

# BUILDING A LEGACY *of* RESILIENCE



## UNITED STATES VIRGIN ISLANDS HURRICANES IRMA AND MARIA RECOVERY

# PROGRESS REPORT



This 2019 Progress Report was prepared for the United States Virgin Islands Office of the Governor/Office of Disaster Recovery by Witt O'Brien's USVI LLC and The Strategy Group Virgin Islands LLC

We thank each agency that has contributed to this 2019 Progress Report.





# TABLE OF CONTENTS

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MESSAGE FROM GOVERNOR ALBERT BRYAN JR.....05

EXECUTIVE SUMMARY.....08

BUILDING A LEGACY OF RESILIENCE.....10

SCHOOLS.....16

HEALTH & HUMAN SERVICES.....22

HOUSING.....28

UTILITIES.....34

TRANSPORTATION.....44

GOVERNMENT FACILITIES.....50

ECONOMY OF THE U.S. VIRGIN ISLANDS.....54

EMERGENCY SERVICES.....58

CHALLENGES TO RECOVERY.....62





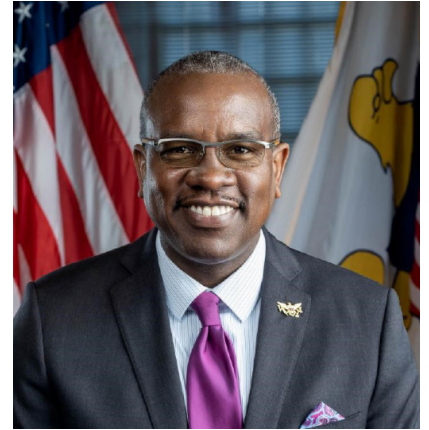


# MESSAGE FROM GOVERNOR ALBERT BRYAN JR

Greetings to all from the resilient people of the Virgin Islands of the United States.

Two years ago, when Hurricanes Irma and Maria struck the Territory, I was a private citizen in the early stages of planning the campaign that would ultimately result in the January 7, 2019 inauguration of the team of myself, Albert Bryan Jr., and Tregenza A. Roach, Esq. as Governor and Lieutenant Governor.

Even before I officially assumed office, my transition team and I made hurricane recovery a top priority. Our goal was to ensure a smooth transition from the administration of Governor Kenneth E. Mapp. Through hard work and determination, we have made many strides in disaster recovery in the last nine months and remain committed to our mission of a brighter Virgin Islands for all of us.



There are three overarching principles that serve as the foundation for every initiative of the Bryan/Roach administration. They are just as relevant to the aftermath of a disaster as to the overall conduct of our government business.

**Building trust.** We are fully committed to transparency in recovery so that everyone has a clear, accurate and up-to-date picture of our priorities, what we are doing and what we have spent.

**Building the economy.** The disaster recovery effort is serving as an initial boost for our economy and over time, the revenues generated for the government will provide an offset to the early losses. Still, we must be cognizant that the economic boom associated with the recovery will not last forever. We are aggressively implementing policies and procedures to manage and maintain a robust economic future ushering in our new normal. See <https://www.vi.gov/news> for further information.

**Investing in our people.** Virgin Islanders bore the brunt of the devastating impacts from Hurricanes Irma and Maria and we must reward their perseverance with good jobs, a fair share of contracts as prime contractors, and by training a more highly skilled and capable workforce than ever before. We know that we cannot handle this massive reconstruction alone, so we welcome those who will continue to come from the mainland to help. At the same time, we will work to make sure that Virgin Islanders are primary beneficiaries of this multibillion-dollar recovery.

Every leader who is going through a major disaster should know that recovery is a process that requires patience and tough decisions. As you will read in this second anniversary hurricane recovery report, there is much reason for optimism. What began as a once-in-a-generation tragedy is being transformed into a once-in-a-century opportunity to build a truly resilient community for our families to prosper and businesses to thrive.



# MESSAGE FROM GOVERNOR ALBERT BRYAN JR

## (Continued)

One of my earliest acts as Governor was to establish the Office of Disaster Recovery (ODR) and charge it with overseeing and coordinating every aspect of our recovery to ensure a comprehensive and integrated strategic approach to “building a legacy of resilience.” Within ODR, we have also created a first-ever post-disaster Portfolio Management Office (PMO), which is now working with more than 50 agencies, departments and authorities to track progress, resolve issues, and drive action on nearly 1,500 distinct recovery projects.

