. It will also contain an acknowledgement of the appeals process.

The program will cover eligible costs for the rehabilitation or replacement of damage to real property, and environmental health hazard mitigation costs related to the repair of disaster-impacted property. For residences considered substantially damaged, support will be granted for reconstruction or provision of a modular (or manufactured) home in place of their original unit. The Program recognizes the advantages of modular construction, from a cost standpoint, speed of construction and the potential for workforce development as well.

The Territory will manage and complete the construction process for the rehabilitation or reconstruction of a damaged home on behalf of a homeowner. The Territory has established a pool of locally licensed contractors that will be assigned to complete the rehabilitation or the reconstruction of storm damaged properties. Homeowners will not select their own contractors and will not contract with the construction contractor. Homeowners will be required to enter into grant agreements with the Territory.

The share of homeowners in the U.S. Virgin Islands who hold mortgages is just under 50%, according to the 2010 Census. The rest of homeowners own outright, often residing in long-standing familial homes that allow them to live on low, fixed expenses each month. Individuals and families may have expended or did not qualify for FEMA temporary rental assistance, exhausted available mortgage forbearances, or may have exhausted any rental assistance provided by insurance companies. The program understands the need to provide temporary rental assistance to homeowners with short-term rental housing costs so that they are not overburdened by displacement while their homes are repaired or reconstructed. The realities of the U.S. Virgin Islands' rental market are that there are few rental units to be had due to the pre-storm shortage of rental housing and a prevalence of vacant vacation rentals priced above reasonable rates for most Virgin Islanders. This shortage has been exacerbated by storm damage to the available rental units and an influx of recovery workers that are renting available housing further reducing the stock. The option of leasing hotel rooms as an extended stay opportunity are also limited due to storm damage, costs and, again, the presence of the disaster recovery workforce. While this Action Plan makes provision for rental assistance as part of a future tranche of funds, it is imperative at this time to focus quickly on ensuring that rental units are created to address these shortages to allow the Territory to assist homeowners with their displacement issues.

- *Rehabilitation*: The Program pays for approved and eligible costs to complete rehabilitation of homes that have not yet been repaired, including eligible improvements for resilience.

- *Reconstruction*: The Program pays for approved and eligible costs of reconstruction when a home is substantially destroyed or determined not feasible to rehabilitate. Eligible expenses include new home construction on an existing plot, or, in some cases, provision for a resilient modular home to replace the damaged unit.

- *Mitigation and resilience measures*: Mitigation measures such as structural retrofitting and non-structural retrofitting (e.g., impact resistant shutters, windows and doors) of existing structures to meet or exceed applicable building codes relative to hazard mitigation and increase the ability to shelter in place will be eligible. Additional resilience measures will also be eligible.

  The Territory does not anticipate elevating homes given the typical construction methodology where homes are constructed on poured concrete slabs connected to below-grade foundations with all elements tied together. Thus, the Territory has put mechanisms in place to ensure structures prone to repetitive loss go through an analysis to determine whether rehabilitation, demolition and reconstruction, or voluntary buyout is the most cost-effective approach to helping that homeowner.

- *Other support services*: Support services may include the following: Funding assistance to eligible service providers who provide critical resources necessary for housing recovery, including but not limited to legal services to assist LMI homeowners and applicants in overcoming storm-related legal obstacles to obtaining necessary recovery assistance, housing and financial counseling. The program will work to incorporate available housing assistance resources such as housing counseling or relocation, if necessary. Additional capital grants may be given for elderly or mobility disabled households for the removal and replacement of architectural barriers including the addition of ramps, railings, and select electronic accessibility support in the rebuilding process.

Administering Entity: VIHFA

Eligible Applicants: Owner occupants at time of disaster events who meet the following conditions:

- Damaged home was applicant's primary residence at the time of the disaster events;
- Damage was the result of Hurricane Maria and/or Hurricane Irma; and
- Eligible structure as determined by program, including but not limited to, one- and two-family homes as well as condominiums and mobile homes.

Duplication of Benefits: The program will undertake a process to verify previously received disaster recovery benefits for the same purpose. Unmet need is determined after accounting for all federal, Territory, local, and/or private sources of disaster-related assistance, including, but not limited to, SBA loans for repairs and homeowners and/or flood insurance proceeds per the Stafford Act, and as the requirements contained in FR-6169-N-02, known as the "DOB Notice."

Prioritization Criteria: Due to limits in the funding available, the Territory will fund eligible homeowners in accordance with the priority categories described in the criteria outlined below. If funds are not fully expended to complete the first phase of the program, the Territory may expand

the criteria to include additional homeowner populations. This may include households with primary residences that can exhibit a remaining need for funding to reconstruct or rehabilitate their homes within the guidelines and parameters of the program.

Territory staff and/or contractors will provide guidance to homeowners on the requirements of this program.

Priority 1: Low- and Moderate-Income Households

Reconstruction:

- The impacted home was destroyed or substantially damaged
- The homeowner applicants meet federal LMI requirements
- Evidence cost to repair storm damage requires demolition and does not exceed $250,000

Rehabilitation:

- The impacted home experienced major/severe damages and the costs to repair is $75,000 or less
- The applicant household meets federal LMI requirements
- Evidence of cost to repair storm damage does not exceed $250,000

Rehabilitation will be considered if it is determined to be feasible and more cost effective than reconstruction

Priority 2: (if funding is available) 80% - 120% AMI Households

Note: If the applicant's home is located in the 100-year floodplain as shown on the FEMA map and the household did not have NFIP flood insurance at the time of the storm, the household's income must be ≤120% of AMI to be eligible for the Homeowner Rehabilitation and Reconstruction Program.

Maximum Award: Awards will be based on the estimated construction cost of the scope of remaining work based on a consistent economy grade of building materials using a national building standard estimating software. Details of building standards will be further defined in the program policies and procedures.

5.3.3 New Housing and Infrastructure Construction Program (Homeownership)

Eligible Activities: Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Acquisition (HCDA Section 105(a)(1)); Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12)); Activities Carried Out through Private or Public nonprofits (HCDA Section 105(a)(14)); Homeownership assistance (HCDA Section 105(a)(24)).

National Objective: Low- to Moderate-Income Housing; and Urgent Need.

Low- and Moderate-Income Projection: 90%; The program will prioritize LMI applicants able to qualify for homeownership.

Program Allocation: $85,000,000 ($6,485,000 initial allocation; $78,515,000 second allocation)

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: While the activity will be eligible territory-wide, it is anticipated that new homes will be built in Bonne Esperance, Mount Pleasant West, Cotton Valley, & Solitude in St. Croix; Whispering Hills, Fortuna, & Nazareth in St. Thomas; and Bethany in St. John. These properties will be built on land owned or in the process of being acquired by VIHFA. Other potential neighborhoods or areas of construction/development under this program may become eligible as determined by the program.

Administering Entity: VIHFA

Proposed Use of Funds:

To reduce the pressure on the stock and improve the quality of life for residents of the U.S. Virgin Islands, this program will provide LMI households the opportunity to purchase a home through direct financial incentives, effectively creating first time home buyers. The program will provide an affordable alternative to renting by creating new homeowner stock; thus, it will alleviate some of the pressure on the rental market post-storms.

Hurricanes Irma and Maria caused significant damage to both owner-occupied and rental stock, depleting the already-limited housing stock, and drove up prices beyond affordable levels. Almost half of all renters in the Territory were cost-burdened paying more than 30% of their income on rent prior to the storms. Due to the limited affordable rental stock, renters are most often paying more than the costs of a mortgage for homes of a similar size. Further, individuals displaced after the storm by damage to their accommodations frequently turned to informal housing scenarios; most commonly causing overcrowding in existing single-family homes.

The creation of new single-family homes in the Territory faces a unique set of challenges, such as limited buildable land due to the steep grade and topography and consequently high cost of site preparation and construction. This difficulty is especially pronounced in St. Thomas and St. John, where buildable land is limited and the cost to build may exceed $250/square foot, according to the Global Property Guide.[116]

[116] April 2016 Global Property Guide Property Market Report

Recognizing the cost challenges to potential homeowners, in 2005, the Legislature of the Virgin Islands passed legislation to raise the upper income limit for low- and moderate-income persons participating in the Virgin Islands Finance Authority's Home and Land Ownership program to 3.5 times the median income in the Virgin Islands.[117]

While the cost of building is high in the Territory, the monthly mortgage payment of a new home built to code under this program will cost less than rent for a comparably sized rental unit given the extremely cost-prohibitive rental market.

Prior to the construction of new homes, vacant parcels of land require infrastructure to support the new housing units. This infrastructure may include, but is not limited to streets, curbs, sidewalks, flood and drainage, lighting, sewer lines, and utilities, located in the public ways (not on the homesite). Each housing unit will be constructed on an individual homesite.

To enable the creation of new, turn-key homes, potential home buyers may have household incomes up to 120% of the AMI, must complete the Homebuyer Counseling Program and must show they are mortgage ready; applicants who were displaced due to the 2017 Hurricanes will be prioritized.

VIHFA will procure developers/contractors to install the infrastructure necessary for the subdivisions on land owned by the U.S. Virgin Islands Housing Finance Authority and construct single-family homes on individual lots. In addition to the costs for building single family residential homes, costs for infrastructure that are on public land (roads, utilities, lighting, etc.) will be funded with CDBG-DR and excluded from the calculations for assisting the homebuyers.

Sales prices for the homes built on individual homesites and made available to eligible homebuyers will be the lesser of the total construction costs or current market value, whichever is less. Construction costs are capped at $325,000 per home (the cost of infrastructure will not be included in the construction cost calculation of individual homes). Homebuyers are required to secure a traditional first mortgage in an amount that makes the home affordable.

In the case that a gap exists between the sales price of the home and the eligible homebuyer's mortgage amount, VIHFA will provide a mortgage buy-down in the amount to cover the difference; the homebuyer must execute a Grant Agreement to ensure program occupancy compliance.

Eligible Applicants:

Developers: In order to support the development of mixed-income (both subsidized and market rate) environments by eliminating neighborhoods of concentrated poverty, eligible applicants may utilize funds for the development of land (including but not limited to infrastructure, grading, installation of utilities, and land preparation) for mixed income

[117] Bill number 26-0014, The Virgin Islands Legislature, May 13, 2005.

communities. This will help subsidize the extraordinarily high costs of these items due to topographical site conditions. When CDBG-DR program funds are used to install the subdivision infrastructure, a minimum of fifty-one percent (51%) of the total subdivsion households must meet the low- and moderate-income criteria of earning no more than eighty percent (80%) of the AMI. Program funds used directly for home construction must be for homes sold to households with AMI ≤120%. LMI (those earning no more than 80% of the AMI) households will be prioritized. Eligible developer applicants include both for- and non-profit private developers building on land owned by VIHFA.

Homebuyers Assistance: Eligible applicants for purchasing the newly constructed home are households that earn no more than 120% and are mortgage ready.

Maximum Award: Awards to developers/contractors may be up to $325,000 per home including the infrastructure and construction of homes for home buyers. Circumstances where additional costs may be incurred will be reviewed against cost reasonableness guidelines. Awards for homebuyer assistance will not exceed the total of the down payment and closing costs necessary to make the home affordable, based on underwriting standards.

A review of the maximum award amount of assistance to be provided to each household will include:

- Ensure first mortgage amount is reasonable under current lending standards (the housing expenses (mortgage, taxes and insurance) to income ratio, and total debt (including housing) to income ratios are not too low or too high);
- The mortgage has a fixed rate and is long term so the household will be able to maintain homeownership of over the CDBG-DR compliance period;
- The amount of assistance is adequate to make homeownership affordable but is not excessively subsidizing the transaction, and
- The down payment and buyer-paid closing costs are reasonable in relation to buyer funds.

Eligibility Criteria: LMI home buyers who are beneficiaries under this program must agree to occupy this home as their primary residence for a twenty-five-year affordability period in accordance with HFA's existing affordability period for homeownership programs.

Affordability Period and Resale and Recapture Restrictions: Section IV.C.1. *Clarification on Affordability Periods and Amended Alternative Requirement* of the January 27, 2020 Federal Register (4687) includes details for the minimum requirements for affordability restrictions on single-family units constructed with CDBG-DR funds; it is HUD's intention only to impose affordable period with resale and recapture requirements that are constructed for sale and not the reconstruction of homes damaged in the Hurricanes. Specifically, HUD amended paragraph IV.B.10 of the August 14, 2018 notice by replacing it in its entirety to require CDBG-DR grantees to enforce an affordability period only on newly constructed single-family housing made available for low- and moderate-income homeownership through a CDBG-DR funded homeownership program. This affordability period does

not apply to housing units newly constructed or reconstructed for an owner-occupant to replace an owner-occupied home that was damaged by the disaster.

In Section IV.B.10. the Affordability Period for New Construction of Single-Family LMI Homeowner Housing (40320), HUD requires "grantees receiving funds under this notice to implement a minimum five-year affordability period on all newly constructed single-family housing that is to be made available for low- and moderate-income homeownership. This requirement for an affordability period does not apply to the rehabilitation or reconstruction of single-family housing. This notice requires grantees to develop and impose affordability (i.e., resale and recapture) restrictions for single-family housing newly constructed with CDBG– DR funds and made available for affordable homeownership to low- and moderate-income persons, and to enforce those restrictions through recorded deed restrictions, covenants, or other similar mechanisms, for a period not less than five years. Grantees shall establish resale or recapture requirements for housing funded pursuant to this paragraph and shall outline those requirements in the action plan or substantial amendment in which the activity is proposed. The resale and recapture provisions must clearly describe the terms of the resale and recapture provisions, the specific circumstances under which these provisions will be used, and how the provisions will be enforced."

VIHFA's existing homeownership and single-family construction programs have established a twenty-year affordability period. VIHFA also currently follows the regulations of the Territory for affordable housing, including the resale and recapture provisions, which are detailed in the U.S. Virgin Islands' code Title 21, Chapter 1 and are further defined in the Joint Rules and Regulations for the U.S. Virgin Islands Affordable Housing Program outlined in Title 29, Chapter 16, Sections 930 of the code. These provisions are further codified in VIHFA's Deed of Conveyance which is instituted for each sale within the existing program. To keep consistent between the CDBG-DR funded New Housing and Infrastructure Construction Program (Homeownership) Program and VIHFA's existing programs, the new program will adopt the existing affordability policies and the resale and recapture policies and procedures. These provisions are summarized below from the existing program and U.S. Virgin Islands code. Further details are included within the policies and procedures governing this program.

Resale Provisions

Affordable housing units constructed or offered for sale under this Program shall not be sold during a control period of twenty (20) years from the date of the original sale for a price greater than a sales price which equals the original selling price plus a percentage of the unit's original selling price equal to the increase in the cost of living as determined by the United States Department of Labor's Consumer Price Index, plus the fair market value of improvements made to the unit between the date of original sale and the date of resale, plus an allowance for payment of closing costs. The affordable sale price formula may be amended or modified from time to time by the Agency.

A Resale Covenant outlining the resale requirements will be recorded against the property at the time of the original purchase and will remain in place until the control period of twenty (20) years has been satisfied.

Recapture Provisions

Affordable housing units sold to eligible persons and families under the Program and subsequently offered for resale to the public by the original purchaser during the twenty (20) year control period in contravention of paragraph (c) of this Section 212 shall be subject to the following recapture rule:

Affordable housing units shall not be sold, transferred or otherwise disposed of within two hundred forty (240) months from the date of the original purchase thereof under the Program unless (i) the transferee of the affordable housing unit satisfies the eligibility requirements under the Program in effect on the date of sale and transfer or (ii) the original purchaser or his transferee agrees to pay a recapture penalty based on a percentage of the amount of the selling price in excess of the original purchase price ("excess profits'') of the unit.

The recapture provisions shall be incorporated in a Second Priority Mortgage in the amount of the subsidy. This mortgage creates a lien on the buyer and the property and shall be subordinate only to the primary mortgage and with the formal approval of the VIHFA.

The resale and recapture requirements will be further outlined in the program's policies and procedures.

For a list of projects funded under the New Housing and Infrastructure Construction (Homeownership) Program, see Appendix 7.4.

5.3.4 Rental Rehabilitation and Reconstruction (**EnVIsion Tomorrow**)

Eligible Activities: Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12); Activities Carried Out through Private or Public nonprofits (HCDA Section 105(a)(14)).

National Objective: Low- to Moderate-Income Housing; and Urgent Need.

Low- and Moderate-Income Projection: 80%; The program will prioritize the rehabilitation and reconstruction of units for residents at 80% AMI and below**.**

Program Allocation: $25,000,000 ($5,000,000 initial allocation; $20,000,000)

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: Applications will be solicited for eligible rental properties territory wide.

Proposed Use of Funds:

Given the limited emergency and temporary repair funds available to rentals thus far, providers of rental units on the islands are at varying stages in their rebuilding process depending on the extent of damage and resources available to date. The Territory seeks to leverage FEMA funding from both the Public Assistance program and the Permanent Housing Construction program to support landlords rehabilitating much needed affordable rental units. Rental damage from the storms can have a far-reaching impact on the local population, displacing individuals and families, constricting the rental income on which landlords rely, and leaving individuals and families to live in sub-par housing stock. Further the costs of rebuilding, including materials and increased insurance rates, in the aftermath of the hurricanes putting more pressure on landlords and developers trying to repair their units.

In response to this situation, the Territory will implement this program to cover eligible costs for repair or replacement of damage to real property; resilience and mitigation; and environmental health hazard mitigation costs related to the repair of disaster-impacted rental property. For residences identified as substantially damaged, support will be granted for reconstruction. Other solutions may be considered in program policies, once units are rehabilitated or rebuilt, to continue to preserve affordable housing in the Territory.

- *Rehabilitation*: The Program pays for approved and eligible costs to complete repairs to rental units that have not yet been completed, including eligible improvements for resilience.

- *Reconstruction*: The Program pays for approved and eligible costs of reconstruction when a unit is destroyed or determined not feasible to rehabilitate.

- *Mitigation and resilience measures*: Mitigation measures such as structural retrofitting and non-structural retrofitting (e.g., impact resistant shutters, windows and doors) of existing structures to meet or exceed applicable building codes relative to hazard mitigation and increase the ability to shelter in place will be eligible. Additional resilience measures will be eligible.

Administering Entity: VIHFA

Eligible Applicants: Owners of rental properties with one (1) to twenty (20) units that were severely damaged by the storms. Funds under this component would be used to rehabilitate or reconstruct units not covered by FEMA's PA program and the CDBG-DR resources under the infrastructure program set aside to cover the local match requirements.

Eligibility Criteria:

- Units must have verified damage from Hurricanes Irma or Maria;
- Units developed by this program will require compliance with long-term rental use requirements guaranteeing no transient use; and,

- Applicants must complete a process to verify previously received disaster recovery benefits. Unmet need is determined after accounting for all federal, Territory, local and/or private sources of disaster-related assistance, including, but not limited to, FEMA, SBA, and flood insurance proceeds.

Prioritization Criteria:

Funding Due to limits in the funding available in the initial allocation, the Territory will prioritize funding for rental units meeting the criteria outlined below. If funds are not fully expended during the first round of the Program for the prioritized populations below, the Territory may open Round 2 for the prioritized populations as stated in the following section.

Priorities of Round 1:

Round 1, priority 1 applicants must meet the following criteria:

- Units that are Majorly/Severely Damaged and vacant. All units served must be reserved for LMI tenants; Landlords who offer properties to Housing Choice Voucher holders will have priority; and
- Rental Units with outstanding needs not met by insurance proceeds or other disaster recovery benefits

Round 1, priority 2 applicants must meet the following criteria:

- Units that are Majorly/Severely Damaged and occupied. All units served must be reserved for LMI tenants; Landlords who offer properties to Housing Choice Voucher holders will have priority; and
- Rental Units with outstanding needs not met by insurance proceeds or other disaster recovery benefits

Round 2 Priorities:
VIHFA recognizes that prior to the storm the Territory suffered from a shortage of affordable rental units. Because of the damages sustained during the storm, the overall limited long-term rental supply was reduced. In efforts to place more units into service, Round 2 will be made available if funds are remaining from Round 1.

Round 2, priority 1 applicants must meet the following criteria:

- Units that are Majorly/Severely Damaged not served in Round 1. All units served must be reserved for LMI tenants with a priority for Housing Choice Voucher holders; and
- Rental Units with outstanding needs not met by insurance proceeds or other disaster recovery benefits.

Round 2, priority 2 applicants must meet the following criteria:

- Units that are acquired after the storm; or
- Units that were under construction; and

- The award amount must be able to bring the unit to an occupancy level; and
- All units served must be reserved for LMI tenants with a priority for Housing Choice Voucher holders.

Maximum Award: A per unit cap of $50,000 is expected; circumstances where additional costs may be incurred will be reviewed against cost reasonableness guidelines. Awards will be based on the scope of remaining work based on a consistent economy grade of building materials using a national building standard estimating software. Details of building standards will be further defined in the program guidelines. Units will be required to meet housing quality standards (HQS) standards. Details of building standards will be further defined in the program guidelines.

Funds for rehabilitation will be delivered in the form of forgivable construction loans. These loans will be forgivable over the affordability period. Properties with 1 – 7 units will require a five (5) year affordability period; properties with 8 – 20 rental units require a fifteen (15) year affordability period. Rents must be restricted throughout the affordability period, based on AMI.

Affordability Period: Rehabilitation or reconstruction of rental projects with 1 – 7 units requires a five (5) year affordability period; eight to twenty (8-20) units will be required to adhere to an affordability period of 15 years.

Future program component (not currently included in program guidelines or funded):

5.3.4.1 Owner Rental Infill

Eligible Activities: Acquisition of Real Property (HCDA Section 105(a)(1)); Public Facilities and Improvements (HCDA Section 105(a)(2)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12)(13)(14).

National Objective: Low- to Moderate-Income Housing

Low- and Moderate-Income Projection: 90%; The program prioritizes the development of units for LMI households.

Program Allocation: To be determined

Estimated Start and End Dates: To be determined

Geographic Area(s) Served: Projects across the territory are eligible for this program as priorities are determined by VIHFA.

Proposed Use of Funds:

This program will offer homeowners, with existing infrastructure in place, the opportunity to build additional units for rental, as infill development. Many homeowners, especially in densely developed St. Thomas, built their homes with the infrastructure in place to one day expand their livable square footage, or create rental income within the same footprint. For these individuals, creating units on the second floor or uninhabited first floor of their homes is a low-cost way to increase rental stock, given much of the existing infrastructure (cistern material, utilities connections) is in place. All construction project proposals and construction will be reviewed and monitored by VIHFA construction managers and by DPNR building inspectors to ensure that construction is to code.

VIHA, which has a long list of eligible applicants within its HCV program, will help to support the program by working with eligible owners to understand and participate in the HCV program. VIHA will also conduct HQS inspections of the newly created units for compliance.

Support for the infill development program will be given via a grant, in the form of a five-year forgivable mortgage. When homeowners sign onto this program, they agree to a twenty-year affordable rental period (secured through a recorded covenant against the property) for any additional units built as result of the program.

Processes for repayment of grant funds for non-compliance and monitoring process for affordability will be spelled out in the program policies and procedures.

Maximum Award: A per unit cap of $50,000 is expected; circumstances where additional costs may be incurred will be reviewed against cost reasonableness guidelines.

Administering Entity: VIHFA

Eligible Applicants: Eligible applicants include owners of one- and two-unit owner-occupied homes, with existing infrastructure in place that will accommodate the infill construction of rental housing units. Additional eligible applicants include for-profit and nonprofit developers; landlords of HUD-assisted, USDA-assisted, and LIHTC housing; providers of supportive housing; VIHA; and VIHFA.

Eligibility Criteria:

- The projects must help replenish the supply of affordable rental units; and
- Units developed by this program will require compliance with long-term rental use requirements, evidenced by a minimum lease term of one year.

Prioritization Criteria: Due to limits in the funding available in the initial allocation, the Territory will prioritize the development of subsidized housing by VIHA, small and multi-family mixed-income development by VIHFA, and developers of small rental buildings.

Affordability Period: New construction of rental units will be required to adhere to an affordability period of 20 years.

5.3.5 Public and Affordable Housing Development

Eligible Activities: Acquisition of Real Property (HCDA Section 105(a)(1)); Public Facilities and Improvements (HCDA Section 105(a)(2)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12)); Activities Carried Out through Private or Public nonprofits (HCDA Section 105(a)(14)).

National Objective: Low- to Moderate-Income Housing; Urgent Need.

Low- and Moderate-Income Projection: 90%; The program prioritizes the development of units for LMI households within affordable and mixed-income communities.

Program Allocation: $81,500,000 ($21,096,670 initial allocation; $50,403,330 second allocation)

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: Projects across the territory are eligible for this program as priorities are determined by VIHFA and VIHA.

Proposed Use of Funds:

This program seeks to redevelop and create new affordable rental housing stock including subsidized and mixed income rental units. Affordable rent is defined as rent (including utilities) is no more than 30 percent of a household's pre-tax monthly income. Eligible development activities include development of low-income and mixed-income units, infill construction of new units, and substantial rehabilitation of vacant commercial or uninhabitable dwellings to bring more mixed-use rental stock online. CDBG-DR funds may be used for the non-federal cost share (match) in FEMA funded projects that meet all CDBG-DR eligibility requirements.

The program will incentivize the development of new low-income and mixed-income small and multi-family stock, including project-based subsidized housing. While low-income stock remains an urgent priority, mixed-income stock is also needed on the islands given the unmet need for rental units across the full spectrum of citizens, from low-income individuals typically supported by Low-Income Housing Tax Credit housing, low-income households with incomes that make them ineligible for LIHTC tax credit units (e.g. households with incomes between 60% of AMI and market rate) and tenants that can afford market rate units. This program intends to enable the development of rental housing which prevents concentrations of poverty.

VIHFA defines affordable rent as rental costs that do not exceed 30% of a renter's income. VIHFA uses the HUD-defined fair market rents as a basis to determine affordable rent caps.

The program proposes the following to address these needs:

- Affordable and mixed-use rental housing development which includes acquisition, demolition, rehabilitation, and new construction as it pertains to the development of project-based subsidized and affordable units for LMI individuals.

  To incentivize the development of this stock, the Territory will provide a ten-year 0% forgivable loan. Multi-family rental development of 8 units or more will be required to adhere to *Davis Bacon* requirements and any other applicable federal requirements.

  Maximum Award: The maximum CDBG-DR award per project is $10,000,000 with a per unit cap of up to $250,000; circumstances where additional costs may be incurred will be reviewed against cost reasonableness guidelines. Award could be in the form of either a loan or a grant however, in some instances, a loan will be the required structure for financing rental development. If this is the case, then the terms of the loan may be forgivable.

- **Non-federal share (match) for public and publicly assisted housing**:
  Eligibility Criteria: The projects must have an active FEMA PW and be able to meet additional CDBG-DR *cross-cutting requirements* (see Section 5.1)

  Maximum Award: The maximum award will be based on the cost-share requirement per project.

For a list of projects funded under the Public and Affordable Housing Development Program, see Appendix 7.4.

5.4 PUBLIC SERVICES AND PUBLIC FACILITIES PROGRAMS

Public services that address the impacts of Hurricanes Irma and Maria can be a strategic component of the USVI recovery strategy. Eligible public services may address a range of individual needs and increase the impacts of other funding sources by complementing other activities. CDBG-DR funds may not be used to supplant other funding sources; any public services funded with CDBG-DR must be documented to show the proposed service is either new, or the CDBG-DR funding will provide a measurable increase in an existing and operational service.

Ineligible public services include any that replace current non-CDBG-DR funding; make payments directly to individuals (payments must go to service providers); provide continuous income payments or non-emergency payments for more than 3 consecutive payments (such as ongoing rent subsidies or utility bills); or involve political or religious activities.

The total amount of CDBG-DR funds expended for public services must not exceed fifteen percent (15%) of the total CDBG-DR funds awarded to the U.S. Virgin Islands, including expenditures for rental assistance to tenants approved under a waiver.

Public facilities are not explicitly defined by HUD; however, it is generally accepted that a public facility is either publicly owned or traditionally provided by the government or owned by a nonprofit and operated as to be open to the all. This includes neighborhood facilities, senior centers, firehouses, parks, playgrounds, shelters, public schools and libraries. Shelters are those facilities that are designed with the intended use of providing shelter for persons having special needs and are considered public facilities (and not permanent housing). Shelters may include nursing homes, convalescent homes, hospitals, shelters for victims of domestic violence, shelters and transitional housing/facilities for the homeless, halfway houses for run-away children, drug offenders or parolees, group homes for the developmentally disabled, and shelters for disaster victims. Public facilities do not include public housing or the buildings for the general conduct of government, such as Government House, the main police station, or governmental agency or departmental office buildings; expenditures for "buildings for the general conduct of government" are not authorized without a waiver from HUD.

When CDBG-DR funding is provided for the creation or rehabilitation of a public facility, a public service (based on the intended use of the facility) that meets must be provided within the facility for the facility to be eligible for funding. Additionally, a minimum five-year "no change of use" for the facility must be enforced with a recorded use restriction or other mechanism to ensure the facility remains for the intended use.

As described in the unmet needs section, a January 2017 study conducted by the Virgin Islands Continuum of Care consortium (CoC), 381 individuals across the Territory were homeless, 81% of whom were unsheltered. Both figures have likely increased as a result of the storms. The storms caused severe damage to homeless facilities and providers serving vulnerable populations. According to the Homeless Management Information System (HMIS) maintained by the CoC, there were 14 homeless facilities operating in the Territory as of January 2017, providing a total of 136 beds. As of March 2018, only 11 of these facilities were in operation and offered only 99 beds. The lack of insurance or sufficient insurance has left several providers without the resources to repair facilities. Furthermore, several shelters are located in floodplains, thereby inhibiting their ability to consistently provide assistance.

Facilities are in need of immediate and longer-term assistance to return to the level of function they were before the storm. Few entities have been able to repair the structures with their own funds and all need improvements to make them more resilient for future disasters.

These is a need to bring existing facilities back to pre-storm condition and increase the resilience of those facilities. There is also a need to expand facilities to accommodate more homeless individuals

and in pursuing permanent supportive housing, transitional housing, mental health services, and substance abuse services.

Another sheltering need the Territory faces is for disaster shelters where individuals and families can weather future storms and live as they transition back into permanent housing in the aftermath of a natural disaster. Though the U.S. Virgin Islands faces the risk of hurricanes and other storms seasonally, the supply of shelters is radically insufficient.

Many of the Territory's supportive housing and service providers have applied to the FEMA's PA program for support. The Territory is coordinating with FEMA to maximize these funds to get units back online quickly and to further determine the remaining unmet needs. The Territory has applied to HMGP for the construction of disaster shelters on each island.

The Territory is proposing two programs to further address the urgent sheltering needs as a result of Hurricanes Irma and Maria. Before the storms, the Territory already faced a shortage of temporary and supportive units for its most vulnerable residents, including the elderly, disabled, mentally ill, and homeless, as well as individuals with substance abuse issues and victims of domestic violence. The storms exacerbated the challenges these individuals regularly faced by damaging the properties in which they live and severely limiting their access to mental and physical health services.

The Territory will prioritize the creation of a Rehabilitation, Reconstruction or New Construction of Public Facilities program which covers eligible costs to rehabilitate or replace damaged transitional or assisted living units for the Territory's most vulnerable populations. The program allows funds to be allocated for the creation of new temporary and supportive housing, and for the expansion or development of support services. This transitional housing will be available to assist those residents of the U.S. Virgin Islands who were homeless before the storms, those who became homeless as a result of the storms and those applicants who are in danger of becoming homeless as a result of job loss in connection with the storm, the requirement to make higher than normal rental housing payments. It will also be developed to assist victims of domestic violence, drug abuse or developmental disabilities and mental illness. The VIHFA will use its emergency housing plan as a guide to prioritize potential projects for populations including domestic violence, natural disaster victims, catastrophic incident victims, and financial hardship victims.

The Emergency Shelter Development program will address this need by funding the creation of new emergency shelters and hardening existing community structures to become safe and secure shelters.

5.4.1 Services for Vulnerable Populations Program (this was previously included in the Housing Sector)

Eligible Activities: Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12); Activities Carried Out through Private or Public nonprofits (HCDA Section 105(a)(14)).

National Objective: Low- to Moderate-Income Area; Low- to Moderate-Income Limited Clientele; Urgent Need

Low- and Moderate-Income Projection: 100%; All funding will serve a low- to moderate income area or groups presumed to be LMI.

Estimated Start and End Dates: Quarter 3, 2020 through Quarter 3, 2024.

Geographic Area(s) Served: Territory-wide.

Proposed Use of Funds:

According to the 2010 Census, 11% of the Territory's population has one or more disabilities. The 2017 disasters exacerbated situations for already vulnerable populations. Within this group the share of unemployment is high resulting in a wide range of social services and subsidies required for these individuals and households. The occurrence of two back-to-back Category 5 storms and the displacement and chaos that followed, has also increased the need for supportive services for vulnerable populations.

To address this need, the program will provide grants through a competitive application process to social services organizations to enhance the support service network for vulnerable populations including, but not limited to, services to the homeless, at-risk youth, victims of domestic violence, disabled and/or the elderly.

Public services must be documented to show the proposed service is either new, or the CDBG-DR funding will provide a measurable increase in an existing and operational service.

Administering Entity: VIHFA

Eligible Applicants: This program is available to public, nonprofit and for-profit providers of support services for the vulnerable populations. This includes but is not limited to the Department of Human Services and the Department of Health.

Eligibility Criteria:

- Applicants must demonstrate the existence of an unmet need. Unmet need is determined after accounting for all federal, Territorial, local and/or private sources of disaster-related assistance available to the applicant, including but not limited to FEMA, SBA, and flood insurance proceeds; and
- Applicants must utilize program funds to serve vulnerable populations.

Prioritization Criteria:

Funding will be allocated to the individual program components as needed ensure that the most vulnerable are served expediently and effectively. Due to limits in the funding available in the initial allocation the Territory will prioritize services for the elderly, youth at-risk of homelessness and other vulnerable populations. The Territory reserves the right to include additional vulnerable populations.

Program Allocation: $500,000 ($500,000 in the initial allocation)

Maximum Award: Awards will be determined on the amount of funding available and based on applications received and projects determined eligible for award. Reasonable costs for services will be considered on a per unit basis based on comparison of standard industry-specific costs. For example, if an organization is selected to provide meal delivery services, the award would be based on current reasonable, documented costs of these services as determined through a cost reasonableness evaluation.

For a list of projects funded under the Services for Vulnerable Populations Program, see Appendix 7.4.

5.4.2 Rehabilitation, Reconstruction or New Construction of Public Facilities (previously listed as Supportive Housing for Vulnerable Populations)

Eligible Activities: Acquisition of Real Property (HCDA Section 105(a)(1)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Public Facilities and Improvements (HCDA Section 105(a)(2)); Planning (HCDA Section 105(a)(12)); Activities Carried Out through Private or Public nonprofits (HCDA Section 105(a)(14)).

National Objective: Low- to Moderate-Income Area; Low- to Moderate-Income Persons; Low- to Moderate-Income Limited Clientele; Low- to Moderate Income Housing; and Urgent Need.

Low- and Moderate-Income Projection: 95% of the funding will serve LMI population.

Estimated Start and End Dates: Quarter 1, 2019, through Quarter 4, 2024.

Geographic Area(s) Served: Territory-wide. Two possible sites for facilities are the Herbert Grigg Home for the Aged in St. Croix and Queen Louise for the Elderly in St. Thomas nursing facilities for the elderly that will be reconstructed, as well as other possible projects. Other sites may be identified by non-profit organizations that provide services for youth at risk of homelessness, the homeless and other vulnerable populations. For shelters, the UVI St. Croix campus has been identified as a possible site; other sites may be identified.

Proposed Use of Funds:

In the initial phase this program will support the restoration of the Territory's two homes for the elderly – Herbert Grigg and Queen Louise. Herbert Grigg Home for the Aged experienced significant damage from the hurricanes; Queen Louise Home for the Aged suffered less severe damages. Both facilities continued to operate, albeit with limited capacity. In addition to its service as a home for the elderly, both facilities provided space for emergency special needs shelters on St. Croix and St. Thomas respectively.

To address this need, this program will cover the eligible costs to rehabilitate, reconstruct or newly construct a facility to meet the needs of this population. Funds will be delivered in the form of forgivable construction loans. These loans will be forgivable over a five-year period (forgiven 20% per year over a 5-year period.) Eligible uses include financing for the acquisition of land, buildings, or new construction.

When Hurricanes Irma and Maria hit the U.S. Virgin Islands in September of 2017 there were limited locations for individuals, families and the most vulnerable to seek shelter from the storms. Unlike in the contiguous United States, only a small fraction of the Territory's population is in a position to evacuate the islands in advance or in the aftermath of a natural disaster, further exacerbating the need for shelters and homes hardened to withstand potential disasters. During Hurricanes Irma and Maria school buildings served as make-shift emergency shelters, despite the frequent incompatibility with emergency shelter standards. Once the storms passed shelters were required to remain open to accommodate individuals and families whose were rendered uninhabitable. In some cases, the lack of alternative accommodations for shelters delayed the re-opening of schools by up to one month.

This program addresses the urgent need for adequate, permanent emergency shelters in the U.S. Virgin Islands. To this end, the program will support the development of multi-purpose facilities which will be dedicated to sheltering needs in disasters and other emergency situations. Additionally, the program may support increasing sheltering capacity by hardening and upgrading existing community, public or private infrastructure to bring them up to sheltering standards.

Administering Entity: VIHFA

Eligible Applicants: Eligible applicants include the University of the Virgin Islands, private developers, for-profit and nonprofit institutions and community organizations, Department of Human Services, and VIHA.

Eligibility Criteria:

- Applicants must demonstrate the existence of an unmet need. Unmet need is determined after accounting for all federal, Territorial, local, and/or private sources of disaster-related

assistance available to the applicant, including, but not limited to FEMA, SBA, and flood insurance proceeds; and

- Applicants must utilize program funds to rehabilitate, reconstruct or build new facilities for vulnerable populations.
- Shelter facilities must be projects that increase the number of congregate shelter options for individuals and families that cannot or choose not to shelter in place during the storms; and
- Shelters developed or hardened in this program require compliance with emergency sheltering standards (including the number of restroom facilities).

Prioritization Criteria:

Due to limits in the funding available in the initial allocation, the Territory has prioritized properties managed by the Department of Human Services for the non-emergency sheltering facilities but reserves the right to adjust this program based on identified needs.

The Virgin Islands will prioritize development of shelter projects through the development of a multi-purpose complex on UVI's St. Croix campus and at various locations in the Territory. If additional funds are made available, other projects may be selected based on their projected performance against a set of factors, including but not limited to: cost effectiveness, speed with which shelters can be developed, number of individuals served, location and accessibility, and proposed use(s) outside of hurricane season or other disaster event.

Program Allocation: $37,000,000 ($37,000,000 second allocation)

Maximum Award: Circumstances where additional costs may be incurred will be reviewed against cost reasonableness guidelines.

For a list of projects funded under the Rehabilitation, Reconstruction or New Construction of Public Facilities Program, see Appendix 7.4.

5.5 INFRASTRUCTURE PROGRAMS

The U.S. Virgin Islands' reliance on the proper functioning of its infrastructure systems—including energy, transportation, and telecommunications infrastructure—was evident when these systems failed in the aftermath of Hurricanes Irma and Maria. As described in Section 4.5, the high winds, torrential rainfall, and flooding from both disasters had compounding effects on all of the U.S. Virgin Islands' infrastructure sectors, leading to widespread and prolonged failures which has served to delay economic recovery. High winds toppled above-ground utility lines; storm water runoff flooded roads and induced mudslides; and flooding, wind, and heavy rain severely damaged water and wastewater treatment plants, hospitals, and other buildings that provide critical services. Electrical substations were crippled, causing power failures to 95% of electrical customers. Water pump failures and sewage overflows from storm water surges led to potable water safety precautions such as "boil

water" advisories and EPA drinking water assessments. Lacking both a steady power supply and functioning transportation and water infrastructure, many businesses were forced to shut down, some for extended periods. Closure of the ports and airports for more than two weeks, had significant effects on the Territory's connectivity, limiting the pace of voluntary evacuation efforts, delaying the delivery of essential supplies for emergency relief, and causing further disruption to the economy.

The U.S. Virgin Islands' has identified multiple infrastructure priorities that must be addressed, and which directly support housing needs. Residents not only suffered from direct damage to their homes from the hurricanes, but also endured the loss of critical services such as power and water due to damaged public infrastructure. Without water or power, residents were forced to evacuate their homes and seek shelter and emergency assistance. If the Territory's infrastructure is made more resilient, critical services could be stabilized and maintained for residents in the event of a future disaster, creating a safer and more secure environment.

Like housing programs, all infrastructure programs will meet a HUD national objective. The most applicable national objective for infrastructure will likely be LMI benefit. A subcategory of LMI benefit is the low- and moderate-income area benefit (LMA). LMA allows activities that benefit all persons in a particular service area to count towards the LMI objective when at least 51% of residents in the service area are classified as LMI. For each activity, the Territory will determine the appropriate service area based on factors including: the nature of the activity; the location of the activity; accessibility issues; the availability of comparable activities; and boundaries for facilities and public services. The Territory will ensure that projects will be prioritized to provide services to LMI persons and support unmet housing needs.

Program activities will be reviewed to determine URA/104(d) compliance and required actions. The policies and procedures will be further developed in modifications to the existing Residential Anti-displacement and Relocation Assistance Plan (RARAP) and a soon to be developed Optional Relocation Policy.

Primary needs for the proper preparedness for, and recovery from, future natural disasters include: (i) comprehensive planning to identify resilience opportunities; (ii) adoption and enforcement of codes to bring critical infrastructure up to industry standards; (iii) holistic mitigation designs to meet future challenges and hazards; and (iv) implementation of innovative technology and other best practices to create a more reliable, sustainable, and cost effective electric grid.

All infrastructure under the FEMA PA program is being designed to consider mitigation components to protect against future damages. Proactive measures to promote risk-informed infrastructure development include diversification of power generation, micro-grid development, relocation of critical facilities, and flood-mitigated roads. Many of these activities have begun under HMGP funding and may continue under CDBG-DR. As part of the HMGP program, VITEMA is currently updating the 2014 Territory Hazard Mitigation Plan to account for post-storm needs. All projects undertaken through the CBDG-DR infrastructure programs will be coordinated with the results of this

planning process. In addition, HMGP funding for important mapping and hydrologic studies are anticipated to be obligated soon, which will provide up-to-date data and land use recommendations that are critical for roads and power-related projects.

A key consideration for future storms is mitigating the water distribution systems on the island through WAPA. It is estimated that over 50% of the island is not connected to municipal water and rely on cisterns. While resilient expansion of water systems will be part of the infrastructure programs, CBDG-DR funding will also consider household-level cistern mitigation as a form of critical infrastructure to ensure these homes can access water in the event of another long-term power outage. Some of this work may be supported by funding from the upcoming tranche of mitigation funds. Additional resilience measures for future extreme weather events may include the burying of power lines, hardening of power poles, and the elevation of homes and critical infrastructure, such as substations. Home elevation is not common in the Territory, as it is not often required due to the mountainous and hilly terrain. Further, the cistern is often connected to the foundation of the home and provides some elevation to the home. However, elevation will be done where required by the Territory's building code, which in accordance with 44 CFR 59.1, requires the first floor of structures located in the 1 percent annual (or 100-year) floodplain that receive federal assistance to be at least two to three feet above the 1 percent annual base floodplain elevation as determined by best available data.

The Territory will be strategic in optimizing the mix of the allocation towards infrastructure programs to ensure effective and efficient use of funds. The U.S. Virgin Islands has requested a waiver of the nonfederal cost share for FEMA funding under the Insular Areas Act. However, to ensure that FEMA-obligated permanent repair and reconstruction work is expedited and completed as soon as possible, 16% of the programmatic funding from Tranches 1-2, and 100% from Tranche 2A of CDBG-DR funds will be allocated to nonfederal cost share for HUD eligible activities. The Tranche 2A funds will be allocated to infrastructure projects.

The Bipartisan Budget Act of 2018 provides an opportunity for the Territory to receive more funding from FEMA PA to not only repair and replace damaged elements of critical infrastructure systems, but to also rebuild the entire system to meet industry standards. This would allow the U.S. Virgin Islands to optimize the use of CDBG-DR funds by reducing the unmet need for infrastructure resilience programs, although it will increase the need for funding to cover the local cost share.

Updates to the infrastructure unmet needs and match program allocations are anticipated as more guidance is provided by FEMA within the coming weeks on the interpretation of Section 20601 of the Bipartisan Budget Act of 2018. For reference, Section 20601 directs FEMA to provide assistance: "for critical services in section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act for the duration of the recovery for incidents DR-4340-USVI and DR-4335-USVI to: (1) replace or restore the function of a facility or system to industry standards without regard to the pre-disaster condition of the facility or system; and (2) replace or restore components of the facility or system not

damaged by the disaster where necessary to fully effectuate the replacement or restoration of disaster-damaged components to restore the function of the facility or system to industry standards."

Table 35 below summarizes the total infrastructure CDBG-DR allocations in accordance with basic eligible activities per HCDA Section 105:

Table 35 Summary of Proposed Infrastructure Programs

Program	Sectors	HCDA Eligible Activities (Section 105(a))	Total Allocation
Non-Federal Share (Match) for Disaster Recovery	• Educational Facilities • Energy • Government Facilities • Hospitals & Healthcare Facilities • Telecommunications • Transportation (including roads, ports, & airports) • Waste: Solid Waste/ Landfill Debris • Water & Wastewater	• Payment of the Non-federal Share • Acquisition of Real Property • Public Facilities and Improvements • Clearance, Rehabilitation, Reconstruction, and Construction of Buildings • Public Services • Relocation • Assistance to Institutions of Higher Education	$417,750,000
Infrastructure Repair and Resilience	Same as above	• Acquisition of Real Property • Public Facilities and Improvements • Clearance, Rehabilitation, Reconstruction, and Construction of Buildings • Public Services • Relocation • Assistance to Institutions of Higher Education	$60,750,000
Electrical Power Systems Enhancement and Improvement	Energy	• Acquisition of Real property • Public Facilities and Improvements • Clearance, Rehabilitation, Reconstruction, and Construction of Buildings • Relocation • Payment of the Non-federal Share	$95,903,330
Total			**$574,403,330**

These infrastructure activities will also contribute to comprehensive long-term recovery and restoration of housing in a number of ways. The Match Program includes local cost share funds to ensure other federal recovery projects can be completed for lifeline sectors to get power and telecommunications back online, fix damaged roads, and build temporary and permanent school facilities, all of which are important to helping homeowners and landlords repair housing units and giving confidence to residents that neighborhoods are being rebuilt. The Repair and Resilience

Program works with, and in some cases goes beyond, the scope of other federal funding sources, to improve roads serving residential areas and between economic hubs, waste and wastewater improvements, and other utilities improvements to help return accessibility and long-term redundancy of systems to improve the quality of life for the Territory's residents. The Electrical Power Systems Enhancement Program supplements FEMA's PA work to restore physical electrical infrastructure by focusing the funding on activities that buy down the cost of power for households, while increasing redundancy and reliability of power to families.

Projects must also assess how planning decisions may affect members of protected classes, racially and ethnically concentrated areas, as well as concentrated areas of poverty; will promote the availability of affordable housing in low-poverty, nonminority areas where appropriate; and will respond to natural hazard-related impacts.

Integration of Mitigation for Resilience

The Territory is acutely concerned with the potential impacts of future storms and therefore will prioritize mitigation across all programs to build comprehensive resilience. Resilience is the state of a community in which the foundational systems are strong and capable of withstanding, or quickly bouncing back from, a disruption. Whether this is a natural or man-made hazard or an unanticipated economic downturn, the social cohesion, diverse economic opportunities, strong infrastructure, and emergency response capacities all contribute to such resilience. A resilient U.S. Virgin Islands is a mitigated U.S. Virgin Islands.

The following estimates demonstrate the financial benefits associated with sector-wide mitigation activities being incorporated into the recovery of the 2017 storms:

- Energy Sector: $825 million benefit in avoided cost of repairs and GDP losses for future storms.
- Education Sector: $420 million benefit projected if resilience measures reduce future damage to school facilities during a storm.
- Healthcare Sector: $320 million benefit projected if resilience measures avoid future repairs to healthcare facilities and systems.
- Transportation Sector: $285 million benefit over ten years in avoided cost of road repairs and GDP impacts of lost mobility due to damaged roads from future storms.
- Government Facilities: $220 million benefit in avoided repairs to existing facilities and temporary support costs.
- Landfills and Debris: $115 million benefit from resilience measures that increase the lifecycle and efficiency of waste facilities.
- Telecommunications: $225 million benefit from avoided cost of repairs to the system and GDP losses from disrupting digital banking and communications during a loss of power.

- Water Systems: $155 million benefit from avoided costs of water delivery, repairs, and GDP impact of health and productivity due to water disruptions.
- Wastewater Systems: $34 million benefit from avoided costs of continually repairing lines and pipes after a storm.[118]

Given these substantial benefits, all infrastructure under the FEMA PA is being designed to consider mitigation components and this will continue to be done under CDBG-DR. Proactive measures to promote risk-informed infrastructure development may include diversification of power generation, micro-grid development, relocation of critical facilities, and flood-mitigated roads. In addition, HMGP funding for important mapping and hydrologic studies are anticipated to be obligated soon, which will provide up-to-date data and land use recommendations that are critical for roads and power-related projects. VIHFA is working closely with VITEMA to stay informed on related efforts being funded through HMGP.

Recipients of funds may be required to provide a narrative of how mitigation principles and practices will be incorporated before the signing of contract agreements to ensure mitigation is a key factor from the onset of project design. The specific mitigation measures and technologies included in the project or program will again be evaluated during a scope and budget phase. This may be done in collaboration with HMGP and PDM work to ensure coordination with the Territory's other approaches to mitigation. Potential infrastructure or resilience projects may also be evaluated based on guidance outlined in FEMA's Hazard Mitigation Assistance Guidance including:

- Technical Feasibility
- Cost and cost-reasonableness
- Effects on the environment and cultural resources
- Community support
- Promotion of community resilience
- To what extent the project design reduces vulnerability
- To what extent the project includes measures to avoid or minimize adverse impacts to floodplains, wetlands, or other environmental and cultural resources
- Accessibility accommodations for individuals with disabilities and/or access and functional needs

A key consideration for future storms is mitigating the water distribution systems on the island. It is estimated that over 50% of the island is not connected to municipal water and rely on cisterns. While resilient expansion of water systems will be part of the infrastructure programs, CBDG-DR funding will also consider household-level cistern mitigation as a form of critical infrastructure to ensure these homes can access water in the event of another long-term power outage. Some of this

[118] For methodology on these calculations, see Appendix 2

work may also be supported by funding from the Housing Programs or upcoming tranche of mitigation funds.

Additional resilience measures for future extreme weather events may include the burying of power lines, hardening of power poles, and the elevation of homes and critical infrastructure, such as substations. Elevation will be done where required by the Territory's building code, which in accordance with 44 CFR 59.1, requires the first floor of structures located in the 1 percent annual (or 100-year) floodplain that receive federal assistance to be at least two to three feet above the 1 percent annual base flood elevation as determined by best available data.

In addition to hardening infrastructure and following elevation requirements, the Territory will seek to incorporate the "no adverse impacts" approach (NAI) set forth by the Association of State Floodplain Managers. This strategy relies on a calculated mix of mitigation approaches to ensure infrastructure development does not increase flooding risks. A key consideration in NAI is green infrastructure and the use of green spaces and natural systems to promote safer, more predictable conveyance of water through communities. All projects under the Infrastructure Programs will be required to provide a narrative summary of the green infrastructure components applicable to the project during the scope and budget development and are encouraged to use the ASFPM's NAI How-to-Guide for Infrastructure to assist in effective project design.[119]

Costs and Benefits

Infrastructure projects typically carry a high cost of labor and materials, relative to the continental U.S., due to the isolated geography and limited workforce in the Territory. Each project will be informed by a consideration of cost and benefits, considering these unique circumstances, but whenever possible, will utilize local/regional talent and materials to reduce costs.

The Territory's approach to assessing costs and benefits may be based on two existing frameworks. The first, HMGP's Guidance on cost effectiveness relies on a Benefit Cost Analysis, where projects for which benefits exceed costs are generally considered cost effective. The project cost estimate includes a line-item breakdown of all anticipated costs, including, as applicable:

- Costs for anticipated environmental resource impact treatment or historic property treatment measures
- Costs for engineering designs/specifications, including hydrologic and hydraulic studies/analyses required as an integral part of designing the project
- Construction/demolition/relocation costs, such as survey, permitting, site preparation, and material/debris disposal costs

[119] https://www.floods.org/ace-images/ASFPM-InfrastructureFinalJuly28.pdf

- All other costs required to implement the mitigation project, including any applicable project-type specific costs

Benefits in this methodology are often calculated using standard loss of function estimates provided by relevant federal agencies, which may also be utilized by the Territory. One disadvantage of this method is that benefits may only be measured as avoided damage, loss of function, and displacement and not fully consider the socio-economic factors involved. Given the Territory's approach to mitigation and resilience as giving full consideration systemic, inter-related processes that promote resilience, the method produced through the National Disaster Resilience Competition (NDRC) will help to supplement some of these factors.

Under this method, to the greatest extent possible, a narrative description may be produced to identify evidence-based practices as the basis for the project proposal. This method includes the following steps:

1. A full proposed cost, including Federal, Territorial, and private funding, as well as expected operations and maintenance costs and functionally related to geographically related work;
2. A description of the current situation and the problem to be solved (including anticipated changes over the analysis period);
3. A description of the proposed project or program including functionally or geographically related elements and estimated useful life;
4. A description of the risks to the community if the proposal and any land use, zoning or building code changes are not implemented, including costs that might be avoided if a disaster similar to the qualifying disaster struck again, including costs avoided if as a result of the project remaining effective in a future disaster;
5. A list of the benefits and costs of the proposal and the rationale for including each effect using the table provided according to the following categories:
    a. Lifecycle costs;
    b. Resiliency value;
    c. Environmental Value;
    d. Social Value; and
    e. Economic Revitalization.
6. A description of risks to ongoing benefits from the proposed project or program; and
7. An assessment of challenges faced with implementing the proposal.[120]

[120] https://www.hudexchange.info/resources/documents/NDRC-Phase-2-NOFA-Appendix-H-Benefit-Cost-Analysis-Instructions.docx

The exact method of benefit and cost assessments may vary and will be detailed further in the Infrastructure Policies and Procedures.

Opportunities and Impacts

Infrastructure programs will generate a wide array of employment opportunities and the Territory is committed to ensuring local firms and jobseekers are fully engaged in this work. Coordination is underway with the Virgin Islands Department of Labor (DOL) to ensure employers' and jobseekers' needs are being considered for both large and small-scale infrastructure projects. DOL is a critical partner in ensuring the Territory's workforce is trained, prepared, and qualified for the work initiated by infrastructure construction. Therefore, an entire program has been included as a Workforce Development Program to provide CDBG-DR assistance to DOL to better serve this need (see Section 4.5.3).

A key target population for this program will be low-income residents and businesses that qualify under Section 3. The Section 3 program requires that recipients of certain HUD financial assistance, to the greatest extent possible, provide training, employment, contracting and other economic opportunities to low- and very low-income persons, especially recipients of government assistance for housing, and to businesses that provide economic opportunities to low- and very low-income persons. Each agency receiving funds under the Infrastructure Programs will receive technical assistance from VIHFA and direct hiring and training assistance from DOL to ensure their projects are compliant with Section 3 to the greatest extent feasible. Further information on Section 3 efforts is outlined in Section 5.1.9.

It is a guiding principle of this allocation to combat the effects of disproportionate impacts for vulnerable populations. Each project will be assessed during the design and implementation to determine who benefits from the resulting infrastructure repairs and improvements. For all three Infrastructure Programs, geographic and demographic analysis will be used to determine how oft-neglected communities will instead receive direct benefits. In the U.S. Virgin Islands, low- and moderate-income residents will be the priority beneficiaries for all infrastructure work. Currently, it is estimated that 65% of Local Match program funding and the Repair and Resilience funding are allocated for LMI beneficiaries, while 80% of the Electrical Power Systems Enhancement and Improvements program is anticipated to benefit LMI residents and businesses (see ***Error! Reference s ource not found.***).

The Territory will also employ the Social Vulnerability Index from the Center for Disease Control to better serve at-risk populations.[121] Social vulnerability refers to the demographic and socioeconomic factors that can affect the resilience of communities. The Index uses 14 different factors collected in Census Bureau statistical data on housing, poverty, accessibility to resources, and others to rank census tracts by vulnerability in 4 different categories. As part of the initial scope and budget process,

[121] Social Vulnerability Toolkit – Center for Disease Control - https://toolkit.climate.gov/tool/social-vulnerability-index

projects will go through a social vulnerability analysis, to determine the type and severity of social vulnerability in the census tracts of the relevant area. Potentially negative impacts found through this analysis will be addressed during the detailed scope and budget phase of the project. Projects that have demonstrated negative impacts in vulnerable census tracts will not receive a Notice To Proceed (NTP) until program staff have determined project re-design or mitigation of the impacts to be sufficient. The Territory will rely on existing Social Vulnerability Index data sets and mapping tools, but in areas where data is missing or insufficient, may determine a comparable method to assess vulnerability with the best available data.[122]

Additional impacts being considered in the design and implementation of infrastructure projects are for those disproportionately impacted by the threat of climate change in the Territory. The U.S. Virgin Islands' Climate Change Executive Order (No. 474-2015) provides a mechanism for all social sectors and groups to work together in building resilience to climate change, and the U.S. Virgin Islands Climate Change Council (the Council) is charged with facilitating this process. Under this order, a 2016 assessment was presented to the Council with guiding principles on better incorporating the needs of vulnerable populations into climate and resilience activities. These guiding principles may be incorporated into the Infrastructure Programs and include:

- Design of processes and materials to facilitate access and full participation by at-risk groups.
- Facilitating access to financial resources, technical assistance, and logistics support to ensure adequate preparation and full participation.
- Ensuring that at-risk groups are allowed to articulate and represent their interests.
- Ensuring that assessment protocols for policies, programs, strategies, and projects include measures for assessing the impact on at-risk groups.[123]

Adaptable and Reliable Technologies

The Territory understands the critical need to strike a balance between advanced technology and reliable results. That is why the projects under the Infrastructure Programs may incorporate sustainability standards that have already been set and tested around the world, such as Leadership in Energy and Environmental Design (LEED) and International Green Construction Code (IGCC). Projects that incorporate such sustainability and technological standards may receive additional priority considerations. All projects will also be encouraged to follow the predevelopment principles

---

122 https://www.arcgis.com/home/webmap/viewer.html?webmap=22f7aef0c950486c89ef30b3e0649d97

123 http://www.fdpi.org/wp-content/uploads/2016/08/Briefing-Paper-on-At-Risk-Groups-in-the-USVI-Climate-Change-Initiative.pdf

described in the Federal Resource Guide for Infrastructure Planning and Design.[124] Under each program, prioritization criteria will also consider the technical feasibility of a project as a factor in how it will receive funding to encourage realistic project design from the onset. However, it is also understood that traditional energy systems and infrastructure pathways might not be the most geographically relevant or effective solution for long-term recovery, so resiliency will be heavily weighted as a prioritization criterion as well.

The Territory will rely on professional engineers and subject matter experts, procured by VIHFA, implementing partners, and subrecipients, to employ adaptable and reliable technologies to guard against premature obsolescence of infrastructure. The CDBG-DR application, containing a detailed scope and budget is required for each project will include a mechanism for program staff and project managers to consider how project design will ensure the longevity and sustainability of the infrastructure. Each project is also subject to relevant Territorial and federal design standards, which through the Bipartisan Budget Act, will be used to bring infrastructure up to modern industry standards regardless of pre-storm condition and direct damage.

Subrecipients should emphasize expectations for appropriate technologies and designs that consider climate adaptation strategies and mitigation components during the project development and procurement process. Relevant Memorandums of Understanding or Subrecipient Agreements may also include this as an expectation of the agreement and subsequent monitoring of the project may track the implementation of this condition.

Covered Projects

Requirements under 83 FR 40314 state that projects surpassing a total investment of $200 million threshold or that are complex enough in the opinion of the Federal Permitting Improvement Steering Council will require enhanced oversight including additional environmental reviews. While the Territory has not identified any infrastructure projects that currently reach this threshold, should any projects meet this criteria, the Territory may choose to complete these additional requirements under Fixing America's Surface Transportation, Title 41 (FAST-41), which established federally accepted procedure to improve early consultation and coordination among government agencies; increase transparency through the publication of project-specific timetables with completion dates for all federal authorizations and environmental reviews; and increase accountability through consultation and reporting on projects.[125]

For a list of projects funded under the New Housing and Infrastructure Construction (Homeownership) Program, see Appendix 7.4.

---

[124] http://portal.hud.gov/hudportal/documents/huddoc?id=BAInfraResGuideMay2015.pdf
[125] https://www.energy.gov/oe/mission/transmission-permitting-and-technical-assistance-division/fast-41

5.5.1 Non-federal Share (Match) for Disaster Recovery Program

Eligible Activities: Acquisition of Real Property (HCDA Section 105(a)(1)); Public Facilities and Improvements (HCDA Section 105(a)(2)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Payment of Non-federal Share (HCDA Section 105(a)(9)); Relocation (HCDA Section 105(a)(11)); Assistance to Institutions of Higher Education (HCDA Section 105(a)(21)).

National Objective: Low- and Moderate-Income Area, Low- and Moderate-Income Limited Clientele, and Urgent Need.

Low- and Moderate-Income Projection: 65%;
Currently, 58% of emergency and permanent PA work is on the islands of St. Thomas and St. John, which meet LMI. However, we project that a portion of infrastructure activity will serve majority-LMI communities in St. Croix. In instances where the infrastructure investment activity does not serve the entire island but a particular location, a low- and moderate-income area analysis will be conducted to determine the low- and moderate-income benefit.

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: Territory-wide.

Proposed Use of Funds:

In most cases, federal programs require local government organizations to pay a share of the cost of a project, called the "local match." In the aftermath of a disaster, the local match requirements can be burdensome on grant recipients with limited resources that have been overwhelmed by emergency and relief work and further weakened by lost government revenues.

To offset this burden, Congress allows CDBG-DR funds to be a source of federal funding that can be used to provide the local match. The Federal Register Notice from February 14, 2018 (FR-6066-N-01) provides guidance on the utilization of the first allocation of funds for disasters in 2017, allows the U.S. Virgin Islands to use CDBG–DR funds as the local match portion for disaster-related programs or activities administered by other federal agencies. Specifically, the Notice states that "[a]s provided by the HCD Act, funds may be used as a matching requirement, share, or contribution for any other federal program when used to carry out an eligible CDBG–DR activity." This includes activities carried out by FEMA, the USACE, FHWA, and other federal agencies. The Notice limits the amount of CDBG–DR funds that may be contributed to a USACE project at $250,000 or less. The Appropriations Act specifically "prohibits the use of CDBG–DR funds for any activity reimbursable by, or for which funds are also made available by FEMA or USACE."