Year Two has seen numerous successes, including the:

- Repair of more than 6,500 homes through the FEMA-funded STEP program, to include the reconstruction of 1,650 permanent code-compliant roofs which, we are pleased to report, stood up extremely well to Hurricane Dorian in late August 2019.
- Installation of more than 1,600 composite power poles so far on the main four inhabited islands, which handled the Category One force of Hurricane Dorian’s winds so well that power was quickly restored territory-wide after the storm passed.
- HUD approval of our Community Development Block Grant - Disaster Recovery (CDBG-DR) Action Plan for Tranches 1 and 2 making more than \$1 billion available for critical housing, infrastructure, and economic revitalization projects across the Territory. Already underway is a major power generation project by the Virgin Islands Water & Power Authority (VIWAPA). When completed in 2020, we will experience more efficient service and substantive reductions in our electricity rates.
- FEMA authorization to replace St. Croix’s two major healthcare facilities—the Juan F. Luis Hospital and Medical Center and the Charles Harwood Clinic—to current industry standards. We are anticipating similar approvals for the Roy L. Schneider Regional Medical Center on St. Thomas, which will enable us to transform our hospitals and clinics throughout the territory into state-of-the-art healthcare facilities prepared for the future.
- FEMA’s agreement to support us in reconstructing our road system to more rigorous federal industry standards. This will greatly improve the everyday transportation experience for our residents, make business investment even more attractive, and significantly reduce maintenance costs overtime.
- Awards of \$27 million in grant funds from the U.S. Economic Development Administration for enhancement of the Henry E. Rohlsen Airport on St. Croix and the Cyril E. King Airport on St. Thomas, which are essential to our ongoing plans for tourism expansion.





# MESSAGE FROM GOVERNOR ALBERT BRYAN JR

## (Continued)

Undoubtedly Year Two has also had its share of challenges including delays by FEMA in issuing critical policy guidance, delays in the approval of USVI-specific reconstruction industry standards, and delays in the determination of factors that are truly representative of the high cost of construction in our islands. While the \$779 million of HUD funding has been approved, the agency has not yet issued the written agreement to us for these CDBG-DR Tranche 2 funds, causing additional delays in critical recovery projects.

On our side, we are addressing the expressed concerns about capacity, making sure that we have the organizational structure, personnel, and financial systems solidly in place to handle these monies with the integrity and operational standards commensurate with such responsibility.

We remain committed to our partnership with the federal government which has been supportive of our recovery efforts, has listened attentively to our needs, and has been generous with disaster assistance. We will maintain open and assertive dialog with our federal partners with the goal of avoiding any unnecessary obstacles to progress.

As we enter Year Three, I want Virgin Islanders and our friends everywhere to hear our message: we are serious about our recovery, serious about professionally managing our projects, serious about completing projects on time and within budget, and very serious about being the very best stewards of the precious taxpayer dollars that have been awarded to us.

Finally, I thank the remarkable citizens of the U.S. Virgin Islands for their patience and perseverance, and most of all for entrusting the Bryan/Roach administration with this tremendous opportunity to work with you to make our beautiful home an even better Virgin Islands.

Our continuing prayers are for your safety and well-being during this hurricane season and throughout the year.

Governor Albert Bryan Jr.



# EXECUTIVE SUMMARY

The recovery efforts from Hurricanes Irma and Maria have not only been transformational to the U.S. Virgin Islands, they have also been transformational in how recovery is implemented through the federal and territorial partnership. Congress and the President have provided the Territory with new tools to conceptualize, recast, and reshape the recovery process, which has opened up new and unprecedented recovery opportunities as the Territory forges ahead with rebuilding.

As a result, the Territory is now positioned to approach disaster recovery far differently than the status quo. While working within a new set of rules and standards can be both time-consuming and complex, the Territory is working closely with federal partners and regulatory specialists to implement the most advantageous, effective and expedient recovery strategy possible.

In Year One of the recovery, the U.S. Virgin Islands and its partner federal agencies completed essential debris removal and emergency protective measures projects, all of which were needed to stabilize the situation and get the Territory back on its feet.

In Year Two of the recovery, the Territory and its partner federal agencies have mapped out a multifaceted, multiyear, multibillion-dollar recovery program that will truly build a legacy of resilience in the U.S. Virgin Islands.

As the Territory enters Year Three of recovery and largescale reconstruction commences, territorial and federal leaders are collaboratively evaluating each aspect of the Territory's recovery to identify how each of the available funding sources can be leveraged to provide a foundation for the territory to not just build back, but to build back more resilient than ever before.