The U.S. Virgin Islands has developed the Non-Federal Share (Match) for Disaster Recovery Program to provide the cost share for CDBG-DR-eligible projects including publicly assisted housing requiring

match. To maximize the leverage of CDBG-DR, the Territory is considering coordinated match and global match approaches to fund eligible projects. The U.S. Virgin Islands intends to use 17% of first and second tranche CDBG-DR program funds as the local match requirement for federally funded projects related to the disaster. Leveraging these funds will allow the U.S. Virgin Islands to better address disaster-related needs and help the Territory minimize its financial exposure, with the intention of spending federal funds efficiently and effectively. CDBG-DR funds for local match will be used as the funding of last resort and only after an eligibility determination has been made and a duplication of benefits analysis has been conducted.

The U.S. Virgin Islands is receiving FEMA Public Assistance (PA) funds through two disasters: FEMA-4335-DR-VI for Hurricane Irma and FEMA-4340-DR-VI for Hurricane Maria. As of May 2020, FEMA has written 1,074 Project Worksheets (PWs) for a total of $2,172,362,792 which includes $49.6 million for DR-4335 and $2.16 billion for DR-4340. These amounts will continue to increase. For both of these disasters, FEMA covered 100% of the cost of projects through May 3, 2018, for 4335-DR and May 14, 2018, for 4340-DR. On May 18, 2018, it was announced that FEMA's 100% share has been extended for all debris removal (Category A) work and all STEP work. However, emergency protective measures (Category B) work that is not STEP is now covered 90% by FEMA. The U.S. Virgin Islands is responsible for the 10% local cost share match for the remaining PA emergency protective measures work, which it intends to use CDBG-DR to cover. The Territory has requested a further extension of the 100% cost share coverage for all emergency work; however, the U.S. Virgin Islands is anticipating that FEMA PA will require cost share for all permanent work. Additionally, a 10% local share amount is required for FEMA Direct Administrative Costs (DAC), which we anticipate totaling approximately $20 million.

In addition to FEMA PA, and as described in Section 4.5, there are several other federal grant programs that require a cost share. One is the Pre-Disaster Mitigation (PDM) grant program. PDM is designed to assist in implementing a sustained pre-disaster natural hazard mitigation and reducing overall risk to the population and structures and reliance on federal funding in future disasters.[126] For PDM, the federal cost share is 75% and the local cost share is 25%.

The Territory will ensure that each project which receives funding under the Non-Federal Share (Match) for Disaster Recovery Program corresponds to a CDBG-DR *eligible activity*, meets a national objective, and demonstrates a direct connection to the disaster. Funds will be provided as payment to governmental agencies, eligible organizations, or other entities for eligible activities within approved PWs or relevant documentation from other agencies.

Administering Entity: VIHFA & Virgin Islands Territorial Emergency Management Agency (VITEMA)

CDBG-DR funds may be used as local match as described in *Table 36* below.

[126] https://www.fema.gov/pre-disaster-mitigation-grant-program

Eligible Applicants: All entities eligible for FEMA PA, FHWA, USACE, and other federal programs requiring a local match. Eligible applicants for the local match program include, but are not limited to, the following entities:

- Territory and municipal governments;
- Territorial agencies and authorities, including housing agencies VIHA and VIHFA for publicly assisted housing;
- Public and parochial schools (K-12);
- University of the Virgin Islands;
- First responders;
- Critical infrastructure facilities as defined by FEMA (e.g., wastewater and potable water facilities); and
- Other local program applicants eligible to receive federal recovery funds, including eligible private non-profit organizations.

Eligibility Criteria: The projects must have an active FEMA PW, or other federal program documentation, and be able to meet additional CDBG-DR *cross-cutting requirements* (see Section 5.1)

Prioritization Criteria: Projects will be selected based on a weighted scale with the following criteria:

- **LMI:** Project beneficiaries are evidenced to be at least 51% low- and moderate-income persons or communities.
- **Readiness:** Projects demonstrate they are ready to begin rehabilitation or construction. A project is considered "ready" if environmental review and engineering have already been completed, where required OR the project can demonstrate an accelerated timeline.
- **Criticality:** Determined based on the extent to which the normal conduct of social, economic, or government processes is impeded without the project. Special consideration will be given to projects that have a strong tie to housing unmet needs or will contribute to long-term recovery and restoration of housing.
- **Resilience:** Project includes measures that prevent vulnerability in the future or provide innovative solutions to existing vulnerabilities.
- **Technical Feasibility:** The degree of specialized equipment or advanced technical capacity required.
- **Sustainability:** Degree to which modern sustainability standards or best practices are taken into consideration for the project.
- **Economic Benefit:** The project is evidenced to resolve an impediment to or create new opportunities for economic activities.

Duplication of Benefits: The Non-Federal Share (Match) for Disaster Recovery Program will include a duplication of benefits review as part of the application review and award calculation process.

Program Allocation: $417,750,000 ($21,741,337 initial allocation, $345,099,223 second allocation and $50,909,440 for unmet infrastructure need)

Maximum Award: The maximum award will be based on the cost-share requirement per project.

Table 36 Infrastructure Match Requirements for Federal Programs

Federal Agency	FEMA Section	Category of Work	Program	Type of Work	Federal Cost Share*	Local Cost Share
FEMA	Section 407	A	Debris Removal	Emergency	100%	0%
FEMA	Section 403	B	Emergency Protective Measures	Emergency	100%; 90%**	0%; 10%
FEMA	Section 403	B	Sheltering and Temporary Essential Power (STEP)	Emergency	100%; 90%**	0%; 10%
FEMA	Section 406	C-G	Public Assistance	Permanent	90%	10%
FEMA	Section 428	C-G	Public Assistance Alternative Procedures (PAAP)	Permanent	90%	10%
FEMA	N/A	N/A	Direct Administrative Costs (DAC)	N/A	90%	10%
FEMA	N/A	Z	State Management Costs (SMC)	N/A	100%	0%
FEMA	Section 404	N/A	Hazard Mitigation Grant Program (HMGP)	Mitigation	100%	0%
FEMA	Section 203	N/A	Pre-Disaster Mitigation (PDM)	Mitigation	75%	25%
FHWA	N/A	N/A	Emergency Relief Program	Emergency, Permanent	100%	0%
USACE	N/A	N/A	N/A	Permanent	100%	$250,000 max. per project

*Subject to change per Congress.
**100% federal cost share for 240 days from the start of the incident period for Hurricanes Irma and Maria, ending August 31, 2018, for Hurricane Irma and September 11, 2018, for Hurricane Maria; 90% thereafter.
***100% federal cost share from the first 180 days after the disaster occurs, 90% thereafter.

For a list of projects funded under the Non-Federal Share (Match) for Disaster Recovery Program, see Appendix 7.4.

5.5.2 Infrastructure Repair and Resilience Program

Eligible Activities: Acquisition of Real Property (HCDA Section 105(a)(1)); Public Facilities and Improvements (HCDA Section 105(a)(2)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Relocation (HCDA Section 105(a)(11)); Assistance to Institutions of Higher Education (HCDA Section 105(a)(21)); Planning (HCDA Section 105(a)(12)(14)(16)).

National Objective: Low- and Moderate-Income Area, Low- and Moderate-Income Limited Clientele, and Urgent Need.

Low- and Moderate-Income Projection: 65%;
Currently, 58% of emergency and permanent PA work is on the islands of St. Thomas and St. John, which meet low- and moderate-income. However, we project that a portion of infrastructure activity will serve majority-low- and moderate-income communities in St. Croix. In instances where the infrastructure investment activity does not serve the entire island but a particular location, a low- and moderate-income area analysis will be conducted to determine the low- and moderate-income benefit.

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: Territory-wide.

Proposed Use of Funds:

Damage to the public networks and facilities for energy, transportation, communications, potable water, education, and health and safety was extensive. For example, transportation networks were devastated throughout the islands. Flooding, storm water overflow, soil erosion, culvert failures, mud slides, potholes, complete washouts, and other damages to road infrastructure inhibited freedom of movement throughout the Territory. Residents were cut off from neighborhoods and forced to take ad hoc detours that were created through saturated mud in the immediate days, weeks, and months following the storms. Islands were cut off from each other, as inter-island travel was restricted while the ports (air and sea) were closed. Moreover, damages to the transportation network impeded delivery of emergency services to vulnerable populations. To return infrastructure to industry standards, permanent repair and reconstruction work is needed, adding up to a current estimate of $4.99 billion for the U.S. Virgin Islands. The cost of repair and reconstruction is likely to increase as the full extent of the damage to infrastructure is assessed.

Hardening public facilities and networks is critical to the Territory's ability to respond swiftly in the aftermath of an extreme weather event. A high priority for the U.S. Virgin Islands will be funding activities that mitigate damage to utility, transportation, and telecommunications networks, particularly for the facilities and networks that serve the health and safety of the community. As of April 27, 2018, the Territory has identified several resilience and mitigation measures, which include hardening public facilities (e.g., water pump stations, public schools), installing on-site power generation, burying utility lines, reducing the risk of storm water runoff erosion and flood exposure, and extending utility services to isolated populations. The estimated cost of these measures is included in the $4.99 billion above. This excludes integrated planning and mitigation studies that, while critical, will be eligible under a separate program.

Part of the hardening activities include ensuring public facilities have uninterrupted access to critical services, particularly electricity. Electricity provides not only lighting, heating, cooling, and refrigeration, but also powers the pumps supplying water to and removing waste from the facilities. During and immediately after the hurricanes, the need for electricity was essential, particularly for those public facilities that were used to mobilize emergency response services or to serve as shelters for residents of the U.S. Virgin Islands. For example, schools were used as primary sheltering locations for the residents of the U.S. Virgin Islands. However, during the hurricanes, the schools in the Territory were without power and thus unable to provide basic sheltering needs and services. Even with the construction of new emergency shelters, which will occur over the course of several years, it is likely that some schools will still have to be used as emergency sheltering facilities; with secondary sources of power, they may at least be sufficiently functional to protect and service residents during future natural disasters.

Extending public utilities to the greater population of the Territory can also improve resilience. Several communities within the U.S. Virgin Islands are disconnected from public utilities and function off the grid for some or all their utility needs. Common means by which residents are "off the grid" are cisterns for water and satellite internet services or no internet services at all (as opposed to connected to a fiber optics broadband for internet). In the event of a disaster, these off-the-grid populations are further distressed because of their lack of connection to the public utility. For example, only 47% of the Territory is connected to the water utility in the latest census and most rely on cisterns fed by rainwater.[127] Thus, for many residents, cisterns are a critical part of their homes. Once the cistern runs out of water, it must be bought from water treatment plants and delivered by truck. If these residents are connected to the public water utility, there would be no need to purchase water from an independent supplier at a time that demand for water is high and may not be available post-disaster. For residents who are connected to the public water system, access to potable water would not be dependent on electricity to power a pump. Thus, once the potable water system is operational, homes would have water regardless of whether they have electricity. Connecting more customers to public utilities creates an additional source of revenue for the publicly-owned utilities which will serve to support activities such as operations and maintenance. There is a reciprocal benefit for the government as an additional source of revenue which can benefit the Territory with maintenance as well as operations upkeep and potential rate stabilization.

As described earlier in the Unmet Infrastructure Need section, historical addresses have created a confusing pattern and make it difficult to locate an individual house or business, especially in an emergency. The development of a consistent addressing system with street signage and address numbering throughout the Territory is essential for public safety. A comprehensive addressing system would result in each property being assigned an address that will include an address number, street name, Estate name, the Island name and ZIP Code. Erecting street signs throughout the

[127] 2010 U.S. Census

Territory will assist first responders, utility companies, delivery companies, residents and visitors in locating homes and businesses.

The goals of the Infrastructure Repair and Resilience Program are to:

- Repair and replace damaged infrastructure;
- Harden infrastructure against extreme weather events; and
- Construct new infrastructure to improve the level and breadth of service to communities.

The demand for repair and resilience interventions, as described above, will exceed the investment in this program; however, this investment will provide a significant improvement to a weakened energy infrastructure and will aid to fill a gap identified as a result of the hurricanes.

The Territory will ensure there is no duplication of benefits and will follow the guidance for proper documentation. There will be an application process for project selection based on the priorities identified and Subrecipient Agreements used as deemed necessary.

Program funds will be used to meet the three goals described below. Priority will be given to projects directly supporting housing needs and critical services. Roads and public and community facilities will be prioritized as they are sectors with the greatest unmet need.

- *Repair and Replacement*: The Program will pay for eligible costs to complete repairs and replacements for public infrastructure that have not yet been completed (e.g., repair of nonfederal aid roads).

- *Hardening*: The Program will cover activities to harden infrastructure against severe weather events. This will include both structural and non-structural measures to harden facilities against high winds, heavy rainfall, flood exposure, storm water run-off, and their effects (e.g., erosion). For example, the Department of Public Works (DPW), with assistance from FEMA and FHWA, has identified potential mechanisms to reduce overall vulnerability of the transportation infrastructure. Structural projects for DPW may include, repair, reconstruct, and improve resilience to transportation infrastructure including roads, bridges, ghuts, culverts, additional drainage systems, embankments, traffic signals, and signage to industry standards, as applicable to the Territory. Non-structural approaches may include hydrologic and hydraulic studies, flood-risk modeling, monitoring systems such as GIS, public outreach and education, and future planning measures.

  Energy resilience measures will keep public facilities operational in times of disaster. Making these facilities less vulnerable to future disasters, will provide communities with that first layer of support beyond the home. Energy resilience measures may include but are not limited to: backup solar power with or without battery storage, standby generators for emergency

purposes (not base load), and other types of distributed energy resources located on site or within a nearby community (e.g., microgrids).

- *New Construction*: The Program will cover the cost of new construction to extend public services to populations that are not currently connected and/or to deliver services more effectively. Eligible projects may include construction of new trenches to bury or extend multiple utilities, e.g., burying telecom fiber optic network in a trench built to extend a water line to an isolated community. This reduces the cost of each individual project, minimizes disturbances to traffic flow, and decreases the risk of damage to previously placed but unmarked utilities.

Administering Entity: VIHFA

Eligible Applicants: WAPA, DPW, BIT, and other infrastructure related governmental and quasi-governmental entities.

Eligibility Criteria: The projects must demonstrate a tie to the storm or have clear evidence of resiliency functions to prevent future damage.

Prioritization Criteria: Due to the limited funds available in the first allocation, the initial focus of the program will be shovel-ready projects in sectors with the highest unmet needs. As energy projects will be able to receive funding under the Electrical Power Systems Enhancement and Improvement Program, the Infrastructure Repair and Resilience Program will prioritize road improvement projects. Projects that benefit LMI and/or vulnerable populations are also a priority. Individual projects will be prioritized based on metrics, to be identified in the policies & procedures manual, in the following categories:

- **LMI:** Project beneficiaries are evidenced to be at least 51% low- and moderate-income persons or communities.
- **Readiness:** Projects demonstrate they are ready to begin rehabilitation or construction. A project is considered "ready" if environmental review and engineering have already been completed, where required OR the project can demonstrate an accelerated timeline.
- **Criticality:** Determined based on the extent to which the normal conduct of social, economic, or government processes is impeded without the project. Special consideration will be given to projects that have a strong tie to housing unmet needs or will contribute to long-term recovery and restoration of housing.
- **Resilience:** Project includes measures that prevent vulnerability in the future or provide innovative solutions to existing vulnerabilities.
- **Technical Feasibility:** The degree of specialized equipment or advanced technical capacity required.
  Sustainability: Degree to which modern sustainability standards or best practices are taken into consideration for the project.

Economic Benefit: The project is evidenced to resolve an impediment to or create new opportunities for economic activities.

Eligibility Criteria: Must be a project that meets the proposed goals stated above. Infrastructure projects must exhaust other eligible funding sources such as FEMA prior to receipt of CDBG-DR. Applicants need not meet all prioritization criteria to be eligible.

Program Allocation: $60,750,000 ($22,984,200 initial allocation; $37,765,800 second allocation)

Maximum Award: There is no maximum award for an individual project. Awards will be based on project cost estimates and cost benefit analysis.

For a list of projects funded under the Infrastructure Repair and Resilience Program, see Appendix 7.4.

5.5.3 Electrical Power Systems Enhancement and Improvement Program

Eligible Activities: Acquisition of Real Property (HCDA Section 105(a)(1)); Public Facilities and Improvements (HCDA Section 105(a)(2)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (including Housing) (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Payment of Non-federal Share (HCDA Section 105(a)(9)); Relocation (HCDA Section 105(a)(11)); Assistance to Institutions of Higher Education (HCDA Section 105(a)(21)); Planning (HCDA Section 105(a)(12)(14)(16).

National Objective: Low- and Moderate-Income Area, Low- and Moderate-Income Limited Clientele, and Urgent Need.

Low- and Moderate-Income Projection: 80%; The majority of the electrical power system will serve low- and moderate-income persons throughout St. Croix, St. John, & St. Thomas.

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: Territory-wide.

Proposed Use of Funds:

As of April 20, 2018, the energy sector has the greatest unmet need of any sector. As described in Section 4.5.1, the U.S. Virgin Islands electrical power system was heavily damaged by Hurricanes Irma and Maria, with over 80% of the transmission and distribution line-miles damaged, and 20% of the

generation capacity for the islands offline for nearly a month.[128] The extent of the damages resulted in loss of service for over 95% of customers. The impacts were exacerbated by aging infrastructure in need of replacement, vulnerability of network design to system-wide outages, and dependence on off-island fuel supplies for energy needs. In particular, the high costs of purchasing and shipping fuel to the U.S. Virgin Islands have driven up the cost of electricity for residents and businesses on the islands. At 38.0 cents per kilowatt-hour, residential electricity rates are 3 times the U.S. national average (12.9 cents per kilowatt-hour) and 1.8 times higher than Puerto Rico (21 cents per kilowatt-hour). High electricity rates substantially increase the cost of living and cost of conducting business, which has deterred many hotels and businesses from opening on the islands. Moreover, many of the Territory's existing businesses use their own generators or solar photovoltaic (PV) systems for electricity, which further raises electricity rates because the fixed costs of maintaining public energy infrastructure are spread across fewer customers.

The main objectives of the Electrical Power Systems Enhancement and Improvement Program will be to invest in optimizing the generation mix, improving asset productivity, and providing more sustainable, more reliable, and more cost-effective energy for the U.S. Virgin Islands. To achieve these goals, WAPA will need to deliver a number of projects across the different areas of investment. Eligible activities may include but are not limited to the following:

- Enhancement of existing generation and/or storage, including supporting infrastructure;
- Development of new generation and/or storage, including supporting infrastructure;
- Repair and reconstruction of energy infrastructure, including structures;
- Hardening of energy infrastructure, including structures;
- Mitigation measures to prevent and/or reduce service disruptions or failures;
- Public facilities and improvements;
- Energy efficiency/conservation programs; and
- Code enforcement.

Generation is a major determinant of both cost and performance of the electrical power system in the U.S. Virgin Islands. Similar to other remote areas, the Territory's primary sources of electricity are combustion and steam turbines powered by fuel oil or propane, which must be shipped to the island and kept in storage facilities owned by third-party providers. The program will help to reduce the Territory's dependence on oil and propane by allowing for projects that replace existing, conventional generator units with advanced, high efficiency technologies or build new capacity with more advanced technologies. Such projects may also have health and environmental benefits to improve air quality for communities near the power generation plants and decrease the overall emissions into the atmosphere.

[128]Congressional Research Service. "Potential Options for Electric Power Resilience in the U.S. Virgin Islands." R45105. 14 February 2018. (https://fas.org/sgp/crs/row/R45105.pdf). Accessed: 3 April 2018.

Enhancing the electrical power system also involves optimizing the type of generation, including conventional and renewable sources. One of the initial priorities for the Territory is to invest in utility-scale solar and wind projects, and eventually consider community-scale or rooftop solar programs. The abundance of solar and wind make the Territory a prime location for investment in renewable energy. Decreasing capital costs and zero marginal fuel costs also make renewable energy technologies an increasingly attractive opportunity for investment. This reduction in variable operating cost could also be passed on to customers, thus decreasing the cost of electricity for ratepayers, including LMI households.

Projects may also include the adoption of grid-scale energy storage systems to smooth intermittent generation from renewable energy sources, supported by interconnection infrastructure to supply energy directly or provide ancillary services to the grid. By combining renewables and battery storage, WAPA would have more freedom to store energy when power generation is high but demand for electricity is low, then dispatch electricity to the grid when generation is low, but demand is high. For example, electricity demand typically spikes in the early evening, while solar power generation is decreasing as the sun sets. By storing excess energy when solar output is peaking in the middle of the day, the utility can supply power to the electric grid without incurring additional marginal costs from other fuel sources. This is a key feature to the success of utility scale renewable energy resources.

Generation optimization has the added effect of increasing the reliability of electricity delivery to customers. Creating a more diversified energy mix means the Territory will no longer rely so heavily on fuel and its delivery to the islands. Projects that reduce the Territory's dependence on off-island fuel sources will allow the U.S. Virgin Islands to become more independent and resilient in the aftermath of severe weather events and lead to greater energy security overall. Renewables are a large part of this diversification effort. If there are global or regional fuel shortages or crisis, this allows for the Territory to remain more self-sufficient than it has been in its history. The first allocation for this program will prioritize funding of shovel-ready projects related to utility-scale generation optimization.

Beyond generation, WAPA is also evaluating best practices from other utilities to incorporate into the delivery of standard operations and maintenance activities. Projects in future allocations may include digital monitoring through system control and data acquisition (SCADA) systems, and geographic information systems (GIS) for preventative maintenance (e.g., vegetation control). Other projects that may be supported in future allocations are those that reduce line losses or limit disruptions to service. For example, closing loops between substations can localize the effects of grid failure and reduce system-wide outages, as well as minimizing the duration of outages, since WAPA could utilize loops and bypasses to be able to redirect power as needed. WAPA may also begin to sectionalize its system, isolating a faulted part of the system from the rest of the network, which would also reduce the time and frequency of outages.

Modernization of services is another element of this program. Investments will be made to increase the utilities ability to response to outages more quickly using Outage Management Systems (OMS)

and ease billing from customers through advanced metering infrastructure. With an advanced metering infrastructure in place, there will no longer be a need for workers to read individual meters, which is more time-consuming and less accurate. More active monitoring will enable for the utility to respond to outages or local increases in load prior to outages and can redirect load to support changes or spikes in usage.

Administering Entity: VIHFA and the U.S. Virgin Islands Water and Power Authority (WAPA)

Eligible Applicants: WAPA and other governmental entities which may have electrical projects outside of the existing WAPA network.

Prioritization Criteria: Due to the limited funds available in the first allocation, the initial focus of the program will be shovel-ready generation diversification projects that reduce the Territory's dependence on off-island fuel sources, including development of utility-scale renewable energy. Projects that benefit LMI and/or vulnerable populations are also a priority. Other types of projects are expected to be funded in future allocations.

Individual projects will be prioritized based on metrics, to be identified in the policies & procedures manual, in the following categories:

- **LMI:** Project beneficiaries are evidenced to be at least 51% low- and moderate-income persons or communities.
- **Readiness:** Projects demonstrate they are ready to begin rehabilitation or construction. A project is considered "ready" if environmental review and engineering have already been completed, where required OR the project can demonstrate an accelerated timeline.
- **Criticality:** Determined based on the extent to which the normal conduct of social, economic, or government processes is impeded without the project. Special consideration will be given to projects that have a strong tie to housing unmet needs or will contribute to long-term recovery and restoration of housing.
- **Resilience:** Project includes measures that prevent vulnerability in the future or provide innovative solutions to existing vulnerabilities.
- **Technical Feasibility:** The degree of specialized equipment or advanced technical capacity required.
- **Sustainability:** Degree to which modern sustainability standards or best practices are taken into consideration for the project.

Economic Benefit: The project is evidenced to resolve an impediment to or create new opportunities for economic activities.

Eligibility Criteria: Must be a project that meets proposed goals stated above. Infrastructure projects must exhaust other eligible funding sources such as FEMA prior to receipt of CDBG-DR. Applicants need not meet all prioritization criteria to be eligible.

Program Allocation: $95,903,330 ($95,903,330 initial allocation)

Maximum Award: There is no maximum award for an individual project. Awards will be based on project cost estimates and cost benefit analysis.

For a list of projects funded under the Electrical Power Systems Enhancement and Improvement Program, see Appendix 7.4.

5.6 ECONOMIC REVITALIZATION PROGRAMS

Hurricanes Irma and Maria had profound and lasting effects on the already fragile economy of the U.S. Virgin Islands. Prior to the devastating 2017 storms, the Territory had lost its largest private employer, the oil refinery HOVENSA. HOVENSA's unexpected closure in 2012 harmed numerous small businesses that provided support services to the refinery. Because it was by far the Territory's largest exporter, this further constrained the fiscal situation of the U.S. Virgin Islands.[129]

Since HOVENSA's closure, the U.S. Virgin Islands has become increasingly reliant on tourism and, despite continued efforts, it has only made modest progress to diversify the economy and attract new businesses. As detailed in Section 4.6, tourism remains by far the largest contributor to employment and GDP, with estimates ranging between 30% in direct economic impact and 80% in indirect impacts, and most small businesses and workers in the Territory are directly or indirectly dependent on tourism. Many of these individuals are of low or moderate income and lost their home as well as their job; making it even more critical to find ways to allow them to regain both economic stability and secure housing. As a result, revitalizing tourism is critical to job creation and expanding economic opportunities for small businesses throughout the Territory. In addition to maximizing the potential of local residents to secure jobs and contracts in the recovery efforts, the Territory will focus on ways to diversify the economy as a way to make the U.S, Virgin Islands more resilient to future economic shocks.

The severe impact of the hurricanes on tourism has been detailed in Section 4.6. Revitalizing tourism will involve considerable efforts on various fronts. It will be necessary to rebuild lodging capacity for both visitors and those whose labor supports the tourism industry, improve connectivity to the Territory, and enhance the travel experience for visitors to the U.S. Virgin Islands. Changing the reality on the ground and communicating it effectively to potential visitors will strengthen the U.S. Virgin Islands as a prime Caribbean destination, open for business and ready to provide a memorable

[129] Government of the United States Virgin Islands, Five-Year Financial Plan (Fiscal Years 2017-2021).

experience to the low-budget, adventure-seeking traveler and the luxury cruise visitor alike. Efforts to increase tourist travel will have to be diverse recognizing that the Territory's tourism assets are slowly coming back online. Small businesses that serve the tourism industry are struggling from the downturn in tourist visits and are deeply concerned about survival during the off season.

The challenge of revitalizing tourism is particularly acute with respect to cruise visits, which represent over 70% of total visitors to the Territory (1.8 million out of 2.5 million in 2016).[130] In the months following the 2017 hurricanes, airlifts and cruise ship arrivals plummeted; they remain considerably low relative to pre-disaster levels. Cruise ship calls in January 2018 were down 30% as compared to January 2017. [131] This exacerbates an already downward tourism trend for the U.S. Virgin Islands, which has become less competitive relative to other Caribbean destinations.[132] While the Territory was receiving significantly fewer cruise visitors in 2017, St. Lucia, Belize, and Bermuda saw their numbers rise by more than 10%.[133] To protect thousands of low- and moderate-income jobs that are still dependent on day visitors coming through the ports, it is crucial that the Territory regains its share of the cruise passenger market.

While reinvigorating tourism is an urgent need, it cannot be the sole focus of a comprehensive economic revitalization effort. It is equally important to support the sustainable diversification of the economy of the U.S. Virgin Islands. A more diversified economy will be more resilient in the face of future natural disasters and will incentivize the creation of higher-earning jobs in the long-run.

Economic diversification poses a major challenge, as there are considerable obstacles to attracting private investment and expanding existing businesses. In addition to higher-than-average shipping and electricity costs, and regulatory hurdles, the lack of a skilled labor force continues to preempt the relocation, growth, and creation of new, high-value businesses. Furthermore, access to financing is seriously limited, especially for small business ventures. It is critical that entrepreneurs in the Territory have a supportive business environment with easier access to capital and adequate technical support in the design and implementation of viable business plans.

The programs detailed herein are intended to enable a broad spectrum of activities to support the varied needs of communities recovering from the disaster. For CDBG-DR purposes, economic revitalization can include any activity that demonstrably restores and improves some aspect of the local economy retaining and/or creating jobs. Thus, an eligible activity also may address job losses, or negative impacts to tax revenues or businesses. All economic revitalization activities must address economic impact caused by the storms, such as loss of jobs, loss of public revenue, and profits lost due to interruption of business.

---

[130] U.S. Virgin Islands Bureau of Economic Research.
[131] Caribbean Tourism Association; U.S. Virgin Islands Bureau of Economic Research.
[132] U.S. Virgin Islands Bureau of Economic Research and Department of Tourism.
[133] Caribbean Tourism Association.

Program activities will be reviewed to determine URA/104(d) compliance and required actions. The policies and procedures will be further developed in modifications to the existing Residential Anti-displacement and Relocation Assistance Plan (RARAP) and a soon to be developed Optional Relocation Policy.

Therefore, the U.S. Virgin Islands proposes an economic revitalization portfolio to support the Territory's long-term housing recovery, and specifically to provide employment opportunities at family-sustaining wages that will allow lower income residents to repair or replace their storm-damaged housing. This will occur in the following ways:

- Generate opportunities for the local workforce to participate in recovery-related sectors such as construction as well as develop essential skills, digital literacy, and vocational skills training for tourism-related work and other key diversification sectors;
- Invest in an advertising campaign that offsets negative perceptions of storm-related damages to the U.S. Virgin Islands and reinforces the Territory's market position as a top sports & adventure, ecotourism, cultural, and romance destination in the U.S.
- Provide financial support to impacted communities for economic revitalization and job growth efforts; and
- Provide loans, grants, and technical assistance to small businesses that sustain income-producing jobs for residents of the disaster-impacted communities.
- Stabilize and grow the tourism industry through key infrastructure improvements to ports and airports that will increase the Territory's capacity to receive tourists;
- Generate job growth/retention through the Ports & Airports Enhancement Program, Tourism Industry Support Program and Workforce Development Program.

Table 37 Economic Revitalization Programs and Tranche 1 & 2 Allocations

Program	HCDA Eligible Activities	Tranche 1 Allocation	Tranche 2 Allocation	Total Allocation
Ports and Airports Enhancement Program	Public Facilities and Improvements	$23,000,000	$15,109,022	$38,109,022
	Clearance, Rehabilitation, Reconstruction, and Construction of Buildings			
	Special Economic Development Activity			
Tourism Industry Support Program	Waiver Request Approved.	$5,000,000	$5,000,000	$10,000,000
Workforce Development Program	Public Services	$5,000,000	$12,000,000	$17,000,000
Neighborhood Revitalization Program	Code Enforcement	$0	$0	$0
	Clearance, Rehabilitation, Reconstruction, and Construction			
	Public Services			
	Special Economic Development Activity			
Small Business and Entrepreneurship Technical Assistance Program	Technical Assistance	$0	$0	$0
	Special Economic Activity			
Total		**$33,000,000**	**$32,109,022**	**$65,109,022**

Economic Revitalization activities will contribute to the long-term recovery and restoration of housing in a multitude of ways. The benefits of a rebounded and stronger tourism industry through the Tourism Industry Support Program will provide more employment opportunities at family-sustaining wages. Similarly, the Ports and Airports Enhancement Program modernizes the Territory's most critical access points for these tourists, as well as import/export commerce, allowing Virgin Islands' businesses to remain competitive in the Caribbean marketplace. The Workforce Development Program provides direct support to individuals and businesses to develop lifelong workplace skills for the Territory's most economically vulnerable residents. These opportunities create a recovery strategy that allows lower-income residents to gain economic stability after the disruption of the 2017 disasters. More financially secure households will have access to better insurance coverage, as well as physical home repair and protective measures, directly impacting their ability to fully restore (beyond what federal resources are providing) or replace their storm-damaged housing now and protect their homes in future hazard events.