## Changes to Disaster Recovery Laws

Two key pieces of legislation passed in 2018 will dramatically change how recovery is administered in the U.S. Virgin Islands. The Bipartisan Budget Act of 2018 (BBA 2018), allocated billions of dollars in disaster aid for states and territories impacted by hurricanes, floods and wildfires across the nation. This legislation also included two very important changes to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), the law governing FEMA and HUD programs intended for disaster aid.

For the first time ever, FEMA can now reimburse the Territory for certain types of damage that existed prior to the storms, at selected types of facilities including power; water; wastewater; telecommunications; educational campuses; hospitals, clinics, long term care facilities and nursing homes; and emergency services facilities. BBA 2018 also allows for FEMA to pay for upgrades to these select types of critical facilities, during the rebuilding process, based on recognized industry standards for these same types of facilities. This modification applies only for the U.S. Virgin Islands and Puerto Rico.

The Disaster Recovery Reform Act of 2018 allows FEMA to accept the latest published editions of relevant consensus-based codes, specifications, and standards that incorporate the latest hazard-resistant designs and establish minimum acceptable criteria for the design, construction, and maintenance of residential structures and facilities that may be eligible for assistance under this Act for the purposes of protecting the health, safety, and general welfare of a facility's users against disasters.



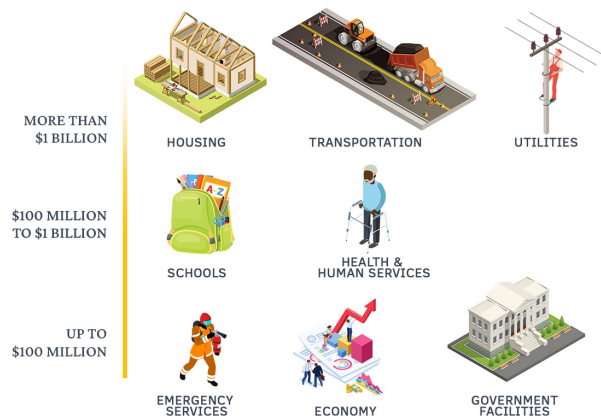


# EXECUTIVE SUMMARY (Continued)

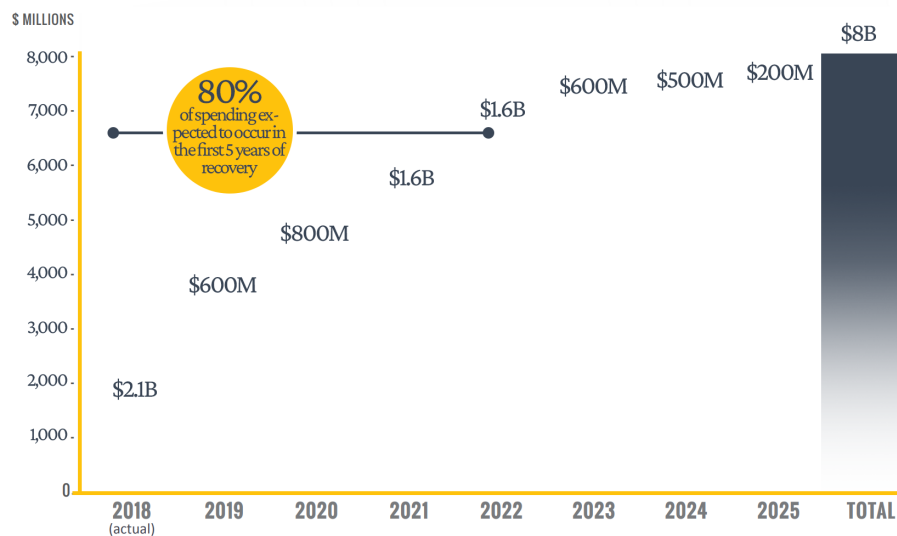
## ANTICIPATED RECOVERY FUNDING



## ANTICIPATED INVESTMENT BY SECTOR



## ANTICIPATED SPENDING BY YEAR



1. Area Cost Factors are publicly available and updated annually by the U.S. Department of Defense for all U.S. states and territories and take into account weather, seismic, climatic, labor availability, contractor overhead and profit, logistics and mobilization and local labor productivity versus the U.S. standard  
SOURCES: <http://www.usace.army.mil>, UFC 3-701-01 DOD FACILITIES PRICING GUIDE (Revision Date: 07-01-2017)



# BUILDING A LEGACY OF RESILIENCE



*The Office of Disaster Recovery was created to administer broad oversight of the recovery efforts and ensure full compliance of regulations in managing and monitoring project funds, expenditures, and timelines.*

**100**  
**TOP PROJECTS**





# BUILDING A LEGACY OF RESILIENCE

## OFFICE OF DISASTER RECOVERY

The Virgin Islands Office of Disaster Recovery (ODR) was established in February 2019 within the Virgin Islands Public Finance Authority. ODR serves as the center of coordination for the anticipated \$8 billion of federal funding to be received over the next few years in support of the recovery from the devastation of the 2017 Hurricanes of Irma and Maria. The Department of Interior (DOI) – Office of Insular Affairs (OIA) granted \$3 million to the Government of the Virgin Islands to establish the ODR to provide broad programmatic oversight and centralize coordination across the government, semi-autonomous, and non-profit agencies. This has maximized efficiencies and integration and has ensured that projects stay on track.

The ODR also certifies compliance of regulations in managing and monitoring project funds, expenditures, and timelines by providing hands-on training and workshops, developing internal controls and tracking tools, and providing accessible reporting across multiple grant programs.

By Executive Order of the Governor, the ODR oversees all federal disaster assistance funding programs for the Territory, the largest of which are:

- Public Assistance Grant Program (PA)
- Hazard Mitigation Grant Program (HMGP)
- Community Development Block Grant – Disaster Recovery (CDBG-DR)
- Federal Highway Administration – Emergency Relief (FHWA-ER)

## ODR's Key Initiatives

### Workshops

- **Doing Business with the Recovery Public Workshop:** In partnership with the V.I. Department of Property and Procurement, the V.I. Department of Licensing and Consumer Affairs, the V.I. Department of Labor, V.I. Bureau of Internal Revenue, and the V.I. Housing Finance Authority, the Doing Business with the Recovery Workshop sought to accomplish taking a proactive step in building capacity and compliance. The workshop provided all vendors, contractors/sub-contractors, consultants and other key establishments, currently within contract or who may intend on doing business with disaster recovery-related projects, with the following:
  - Information on current and upcoming disaster recovery project opportunities to local contractors
  - Information needed to successfully perform their contractual and statutory obligations
- **Government Sector Workshops:** The inaugural coordination event of the ODR was the assembly of government agencies to identify top projects for each of the participating agencies, discuss the integration between like-projects thus addressing the concern of waste and the efficient use of project funding, strategically plan methods to remedy challenges in initiating obligated projects, and open the lines of communication between governmental sub-recipients and the ODR to continue progressive action on all disaster recovery projects.



# BUILDING A LEGACY OF RESILIENCE (Continued)

## *ODR's Key Initiatives (continued)*

### **Workshops (continued)**

- **State Management Costs Workshops:** The workshops provided all sub-recipients of Public Assistance (PA) and Hazard Mitigation (HMGP) federal grant funding with an overview of the state management costs, purpose, guidelines, requirements, applicability, and proper management measures.

### **FEMA Coordination**

- Coordination meetings with local FEMA personnel, to review cross-cutting issues and receive updates from FEMA sector leads on the status of key projects within each sector.

### **Expenditure of Obligated Federal Funds**

- Through regularly scheduled Recovery Project Status Meetings – the ODR met one on one with 19 governmental sub-recipients within 90 days to gain a progress report on the expenditure of obligated funds and to address issues and concerns inhibiting progress. ODR conducts these meetings with critical agencies on a regular cadenced basis.

### **Federal Funding Stakeholder Coordination**

- The ODR led key federal partners from the national leadership of FEMA, DOT, CDBG-DR and DOI in a discussion on:
  - Streamlining the use of recovery funds when multiple federal sources are involved
  - Insular Affairs Act provision that allows federal agencies to consolidate grants
  - Use of CDBG-DR funds to meet the cost-share for Public Assistance projects

### **Long Term Recovery Group and Non-Profit Coordination**

- The ODR reengaged the non-profit community and established a symbiotic relationship between the governmental sector and the non-governmental sector in coordination of disaster recovery efforts and aligned recovery efforts to ensure a cohesive and coefficient recovery process.