5.6.1 Ports and Airports Enhancement Program

Eligible Activity: Public Facilities and Improvements (HCDA Section 105(a)(2)); Clearance, Rehabilitation, Reconstruction, and Construction of Buildings (HCDA Section 105(a)(4)); Planning (HCDA Section 105(a)(12)(14); Special Economic Development Activity (24 CFR 570.203).

National Objective: Urgent Need.

Low- and Moderate-Income Projection: 20%; Ports and airports will impact the area surrounding the port primarily with a larger economic impact for the island and Territory, including through the wharfage, passenger terminal use, port and ship fees and tariffs.

Estimated Start and End Dates: Quarter 4, 2019 through Quarter 3, 2024.

Geographic Area(s) Served: The ports of Christiansted in St. Croix and Charlotte Amalie in St. Thomas (Charlotte Amalie Harbor, Havensight and Crown Bay) will be enhanced.

Proposed Use of Funds:

This program is aimed at improving maritime and air connectivity for the U.S. Virgin Islands with the objective of increasing cruise ship arrivals to St. Thomas and St. Croix and increasing air traffic to and from the islands, particularly through recurrent international commercial flights. Both initiatives are key to the tourism sector, which accounts for over 30% of the economy of the U.S. Virgin Islands.

Cruise connectivity is critical to the Territory, as cruise passengers represent approximately 70% of all visitors to the U.S. Virgin Islands.[134] The capacity to attract cruise ships is vital to an economy that is so dependent on tourism. The 2017 hurricanes continue to limit hotels stays due to damages which makes the need to increase the influx of cruise day visitors more critical for the Territory.

Over the last few years, cruise travel demand for the Caribbean has remained strong and growing, but the U.S. Virgin Islands has been losing ground to other destinations. St. Lucia, Belize, and Bermuda all grew by more than 10% in 2017; by contrast, the number of cruise passenger arrivals to the Territory decreased by 5.4% between 2015 and 2016. In 2016 passenger arrivals – at 1.78 million – were only marginally higher than they were in 2008, when the effects of the Great Recession were just beginning to impact the tourism sector. [135]

One major reason for the loss in cruise arrivals is the limited capacity of the U.S. Virgin Islands' ports to accommodate the newer and larger cruise vessels that are being introduced into the market, notably the Oasis-class cruise vessels pioneered by Royal Caribbean International. Oasis-class cruise

[134] U.S. Virgin Islands Bureau of Economic Research Annual Tourism Indicators (2016).
[135] U.S. Virgin Islands Bureau of Economic Research Annual Tourism Indicators (2016).

ships are the largest in the world, with capacity for up to 6,400 passengers and crew members and weighing over 230,000 tons. Other cruise lines are following suit: MSC Cruises alone has announced 12 new vessels to be delivered by 2026, all with capacity for at least 5,500 passengers. MSC's industrial plan includes 4 new World-class ships with total capacity for 2,000 crew and over 6,800 passengers.[136]

The rapid increase in vessel size is a visible industry trend. According to the Cruise Lines International Association, based on the ships on order as of December 2016, the average cruise ship making its maiden voyage between 2020 and 2026 will have over 3,700 passengers, up from the 2,400 passenger average for ships expected to enter the market in 2019.[137] As of March 2018, there are at least 23 cruise vessels to be delivered between 2019 and 2024 with a capacity of over 4,000 passengers.[138]

There are now four Oasis-class vessels servicing the Caribbean and plenty of others of comparable capacity and similarly large dimensions such as the Quantum- and Voyager-class ships. Common to these larger cruise ships is their deeper draft requirements, which require deeper ports.

Awareness of the growing size of vessels has driven governments across the Eastern Caribbean to invest heavily in port enhancement. A clear example of this is Sint Maarten/Saint Martin's Pointe Blanche, which remains the most popular destination in the region with over 2 million passenger arrivals per year thanks in large measure to its capacity to dock several Oasis-class ships at the same time.[139] As cruise vessels become larger, ports have to increase their draft (depth) to avoid sheer obsolescence.

As Caribbean ports invest in dredging to accommodate the growing size of cruise vessels, they have also expanded berthing capacity to fit the same number of larger ships simultaneously. The Port of Bridgetown in Barbados, for instance, undertook a large-scale dredging project of its inner harbor "to accommodate the large mega-cruise ships" that have become a new industry standard. As part of a large-scale, $100 million-project, Bridgeport has also added two new berths to make room for larger cruise and cargo vessels.[140] Without berth expansion, ports cannot enter preferential berthing access agreements with cruise lines. The West Indian Company, which operates the largest cruise harbor in St. Thomas, was unable to enter into preferential berth agreement with Royal Caribbean for lack of capacity to harbor its Oasis-class ships.[141] As recent studies have pointed out, cruise companies have gained negotiating power vis-à-vis ports and they increasingly consider the size and quality of port infrastructure in selecting destinations.[142]

---

[136] MSC Cruises Presentation, PAMAC Cruise Summit (January 2018).
[137] Cruise Lines International Association, Inc. 2017 Cruise Industry Outlook Report.
[138] Seatrade Cruise Review, March 2018 Quarterly.
[139] Cayman Compass, "Cruise Ports Expand Around the Caribbean" (July 30, 2015).
[140] Barbados Port, Inc. Accessible online: http://www.barbadosport.com/odern-bridgetown-port.
[141] U.S. Virgin Islands Department of Tourism, West India Company, Ltd.
[142] Jack Daly and Karina Fernandez-Stark, "Barbados in the Cruise Tourism Global Value Chain" (2017). Duke Global Value Chain Center, Duke University.

Expanding port capacity through dredging and additional berthing space will enable the Territory to enter formal berthing access agreements for larger cruise ships, thus increasing the number of cruise passenger arrivals and overall tourism expenditures in the Territory. The ultimate beneficiaries will be the thousands of low- and moderate-income residents whose livelihood depends on tourism and the small businesses in the areas adjacent to ports whose revenue stream is highly dependent on the increasingly competitive Caribbean cruise travel market. VIHFA will partner with the V.I. Port Authority and the West Indian Company Ltd. (WICO) to work with business owners and the Workforce Investment Board to identify and certify Section 3 eligible workers. In towns like Charlotte Amalie or Frederiksted, hundreds of taxi drivers, street vendors, small jewelry retailers, tour guides, housekeepers, wait-staff, and other service providers depend on a steady influx of cruise visitors. Many of these individuals experience storm damage and will be reliant on CDBG-DR and FEMA resources as well as their wages to retain their homes. In this way, thousands of low- and moderate-income workers stand to benefit from revitalizing tourism. WICO will also work with the Havensight area businesses to identify low- and moderate-income jobs that are retained as an impact of the port enhancement to ensure the preservation of low-mod jobs. Additional partnerships will be established with other entities such as the Workforce Investment Board to obtain information required to identify and certify the status of workers employed at businesses in proximity to the other CDBG-DR project sites.

It is understood that the project will require coordination with the USACE, and that significant environmental review will have to be conducted. The environmental review is already under way; the Port is already in discussion with the USACE on project details.

While enhancing ports for cruise ships is critical, it is equally important to improve the quality of air service to the U.S. Virgin Islands. The number of flights fell dramatically as result of the 2017 hurricanes and have only very slowly recovered since. During the eight-month period of fiscal year 2018, air arrivals were 225,702, representing a loss of 60% compared to the 566,828, air visitors one year ago. Major carrier seats in fiscal year 2017 averaged 17,123 compared to 17,293 seats in fiscal year 2016, a decline of 1%. The number of major carrier seats during the seven months of fiscal year 2018 was 8,817. The average number of seats during the same period in fiscal year 2017 was 18,401, a decline of 52%.[143] Insufficient air connectivity severely limits demand for overnight tourism to the Territory, at a significant opportunity cost; the average overnight tourist to the U.S. Virgin Islands spent six times as much as day-visitors in 2016, benefitting a wider range of low- and moderate-income workers in the hospitality sector.[144]

One important challenge for the Territory is to develop the capacity to attract direct international flights, which could significantly boost tourism revenue and overall attractiveness for other businesses. The runway of the Henry E. Rohlsen Airport in St. Croix is long enough to accommodate larger aircraft, but the airport's passenger processing infrastructure is radically insufficient. The Cyril

[143] U.S.V.I. Bureau of Economic Research.
[144] U.S.V.I. Bureau of Economic Research.

E. King Airport in St. Thomas is currently underutilized, with a second floor that is not operational at present due to the lack of jet bridges.

The program will focus on port dredging in the first and second tranche of funding.

Program Allocation: $38,109,022 ($23,000,000 initial allocation; $15,109,022 second allocation)

Administering Entity: V.I. Port Authority and the West Indian Company Limited (WICO)

Eligible Applicants: Port and airport operators in the U.S. Virgin Islands.

Maximum Award: There is no maximum award for an individual project. Awards will be based on project cost estimates and cost reasonableness analysis.

Eligibility Criteria: For dredging projects, seaport operators must provide evidence of direct engagement with cruise lines aimed at reaching preferential berthing agreements when said agreements are necessary to increase utilization of existing berths. Similarly, airport operators will be expected to show direct engagement with airlines to increase airlifts upon expansion of passenger processing capacity. Projects should be shovel ready.

For a list of projects funded under the Ports and Airports Enhancement Program, see Appendix 7.4.

5.6.2 Tourism Industry Support Program

Eligible Activity: Technical Assistance (HCDA Section 105(a)(19)); Assistance to For Profit Businesses (HCDA 105(a)(17)); Planning (HCDA Section 105(a)(12)(14). Special Economic Development Activity (24 CFR 570.203); Marketing - waiver request approved.

Low- and Moderate-Income Projection: 20%; A portion of funds, for Business and Entrepreneurial Support, will benefit low- and moderate-income persons.

Estimated Start and End Dates: Quarter 4, 2019 through Quarter 4, 2021.

National Objective: Low- and Moderate-Income Jobs; Low- and Moderate-Income Limited Clientele; Low- and Moderate-Income Area Benefit; Urgent Need**.**

Geographic Area(s) Served: Territory-wide.

Proposed Use of Funds:

As mentioned in Section 4.6, tourism is a critical industry to the Territory. Efforts to revitalize tourism in the U.S. Virgin Islands face a critical short-term challenge: overcoming the perception that the

Territory's leisure and hospitality industry are closed for business following the 2017 hurricanes. National press coverage of the devastation caused by Irma and Maria is likely to have influenced public perception of the islands. Studies of tourist areas that have suffered widely-publicized natural disasters indicate that misperceptions of damage can continue to affect demand as long as two years after the event.[145] The impact of the public's perception on travel demand for the U.S. Virgin Islands should not be underestimated, as perceptions of safety and stability have become a key decision-making factor for tourists.[146]

The lingering effects of the perception that the U.S. Virgin Islands is closed for business will delay the positive returns on various programs designed to boost the tourism industry. More importantly, it will exacerbate economic losses for small businesses and low- and medium-income households that depend on tourism for their livelihoods and their recovery. The most recent cruise passenger arrival statistics highlights the extent of the problem: during the eight- month period of fiscal year 2018, cruise passengers were 850,193 compared to 1,266,802 cruise passengers who came in 2017, representing a decline of 33%. The drop-in cruise passengers is expected to continue for the remainder of fiscal year 2018, due to the summer season and scheduled cruise calls to St. Croix ended in May 2018.

The U.S. Virgin Islands Department of Tourism will administer a multi-pronged strategy to support small businesses and entrepreneurs in the tourism industry as well as establish a robust campaign to showcase the U.S. Virgin Islands vast tourist assets as they come back online. Business and Entrepreneurial Support will support businesses specific to the tourism industry. Program details are in development.

To quantify the impact of the Program, the Department of Tourism and the Bureau of Economic Research will collect annual statistics and will measure jobs created or retained due to tourism activity in the Territory. Post-disaster analytics to measure the return of pre-storm rates of tourism activity to the most impacted areas will include:

- Number of pre-disaster tourists and visitors
- Revenue generated by impacted areas through tourism industry
- Number of businesses stabilized
- Number of jobs created or retained

The program will be evaluated using the same data sources on the basis of which the Territory has estimated the impact of the storms on tourism and the economy at large, including the U.S. Virgin Islands Department of Tourism, the U.S. Virgin Islands Bureau of Economic Research, the Virgin Islands Hotel and Tourism Association, and the World Travel and Tourism Council.

---

[145] Potential Impact of the Gulf Oil Spill on Tourism, Oxford Economics.

[146] 2015 World Economic Forum Travel and Tourism Competitiveness Report, Box 3: Seven Transformations that May Change the Travel and Tourism Sector – A Business Perspective (p. 24).

Tourism Marketing

The V.I. Department of Tourism has ample experience leading marketing and advertisement campaigns. In fact, up until May 2017 (shortly before the hurricanes), the Territory was undertaking various advertising activities as part of the "Real Nice" campaign. Following the storm, the messaging strategy shifted—the campaign was called "Still Nice"—but most sales efforts had to be scaled back significantly, as the entire marketing budget came from hotel room taxes. With most hotels closed following the hurricanes, there were no funds to continue such marketing efforts beyond inexpensive social media platforms.

Despite the lack of funding, marketing is more urgent than ever, as tourists and travelers will not otherwise know of the Territory's quick recovery and readiness to welcome visitors. As hotels reopen in the coming years, the U.S. Virgin Islands needs to remain a top-of-mind destination to ensure growth of tourist-related businesses and retention of jobs, many of which employ low- and moderate-income residents.

In dedicating CDBG-DR funding for a marketing campaign to revitalize the tourism sector, the U.S. Virgin Islands follows the example of the Lower Manhattan Development Corporation, the Louisiana Tourism Marketing Program, State of New York and the State of New Jersey. As these localities knew, "tourism marketing" is much more than simply marketing. In the wake of a devastating natural disaster, for a community whose main economic driver is tourism, a campaign of this kind is a message to the world about the strength and resiliency of a people and their identity in the place they call home.

Given the devastation the U.S. Virgin Islands has witnessed and from which it is still working to recover, and considering the Territory's greater comparative dependence on tourism, the need for this program is especially urgent. The livelihood of thousands of low- and moderate-income households will be deeply impacted by the Territory's ability to attract large numbers of tourists once again.

The U.S. Virgin Islands will initially allocate $4,000,000 to support the first year of this multi-pronged strategy that includes a marketing campaign as well as technical assistance to small businesses and entrepreneurs to support the tourism industry. Future funding will depend on subsequent funding availability. To ensure maximal efficacy and impact, marketing initiatives will target specific travel and tourism niches in which the U.S. Virgin Islands are known to be competitive, especially among U.S. mainland residents. The niches identified by the Department of Tourism include sports and adventure, MICE (meetings, incentives, conferences, and exhibitions), romance market (destination weddings, honeymoons, and vow renewals), and yachting. The marketing campaign and product development technical assistance will be designed under the direction of the Department of Tourism.

Business and Entrepreneurial Support

The Department of Tourism also recognizes that tourism industry relies on the strength of its businesses and entrepreneurs. The Department has been involved in supporting the efforts of small businesses and entrepreneurs that support the tourism sector through a "Made in the Virgin Islands" product development program. Now more than ever, this effort to support small businesses and entrepreneurs in the development of products that tap into the local culture is critical. This program will provide support to artisans, restauranteurs, retailers and other small businesses, to help them to recover from the storm and remain in businesses. Many of these small firms are owned by and employ low- and moderate-income individuals.

The U.S. Virgin Islands may initially allocate $1,000,000 to business and entrepreneurial support that will include activities such as building technical capacity and workforce development specific to management positions in the tourism industry, ongoing training for public and private frontline associates, educational seminars for small hotel owners, and enterprise development through a "Made in the Virgin Islands" initiative to support local artisans and producers.

Administering Entity: V.I. Department of Tourism

Eligibility Criteria:

- The projected use of funds for national marketing and outreach efforts will be focused as follows: event and festival planning and sponsorship in impacted areas within the Territory; advertising creation; niche marketing; and media placement (social media/ television/ radio/ digital and out-of-home advertising) in targeted markets.
- Funds for small business and entrepreneurial technical assistance and workforce training must support the stabilization and enhancement of tourism-related businesses. Eligible businesses are those that:
    - Qualify as Section 3 businesses OR
    - Employ one or more workers that would qualify as Section 3 workers AND
    - Provide goods or services that support the tourism industry

Program Allocation: $10,000,000 ($5,000,000 initial allocation; $5,0000,000 second allocation)

Maximum Award: Awards will be based on cost estimates and a cost reasonableness analysis.

For a list of projects funded under the Tourism Industry Support Program, see Appendix 7.4.

5.6.3 Workforce Development Program

Eligible Activity: Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12)(14)); Assistance to For-Profit Entities (HCDA Section 105(a)(17))

National Objective: Low- and-Moderate Income Limited Clientele; Low- and Moderate-Income Jobs, Urgent Need.

Low- and Moderate-Income Projection: 100%; At least 51% of participants of the Workforce Development Program will be Low- and Moderate-Income.

Estimated Start and End Dates: Quarter 4, 2018 through Quarter 3, 2024.

Geographic Area(s) Served: Territory-wide.

Proposed Use of Funds:

The Workforce Development Program is a centerpiece of the approach to economic revitalization proposed in this Action Plan. This program will fund sector-based workforce development that includes the many actors along the workforce development spectrum such as training providers, educational institutions, and employers to ensure a pipeline from training to job placement. Eligible entities will include vocational training organizations, established providers such as universities and employers with the goal of creating and supporting partnerships to develop a workforce training and placement program for Virgin Islanders. The initial focus of this program will be on training low- and moderate-income residents to fill the construction and other related jobs that will be created as federal recovery funds come to the Islands. At present, the U.S. Virgin Islands has virtually no certified vocational training programs, which severely limits workers' access to higher-paying jobs.[147] The Workforce Development Program addresses this gap with a demand-driven approach to vocational training focused on training and job placement.

The immediate workforce needs of recovery and rebuilding initiatives in the Territory represent both a challenge and an opportunity with the potential to benefit hundreds of residents across the U.S. Virgin Islands. This effort seeks to ensure that low- and moderate-income residents have access to the training needed to take advantage of these opportunities and the additional supports are made available to ensure they will be successful long term. The Action Plan calls for the expenditure of $326 million for housing programs, not taking into consideration the construction activities already underway by FEMA. Given the pressing need for housing, these programs will be the first to ramp up. By placing an emphasis on recruitment and training of construction workers as soon as possible, these residents will be well positioned to take advantage of these early construction opportunities. An initial planning process by the V.I. Department of Labor, the V.I. Department of Education and the V.I. Office of Management and Budget to be funded within this program will assist in determining the path forward for the workforce training and job placement program as well as long term workforce development for the Territory.

---

[147] 2014 U.S. Virgin Islands Targeted Competitive Industry Report commissioned by the Government of the U.S. Virgin Islands. Vocational training capacity has seen no significant expansion since then according to the Department of Labor.

The experiences of disaster-impacted areas in New Jersey, Louisiana, Texas, Florida, and New York show that recovery and rebuilding efforts can last for several years. Training the local workforce to meet the needs of disaster relief construction and related projects is key to maximizing the benefits for local residents and also to reduce the cost of reconstruction. Absent enough skilled labor in the Territory, contractors are led to mobilize workers from outside the Territory at significant cost and at the expense of much-needed job opportunities for local workers. Furthermore, given the need to temporarily house workers from outside the Territory, and given the decreased stock and availability of hotel rooms as described in the Unmet Economic Needs section, the training of local residents in construction trades and other skills needed to aid disaster relief efforts can mitigate the cost pressure outside labor will likely place on the existing, constrained supply of rental housing.

In addition to construction and other types of employment related to disaster relief, the Workforce Development Program seeks to meet the evolving demands of tourism. The hospitality and leisure industries are becoming increasingly reliant on online and highly personalized services.[148] Protecting LMI jobs associated with tourism will require improving digital literacy and enhancing the customer service culture skills.[149]

Well-designed training programs can also aid small businesses to reap the benefits of identified tourist spending patterns. According to a large cruise passenger survey conducted by the Florida-Caribbean Cruise Association, 56% of cruise passengers purchase local tours and 65% make onshore retail or food and beverage purchases. Watches and jewelry, local tours, and clothing together account for 63% of total spending by cruise passengers.[150] These patterns represent an opportunity for small businesses to manufacture high-value products and offer top-quality niche tours for day visitors to the U.S. Virgin Islands.

Given the difficulty of attracting new businesses to the Territory, the Workforce Development Program will also emphasize entrepreneurship and innovation as critical skills to foster the creation and growth of small businesses.

The Workforce Development Program will strengthen collaborations between workforce, education and training centers, and employers with a shared goal of providing solutions to promote growth and stability of the local economy. Several pathways will be developed jointly to ensure that training is timely and relevant.

As a way to ensure job placement after training, the Workforce Development Program will prioritize training curricula that include an on-the-job training component. The on-the-job training component may include a stipend paid to participants.

---

[148] 2015 World Economic Forum Travel and Tourism Competitiveness Report
[149] 2014 U.S. Virgin Islands Targeted Competitive Industry Report (from a survey administered by the Bureau of Economic Research).
[150] Economic Contribution of Tourism to the Destination Economies Report (2015).

Funds from the Workforce Development Program may be used to purchase equipment, supplies, and technology required for specific vocational programs only for nonprofit or public training providers that are physically located in the U.S. Virgin Islands.

The U.S. Virgin Islands Department of Labor will be directly involved in the selection of beneficiaries for the Workforce Development Program through the Workforce Development Board, an existing organization within the Department of Labor. The Department of Labor's subsidiary agencies and programs will remain eligible to apply for funds per the program guidelines and requirements.

The U.S. Virgin Islands Department of Tourism and the Bureau of Economic Research will collect annual statistics and will measure jobs retained related to tourism activity in the Territory. Post-disaster metrics to measure the return of pre-storm rates of tourism activity to the most impacted areas will be developed and may include:

- Number of pre-disaster tourists and visitors
- Revenue generated by impacted areas through tourism industry
- Number of businesses stabilized
- Number of jobs retained

Administering Entity: V.I. Department of Labor, the USVI Economic Development Authority, and other qualified entities.

Eligible Applicants: A consortium of accredited educational institutions; certified vocational program providers; private businesses, including but not limited to those with in-house, certified on-the-job training programs; certified apprenticeship program providers and nonprofit workforce and soft skills providers; and/or other organizations approved for workforce training by the U.S. Virgin Islands Workforce Development Board.

The U.S. Virgin Islands may create an additional option to support qualifying individual workers seeking vocational training not offered by the training providers otherwise funded through this program.

Prioritization Criteria: Priority will be given to applicants that can meet the following conditions:

- Serving predominantly LMI individuals;
- A documented job placement program for trainees;
- A curricular plan that is demonstrably tailored to meet market labor demand and is clearly connected to a career path and available jobs, apprenticeships, and on-the-job training opportunities; and
- When appropriate, incorporation of digital literacy and soft skills training in the program's curriculum.

Further detail about applicant selection will be provided in the program policies and procedures.

Program Allocation: $17,000,000 ($5,000,000 initial allocation, $12,000,000 second allocation)

Maximum Award: Awards will be based on cost estimates and a cost reasonableness analysis.

For a list of projects funded under the Workforce Development Program, see Appendix 7.4.

5.6.4 Neighborhood Revitalization Program

Eligible Activity: Code Enforcement (HCDA Section 105(a)(3)); Clearance, Rehabilitation, Reconstruction, and Construction (HCDA Section 105(a)(4)); Public Services (HCDA Section 105(a)(8)); Planning (HCDA Section 105(a)(12)(13)(14)); Special Economic Development Activity (24 CFR 570.203).

National Objective: Low- and Moderate-Income Area; Low- and Moderate-Income Jobs; Urgent Need**;** Prevention or Elimination of Slum and Blight.

Low- and Moderate-Income Projection: To Be Determined.

Geographic Area(s) Served: Downtown and commercial centers on each island, as well as other neighborhood areas to be determined.

Proposed Use of Funds:

The Neighborhood Revitalization Program targets several key economic revitalization needs at once. First, the programs promote sustainable modes of civic and private sector engagement for the preservation and development of commercial and historic districts with the potential to increase tourism revenue. Second, the program seeks to create a more vibrant local economy that can foster small business growth, housing stock improvements, and new private investments in designated urban areas across the U.S. Virgin Islands, including Charlotte Amalie in St. Thomas; Frederiksted and Christiansted in St. Croix; and the Cruz Bay Port area in St. John.

The Neighborhood Revitalization Program is intended to improve the quality of life of residents in urban areas close to the ports and to create a more vibrant business environment. The program will support activities such as aesthetic and functional enhancements, preservation of historic sites, increased security, better services for tourists and residents alike, and promotion of private investment. Potential projects associated with this program include, but are not limited to:

- Façade and code-related improvement grants for small businesses;

- Grants for reconstruction and renovation of key mixed purpose buildings (residential and commercial) in designated areas;
- Grants for public facility improvements such as streetscapes, lighting, and sidewalks;
- Grants for clearing slum and blight around disinvested properties in designated low- and moderate-income areas; and
- Resources to support local business incubators.

Direct community involvement is key to the sustainability of revitalization efforts. The grants awarded under the Neighborhood Revitalization Program will prioritize projects to be implemented in partnership with the local business and resident community. Drawing on the experience of the State of New York's 2013 CDBG-DR Action Plan, which funded the creation of nonprofit business improvement districts, the Neighborhood Revitalization Program will encourage small businesses and residents to work together by forming business improvement districts and local development corporations. Supporting nonprofit community organizations committed to neighborhood revitalization is critical to the long-term sustainability of the activities sponsored by this program.

As experiences like the Rockaway Business Alliance in New York indicate, such nonprofit organizations can go a long way towards ensuring the community's commitment to further revitalizing neighborhoods and extending the durability of renovations and improvements.

In addition, U.S. Virgin Islands government officials as well as private businesses in the Territory agree that neighborhood revitalization is critical to the Territory's competitiveness as a travel and tourism destination in the Caribbean. Cruise passengers have, on average, comprised 70% of visitor arrivals in the U.S. Virgin Islands over the last 15 years, but these visitors, on average, spend only 4 hours on island, mostly engaging in retail shopping and taking local tours. The quality of such brief experiences in the Territory—usually limited to the urban areas surrounding the ports— is pivotal to visitors' likelihood of return and, in the long run, to overall tourist demand for the U.S. Virgin Islands. Whereas the Port Enhancement Program is critical to the Territory's capacity to welcome cruise visitors, the Neighborhood Revitalization Program is key to sustaining demand for the U.S. Virgin Islands, increasing the likelihood of visitor return, and promoting the conversion of day-visitors into overnight tourists.

Furthermore, the urban areas adjacent to the ports are uniquely positioned to showcase products and services offered by small businesses to cruise excursionists, who, in 2015, spent nearly 50% more in the U.S. Virgin Islands than they did at other Caribbean destinations.[151] More vibrant urban areas in the proximity of the Territory's ports will help the islands retain high-spending cruise visitors and

[151] 2015 Economic Contribution of Cruise Tourism to the Destination Economies Study - Florida-Caribbean Cruise Association

compete for the new adult-only cruise services expected to enter the Caribbean market by the year 2020.[152]

The Neighborhood Revitalization Program will be administered by the Enterprise Commission Zone in coordination with the Virgin Islands Historic Preservation Commission. The Enterprise Commission Zone is a subsidiary entity of the Economic Development Authority with ample experience in community revitalization and with jurisdiction over specific neighborhoods in Christiansted, Frederiksted, and Charlotte-Amalie. The Enterprise Zone Commission typically invests in the renovation of specific abandoned, vacant, and mixed-use buildings on the condition that building owners contribute to the renovation efforts and with prior extensive community engagement and consultation. The eligible buildings are selected with an eye to spurring further renovations in the area and to meet the Commission's strategic objectives, including community aesthetics, public safety and crime prevention, and neighborhood development.

Project selection and implementation will proceed in consultation with private sector and resident community leaders in designated urban areas to target key infrastructure improvements, aesthetic and historical preservation efforts, and on-going services necessary to ensure effective and sustainable revitalization.

Administering Entity: To Be Determined

Eligible Applicants: Eligible entities will include redevelopment agencies, small businesses, and nonprofits such as (but not limited to) newly formed business improvement districts and local development corporations.

Prioritization Criteria: Neighborhood Revitalization grants and projects will prioritize urban areas with substantive small business presence and low- and moderate-income jobs or live/work environments for local artisans and business owners.

Program Allocation: TBD

Maximum Award: Awards will be based on cost estimates and a cost reasonableness analysis.

5.6.5 Small Business and Entrepreneurship Technical Assistance Program

Eligible Activity: Technical Assistance (HCDA Section 105(a)(19)); Special Economic Development Activity (24 CFR 570.203); Planning (HCDA Section 105(a)(12)(14)).

---

[152] "Virgin Voyages: Richard Branson Launches Adults-Only Cruise Line," *The Independent* (November 2, 2017). https://www.independent.co.uk/travel/news-and-advice/virgin-voyages-cruise-adults-only-richard-branson-tom-mcalpin-how-to-book-a8033061.html

National Objective: Low- and Moderate-Income Clientele; and Urgent Need

Low- and Moderate-Income Projection: To Be Determined.

Geographic Area(s) Served: Territory-wide.

Proposed Use of Funds:

The entire economy was devastated by the hurricanes. Small businesses, which account for virtually all of the businesses that operate in the U.S. Virgin Islands – of which some 96% of them have fewer than 50 employees – were particularly heavily impacted.[153] This program will assist small businesses and entrepreneurs to identify ways to rebound from the change in economic circumstances from the storms. Profits lost due to interruption of business and limited access to capital make them less financially resilient, while changes in demand and customer base may force them to restructure their business models unexpectedly. Technical assistance is necessary to help hundreds of small businesses adapt to the economic landscape in a disaster-impacted economy.

At the same time, recovery efforts create new economic opportunities for local workers as well as business and social entrepreneurs, in the construction and services sectors and beyond. This technical assistance program is also intended to help entrepreneurs materialize their business and social innovation plans to promote the creation of low- and moderate-income jobs and rebuild the human capital of local communities hit by the 2017 hurricanes.

Technical assistance activities include, but are not limited to, development of business continuity plans or new business models; financial management guidance; and long-term recovery and sustainability plans.

Administering Entity: To Be Determined

Eligible Applicants: Certified technical assistance providers, including but not limited to the Small Business Development Center operated by the University of the Virgin Islands and local nonprofits with a proven track record of technical assistance programs for businesses and nonprofits.

Program Allocation: Future CDBG-DR funds will be allocated to this program as it aligns with remaining unmet needs.

Maximum Award: Awards will be based on cost estimates and a cost reasonableness analysis.

---

[153] 2012 Economic Census of the U.S. Virgin Islands; cf. Small Business Administration's Small Business Standard.

6. GENERAL ADMINISTRATION

6.1 PROGRAM REQUIREMENTS

6.1.1 Building Standards and Construction Methods

Resilience

In the interest of reducing the risks associated with natural hazards, the Territory will seek to incorporate an industry-recognized standard for building resilient or disaster resistant structures, such as those set by the Insurance Institute for Business and Home Safety's FORTIFIED Home program, in any new construction or substantial rehabilitation projects.

Sustainability

All construction will implement methods that emphasize high quality, energy efficiency, sustainability, mold resistance. All rehabilitation, reconstruction, and new construction will be designed to incorporate principles of sustainability, including water and energy efficiency, resilience, and mitigation against the impact of future disasters**.**

Accessibility

The use of recovery funds must meet accessibility standards, provide reasonable accommodations to persons with disabilities, and take into consideration the functional needs of persons with disabilities in the relocation process. A checklist of accessibility requirements under the Uniform Federal Accessibility Standards (UFAS) is available at: http://www.hudexchange.info/resources/796/ufas-accessibility-checklist/. The HUD Deeming Notice 79 FR 29671 (May 23, 2014) explains when HUD recipients can use 2010 ADA Standards with exceptions, as an alternative to UFAS to comply with *Section 504*.

Green Building Standards

All new construction of residential buildings or replacement and/or reconstruction of substantially damaged buildings must incorporate Green Building Standards, and rehabilitation of non-substantially damaged residential buildings must follow guidelines in the HUD Community Planning and Development Green Building Retrofit Checklist. Any construction subject to the Green Building Standards must meet an industry-recognized standard and achieve certification under at least one of the following programs: Energy Star; Enterprise Green Communities; LEED; ICC-700 National Building Standard; EPA Indoor AirPLUS; or any other equivalent comprehensive green building program deemed acceptable to HUD and approved by VIHFA.

Broadband Infrastructure

Per 83 FR 8362, any substantial rehabilitation, as defined by 24 CFR 5.100, or new construction of a building with more than four rental units must include installation of broadband infrastructure, except where the U.S. Virgin Islands documents that: a) The location of the new construction or substantial

rehabilitation makes installation of broadband infrastructure infeasible; b) the cost of installing broadband infrastructure would result in a fundamental alteration in the nature of its program or activity, and/or pose an undue financial burden; or c) the structure of the housing to be substantially rehabilitated makes installation of broadband infrastructure infeasible.

Construction Standards

To ensure that housing activities result in resilient, energy efficient affordable housing units, VIHFA has developed CDBG-DR Construction Standards (Standards) which are required for housing activities and projects that include CDBG-DR funding. These Standards promote energy efficiency and green building practices for new construction or rehabilitation (retrofit) residential projects. VIHFA subrecipients and developers must utilize the VIHFA Green Building Retrofit Checklist in its entirety based on the type of structure (new construction or rehabilitation of single- or multi-family housing).

The Territory will develop within its policies and procedures a mechanism for homeowners and businesses to appeal the quality of rehabilitation work per 83 FR 5850-5851. The Territory is in the process of updating building codes, which will be discussed in detail in the Policies and Procedures manuals for housing programs.

6.1.2 Fair Housing

VIHFA will ensure that the Territory complies with all *fair housing* requirements applicable to the CDBG-DR Program. The Territory has created programs in this Action Plan to affirmatively further fair housing. When gathering public input, planning, and implementing housing related activities, VIHFA and its subrecipients will include participation by neighborhood organizations, community development organizations, social service organizations, community housing development organizations, as applicable, as well as members of each distinct affected community or neighborhood which might fall into the assistance category of low- and moderate-income communities. Addressing the housing needs of impacted residents is a priority to ensure housing stock is increased and housing quality is improved.

6.1.3 Flood-Resistant Housing

Sea Level Rise

The program will promote sound and sustainable long-term recovery planning, informed by a post-disaster evaluation of hazard risk, especially construction standards and land-use decisions that reflect responsible floodplain and wetland management. The program will furthermore consider continued sea level rise, when applicable; and coordinate with other local and regional planning efforts to ensure consistency. All programs will incorporate, where applicable, appropriate mitigation measures and floodplain management.

Elevation

The Territory does not anticipate elevating homes given the cost and structural limitations of cisterns, which are structurally connected to the slab. However, homes within the floodplain will be built in

accordance with the existing local building codes. The Territory will implement resilient home construction standards.

However, New housing construction within the floodplain will be built in accordance with the existing local building codes. The existing code is consistent with HUD guidance to ensure all structures, as defined at 44 CFR 59.1, designed principally for residential use and located in the 1 percent annual (or 100-year) floodplain that receive federal assistance for new construction, repair of substantial damage, or substantial improvement, as defined at 24 CFR 55.2(b)(10), must be elevated with the lowest floor, including the basement, at least two to three feet above the 1 percent annual base floodplain elevation as determined by best available data. Residential structures with no dwelling units and no residents below two feet above the 1 percent annual floodplain, must be elevated or flood-proofed, in accordance with FEMA flood proofing standards at 44 CFR 60.3(c)(3)(ii) or up to at least two feet above the 1 percent annual floodplain. Thus, the Territory has put mechanisms in place to ensure all structures requiring elevation go through an in-depth structural analysis to determine how whether the rehabilitation or reconstruction is the most cost-effective approach to helping homeowner.

Property owners assisted through the recovery program will be required to acquire and maintain flood insurance if their properties are located in a FEMA- designated floodplain. This requirement is mandated to protect the safety of residents and their property and the investment of federal dollars. The elevation height of a house can significantly reduce the cost of flood insurance. The Territory will implement procedures and mechanisms to ensure that assisted property owners comply with all flood insurance requirements, including the purchase and notification requirements as a condition of receiving assistance.

Stormwater Management

The V.I. Department of Public Works (DPW) has been actively surveying and assessing the Territory's stormwater management post-hurricanes. For example, they conducted a survey of 160 culverts on St. Croix, as well as some on St. Thomas and St. John. The storm water management system includes ghuts, culverts, concrete swales, low water crossings and curbs. Some ghuts are natural formations (dry stream beds) and others are concrete lined channels. We are attempting to address water/flooding damages to local roadways in FEMA Public Assistance Project Worksheets (PWs) via hazard mitigation. Mitigation measures may include paving a gravel street, building new concrete swales, re-building sections of road as rigid pavement (concrete) instead of the original asphalt design that is easily damaged by water. Conversations moving forward need to include resizing culverts and replacing older ones. Some culverts are simply old and need to be replaced.

Special Needs Population

It is the intention of VIHFA to prioritize the homeless population and other vulnerable, special needs populations through its rental housing, supportive housing, and sheltering programs.

Homeless and Special Needs Support

The following organizations and institutions were consulted in preparation for this Action Plan: the V.I. Department of Human Services, Continuum of Care, Catholic Charities of V.I., Frederiksted Health Care, Lutheran Social Services, Methodist Training and Outreach Center, and others. As outlined in the housing unmet needs section (Section 3.4), there is an extensive need for housing and services for homeless and special needs populations. If additional funds are made available, there is a proposal that shelters and transitional facilities are funded for repairs that are not covered by FEMA. There is also a proposal for new sheltering facilities for the vulnerable populations affected by the storm.

Public Housing and HUD-assisted Housing

Public Housing is an integral part of housing resources for low-income persons. VIHFA's rental programs are designed specifically to address the housing needs of low- and moderate-income individuals and families. HUD-assisted housing, private market units receiving project-based assistance, and units that were occupied by tenants participating in the Housing Choice Voucher Program are eligible for assistance through the proposed programs. Recognizing that the storms also impacted homeless shelters and elder care, VIHFA is working in coordination with the Housing Authority and not for profits that serve these vulnerable populations to determine how to best address the needs of individuals that used shelters and elder housing prior to the storms and develop long-term rehabilitation solutions.

6.1.4 Anti-Displacement and Relocation

In implementing the activities proposed in this Action Plan, the Territory will ensure that the assistance and protections afforded to persons, businesses, and entities under the Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA) and Section 104(d) of the Housing and Community Development Act of 1974, are available. To ensure that any assistance provided under the URA or Section 104(d) is provided uniformly, the VIHFA will review and modify as needed its existing Residential Anti-displacement and Relocation Assistance Plan (RARAP) and a soon to be developed Optional Relocation Policy.

Specific activities and programs proposed to be funded with CDBG-DR funds that may result in acquisition, relocation or displacement are:

- owner-occupied and rental housing rehabilitation;
- reconstruction of housing;
- voluntary buyouts of high-risk property;
- public and affordable housing redevelopment;
- affordable and mixed-used rental housing development;
- neighborhood revitalization activities;
- development of supportive housing;
- infill development, including addition of units to existing properties; and
- hazard mitigation activities.

Prior to pursuing each activity, the VIHFA will consider the potential that the activity will trigger relocation or displacement and will explore options to minimize relocation or displacement of persons and entities. In instances in which relocation or displacement is necessary, the VIHFA will take the following steps to mitigate disruption due to relocation and to minimize displacement.

1. Facilitate, to the greatest extent possible, new construction on government-owned, vacant land.

2. Stage rehabilitation of apartment units in a manner such as to allow tenants to remain in the building or complex during and after the rehabilitation – i.e., by working with vacant units first and transferring existing tenants as units are completed.

3. Arrange for facilities to house persons who must be relocated temporarily during rehabilitation.

4. Adopt policies which provide reasonable protections for tenants faced with conversion of their housing to a condominium, cooperative, or single-family ownership, such as working closely with the local PHA to identify alternate housing including provision of Housing Choice Vouchers for those tenants who choose to vacate rather than participate in the conversion initiative.

Temporary relocation and permanent replacement housing payments will be provided in accordance with the Uniform Relocation Act. As temporary relocation will likely be necessary, the VIHFA will develop an Optional Relocation Policy to cover temporary relocation costs for owner-occupants in cases of demonstrable hardship (defined below) and to facilitate the administration of temporary relocation benefits for tenants.

VIHFA will exercise the waivers set forth in 83 FR 5844 dated February 9, 2018 pertaining to URA and HCD Acts given its potential to engage in voluntary buyout and optional relocation activities to avert repeated flood damage and to improve floodplain management. However, activities undertaken through this Plan may result in the need for one-for-one replacement of housing units should the VIHFA demolish or convert properties that do not meet the definition of "Not Suitable for Rehabilitation" (which will be defined in forthcoming policies and procedures). In these cases, the VIHFA will follow procedures for one-for-one replacement as described in its RARAP.

VIHFA will also seek technical assistance on URA from HUD as it further develops its policies and procedures.

6.1.5 "Demonstrable Hardship" and "Not Suitable for Rehabilitation"

VIHFA will consider exceptions to program policies and relocation benefits for applicants and property owners who demonstrate undue hardship. When properties are rehabilitated or reconstructed, owners are not automatically eligible for temporary relocation assistance under the URA. However,

VIHFA may provide temporary relocation assistance through an Optional Relocation Policy outlining the process. VIHFA will further define demonstrable hardship in its program policies and procedures.

83 FR 5858 requires grantees to define "not suitable for rehabilitation" in its Action Plan or in its policies and procedures. The VIHFA understands that lower-income units that are damaged by the disaster and are not suitable for rehabilitation are exempt from the one-for-one replacement requirements of Section 104(d) and defines "not suitable for rehabilitation" as: "Structures that are considered "beyond rehabilitation" and do not meet the Program's rehabilitation standards, and/or federal and local code requirements shall be deemed not suitable for rehabilitation, as determined by the program and consistent with program guidelines.".

VIHFA will consider the current condition of the property; its ability to meet building codes post-rehabilitation; the cost of rehabilitation as a percent of total property value post-rehabilitation; and whether the property has experienced repetitive losses under FEMA's National Flood Insurance Program (NFIP). VIHFA may make exceptions to the definition for properties located in a historic district to allow for a higher cost threshold to encourage preservation of historic properties.

6.1.6 Ineligible Activities

In general, any activity that is not authorized under the provisions of § 105(a) of the HCDA (or, where applicable, the statute and Federal Register notices governing these disasters) is not eligible to be assisted with CDBG-DR funds.

6.1.7 LMI and Overall Benefit Requirement

Per the February 14, 2018 Federal Register Notice, the HCD Act requires that not less than 70% of the aggregate of CDBG-DR program funds be used to support activities benefitting low- and moderate-income persons. The 70% overall benefit requirement shall remain in effect for this allocation, unless waived pursuant to HUD's approval of a request by the U.S. Virgin Islands to authorize a lower overall benefit for its CDBG–DR grant based on a demonstrated compelling need for the reduction.

6.1.8 Urgent Need

While at least 70% of the entire CDBG–DR grant will be used for activities that benefit LMI persons, for certain activities the U.S. Virgin Islands will use the Urgent Need national objective. Activities carried out under the urgent need objective will not count towards the 70% LMI benefit.

6.1.9 Section 3

Section 3 of the Housing and Urban Development Act of 1968 is intended to ensure that, to the extent feasible, low- and very low-income persons receive benefit in employment and related economic opportunities when such opportunities are generated by funding from the U.S. Department of Housing and Urban Development (HUD). It also specifically encourages economic opportunities for households who are recipients of government assistance for housing. The Section 3 program requires that recipients of HUD CDBG-DR funds, to the greatest extent feasible, provide (a) employment and

training and (b) contracting opportunities for low- or *very-low income* residents in connection with construction projects in their neighborhoods. The VIHFA and all administering entities will follow and require relevant contractors to follow Section 3 requirements in contracting.

The Action Plan includes an overview of programs and initial prioritization and criteria. Program policies and procedures will be developed for each program which will describe in more depth the process and criteria for project selection, and the relevant Section 3 requirements for each program. Section 3 is triggered when the award of CDBG-DR funds for new construction and rehabilitation projects creates the need for new employment, contracting, or training opportunities.

Section 3 requirements that apply to CDBG-DR Programs:

- Section 3 applies to the U.S. Virgin Islands, as recipient of HUD funding, as well as to subrecipients receiving HUD funding exceeding $200,000. Whenever any portion of HUD funding is invested into projects involving housing construction, demolition or rehabilitation, commercial/private improvements for economic development, or other public construction (e.g., roads, sewers, community centers, and public facilities), the requirements of Section 3 apply.

Section 3 requirements that apply to CDBG-DR Projects:

In conjunction with construction activity, Section 3 applies to projects that are fully or partially funded with CDBG-DR assistance, including projects that are financed in conjunction with territory, local or private matching or leveraged funds, provided that the Section 3 monetary threshold requirements are met. In particular:

- In conjunction with construction activities, Section 3 applies to contractors or subcontractors that receive contracts more than $100,000 for Section 3 covered projects/activities. Once it is determined that Section 3 applies to a project, the requirements apply to all contracts for construction work arising in connection with that project exceeding $100,000, including those not funded with CDBG-DR assistance. Contractors or subcontractors are required to comply with the Section 3 regulations in the same manner as the Territory; and
- "Section 3 covered contract" includes professional service contracts, provided that the work to be performed is generated by the expenditure of funds in furtherance of Section 3 covered work (e.g., housing construction, housing rehabilitation and other public construction), arising relating to construction projects. Professional service contracts that may constitute Section 3 "covered contracts" include construction contract oversight, engineering, architectural, environmental and property evaluation, construction progress and construction draw inspection and prevailing wage labor compliance.

The regulations pertain to new hires required to complete covered projects and activities. If the expenditure of funding for an otherwise covered project and activity does not result in new employment, contracting, or training opportunities, Section 3 reporting will still be required.

VIHFA, its subrecipients and partners will attempt to meet the Section 3 HUD numerical goals found at 24 CFR Part 135.30:

- Thirty percent (30%) of the aggregate number of new hires are Section 3 residents;
- Ten percent (10%) of the total dollar amount of all covered construction contracts are awarded to Section 3 business concerns; and
- Three percent (3%) of the total dollar amount of all covered non-construction contracts are awarded to Section 3 business concerns. Non-construction contracts may include, but not be limited to, accounting, payroll, bookkeeping, purchasing, data processing, marketing, printing, environmental, architectural/engineering, and related.

When VIHFA awards CDBG-DR funds to other governmental departments, nonprofit organizations, subrecipients or other funded entities, VIHFA will require that the minimum numerical goals set forth at 24 CFR Part 135.30 be met for all covered projects or programs. VIHFA will inform its subrecipients and other funded entities of the requirements of Section 3, including the language required to be inserted into all construction-related contracts, assist them and their contractors with achieving compliance, and monitor their performance with respect to the Section 3 objectives and requirements.

Based on the above criteria and standards, VIHFA will apply Section 3 to" covered activities" within the following programs: Housing, Infrastructure, and the Port project. Section 3 is not implicated by workforce development or the tourism industry support program as they are currently detailed in the State's Action Plan.

6.1.10 Environmental Review

The Appropriations Act goes beyond the Prior Appropriation and authorizes recipients of CDBG-DR funds under the Appropriations Act that use such funds to supplement Federal assistance provided under section 408(c)(4) as well as sections 402, 403, 404, 406, 407 or 502 of the Stafford Act may adopt, without review or public comment, any environmental review, approval, or permit performed by a Federal agency to satisfy responsibilities with respect to environmental review, approval or permit. Such adoption shall satisfy the responsibilities of the recipient for environmental review, approval, or permit that is required by the HCD Act. VIHFA will notify HUD in writing of its decision to adopt another agency's environmental review. VIHFA will also retain a copy of the review in its environmental records.

6.1.11 Cost Verification

Federal guidelines require that project costs funded with CDBG–DR are necessary and reasonable. 83 FR 40314 provides additional details as to how grantees can demonstrate and verify costs: ''14. A description of the grantee's controls for assuring that construction costs are reasonable and consistent with market costs at the time and place of construction. The method and degree of analysis may vary dependent upon the circumstances surrounding a particular project (e.g., project type, risk,

costs), but the description must address controls for housing projects involving eight or more units (whether new construction, rehabilitation, or reconstruction), economic revitalization projects (involving, construction, rehabilitation or reconstruction), and infrastructure projects. HUD may issue guidance to grantees and may require a grantee to verify cost reasonableness from an independent and qualified third-party architect, civil engineer, or construction manager.''

VIHFA will establish the following processes to ensure cost reasonableness of construction costs as well as other goods and services:

- First and foremost a fair and open procurement action, which surveys the market and welcomes competition from available, capable bidders, is the preference of VIHFA and will support and ultimately determine what is "reasonable." A key objective in undertaking a full and open procurement is to establish at what price the market is currently willing to provide whatever goods and services are being procured considering all market factors in the current post disaster environment for the specific geography.
- As part of establishing cost reasonableness during procurement, a cost estimate will be prepared in advance of issuing the procurement as a benchmark for evaluating proposals received. This benchmark might include market research that takes into account current post disaster capacity and capability in the market, or a review of financial aspects of a previously let contract which takes into account providing goods or services in a remote geography which has been significantly impacted by multiple recent storms. Input will also be sought from subject matter resources resident in VIHFA and implementing agencies and subrecipients including but not limited to employees and pre-existing contractors with specific knowledge of the requirements of what is being procured.
- VIHFA, implementing agencies and other subrecipients will also review proposed prices with historical data from previous similar pre-disaster construction projects against cost estimates for projects in the current post-disaster setting.

VIHFA understands that it must develop controls to assure that construction costs are reasonable and consistent with market costs at the time and place of construction. Cost estimating is difficult for the Territory given its position at the end of the supply chain from the mainland. This is a primary driver of the high cost of imported goods and materials, which mean higher-than-average costs of reconstruction—with construction costs nearly 1.4 times the U.S. national average—and contributes to the high cost of power, almost three times the U.S. average.[154]

Construction costs can be prohibitively high due to both a lack of skilled labor and the high cost of shipping materials to the islands, which sit at the end of the supply chain. On St. Thomas, the cost to build can exceed $250 per square foot according to the Global Property Guide.[155]

---

[154] U.S. Department of Defense, UFC3-701-01 DoD Facilities Pricing Guide (Revision Date: 07-01-2017); U.S. Energy Information Administration, Territory Profile: U.S. Virgin Islands: April 2018.
[155] April 2016 Global Property Guide Property Market Report.

In addition to these challenges, costs vary by island. For example, the Consumer Price Index (CPI) in the 4th Quarter of 2017 was 124.1 for St. Croix, 128.4 for St. Thomas, and 138.4 for St. John; an 11.5% difference in the CPI between St. Croix and St. John. In housing for the same period, the CPI was 124.3 for St. Croix, 134.7 for St. John, 151.8 for St. John; a difference of 22% between St. Croix and St. John.[156] These island-by-island variances reveal a statistically significant difference in cost comparison between islands, further making cost verification a challenge.

According to a US Virgin Islands Bureau of Economic Research Consumer Price Index factsheet published for December 2019, the annual changes in the consumer price indices for the US Virgin Islands (collectively) for 2019, 2018 and 2017 are consistently above the mainland numbers. Underlying factors explain the larger price increases due to high import dependence, high costs of shipping, high costs of electricity, and less competition with more concentration among retail businesses allowing for greater exercise of market power.

The rate of annual inflation for all three islands rose 3% from December 2018 to December 2019, due mainly to the higher prices for food, which was up 9% (recreation up 7.3%, and alcoholic beverages up 5.4% for the year). Of the 3 main islands, St. Thomas showed the largest increase for the year, rising 4.8 percent. St. Croix experienced an increase of 3.2%, with St. John experiencing a moderate annual increase of only .9% even with a sharp increase of 13.5% for food.

Independent estimating tools like RS Means and Xactimate no longer contain multipliers for the Virgin Islands. To develop standard controls for cost reasonableness for each program area, the VIHFA will take a multi-pronged approach. VIHFA and VIHA will consult the best available data from sources such as the Global Property Guide and the Department of Defense Facilities Pricing Guide. In addition to reviewing updated standardized data like that provided in the Global Property Guide and from the Department of Defense's Facilities Pricing Guide, Additionally, VIHFA will utilize Walker's Building Estimator's Reference Book, local suppliers, local contractors and its historical data to effectively estimate construction costs. In addition to reviewing updated standardized data like that provided in the Global Property Guide and from the Department of Defense's Facilities Pricing Guide to ensure cost reasonableness for housing projects with 8 or more units, economic revitalization and infrastructure projects, VIHFA's cost control guidance will require, when possible, an evaluation of historical data from previous similar construction projects pre-disaster along with a review of evaluation of cost estimates for projects in the current post-disaster setting. VIHFA will further develop controls to be included in policies and procedures.

FEMA also has stringent requirements of cost reasonableness and a proven methodology for ensuring that the costs are properly adjusted for local conditions. This is especially true for 428 permanent

[156] All data from USVI Bureau of Economic Research, "Historical Consumer Price Indexes for the All Islands CPI," 8/14/2018.

work projects. Our intent is to apply the same methodologies and cost adjustment factors to establishing cost reasonableness for CDBG-DR projects.

6.2 ADMINISTRATION AND PLANNING

6.2.1 Reimbursement of Disaster Recovery Expenses

VIHFA is tracking those activities undertaken prior to execution of its grant agreement with HUD for reimbursement including tracking time spent on CDBG-DR related activities including development of this Action Plan. Pre-award costs covered by Planning include the activities related to the development of the Action Plan.

6.2.2 Consultation with Local Governments and Public Housing Authority

The U.S. Virgin Islands has no units of local government. However, this Action Plan has been prepared by the Government of the U.S. Virgin Islands in consultation with Territorial government agencies and authorities (and/or their consultants), including VIHA, and community stakeholders.

Multiple levels of consultation were used to ensure local government partners were involved in the policy and program development for the Action Plan. "Recovery Room" meetings and follow up communications were conducted with department heads and key community members, such as business owners and non-profits, to understand the unmet needs in their sector and the resulting programmatic work required for recovery. The results of these meetings directly informed the development of the policy and budget for the programs. These consultations were followed by budget and policy changes in Amendment 1 in consultation with these partners during the development of the Amendment, as well as during the public comment period via additional meetings, email, and phone correspondence.

Consolidated Plan Waiver

HUD has temporarily waived the requirement for consistency with the consolidated plan (requirements at 42 U.S.C. 12706, 24 CFR 91.325(a)(5) and 91.225(a)(5)), because the effects of a major disaster alter a grantee's priorities for meeting housing, employment, and infrastructure needs. In conjunction, 42 U.S.C. 5304(e), to the extent that it would require HUD to annually review grantee performance under the consistency criteria, has also been waived.

Hurricane Recovery and Resilience Task Force

On October 16, 2017, U.S. Virgin Islands Governor Kenneth E. Mapp created the U.S. Virgin Islands Hurricane Recovery and Resilience Task Force. The expert advisory committee is intended to help guide reconstruction and resilience efforts in the U.S. Virgin Islands in the wake of Hurricanes Irma and Maria. The Task Force released its initial 280-page report on July 20, 2018, containing 218

actionable recommendations pertaining to the long-term recovery to improve critical infrastructure and public services, and to make businesses more resilient to future storms and other natural disasters. The recommendations generally fall into four major strategies: hardening infrastructure; re-configuring systems; changing governance and regulation; and improving planning, coordination and preparation. Many of these are already in the process of implementation. The document is currently published for public comment until July 30, during which time the community can provide feedback.

6.2.3 Planning and Coordination

The U.S. Virgin Islands will spend no more than 15% of its total allocation on eligible Planning activities. This includes all Action Plan development activities, which are considered Planning activities. The U.S. Virgin Islands also intends to fund planning-only grants for studies, technical reports, or the like. This may include costs incurred for data gathering, studies, analysis and preparation of plans. For the purposes of this grant award, the cost of engineering or architectural plans in support of construction activities will be treated as direct project delivery costs. Only VIHFA and its subrecipients can incur planning costs.

VIHFA will continue to coordinate with existing planning efforts including the Governor's Hurricane Recovery and Resilience Taskforce and the planned update of the Hazard Mitigation Plan. HMGP is funding a comprehensive update to the Territorial Hazard Mitigation Plan with 100 percent HMGP funding for an amount around $3 million with the University of the Virgin Islands (UVI) taking the lead for the technical work. The current plan was completed in 2014 and expires in 2019. VIHFA is working closely with VITEMA to stay up to date on related efforts being funded through HMGP, which are also coordinated through the Territory of the Virgin Islands Administrative Plan for the Hazard Mitigation Grant Program.

As part of its coordination efforts, VIHFA has partnered with VIHA, in consultation with the Government of the Virgin Islands and others, to convene an Urban Land Institute Advisory Panel to provide input on potential redevelopment areas. The panel is focusing on ways to support the transformation of St. Croix through the long-term recovery process including economic growth through equitable and entrepreneurially means.[157] The VIEDA Vision 2040 Plan, partially funded with CDBG-DR, is a long-term strategic economic recovery and development plan with economic growth, job creation and wealth generation as measurable deliverables, with a focus on improved quality of life for the Territory's residents.

Further, VIHFA will develop a protocol for coordination amongst implementing entities and other stakeholders key to fulfilling programmatic goals defined with the Action Plan. The coordination will

[157] Martinez, Nicole, "Planning a Sustainable Recovery for St. Croix after Two Destructive Storms," UrbanLand, August 27, 2018.

support updates to the unmet needs analysis and identification of program interventions that could support short and long-term recovery efforts.

Finally, VIHFA will work with the Government of the U.S. Virgin Islands and implementing entities to determine what additional planning needs exist and how to best coordinate them.

Additional resources to assist in this process are available on the HUD exchange website: https://www.hudexchange.info/programs/cdbgdr/resources/#natural-hazard-risk-andresilience-tools

6.2.4 Program Income

VIHFA will comply with HUD requirements found in 24 CFR 570.489. In the event program activities generate program income, those funds will be allocated to projects which further recovery and to the maximum extent possible will be distributed before the program makes additional withdrawals from the Treasury. Program Income proceeds will continue to be considered CDBG-DR funds and will be subject to all regulations and DR waivers.

6.2.5 Performance Schedule

In accordance with HUD Guidance, VIHFA will amend its Action Plan within 90 days to provide detailed performance metrics. Performance metrics will be based on quarterly expected expenditures and outcomes and will contain estimated and quantifiable performance outcome factors.

6.2.6 Assessment of Natural Hazard Risks

Plans will include an assessment of natural hazard risks, including anticipated effects of future extreme weather events and other hazards. The U.S. Virgin Islands will refer to the Natural Hazard Risk and Resilience Tools on HUD's website.

6.2.7 Administrative Capability

Timely Distribution of Funds

In accordance with Federal Register Notice FR-6066-N-01 and under Public Law 114-113, the definition of timely expenditures is within six (6) years from the date that HUD signs the grant agreement. In addition, there are requirements surrounding the obligation, timely draw down and payment within that six-year timeline as a requirement of the financial management of the CDBG-DR funds. In addition to HUD's review of the progress being made in the drawdown of Grant funds, VIHFA will maintain its own review of all expenditures in order to ensure grant compliance. Timelines will be established to ensure that obligations and requirements are met.

There are four types of program costs:

- **Project Costs** are the direct costs of undertaking the project;

- **Activity Delivery Costs (ADCs)** are costs incurred by a grantee or subrecipient directly related to delivery of a specific CDBG-DR project or service by a beneficiary. Developers, property owners, businesses & other beneficiaries cannot have ADC;
- **Planning Costs** are costs incurred where the "end product" of a Planning Activity is the Plan; and
- **Program Administration Costs (PACs)** are costs incurred for the general management, oversight, and coordination of the CDBG-DR grant.

6.2.8 Public Services Activities

CDBG-DR regulations allow the use of grant funds for a wide range of public service activities. To utilize CDBG-DR funds for a public service, the service must be either a new service or a quantifiable increase in the level of an existing service which has been provided by the state or another entity on its behalf through state or local government funds in the 12 months preceding the submission of the Consolidated Plan Annual Action Plan to HUD. An exception to this requirement may be made if HUD determines that any decrease in the level of a service was the result of events not within the control of the local government. Public services are capped at 15% of the allocation.

6.2.9 Amendments

Amendments to the action plan will be made to update its needs assessment, modify or create new activities, or reprogram funds, as necessary. HUD requires amendments to be included in a contiguous document to make easier tracking of program and budget changes.

Substantial Amendments are characterized by either an addition or deletion of any CDBG-DR funded program, any funding change greater than 1% of the total CDBG-DR allocation, or any change in the designated beneficiaries of a program. Substantial amendments will be available on the U.S. Virgin Islands CDBG-DR Action Plan website (https://www.vihfa.gov/community-development-block-grant-disaster-relief) for public review and comment for at least 14 days.

Technical Amendments are minor changes that do not materially alter the activities or eligible beneficiaries. The grantee must notify HUD five business days before the effective date of any technical amendments. Technical amendments are not subject to public notification and public comment requirements.

6.2.10 Website

VIHFA will maintain a comprehensive website dedicated to the U.S. Virgin Islands' CDBG-DR programs and related activities associated with these funds. The webpage can be found on VIHFA's website: https://www.vihfa.gov/community-development-block-grant-disaster-recovery. The website will ultimately include the following:

- CDBG-DR Action Plan, including all amendments;
- The current approved DRGR Action Plan;

- All QPRs created in DRGR;
- Citizen participation requirements;
- Procurement policies and procedures;
- Program policies and procedures;
- A description of services or goods currently being procured using CDBG-DR funds;
- Redacted PDF copies of all contracts that have been directly procured; and
- A summary of all procured contracts, including those procured by the U.S. Virgin Islands, recipients, or subrecipients (e.g. a summary list of procurements, the phase of the procurement, requirements for proposals, and any liquidation of damages associated with a contractor's failure or inability to implement the contract, etc.).

6.3 MONITORING AND COMPLIANCE

VIHFA will oversee all activities and expenditures in connection with the CDBG-DR funds. Existing VIHFA employees, additional personnel and contractors will be hired to aid in the administration of, and to carry out, the recovery programs. These partners will ensure that the programs meet all requirements, including: the disaster threshold, eligibility, national objective, compliance, fair housing, labor standards, nondiscrimination, environmental regulations, and procurement regulations at Part 85.