### **Top 100 Recovery Projects**

- The ODR compiled a list of prioritized recovery projects in which key stakeholders convene on a monthly basis to provide updates, address issues, mitigate project risks and increase visibility to how funding sources and agencies align. The top projects are determined by the following criteria:
  - Projects with the greatest criticality to the community
  - Projects where funds have been obligated
  - Projects where the Scope of Work has been completed

**Centralization of key finance, financial management, compliance and transparency resources across the Territory.** ODR's role includes ensuring that all agencies use federal funds efficiently and effectively and in full compliance with all federal and territorial regulations. Current and comprehensive data on all aspects of disaster recovery are maintained on the ODR website at [www.usviodr.com](http://www.usviodr.com).



# BUILDING A LEGACY OF RESILIENCE (Continued)

## *ODR's Key Initiatives (continued)*

Facilitation of Requests for Proposals (RFPs) for central government support services including design engineers at the Department of Public Works Capital Improvement Program Division.

Standardizing the portfolio management approach, project tracking and reporting with a common disaster recovery project lifecycle framework and methodology created by the ODR Portfolio Management Office (PMO) for the USVI disaster recovery program.

Building a single source of truth for project status information. Thus far, detailed project information gathered for 1,500+ projects across 54 agencies included initial project schedules.

## *Looking Ahead*

- Continue to establish the ODR as the central repository for recovery progress information, resources and reporting. This would be the first time that centralized project management services are being incorporated into disaster recovery operations in the USVI.
- Strengthen project management capacity and capabilities within agencies by implementing cloud-based project and portfolio management tools and providing project management services to meet the needs of agencies as the USVI recovery effort proceeds.
- Foster the community's trust in building a more resilient USVI through the ODR website and other robust communications efforts.

## **PORTFOLIO MANAGEMENT OFFICE (PMO)**

To grasp the nature and extent of the work and expedite the recovery that the Government of the U.S. Virgin Islands (GVI) is managing, the PMO has laid the foundation for the long-term success of the USVI disaster recovery program using an integrated approach for delivering project management services to the Territory. This is the first time that centralized project management services are being incorporated into disaster recovery program operations.



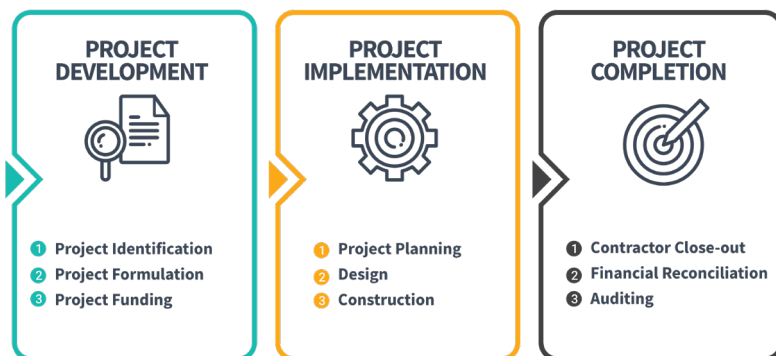
# BUILDING A LEGACY OF RESILIENCE (Continued)

## *Integrated Portfolio Management Approach*

Even in the best of times, no organization has the resources to meet all its business needs. To help ensure that the USVI Government spends its scarce resources on the disaster recovery related work that is of the most value, the PMO developed an integrated portfolio management approach that drives the interests and operating standards of the ODR by providing flexibility for managing each federal agency's distinct requirements. The integrated portfolio management approach also encompasses frameworks, methodologies and tools to determine how to consistently track and monitor all disaster recovery related projects and assist the ODR in supporting all respective agencies with the appropriate level of program or project management support services. Over the last nine months, the PMO has successfully applied this integrated approach in organizing the USVI's 1300+ disaster recovery related projects and schedules across 54 agencies.

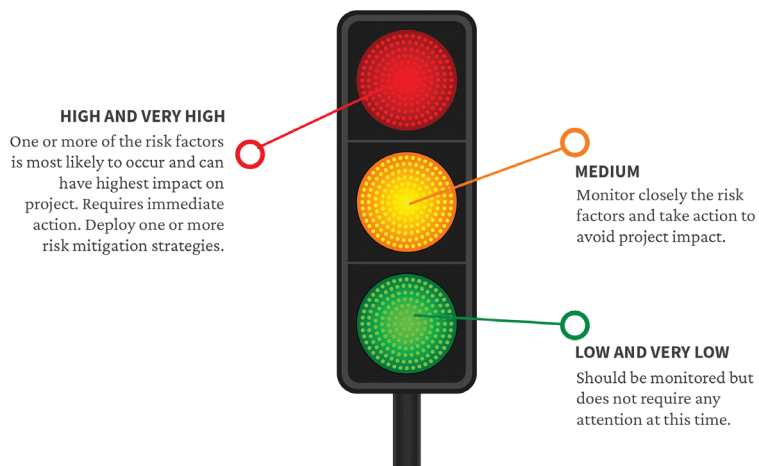
## *Project Lifecycle Methodology*

The portfolio management framework created by the PMO has a standard lifecycle that consists of three project stages and nine project phases for all disaster recovery related projects. As the USVI recovery effort proceeds, this project lifecycle methodology drives standard project scheduling, risk management and reporting, and a common language for agencies providing status updates for disaster recovery related projects across all sectors, project types, and funding sources.