VIHFA will create a monitoring plan in accordance with CDBG-DR requirements so that each activity funded will meet the disaster threshold and one of HUD's three national objectives, with emphasis on eligible activities achieving the primary national objective of benefiting low- and moderate-income persons.

All projects must comply with applicable federal laws and regulations and are effectively meeting their stated goals. VIHFA will monitor funds using the HUD Disaster Recovery Grant Reporting (DRGR) system. In accordance with HUD requirements, VIHFA will submit a Quarterly Performance Report (QPR) through DRGR no later than thirty days following the end of each calendar quarter. QPR's will be posted on a quarterly basis until all funds have been expended and all expenditures have been reported. U.S. Virgin Islands will utilize the HUD-provided contract reporting template (for PL 113-2) for upload to the DRGR on a quarterly basis: https://www.hudexchange.info/resource/3898/public-law-113-2-contract-reporting-template/

6.3.1 Prevention of Duplication of Benefits

The requirements the Robert T. Stafford Act (Stafford Act), as amended, prohibit any person, business concern, or other entity from receiving federal funds for any part of such loss for which they have already received financial assistance under any other program, private insurance, charitable assistance or any other source. This duplicative funding is called Duplication of Benefit (DOB). Any government entity that provides disaster recovery assistance must both prevent and correct any DOB by the

establishment and implementation of policies and procedures to identify and adjust for such duplicative assistance payments.

HUD released Docket No. FR-6169-N-01, "Updates to Duplication of Benefits Requirements Under the Stafford Act for Community Development Block (CDBG) Disaster Recovery Grantees," (https://files.hudexchange.info/resources/documents/6169-N-01-DOB-Notice.pdf?utm_source=HUD+Exchange+Mailing+List&utm_campaign=c9481124c7-CDBG-DR+DOB&utm_medium=email&utm_term=0_f32b935a5f-c9481124c7-19458421). This notice provided clarifications regarding how duplication of benefits calculations and the documentation requirements. VIHFA and all subrecipients will follow the guidance issued in FR-6169-N-01.

6.3.2 Fraud, Waste, and Abuse

All contractors, vendors and subrecipients must demonstrate they have procedures and systems to identify and report fraud, waste and abuse. If suspected fraud is identified it should immediately be reported to the Program Manager, who will refer the issue to the HUD Office of the Inspector General (HUD OIG) and other law enforcement agencies as appropriate. VIHFA will make every effort to ensure the proper reporting and communications of CDBG-DR grant funds on the webpage.

6.4 CITIZEN PARTICIPATION

VIHFA in all planning efforts and in the delivery of disaster-related programs and services will ensure that all residents have equal access to information about the programs, including low- and moderate-income persons, persons with disabilities, the elderly, and those with limited English proficiency (LEP). The VIHFA has a commitment to providing meaningful participation opportunities to all its residents.

During the development of the Action Plan organizations such as the V.I. Department of Human Services, the V.I. Public Housing Authority, Continuum of Care, Catholic Charities of V.I., Frederiksted Health Care, Lutheran Social Services, and the Methodist Training and Outreach Center were engaged to both identify needs and suggest programmatic activities to assist disaster-impacted vulnerable populations. In October 2017, Governor Kenneth E. Mapp created an expert advisory committee to help guide short- and long-term recovery efforts for the Territory. This Task Force included representatives from territorial departments and agencies that serve low income residents, the elderly, children, and persons with physical and developmental disabilities. While these individuals face the most barriers, they may be the least able to advocate on their own behalf. The involvement of groups and agencies that represent them ensures that these vulnerable individuals and households are not forgotten in the recovery.

The vulnerable population is estimated by the Governor's Recovery and Resilience Task Force to be approximately 63,000 people; 56,500 supported through financial programs, 6,300 elderly, 1,100 children and 400 persons with disabilities.[158] This number represents roughly 60% of the Virgin Island's

[158] USVI Hurricane Recovery and Resilience Task Force Report – DRAFT, June 26, 2018.

total population.[159] Through the consultation process and Task Force involvement, the organizations helped to make sure the needs of these populations were recognized and addressed in both the CDBG-DR Action Plan and the Recovery and Resilience Task Force Recommendations.

Given the logistical challenges on the islands, in terms of geography and connectivity, the VIHFA went above and beyond the Federal Register requirements to reach as many residents as possible with information about the Action Plan, proposed recovery programs, and opportunities to provide input.

The Action Plan was posted on the VIHFA disaster recovery website (https://www.vihfa.gov/cdbg-dr/action-plans-amendments). The entire draft plan and executive summary of the plan were also translated into Spanish and posted to the website for public comment. VIHFA Director Daryl Griffith went on the radio, the preferred informational vehicle for island residents, to publicize the plan, its availability for review, and the public meetings. Going forward and based on the development of the Language Access Plan currently under development, at a minimum, all vital documents will be made available in English, Spanish, and any other languages identified in the VIHFA's Language Access Plan.

For the initial Action Plan, VIHFA conducted three public meetings, one on each island, to solicit comments and recommendations from citizens:

St. John	May 9, 2018, 6:00 pm	Julius Sprauve School, Cruz Bay
St. Croix	May 10, 2018, 6:00 pm	American Legion Hall, Frederiksted
St. Thomas	May 16, 2018, 6:00pm	Charlotte Amalie High School Auditorium

For Amendment 1, VIHFA also conducted three public meetings, one on each island:

St. Croix	September 24, 2018, 6:30 pm	University of the Virgin Islands, Great Hall
St. John	September 26, 2018 6:30 pm	Julius Sprauve School, Cruz Bay
St. Thomas	October 2, 2018, 6:30pm	Charlotte Amalie High School Auditorium

All the sites were handicapped accessible and VIHFA provided sign language interpretation for the hearing impaired as requested.

See below for the Amendment 2 outreach to solicit comments and recommendations

Going forward, VIHFA intends to continue with this level of public outreach for all substantial amendments to the Action Plan, using the public meetings and fourteen-day public comment period or other timeline consistent with the relevant Federal Register Notice.

[159] Total estimated population U.S. Virgin Islands in 2016 was 105,000. (http://www.worldometers.info/world-population/united-states-virgin-islands-population/)

In addition, the VIHFA has a strong history of continuous engagement with the individuals and households it serves. It is their intent to continue this with the CDBG-DR implementation, using mobile intake centers, community meetings, radio information, and continuing engagement with organizations and advocacy groups that represent vulnerable populations.

VIHFA also intends to publish in English, Spanish and any other languages identified in the VIHFA's Language Access Plan, all vital documents which will include, but not be limited to: program descriptions; program eligibility requirements; applications; application process, procedures, and intake sites, appeal process. In addition, with the completion of the Language Access Plan, additional detail will be provided regarding other language needs that will need to be addressed to ensure that any resident with Limited English proficiency is able to access the programs they need.

The Virgin Island's outreach and citizen participation process will continue throughout the duration of the program planning and recovery process. Staff from VIHFA, the Governor's office and task force, and other territorial departments will continue to solicit input from all constituencies, and to use that input to inform program priorities.

The Novel Coronavirus Disease (COVID-19) outbreak was declared a global pandemic on March 12, 2020 by the World Health Organization. The Honorable Albert Bryan Jr., as Governor of the U.S. Virgin Islands, officially declared a state of emergency on March 13, 2020 in preparation of the likely spread of COVID-19 to the Territory. For the protection of the citizens of the Virgin Islands, this state of emergency included a restriction of large gatherings until further notice.

On March 14, 2020, the President issued a Proclamation on Declaring a National Emergency Concerning the Novel Coronavirus Disease (COVID-19) Outbreak, which states the COVID-19 outbreak is a national public health emergency. The United States Department of Health and Human Services Centers for Disease Control (CDC) issued guidance on March 15, 2020, that for the next 8 weeks, organizers throughout the United States should cancel or postpone in-person events that consist of 50 people or more. Governor Bryan announced a tightening of the local response to include a limit of gatherings to 10 or less people. Governor Bryan's restrictions, along with the CDC's guidance eliminates the ability to conduct the appropriate level of public engagement required for the use of the CDBG-DR funds.

The public comment period ran from September 3 through October 3, 2020. Three virtual public meetings were held: two English version public meetings occurred on September 23 and September 29, and a Spanish version was conducted on September 29. All public meetings were conducted online via Zoom with a live stream simulcast on Facebook. VIHFA also participated in two radio programs in September outlining the CDBG-DR Action Plan Amendment; St. Croix's radio station The Reef and the St. Thomas station Da Vybe.

Amendment 2 public outreach included:

<u>Radio announcements</u>

30 second ads will run **September 3** through **September 26, 2020** to announce the virtual meetings. Station information for each market includes:

St. Croix

- WJKC Communications (Isle 95, 95.1 FM; Sunny 99.5 FM; Caribbean Country, 93.5 FM; Rumba 98.3 FM)
- The Reef Broadcasting (103.5 FM; 1620 AM)
- Caledonia Communications (WSTX AM 970; 100.3 FM)

St. Thomas

- Da Vybe 107.9 FM
- Ackley Media Group (Hot 105.3 FM; AM 1000)
- Lucky 13 Radio (WSTA AM 1340)

Print announcements

VIHFA published announcements of the virtual meetings to solicit public comment and recommendations on **September 5** and **September 14, 2020** in the *Virgin Islands Daily News* and the *St. Croix Avis* newspapers.

Online announcements

Between **September 3** through **October 3, 2020** announcements of the virtual meetings and solicitation of public comment and recommendations were posted on the *Virgin Islands Consortium*, the *Virgin Islands Source* (the Virgin Islands Source has 3 sites; *St. Croix, St. Thomas* and *St. John Source*) websites.

6.4.1 Citizen Participation Plan

The Virgin Islands Housing Finance Agency is close to completion on the update of the Citizen Participation Plan that will be used for its Consolidated Plan for all its HUD CPD programs. The revision will also include Community Development Block Grant – Disaster Recovery programs. This plan will describe in detail how the Territory will provide for and encourage citizen participation in the development of the five-year Consolidated Plan, any amendments thereto, the Annual Action Plan, annual performance evaluation report (CAPER), the Action Plan governing the use of any CDBG-DR funds received and any amendments to those plans.

The Consolidated Plan process entails the assessment of needs, the establishment of priorities, and the development of strategies to address housing, community development and homelessness. Going forward, the Territory will review and revise, if necessary, the Citizen Participation Plan, every five years as part of the consolidated planning process.

At a minimum, the Citizen Participation Plan will include the following elements:

- A description of each of the programs that are included in the Consolidated Plan, the purpose of the program, funding amount, eligible activities, and potential beneficiaries.
- A detailed description of the Consolidated Plan process; including the needs assessment, anticipated level of funding, consultation and planning meetings, proposed programs, availability for public review and comment, public meetings, and access to records and documents.
- In addition to the general population a listing of groups and populations that will receive additional outreach efforts when developing the plan, as they are the most likely to be impacted by or able to take advantage of the programs.
- Additional detail on how citizen participation will be supported and encouraged, with a focus on low- and moderate-income populations, families with children, the elderly, the homeless, persons with disabilities, and those with limited English proficiency.
- The process by which citizen participation will be encouraged and incorporated into the amendment process, annual plan and performance reports.
- Procedures for recording and addressing complaints or grievances from citizens.
- The policy for minimizing displacement and the loss of low-moderate income dwelling units.
- The process by which other requirements of CDBG-DR funding will be addressed; including, but not limited to creation of a public disaster recovery website, and mechanism by which a program applicant is able to determine application status at any point.

Circumstances such as the 2020 Novel Coronavirus Disease (COVID-19) Outbreak National Emergency restrict the number of citizens that can congregate, eliminating the ability to hold public hearings. The Citizen Participation Plan has been amended to include alternative outreach methods to ensure the public engagement requirements are carried out and a continuity for the programs to be implemented during difficult times.

Considerations of conditions that may present challenges for participating in public outreach efforts are geographic isolation of vulnerable individuals; linguistic and/or cultural isolation of immigrant populations; homeless or those at-risk of becoming homeless; access to methods of participating in outreach efforts; ensuring the outreach plan reaches the target populations, based on programs; and low stakeholder involvement.

The goal of the VIHFA Citizen Participation Plan is to ensure the efforts result in meaningful and successful engagement. The use of online engagement through a variety of social media platforms provides the ability to provide and seek information.

The use of social media allows VIHFA to facilitate the dissemination of information to the Territory, solicit and obtain feedback from the public, meet and manage public expectations, engage the community in problem solving, and provide program updates and information. The use of social media also provides a mechanism to collaborate among the community, providers, stakeholders and other agencies. Social media provides individuals a voice and empowers them to participate in their

own community as a whole. VIHFA, as leaders of the programs, can provide guidance, ask for and accept feedback, and ensure accuracy of information that is shared, providing transparency and accountability.

VIHFA released the revised Citizen Participation Plan concurrent with the CDBG-DR Action Plan Amendment 2. The public meetings contained two sections; the first portion of the presentation discussed the Citizen Participation Plan and the requirements, and the second portion covered the Action Plan Amendment proposal. The comment period was open from September 3 through October 3, 2020.

VIHFA will submit the final Citizen Participation Plan to HUD separately.

6.4.2 Application Status

VIHFA understands the importance of providing all program applicants current, accurate, and clear information throughout their application process. The processes required to deliver benefits, particularly in housing related activities, are multi-step complex processes that require extensive documentation. Not only do applicants need to keep up to date on any missing supporting documentation or impediments to their grant award, but the program can assist applicants in staying aware of other resources that may be available to them. Real time access to information about grant status is a priority, together with effective case management including the ability to contact their case manager by appointment or phone during operation hours or by email. Parameters will be set so that applicants will understand their expected return response times. Printed status updates to applicants who do not have access to electronic media and phone service will be provided.

For each program information will be available on the disaster recovery area of the VIHFA's website. Programs will use printed and electronic materials, various forms of media including television and radio, publications, direct contact, and placement of flyers/posters in public facilities, neighborhood facilities, churches and community centers to provide timely information. Program information and documents will also be available in multiple languages to accommodate the non-English speaking participants.

For housing programs for residents, prior to scheduling an in-person appointment for the intake process of their application, program applicants will receive a detailed listing of all required documentation needs. Applicants with physical disabilities and/or a need for translation services will be accommodated as needed. Scheduled updates will be made to keep the applicant updated on missing documentation and application status. Application statuses will be accessible to the program applicant during the processing of the application, until the eligibility determination is made, and the grant award is determined via the applicant's preferred contact method selected in their application. This determination of grant award will be provided to the applicant in writing.

Applicants will have an opportunity to appeal the determination of eligibility and grant award as well as provide additional documentation to support their appeal through an appeals process that will be

provided to all applicants at the initial intake and posted on the Program website. All applications, guidelines, and websites will include details on the right to file an appeal, and the process for beginning an appeal.

7. APPENDICES

7.1 INDEX OF FIGURES, TABLES, AND IMAGES

Figure 1. School Enrollment in the U.S. Virgin Islands from 2006 to 2016 54
Figure 2. School enrollment in St. Thomas, St. John, and St. Croix from 2008 to 2016 55
Figure 3. Annual visitors to St. Thomas, St. John, and St. Croix from 2006 to 2016 55
Figure 4. Trajectory of Power Restoration* 95
Figure 5. Piles of Storm-related Debris on St. Thomas in March 2018 102
Figure 6. Annual Visitors to the U.S. Virgin Islands, 2010-2017 111
Figure 7. Reduced Cruise and Air Visitors to the U.S. Virgin Islands due to 2017 Hurricanes 112
Figure 8. Monthly Employment in the U.S. Virgin Islands' Accommodations Sector 113
Figure 9. U.S. Virgin Islands' Annual GDP, 2007-2017 115
Figure 10. Employment by Sector in the U.S. Virgin Islands (2017) 116
Figure 11. Economic Impact of Hurricanes Irma and Maria on the U.S. Virgin Islands 117
Figure 12. Job Losses Caused by Natural Disasters 118
Figure 13. Lost Wages in the U.S. Virgin Islands by Sector through 2020 119
Figure 14. Lost Government Revenue in the U.S. Virgin Islands by Type through 2020 120
Figure 15. Value of SBA Small Business Disaster Loan Applications 121

Map 1 Hurricane Irma Wind Gusts: Eastern Caribbean 37
Map 2 Hurricane Irma Wind Gust: St. Thomas and St. John 38
Map 3 Hurricane Irma Wind Gust: St. Croix 38
Map 4. Hurricane Maria Wind Gust: Eastern Caribbean 39
Map 5. Hurricane Maria Wind Gust: St. Croix 39
Map 6. Hurricane Maria Wind Gust: St. Thomas and St. John 40
Map 7. LMI Households and Extent of Roof Damage: St. Croix 41
Map 8. LMI Households and Extent of Roof Damage: St. Thomas and St. John 41
Map 9. LMI Households and 1% Flood Zone: St. Croix 42
Map 10. LMI Households and 1% Flood Zone: St. Thomas and St. John 42
Map 11. Percentage of LMI Households by Census Tract: St. Thomas and St. John 50
Map 12. Percentage of LMI Households by Census Tract: St. Croix 51
Map 13. Homes with Damage (% of Households) in St. Croix 64
Map 14. Homes with Damage (% of Households) in St. Thomas and St. John 65
Map 15. LMI Households (%) and Damaged Households (%) in St. Croix 66
Map 16. LMI Households (%) and Damaged Households (%) in St. Thomas and St. John 66
Map 17. Pre- and Post-Irma Night Lights Variation in St. Thomas and St. John 93
Map 18. Pre- and Post-Maria Night Lights Variation in St. Croix 94

Table 1 Program Allocations from Tranches 1, 2 and 2A 13
Table 2 CDBG-DR Program Eligibility Details for Tranches 1, 2 and 2A 14

Table 3 Low- to Moderate-Income Projections for Tranches 1, 2 and 2A 27
Table 4 Federal Registers Awarding Disaster Funds to U.S. Virgin Islands 29
Table 5 Proportionality Between Share of Unmet Needs and Share of Tranche 1, 2 and 2A Program Allocations 30
Table 6. Agencies and Organizations Engaged in Preparation of CDBG-DR Action Plan (Updated September 6, 2018) 47
Table 7. Estimated Unmet Needs for the U.S. Virgin Islands 49
Table 8. Additional 2010 Demographic Statistics for the U.S. Virgin Islands 53
Table 9. Housing Units Damaged by Severity and Occupant Type for FEMA IA Applicants 65
Table 10. Percent of Housing Stock with Major to Severe Damage and Impact on LMI 67
Table 11. FEMA Damage to Owner Stock 68
Table 12. FEMA Damage to Rental Stock 70
Table 13. Cost-Burdened Rental Households 71
Table 14. Virgin Islands Housing Authority Units and Vouchers 74
Table 15. Median Family Income (MFI) 76
Table 16. Federal Poverty Level 77
Table 17. Housing Funding Sources as of October 2019 78
Table 18. Serious Unmet Housing Need 81
Table 19. Total Unmet Housing Need 81
Table 20. Local Share Need for FEMA Public Assistance as of August 25, 2018 87
Table 21 Required Non-Federal Share (Match) for Disaster Recovery Programs by Category as of August 25, 2018 90
Table 22. Infrastructure Unmet Needs by Sector* as of May 2020 92
Table 23. Damage to Transmission and Distribution Infrastructure 93
Table 24. Damage to the U.S. Virgin Islands' Public K-12 Educational Facilities 99
Table 25. Number of Businesses in the U.S. Virgin Islands by Size 110
Table 26. Largest Hotels in the U.S. Virgin Islands 122
Table 27. Disbursement of Funds for Economic Revitalization 123
Table 28. Proportionality between Share of Unmet Needs and Share of Tranche 1, 2 and 2A Program Allocations 128
Table 29 Housing Program Alignment with Local Planning Initiatives 132
Table 30 Public Services and Public Facilities Program Alignment with Planning Initiatives 134
Table 31 Infrastructure Program Alignment with Local Planning Initiatives 137
Table 32 Economic Revitalization Program Alignment with Local Planning Initiatives 139
Table 33 Allocations from Tranche 1, 2 and 2A of CDBG-DR Funds 141
Table 34 Summary of Housing Programs for Tranches 1, 2, & 2A 143
Table 35 Summary of Proposed Infrastructure Programs 172
Table 36 Infrastructure Match Requirements for Federal Programs 183
Table 37 Economic Revitalization Programs and Tranche 1 & 2 Allocations 195
Table 38 Total CDBG-DR Grant Expenditures 239
Table 39 Housing Assistance Expenditures 240
Table 40 Non-Housing Assistance Expenditures 241

Table 41 Planning and Administration Expenditures 242
Table 42 Homeowner Rehabilitation and Reconstruction Accomplishments 243
Table 43 New Housing and Infrastructure Construction Accomplishments 244
Table 44 Rental Rehabilitation and Reconstruction Accomplishments 244
Table 45 Public and Affordable Housing Development Accomplishments 245
Table 46 Public Services Accomplishments 246
Table 47 Public Facilities for Vulnerable Populations Accomplishments 246
Table 48 Infrastructure Repair and Resilience Accomplishments 247
Table 49 Port Enhancement Accomplishments 248
Table 50 Workforce Development Accomplishments 248

7.2 ACTION PLAN CERTIFICATIONS

U.S. Virgin Islands
Grantee Certifications
CDBG-DR Grants under Public Law 115-123
(83 FR 5867-5868)

a. The grantee certifies that it has in effect and is following a residential anti-displacement and relocation assistance plan in connection with any activity assisted with funding under the CDBG program.

b. The grantee certifies its compliance with restrictions on lobbying required by 24 CFR part 87, together with disclosure forms, if required by part 87.

c. The grantee certifies that the Action Plan for Disaster Recovery is authorized under State and local law (as applicable) and that the grantee, and any entity or entities designated by the grantee, possess(es) the legal authority to carry out the program for which it is seeking funding, in accordance with applicable HUD regulations and this Notice. The grantee certifies that activities to be administered with funds under this Notice are consistent with its Action Plan.

d. The grantee certifies that it will comply with the acquisition and relocation requirements of the URA, as amended, and implementing regulations at 49 CFR part 24, except where waivers or alternative requirements are provided for in this Notice.

e. The grantee certifies that it will comply with section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u), and implementing regulations at 24 CFR part 135.

f. The grantee certifies that it is following a detailed citizen participation plan that satisfies the requirements of 24 CFR 91.105 or 91.115, as applicable (except as provided for in notices providing waivers and alternative requirements for this grant). Also, each local government receiving assistance from a State grantee must follow a detailed citizen participation plan that satisfies the requirements of 24 CFR 570.486 (except as provided for in notices providing waivers and alternative requirements for this grant).

g. Each State receiving a direct award under this Notice certifies that it has consulted with affected local governments in counties designated in covered major disaster declarations in the non-entitlement, entitlement, and tribal areas of the State in determining the uses of funds, including method of distribution of funding, or activities carried out directly by the State.

    i. **Note: The Territorial government acts as both the State and local government. Consultation with stakeholders on each island has been conducted.**

h. The grantee certifies that it is complying with each of the following criteria:
    i. Funds will be used solely for necessary expenses related to disaster relief, long-term recovery, restoration of infrastructure and housing, and economic revitalization in the most impacted and distressed areas for which the President declared a major disaster in 2017 pursuant to the Robert T. Stafford Disaster Relief and emergency Assistance Act of 1974 (42 U.S.C. 5121 et seq.).

ii. With respect to activities expected to be assisted with CDBG-DR funds, the Action Plan has been developed so as to give the maximum feasible priority to activities that will benefit low- and moderate-income families.

iii. The aggregate use of CDBG-DR funds shall principally benefit low- and moderate-income families in a manner that ensures that at least 70 percent of the grant amount is expended for activities that benefit such persons.

iv. The grantee will not attempt to recover any capital costs of public improvements assisted with CDBG-DR grant funds, by assessing any amount against properties owned and occupied by persons of low- and moderate-income, including any fee charged or assessment made as a condition of obtaining access to such public improvements, unless: (a) disaster recovery grant funds are used to pay the proportion of such fee or assessment that relates to the capital costs of such public improvements that are financed from revenue sources other than under this title; or (b) for purposes of assessing any amount against properties owned and occupied by persons of moderate income, the grantee certifies to the Secretary that it lacks sufficient CDBG funds (in any form) to comply with the requirements of clause (a).

i. The grantee certifies that it grant will conduct and carry out the grant in conformity with title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d) and the Fair Housing Act (42 U.S.C. 3601–3619) and implementing regulations, and that it will affirmatively further fair housing.

j. The grantee certifies that it has adopted and is enforcing the following policies. In addition, States receiving a direct award must certify that they will require UGLGs that receive grant funds to certify that they have adopted and are enforcing:
(1) A policy prohibiting the use of excessive force by law enforcement agencies within its jurisdiction against any individuals engaged in nonviolent civil rights demonstrations; and
(2) A policy of enforcing applicable State and local laws against physically barring entrance to or exit from a facility or location that is the subject of such nonviolent civil rights demonstrations within its jurisdiction.

k. The grantee certifies that it (and any subrecipient or administering entity) currently has or will develop and maintain the capacity to carry out disaster recovery activities in a timely manner and that the grantee has reviewed the requirements of this notice. The grantee certifies to the accuracy of its Public Law 115-56 Financial Management and Grant Compliance certification checklist, or other recent certification submission, if approved by HUD, and related supporting documentation referenced at A.1.a under Section VI and its Implementation Plan and Capacity Assessment and related submission to HUD referenced at A.1.b under Section VI.

l. The grantee will not use grant funds for any activity in an area identified as flood prone for land use or hazard mitigation planning purposes by the State, local, or tribal government or delineated as a special flood hazard area (or 100-year floodplain) in FEMA's most recent flood advisory maps, unless it also ensures that the action is designed or modified to minimize harm to or within the floodplain, in accordance with Executive Order 11988 and 24 CFR part 55. The relevant data source for this provision is the State, local and tribal government land use regulations and hazard mitigation plan and the latest issued FEMA data or guidance, which includes advisory data (such as Advisory Base Flood Elevations) or preliminary and final Flood Insurance Rate Maps.

m. The grantee certifies that its activities concerning lead-based paint will comply with the requirements of 24 CFR part 35, subparts A, B, J, K, and R.

n. The grantee certifies that it will comply with environmental requirements at 24 CFR Part 58.

o. The grantee certifies that it will comply with applicable laws.

Signature of Authorized Official

7/13/2020
Date

Daryl Griffith, Executive Director
Virgin Islands Housing Finance Authority

7.3 PROJECTIONS OF EXPENDITURES AND OUTCOMES

7.3.1 Financial Projections

7.3.1.1 Methodology

As the designated Grantee of Community Development Block Grant-Disaster Recovery (CDBG-DR) funds for the U.S. Virgin Islands (USVI or Territory), the Virgin Islands Housing Finance Authority (VIHFA) tracks the projections and expenditures of activities identified in the Action Plan, as well as allowable administration and planning costs. The VIHFA incorporates projections from each program manager and/or subrecipient agency of CDBG-DR funds to confirm each program's financial and performance projections by quarter through the life of the program.

The VIHFA has adjusted projections going forward to reflect the actual expenditures to date, as reported in the most recent Quarterly Performance Report (QPR) approved by the U.S. Department of Housing and Urban Development (HUD), October 1, 2019 – December 31, 2019. Expenditures are projected starting the quarter that the funds are available, which is Q4-FY18. Expenditures were incurred primarily for staff salaries and reported in quarters prior to allocation of the grant funds for specific CDBG-DR projects. All costs including activity delivery costs (or ADCs) are factored into the average costs.

The VIHFA proposes to make reclasses to programs and projects reflective of actual activity delivery costs incurred but drawn from Administration category in the foreseeable future.

7.3.1.2 Assumptions

Categories for grouping expenditures in the charts are defined by HUD in the Explanatory Guidance for Grantee Projections of Expenditures and Outcomes. VIHFA has included a list of programs for each graph included in the financial projections as aggregated to meet the HUD-required categories. The quarters as noted in the tables represent the VIHFA fiscal year, which runs from October 1 through September 30 of the following year. For instance, Q3-FY20 is April 2020 through June 2020.

The program forecasts that are reflected in the charts are inclusive of direct project costs and activity delivery costs, which include necessary environmental and historic clearances, title reviews, Uniform Relocation Assistance (URA), program management and reporting. Activity delivery costs are generally 5 percent for non-housing and 40 percent for housing of total program funds, respectively.

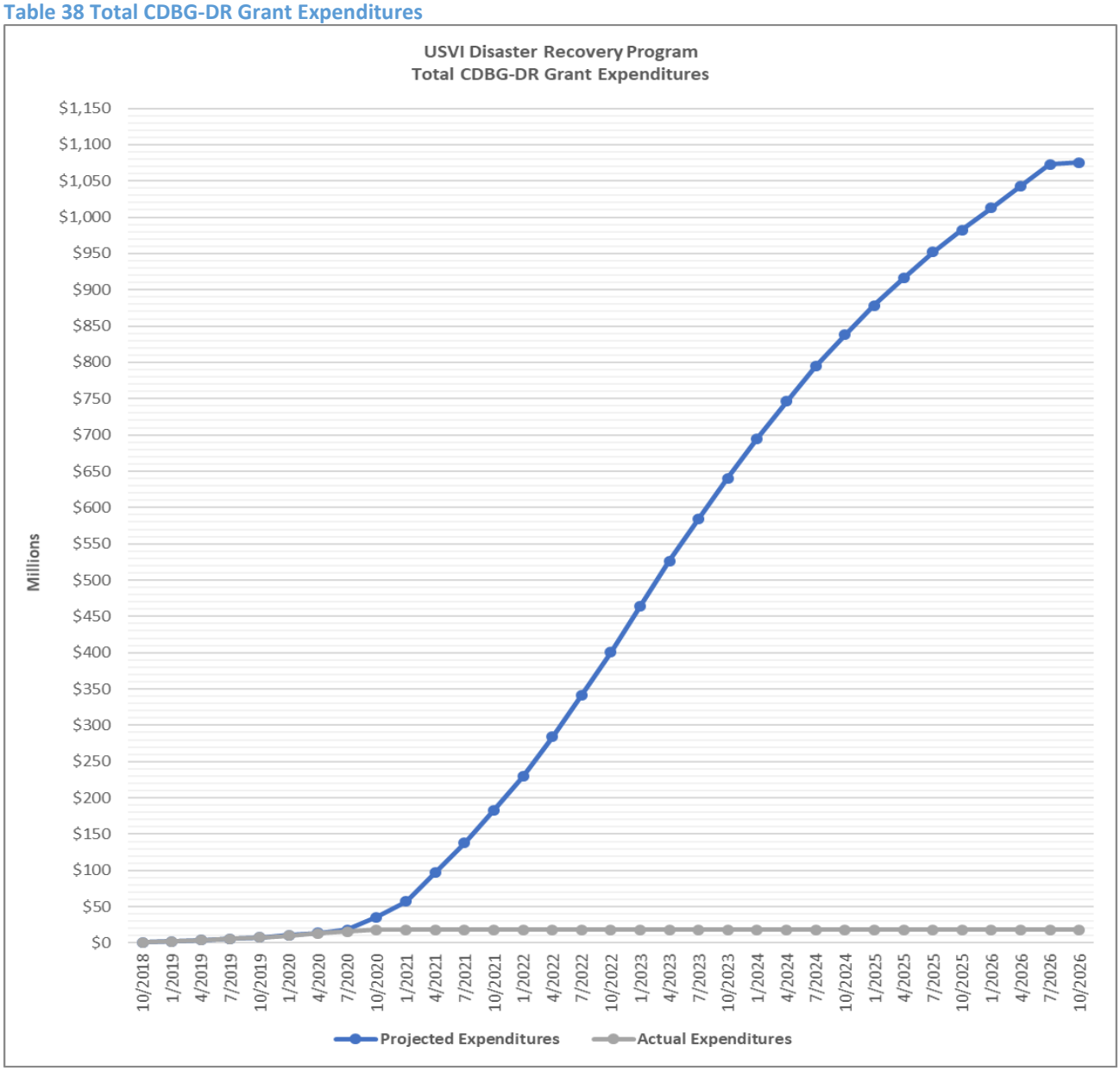
Based on program status, there is an expectation that expenditures will go beyond calendar year 2025 and an extension may be requested. The VIHFA will continue to evaluate as quarterly forecasts are updated.

The **Total CDBG-DR Grant Expenditures** chart demonstrates the timeline for expenditures, which includes the CDBG-DR grant funds approved by HUD as of the March 1, 2019 Action Plan in the amount of $1,021,901,000. The January 27, 2020 Federal Register Notice (FR-6182-N-01) allocated $53,588,884 CDBG-DR funds to the U.S. Virgin Islands (USVI or Territory) for unmet infrastructure

need, allowing up to 5 percent of the funds to be used for administration costs.

Action Plan Amendment II allocates $50,909,440 to infrastructure activity funds for the Non-Federal Share (Match) for Federal Disaster Recovery programs and $2,679,444 for administration costs. Note: amounts may differ when compared to previous Action Plan Amendment. As a part of the requirements for disaster recovery funds, VIHFA will provide the proposed amendment for public review and comment, then approval. The programs included in the allocation are described in detail in the Territory's approved Action Plan and ensuing Amendments. Assistance is provided to programs in hurricane-impacted sectors such as housing, public services and facilities, infrastructure, and economic development.

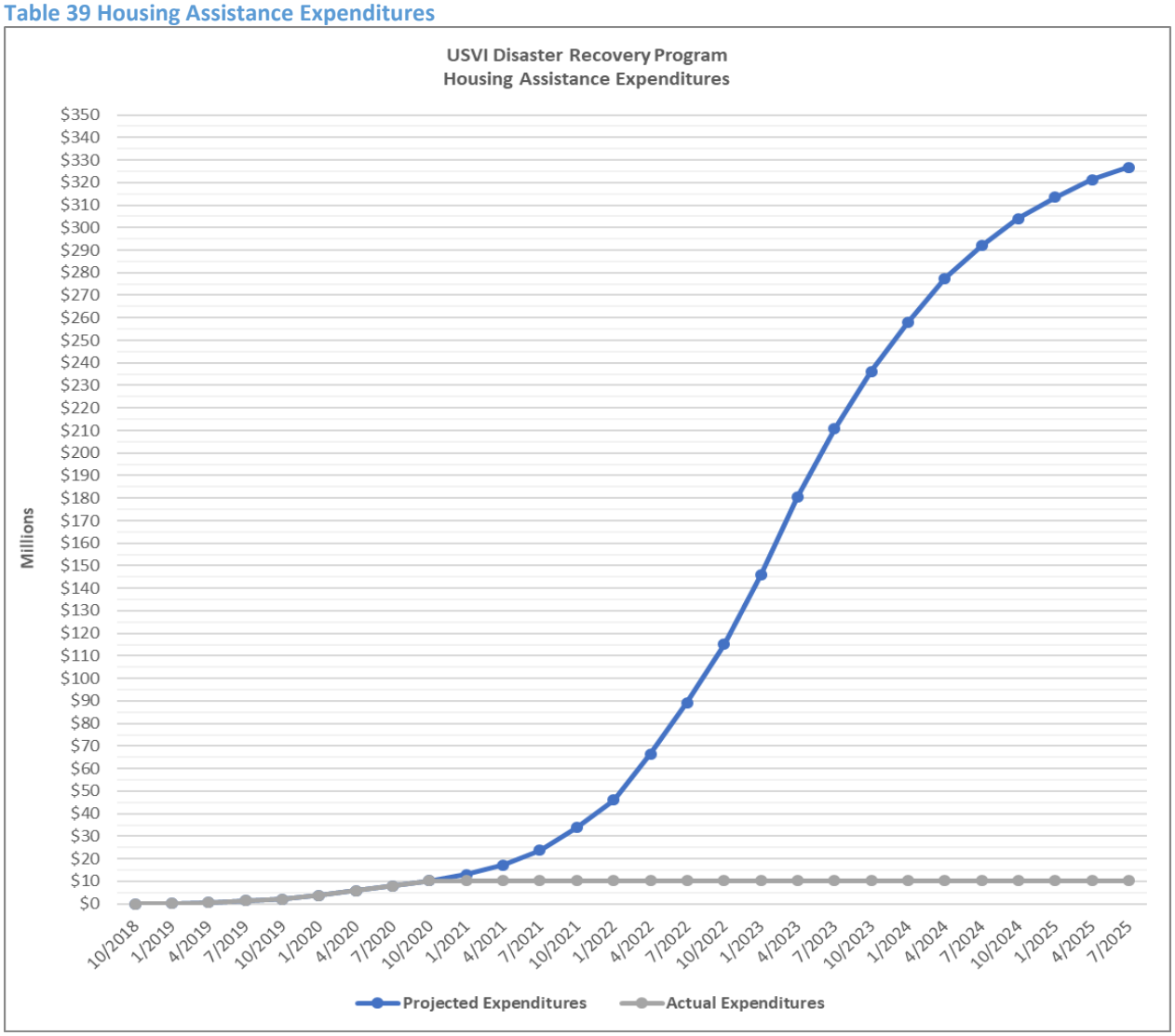
Table 38 Total CDBG-DR Grant Expenditures



The **Housing Assistance Expenditures** chart demonstrates the funds that are in programs targeted to provide recovery assistance in the housing sector. Programs for housing assistance are comprised of the homeowner and rental assistance programs. Q3-FY18 through Q4-FY20 represent actual expenditures. Q1-FY21 and beyond represent projected expenditures. The programs include Homeowner Rehabilitation and Reconstruction Program (HRRP); New Housing and Infrastructure Construction Program (Homeownership) (NHICH); Rental Rehabilitation and Reconstruction Program (RRRP); and Public and Affordable Housing Development (PAHD).

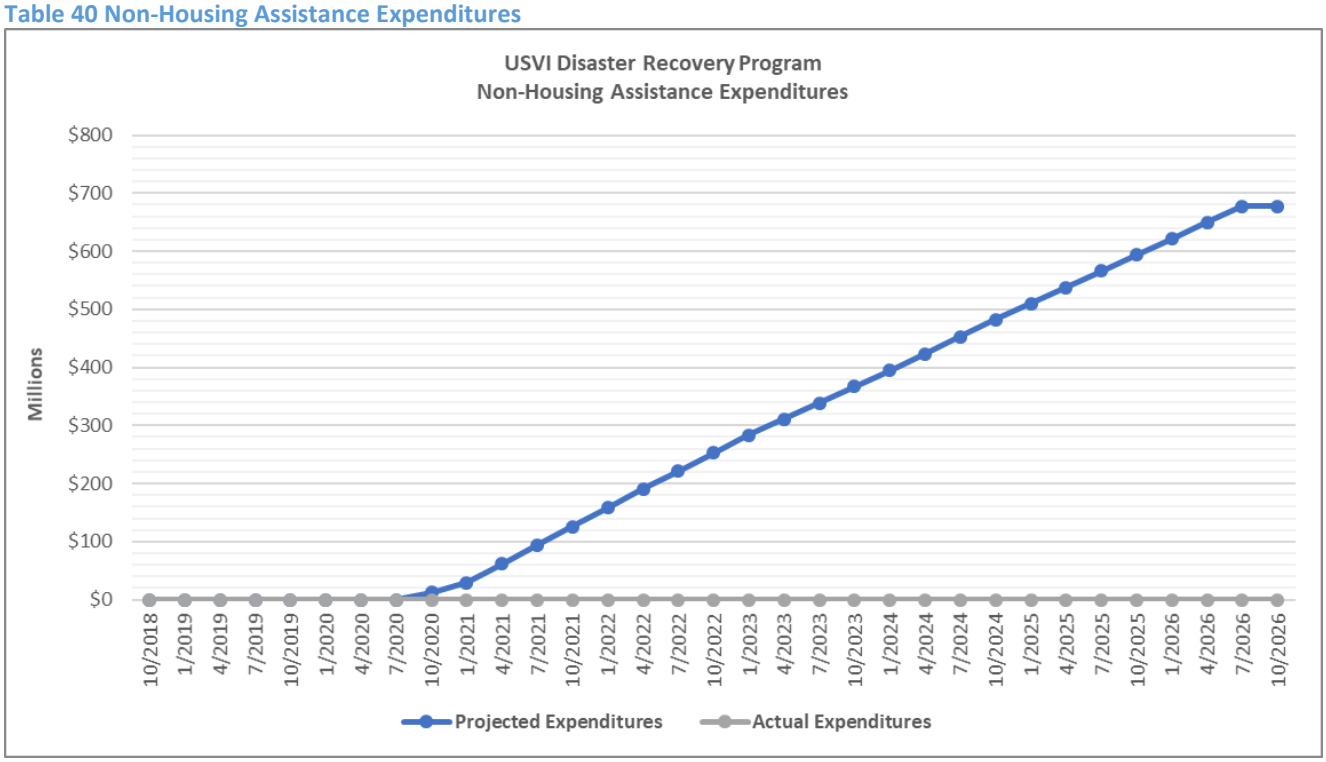
As of September 30, 2020, the Territory has disbursed $4,048,506.04 through HRRP and RRRP to benefit homeowners, rental property owners and communities continuing to recover and building resiliency against the impact of future storms. The Territory continues to prioritize assistance to low-and-moderate income (LMI) households and to those areas identified as most severely impacted by the 2017 Hurricanes Irma and Maria.

Table 39 Housing Assistance Expenditures



The **Non-Housing Assistance Expenditures** chart demonstrates expenditures in the recovery programs considered to be non-housing, including those under Public Services and Facilities, Infrastructure, and Economic Revitalization. Public Services and Facilities is a new sector of activities which has been created to fund public services targeting low- and moderate-income populations, especially those HUD presumes to be LMI, such as the homeless, elderly, at-risk youth, victims of domestic violence and others. These activities were previously included in the Housing sector as the Supportive Housing for Vulnerable Populations and Emergency Shelter Development programs. Infrastructure programs include Non-Federal Share (Match) for Disaster Recovery, Infrastructure Repair and Resilience, and Electrical Power Systems Enhancement and Improvement. Economic Revitalization programs include Ports and Airports Enhancement, Tourism Industry Support, and Workforce Development.

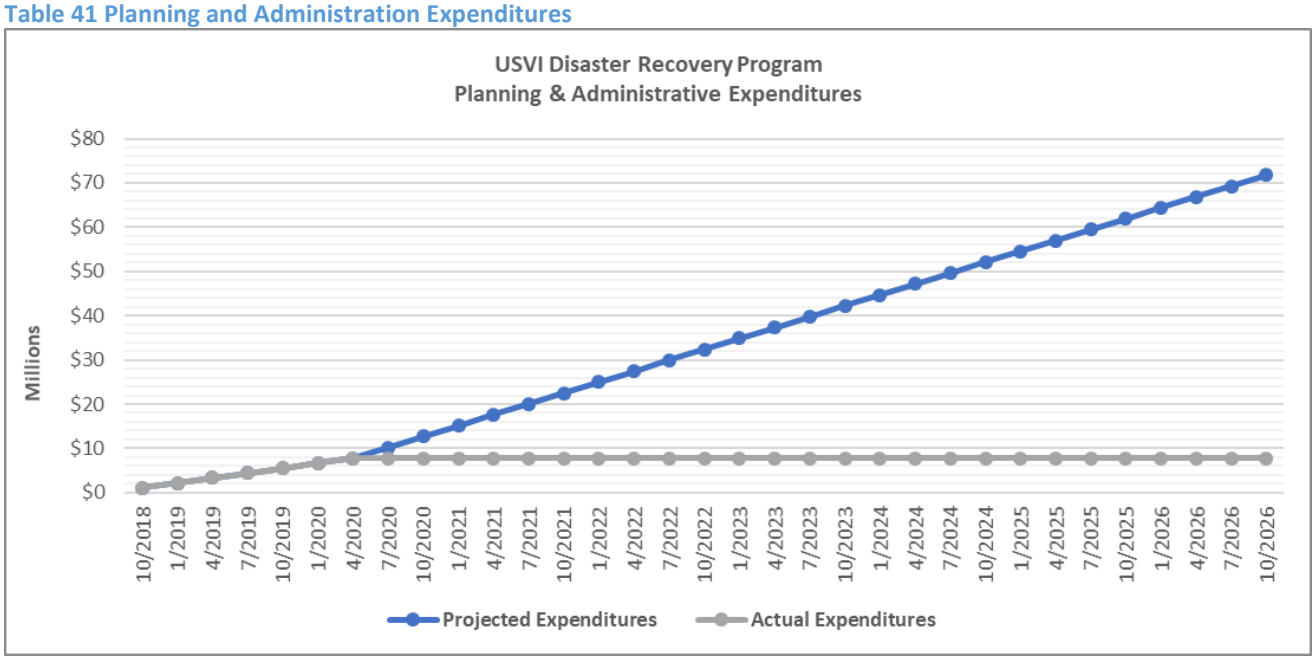
Table 40 Non-Housing Assistance Expenditures



The **Planning and Administrative Expenditures** chart demonstrates the expenditures for planning activities, as well as those expenditures related to administration, management oversight, reporting, and monitoring of programs funded by the CDBG-DR funds. The maximum planning cap is 15 percent and administrative cap is 5 percent, for a total of 20 percent of grant funds.

As of September 30, 2020, the Territory has disbursed $3,689,227.22 from planning activities and $8,644,426.17 from administrative cost, a portion of which is subject to be reclassed, for a grand total of $12,333,653.39 in cumulative planning and administrative costs. Planning and Administrative costs disbursed were allocated across the quarters starting Q1-FY18 through Q3-FY20.

Table 41 Planning and Administration Expenditures



7.3.2 Performance Projections

The HUD Template for Grantee Projections prescribes the categories in which the performance projections are reported. The projected outcomes are often drawn from across several programs.

7.3.2.1 Methodology

The VIHFA Program Managers and subrecipients reported anticipated completion of performance goals for each quarter until all program funds are expended. While there are many performance measures, the represented charts reflect the performance measure groupings specified by HUD in the guidance for projections. The Territory has adjusted projections going forward to reflect the actuals-to-date, as reported in the most recent Quarterly Performance Report (QPR) approved by HUD, October 1, 2019 – December 31, 2019.

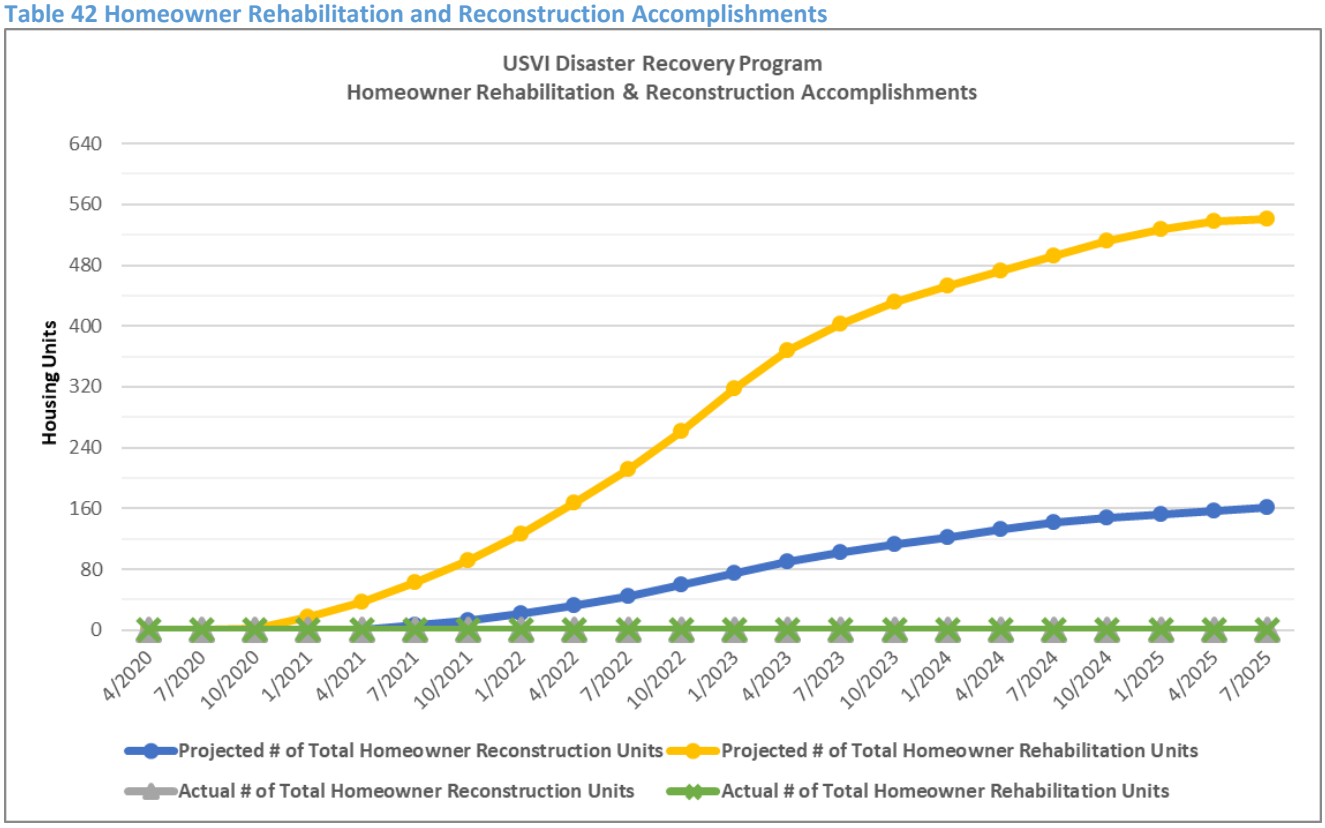
7.3.2.2 Assumptions

Categories for rolling up performance indicators were defined by HUD and cut across programs. The VIHFA has included a list of programs for each graphical representation included in the performance projections as aggregated to meet the HUD-prescribed categories.

Performance is linked to the financial projections; but, in line with HUD requirements, the performance results are only noted once completed and the national objective attained. The performance projections reflect the date at which the objective is considered met. For instance, new housing units under the HRRP are counted only when tenant occupancy is completed, although the financial projections would reflect funds spent on construction. Similarly, housing rebuilding and infrastructure construction may show funds expended, but the performance measure is only achieved and recorded upon completion.

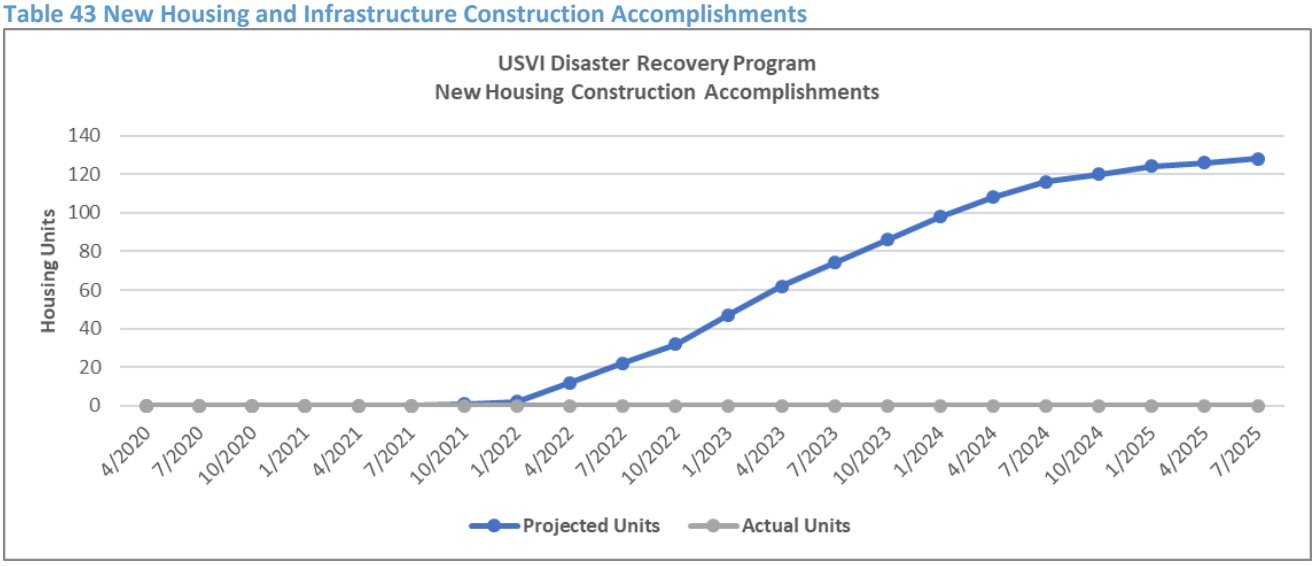
The **Homeowner Rehabilitation and Reconstruction Program (HRRP) Accomplishments** chart demonstrates the projected number of housing units that will benefit from the recovery programs for rehabilitation and reconstruction of existing homes.

Table 42 Homeowner Rehabilitation and Reconstruction Accomplishments



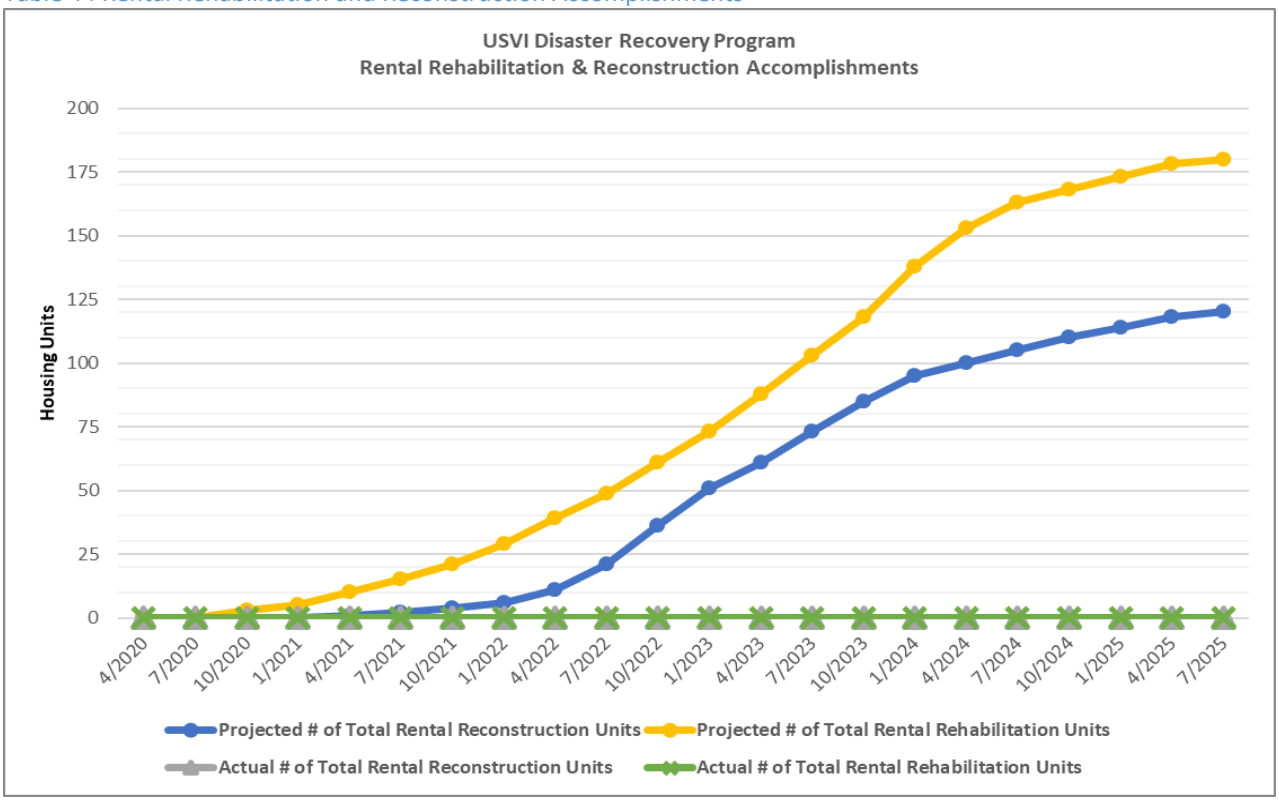
The **New Housing and Infrastructure Construction Program Accomplishments** chart demonstrates number of new housing units to be constructed and offered to low- and moderate-income households as homeownership opportunities.

Table 43 New Housing and Infrastructure Construction Accomplishments



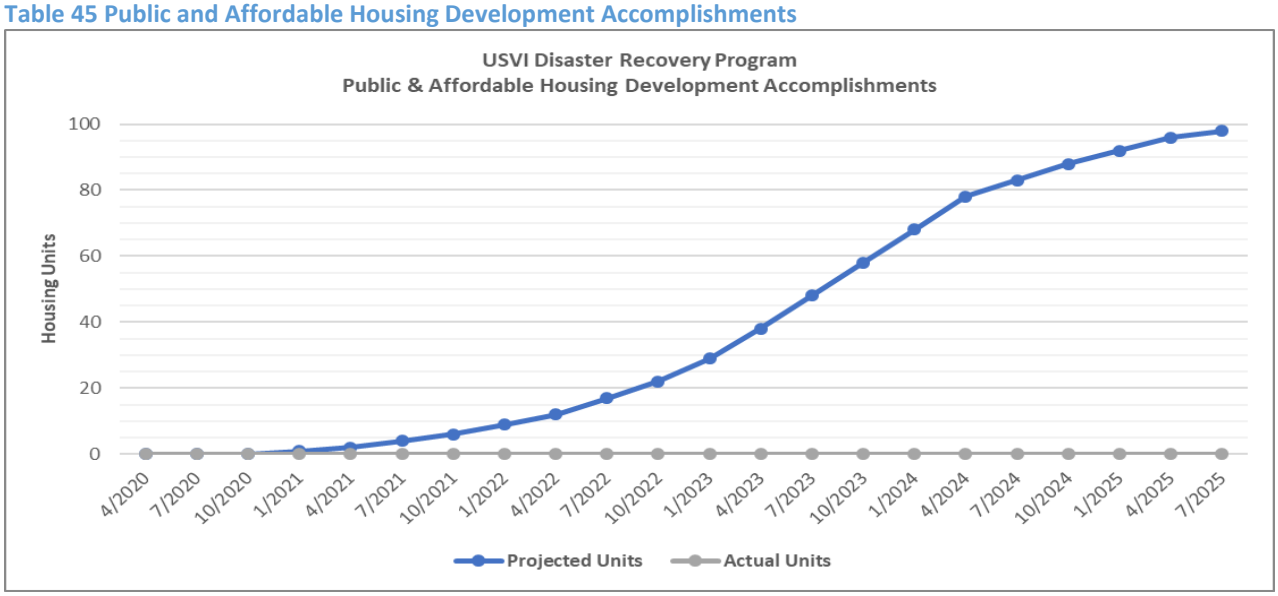
The **Rental Rehabilitation and Reconstruction Program (RRRP) Accomplishments** chart demonstrates the number of units that will benefit from the recovery programs for rehabilitation and reconstruction of existing rental properties.

Table 44 Rental Rehabilitation and Reconstruction Accomplishments



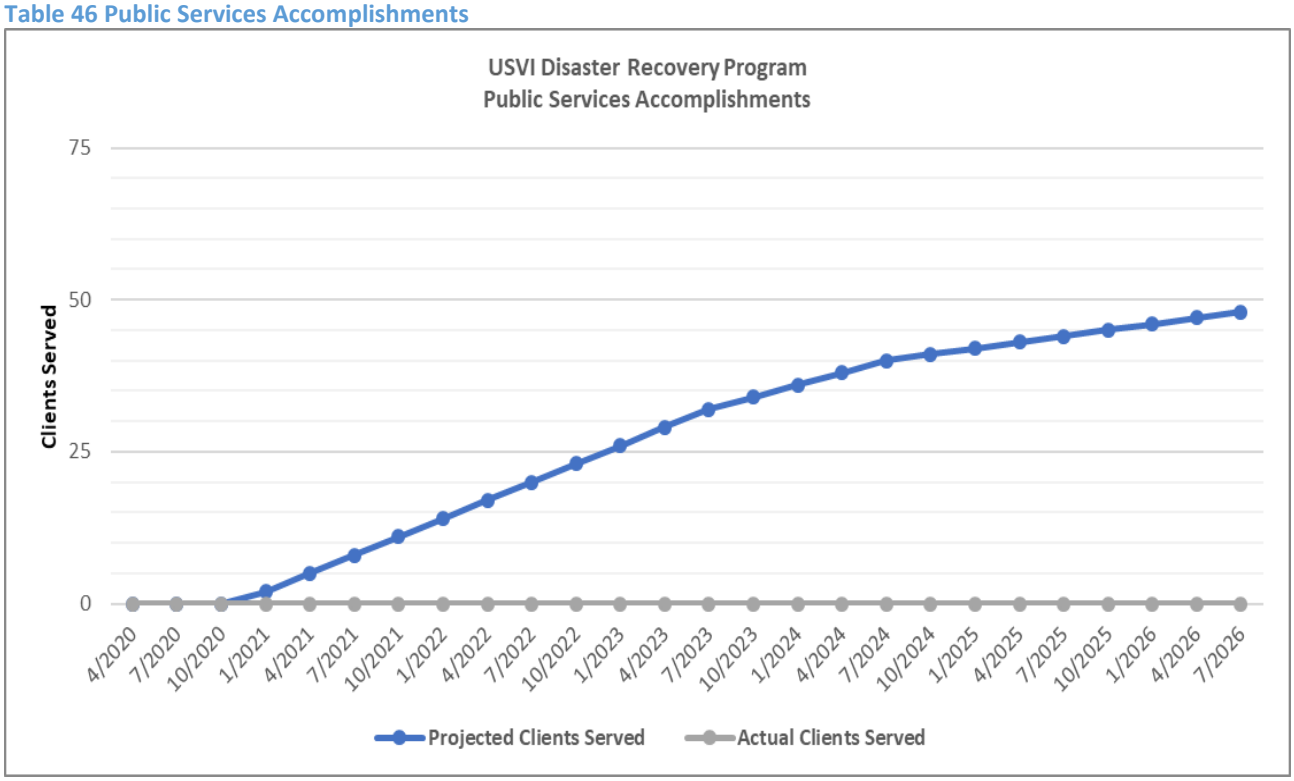
The **Public and Affordable Housing Development Accomplishments** chart demonstrates the number of public and affordable units that will result in new construction and rehabilitation of existing public and affordable properties. The VIHFA will partner with developers and the Virgin Islands Housing Authority to construct, rebuild or rehabilitate public housing units.

Table 45 Public and Affordable Housing Development Accomplishments



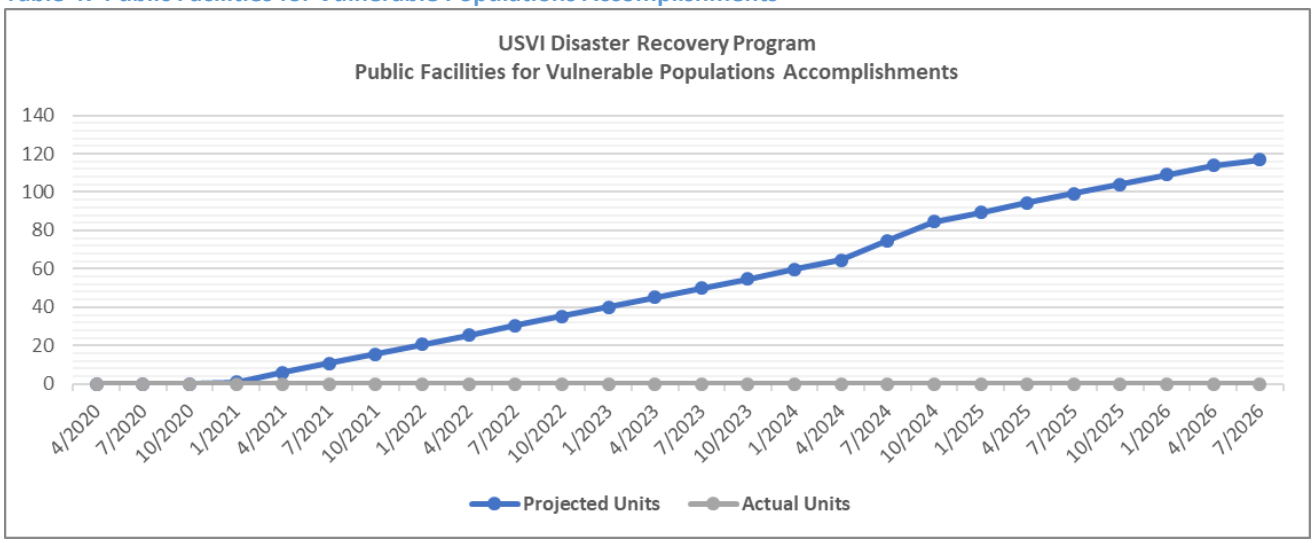
The **Public Services Accomplishments** chart represents clients served -within vulnerable populations. This is a new program which assists public and private non- and for-profit social services organizations that provide services to vulnerable populations, such as homeless, elderly, at-risk youth, and other groups HUD identifies as presumed to be low- and moderate income.

Table 46 Public Services Accomplishments



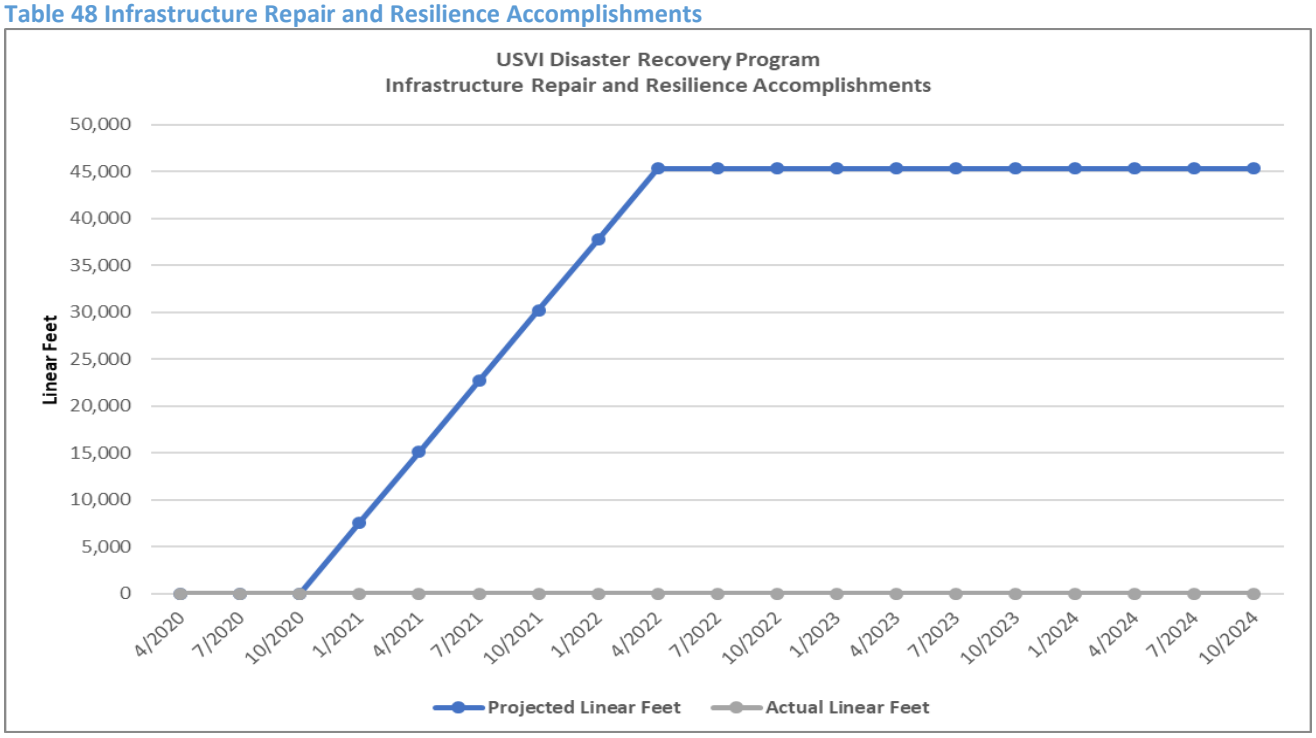
The **Public Facilities for Vulnerable Populations Accomplishments** chart represents rehabilitation or creation of care facilities, such as long-term care homes for the elderly. Facilities for the homeless or domestic violence shelters, nursing homes, or group homes for the disabled are all public facilities, not permanent housing units.

Table 47 Public Facilities for Vulnerable Populations Accomplishments



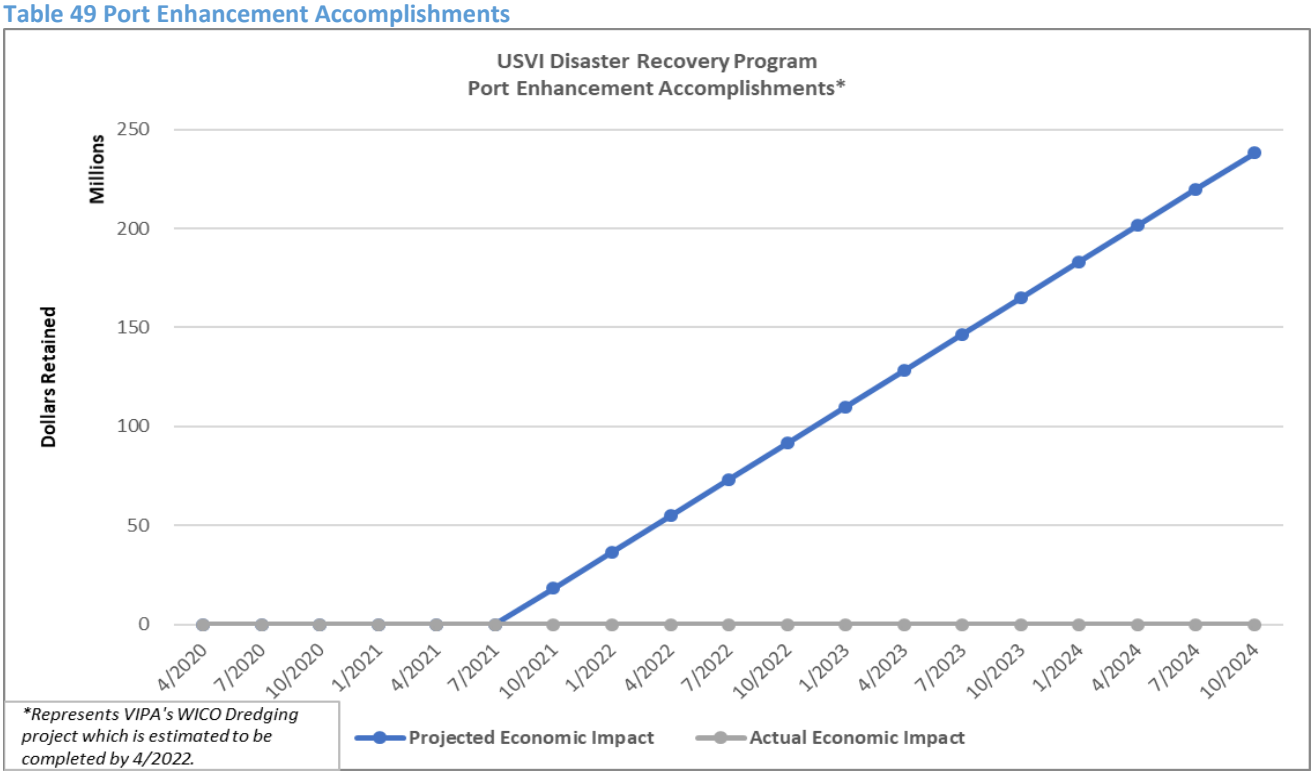
The **Infrastructure Repair and Resilience Accomplishments** chart represents linear feet. The linear feet metric is used to measure investment in roadside improvement projects. This program works with, and in some cases goes beyond, the scope of other federal funding sources, to improve roads serving residential areas, areas between economic hubs, waste and wastewater improvements, and other utilities improvements to help return accessibility and long-term redundancy of systems to improve the quality of life for the Territory's residents.

Table 48 Infrastructure Repair and Resilience Accomplishments



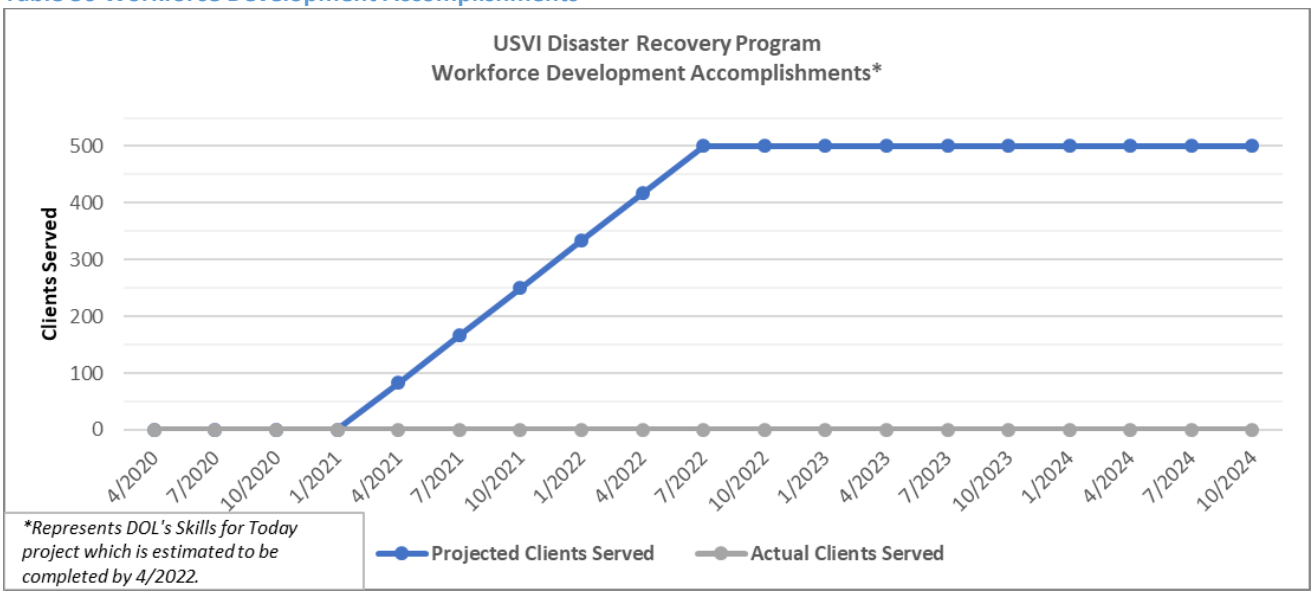
The **Port Enhancement Accomplishments** chart represents dollars retained and projected economic impact for the U.S. Virgin Islands Port Authority's West Indian Company Dredging project, which is estimated to be completed by April 2022. The Ports and Airports Enhancement program modernizes the Territory's most critical access points for tourists, as well as import/export commerce. This allows Virgin Islands' businesses to remain competitive in the Caribbean marketplace and helps to generate job growth/retention.

Table 49 Port Enhancement Accomplishments



The **Workforce Development Accomplishments** chart represents clients served for the U.S. Virgin Islands Department of Labor (DOL) Skills for Today project, which is estimated to be completed by April 2022. The Workforce Development program provides direct support to individuals and businesses to develop lifelong workplace skills for the Territory's most economically vulnerable residents.

Table 50 Workforce Development Accomplishments



7.4 CDBG-DR PROJECTS LIST EFFECTIVE MAY 31, 2020

HOUSING PROGRAMS		
HOMEOWNER REHABILITATION AND RECONSTRUCTION (EnVIsion Tomorrow) PROGRAM **Total Program Funding: $135,203,038**		
Subrecipient Name	None: **VIHFA** will implement this program	
The EnVIsion Tomorrow Program allows low- and moderate-income homeowners to apply for assistance to repair or rebuild their storm-damaged principle residence. Each application, along with supporting documentation, is reviewed for household and property eligibility, including a site inspection to determine the extent of damage. Once the scope of the work and budget are developed, a contractor is selected from the pre-approved pool. Once the Grant Agreement and construction contract have been signed a Notice to Proceed is issued for the construction work to begin.		
The EnVIsion Tomorrow program has received almost 1,600 applications for Homeowner Rehabilitation and Reconstruction assistance: 1,045 applications are in various stages of program eligibility, site inspections, and duplication of benefit review Approximately 550 applicants either withdrew their application or were determined to be ineligible based on the household's income, property ownership, primary residence status or other program eligibility criteria		
NEW HOUSING AND INFASTRUCTURE (HOMEOWNERSHIP) PROGRAM **Total Program Funding: $85,000,000**		
Subrecipient Name	None: **VIHFA** will implement these projects	
Subrecipient Agreement and Project Agreement	None: **VIHFA** will contract with developers and contractors to carry out the construction of infrastructure and new construction of housing units	
VIHFA Project No. 1	Estate Solitude	**CDBG-DR:** $4,000,000
Infrastructure and new construction of 20 new single-family residential units for homeownership opportunity for low- and moderate-income households (earning less than 80% area median income)		
VIHFA Project No. 2	Mt. Pleasant	**CDBG-DR**: $1,500,000
Infrastructure and new construction of 6 new single-family residential units for homeownership opportunity for low- and moderate-income households (earning less than 80% area median income)		
VIHFA Project No. 3	Estate Fortuna	**CDBG-DR**: $4,000,000

Infrastructure and new construction of 12 new single-family residential units for homeownership opportunity for low- and moderate-income households (earning less than 80% area median income)		
RENTAL REHABILITATION AND RECONSTRUCTION (EnVIsion Tomorrow) PROGRAM **Total Program Funding: $25,000,000**		
Subrecipient Name	None: **VIHFA** will implement the program	
EnVIsion Tomorrow's rental program offers owners of rental properties with 2 to 20 units assistance to repair or rebuild their storm-damaged rental units. Each application, along with supporting documentation, is reviewed for program and property eligibility, including a site inspection to determine the extent of damage. Once the scope of the work and budget are developed, a contractor is selected from the pre-approved pool. Once the Loan Agreement, Affordability Agreement and construction contract are signed a Notice to Proceed is issued for the construction work to begin. Rental units repaired or rebuilt with EnVIsion Tomorrow program funds must be long term rentals (are prohibited from being short term or vacation rentals, such as Airbnb, VRBO, etc.).		
EnVIsion Tomorrow - Rental Rehabilitation and Reconstruction has received applications from owners of over 340 rental units: 226 units are being reviewed for program eligibility, having site inspections conducted and a duplication of benefits review completed 115 determined to be ineligible or withdrawn		
PUBLIC AND AFFORDABLE HOUSING DEVELOPMENT PROGRAM **Total Program Funding: $81,500,000**		
Subrecipient Name	None: **VIHFA** will implement the project	
Subrecipient Agreement and Project Agreement	None: **VIHFA** will contract with a developer and contractors to carry out the construction of the project	
VIHFA Project No. 1	Ross Taarneberg	**CDBG-DR**: $2,970,500
The mixed-use building will be constructed to provide eight (8) housing units on the 3rd floor, with office space for Virgin Islands Housing Finance Authority on the first and second floors. Five (5) of the 8 housing units will be affordable and made available to households earning no more than 80% of the area median income.		
Developer Name	**JDC-Magens Junction Associates 2, LLP**	
Project Specific Award Agreement	**Agreement Execution Date**	
Project Name	Magens Junction - Phase 2	**CDBG-DR**: $3,500,000
JDC-Magen's Junction Associates 2, LLLP will develop 30 one-bedroom and 30 two-bedroom new apartment units contained in a nine-story building with ground floor amenity space located on St. Thomas at Remainder Parcel 7-1 Estate Joseph & Rosendahl and Parcel 3A Estate Lovenlund. The building will be served by two high efficiency elevators.		

Six (6) units will be reserved for households earning less than thirty percent (30%) of the area median income; the remaining fifty-four (54) units will be occupied by households earning less than sixty percent (60%) of the area median income.			
Developer Name	**Croixville Preservation Associates L.P.**		
Project Specific Award Agreement	**Agreement Execution Date**		Under Development
Project Name	Croixville	**CDBG-DR**: $6,930,000	
Rehabilitation of 80 two- and three-bedroom apartments located on St. Croix. Forty-one of the units will be available to households earning no more than 80% of the area median income.			
Subrecipient Name	**Virgin Islands Housing Authority**		
VIHA Project No. 1	Walter I.M. Hodge	**CDBG-DR**: $5,000,000	
Project Agreement Number	Under Development	**Project Agreement Execution Date**	N/A
The rehabilitation of approximately 71 multi-family rental housing units that sustained severe wind, rain and flood damage as result of Hurricane Maria. Rehabilitation will include but may not be limited to new plumbing, kitchen cabinets and fixtures, bathroom fixtures, electrical wiring, ceilings and interior paint, and some of the units will have non-friable asbestos abatement completed, if identified in the floor tiles and popcorn ceiling coverings. The Walter I.M. Hodge complex is located on St. Croix.			
VIHA Project No. 2	William's Delight Villas	**CDBG-DR**: $5,000,000	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A
Rehabilitation of 100 existing single-family units with improvements to allow conversion to homeownership sales (through the U.S. Department of Housing and Urban Development's 5H Homeownership Plan). The William's Delight Villas are located on St. Croix.			
VIHA Project No. 3	Ralph de Chabert Phase 1	**CDBG-DR**: $10,000,000	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A
New construction of 100 new single- and multi-family housing units for low- and extremely low-income households located on St. Croix. Low-income households are those earning less than of the area median income, and extremely low-income households earn less than of the area median income. The project will include Low Income Housing Tax Credits.			

VIHA Project No. 4	Donoe Redevelopment Phase 1	**CDBG-DR**: $10,000,000	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A

New construction of 84-unit rental community with one-, two- and three-bedroom apartments homes, including new walkways and roads, community building and rental office located on St. Thomas. Sixty (60) of the units will be set aside for households earning up to 30% of the area median income and twenty-four (24) will be affordable for households earning up to 60% of the area median income.

PUBLIC SERVICES AND PUBLIC FACILITIES PROGRAMS

PUBLIC SERVICES

Total Program Funding: $500,000

Public services can address a wide range of individual needs, are an integral part of comprehensive community development and can increase the impacts of the CDBG-DR dollars by complementing other activities. In addition, the cost of operating and maintaining the portion of a facility in which the CDBG-DR funded public service is located and the lease of furnishings, equipment or other personal property needed for the delivery of the service. Paying for the operational and maintenance of the entire facility that is only partly used for CDBG-DR assisted services is not permitted.

VIHFA will release a Notice of Funding Availability for providers of public services for a wide range of public services including, but not limited to childcare, health care, job training, recreation programs, education programs, and many others.

REHABILITATION, RECONSTRUCTION OR NEW CONSTRUCTION OF FACILITIES

Total Program Funding: $37,000,000

Subrecipient Name	**University of the Virgin Islands**		
Project Name	Multi-purpose Complex	**CDBG-DR:** $30,000,000	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A

In partnership with VIHFA, the University of the Virgin Islands will develop a 72,800 square foot multi-purpose complex located on the UVI Albert A. Sheen campus on St. Croix. The complex, developed to FEMA safe room standards, will be able to accommodate almost 800 people on either a short- or long-term basis during an emergency, increasing the well-being and quality of life for the residents and visitors of St. Croix. The complex will also provide storage space for supplies to be used if a disaster or emergency occurs, and the parking lots will be used as staging areas and to accommodate busses that will transport people with no other way to get to the location, along with providing parking for residents that arrive in their own vehicles.

The facility will allow the crucial resource agencies and non-profits to coordinate services throughout the lifecycle of an event, from preparation through the impact and immediate aftermath of a disaster.

Office space and meeting rooms designated for the resource agencies and non-profits will be included in the complex.

The American Red Cross, United Way, and local non-profit providers typically coordinate and respond to disasters, along with the Virgin Islands Territorial Emergency Agency (VITEMA), the Virgin Islands National Guard and other Government of the Virgin Islands (GVI) agencies or departments. Agreements for providing space and services within the facility will be developed and executed along with the design of the physical architectural and engineering design.

During non-emergency time, the multi-purpose complex will be available for conventions, large community meetings, public information fairs, emergency management trainings, exercises, and services to predominately low- and moderate-income individuals.

Subrecipient Name	None: **VIHFA** will implement the project	
Subrecipient Agreement and Project Agreement	None: **VIHFA** will contract with a developer and contractors to carry out the construction of the project	
VIHFA Project No. 1	Kronegade Inn	**CDBG-DR:** $1,400,000

The rehabilitation of 18 units in Christiansted St. Croix that will be converted to emergency housing. Emergency housing provides temporary housing for victims of domestic violence, natural disaster, catastrophic incidents and financial hardships.

INFRASTRUCTURE PROGRAMS

NON-FEDERAL SHARE (MATCH) FOR FEDERAL DISASTER RECOVERY PROGRAM
Total Program Funding: $417,750,000

Subrecipient Name	**Virgin Islands Territorial Emergency Management Agency**		
Project Name	Cost share	**CDBG-DR**: $5,658,923	
Project Agreement Number	Under Development	**Project Agreement Execution Date**	None

Non-federal share for FEMA projects throughout the Territory. Project work (PW) project numbers:

- PW60 - replacement of power poles damaged in the Hurricanes
- PW58 – repair of the Water Islands electric distribution system

INFRASTRUCTURE REPAIR AND RESILIENCE PROGRAM
Total Program Funding: $60,7500,000

Subrecipient Name	**Virgin Islands Department of Public Works**	
DPW Project No. 1	Donoe Bypass Improvement	**CDBG-DR**: $2,450,000

Project Agreement Number	I-IRR-DPW-DONOE BYPASS	**Project Agreement Execution Date**	April 23, 2020
Design and environmental review of the Donoe Bypass Improvement project, which will be the repair and replacement of a heavily used 2-mile (estimated 11,100 linear feet) stretch of roadway through the center of St. Thomas that connects residents from the northern to southern and eastern parts of St. Thomas. As a continuation of Skyline Drive, Donoe Bypass serves as a primary conduit for east-west travel on the island and provides access to key economic hubs and critical facilities, as well as to neighborhoods along the corridor, including Anna's Retreat and the Grandview, predominantly low- and moderate-income areas.			
DPW Project No. 2	Northside Highway Improvement	**CDBG-DR**: $3,100,000	
Project Agreement Number	I-IRR-DPW-NORTHSIDE	**Project Agreement Execution Date**	April 23, 2020
Design and environmental review of the Northside Highway, an approximately 6.5 mile-long (34,300 linear feet) roadway that serves as the designated tsunami evacuation route for the island of St. Croix. Northside Highway is the main arterial road to places of employment, business and access to critical services and serves as the main route for residents in Christiansted and neighborhoods along the Northside corridor to the main healthcare facilities on St. Croix: Harwood Clinic, Juan F. Luis Hospital and Plessen Healthcare.			
Subrecipient Name	**Virgin Islands Water and Power Authority**		
WAPA Project No. 1	Smith Bay and Frydendahl Waterline Expansion	**CDBG-DR**: $7,970,000	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A
Provide potable water to the approximately 250 households in the Smith Bay and Frydendahl communities, eliminating the risk of not having access to water during extended power outages caused by hurricanes, other feeder interruptions or droughts, and avoiding the possibility of water supplies being reduced or contaminated if the water collection system (room and gutters) are damaged.			
WAPA Project No. 2	Anna's Retreat Waterline Extension	**CDBG-DR**: $5,760,850	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A
Provide potable water to the approximately 320 households in the Smith Bay and Frydendahl communities, eliminating the risk of not having access to water during extended power outages caused by hurricanes, other feeder interruptions or droughts, and avoiding the possibility of water supplies being reduced or contaminated if the water collection system (room and gutters) are damaged.			

ELECTRIC POWER SYSTEMS ENHANCEMENT AND IMPROVEMENTS PROGRAM Total Program Funding: $95,903,330			
Subrecipient Name	**Virgin Islands Water and Power Authority**		
WAPA Project No. 1	Randolph Harley Power Plant (RHPP) Expansion	**CDBG-DR**: $44,775,000	
Project Agreement Number	WAPA-001-2019	**Project Agreement Execution Date**	August 8, 2019
The RHPP project will enhance the U.S. Virgin Islands' St. Thomas/St. John District of the electrical power system infrastructure by purchasing and installing efficient power generators with 9-10 megawatts (MW) capacity, not to exceed 40 MW. The generators will have dual fuel capabilities and will operate on liquified petroleum gas (LPG) as the first fuel source and ultra-low sulfur diesel (ULSD) as its secondary fuel. Additionally, a Battery Energy Storage System (BESS) will be purchased and installed. These additional power generators and BESS will increase and optimize the type of electrical generation.			

ECONOMIC REVITALIZATION PROGRAMS

PORTS AND AIRPORTS PROGRAM Total Program Funding: $38,109,022			
Subrecipient Name	**Virgin Islands Ports Authority**		
VIPA Project No. 1	Charlotte Amalie Harbor and Harbor Dredging	**CDBG-DR**: $24,859,733	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A
The project will dredge approximately 255,118 cubic yards of material from the Charlotte Amalie Harbor, the entrance channel and West India Company (WICO) berth, providing additional keel to sea floor clearance in the channel, turning basin and alongside the berthing dock. Dredging will provide a control depth of the channel of 40 feet below mean lowest low water level, 38 feet below for the turning basin and a depth of 36 feet for the berth. The additional clearance from the keel of existing and new generation cruise ships and the sea floor will reduce the amount of sediment drawn into sea to sea cooling intake valves. Accommodating the larger cruise vessels will ensure that the USVI retains port of calls in 2021 and into the future, with a directly associated benefit to business who rely substantially on cruise passenger traffic.			

TOURISM INDUSTRY SUPPORT PROGRAM Total Program Funding: $10,000,000		
Subrecipient Name	**Virgin Islands Department of Tourism**	
Project Name	Tourism Marketing Campaign	**CDBG-DR**: $

Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A

The U.S. Virgin Islands Department of Tourism will administer a multi-pronged strategy to support small businesses and entrepreneurs in the tourism industry as well as establish a robust marketing campaign to showcase the U.S. Virgin Islands vast tourist assets as they come back online. Marketing initiatives to ensure maximal efficacy and impact, will target specific travel and tourism niches in which the U.S. Virgin Islands are known to be competitive, especially among U.S. mainland residents. These niches include sports and adventure; meetings, incentives, conferences, and exhibitions; romance market (destination weddings, honeymoons, and vow renewals); and yachting. The marketing campaign and product development technical assistance will be will include: branding; marketing (public relations, advertising, social media); public relations (media relations, paid broadcast and niche events); purpose travel (voluntourism to support recovery efforts); film (marketing, training, scouts, film trade events); and visitor experience.

WORKFORCE DEVELOPMENT PROGRAM **Total Funding: $17,000,000**			
Subrecipient Name	**Virgin Islands Depart of Labor**		
DOL Project 1	Skills for Tomorrow	**CDBG-DR**: $5,000,000	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A

This project seeks to train 500 individuals over a fifteen-month period. Through a rigorous training schedule, cohorts of 100 (50 each district) will begin training every twelve weeks. Participants will be recruited by media advertisement, and through the VI Department of Labor and VI Department of Human Services job seeker data bases. All participants will be screened by the VI Department of Labor. Successful candidates will start with job readiness workshops and continue through to completion of occupational skills training.

Components include:

- Job readiness skills workshops that cover preparing for employment, dressing for the job, getting along with supervisors and peers, observing time and attendance;
- Comprehensive academic and aptitude assessments;
- Introduction to the Construction Industry course using the NCCER Core Curriculum with Certification;
- Entry level Occupational Skills training (student's choice of focus) in plumbing, electrical, masonry and carpentry; and
- Job Preparation and Referral – Resume preparation and interviewing techniques

The job-readiness workshops and academic/aptitude assessments will be conducted by the VI Department of Labor. Multiple training service providers will be available in each district to conduct the NCCER Core Curriculum and Occupational Skills training courses. Participants will have an opportunity to visit actual construction sites and engage in "light hands-on" activity during that time.

Participants will return to the VI Department of Labor to develop resumes, learn interviewing techniques and engage in job search activities. Job fairs will be held to assist with employment as needed.

It is expected that the individuals trained in this targeted effort will be employed by the contractors/sub-contractors of the VI Housing Finance Authority and other sub-recipients of the CDBG-DR grant who require local construction workers.

DOL Project 2	On the Job Training	**CDBG-DR**: $5,000,000	
Project Agreement Number	Under development	**Project Agreement Execution Date**	N/A

This project seeks to form partnerships with local businesses to conduct customized training and work-based training opportunities in the construction, manufacturing, transportation and hospitality industries. Work-based training activities include on-the-job training and industry-recognized apprenticeship training. Participants will:

- spend twenty weeks (5 months) in a paid work experience learning a specific skill;
- receive classroom training to ensure subject matter knowledge;
- receive hands-on instruction from employer;
- be paired with a mentor in the industry;
- be responsible for completing an "assignment" from the employer that signifies knowledge of theory and mastery of skill

In total, the project seeks to train 300 individuals over a twelve-month period. Cohorts of 100 individuals (30 per district) will be placed every three months. Participants for work-based training opportunities will be recruited from the individuals who have successfully completed training in phase one, from enrollments in other programs for low to moderate income individuals and from the VI Department of Labor and Department of Human Services database of job seekers. All participants will be screened by the VI Department of Labor.

All interested employers will be asked to register with the VI Department of Labor and will also be able to screen participants prior to hiring them. Employers will be reimbursed for on-the-job training at 100% for the duration of this program.

PLANNING **Total Funding: $18,000,000**			
Subrecipient Name	**Virgin Islands Economic Development Authority**		
Project Name	Vision 2040 Plan (Vision 2040)	**CDBG-DR**: $319,000	
Project Agreement Number	P-Planning-EDA-2040VisionPlan	**Project Agreement Execution Date**	December 16, 2019

Vision 2040 is a long-term strategic economic recovery and development plan with economic growth, job creation, and wealth generation as measurable deliverables of Vision 2040, with a focus on improved quality of life for the people of the U.S. Virgin Islands. The development of the plan will primarily be dedicated to assessing, compiling, and analyzing feedback from Virgin Islanders locally and in the diaspora on the economic future of the Territory, with a technological analysis of the data collected. The scope of this portion of the project is limited to the activities required to gather data, draft, and deliver the Vision 2040 Plan document.