## *Risk Management Methodology*

To understand potential challenges that may delay or hinder disaster recovery projects, the PMO developed a risk management methodology that has been applied to the ODR Top Projects. Agencies and stakeholders identify and assess each project using a standard set of nine risks defined by the PMO for each project based on the likelihood of occurrence and potential impact on project schedule and budget if it does occur. Using this project risk assessment, agencies can uncover project-specific, department-specific and systemic issues and devise appropriate mitigation strategies needed to facilitate project completion and ultimately the recovery of the U.S. Virgin Islands.





# BUILDING A LEGACY OF RESILIENCE (Continued)

## *Promoting a Culture of Program Management*

Moving forward into Year Three, using the foundation that has already been laid, the ODR and PMO strive to build a culture of project management that will become the new normal across agencies even after the recovery is over. In part, this entails applying leading project/portfolio management practices that will keep the GVI positioned at the forefront of the industry, keeping the PMO staffed with people that have a keen knowledge of local communities and community needs and integrating organizational change management into disaster recovery program operations.

Over time, experience has shown that recovery occurs regardless of how closely or loosely it is managed, and eventually disaster impacted areas return to a condition of normalcy. However, for the USVI to seize the truly transformational opportunities presented by the influx of billions of dollars of federal disaster assistance, significantly enhanced oversight and centralization is required. The ODR alone will not guarantee a successful and expedited recovery. Much work and support will be needed from our federal and contractual partners as well as government and non-profit stakeholders to ensure optimal collaboration and coordination across a huge program of complex capital construction projects through centralized oversight and management.

***“The ODR strives to build a culture of project management that will become the new normal across agencies even after the recovery is over.”***





## IN YEAR TWO

*Education System Stabilized And  
A Strategic Vision For The Future  
Developed*

## SCHOOLS



✓ **\$119M**  
COMMITTED

🎯 **\$950M**  
ANTICIPATED

**19**  
TOP  
PROJECTS



# SCHOOLS

*Educational stakeholders Territory-wide collaborated to develop draft industry standards that once approved by FEMA will be used to guide the coming repair and rebuild programs.*

## OVERVIEW OF SCHOOLS

The USVI's educational system includes K-12 schools and the University of the Virgin Islands. The K-12 system includes 31 public schools and 28 parochial and private schools, and a small number of home-schooled students. Several of the public schools on St. Croix have a pre-K classroom and there is also a career and technical education school located within the high school across from the University. During the 2018-2019 school year, the Virgin Islands Department of Education (VIDE) maintained a staffing level of 2,324 employees. The University of the Virgin Islands (UVI) is the sole post-secondary institution in the Territory.

The hurricanes caused substantial damage to facilities and disruption to instruction. As a result, the Virgin Islands Department of Education (VIDE) shuttered 12 school campuses across the Territory, 8 on St. Croix and 4 on St. Thomas and St. John. In early 2018, VIDE embarked on an aggressive program to execute temporary repairs to nine campuses in St. Thomas and St. Croix and returned over 600 classrooms to service in time for the start of the 2018-2019 school year. Additionally, 245 temporary modular classrooms and eight large temporary Sprung structures totaling 211,680 square feet were manufactured, shipped, and installed on ten campuses.



## SCHOOLS (Continued)

For the 2018-2019 school year, most of the Territory's schools were off double sessions. Although a dozen or so campuses opened late, the main goal of ending double sessions was accomplished by the completion of the temporary building and repair program. The focus has now shifted towards permanent repairs and replacements.

To capitalize on the additional post-disaster funding authorized by Congress as part of the 2018 Bipartisan Budget Act (BBA), VIDE, with support from Witt O'Brien's and input from the American Institute of Architects (AIA) embarked on a critical mission to define "Industry Standards" for which this additional funding would be made available. All parties worked closely with AIA's Committee on Architecture in Education to develop educational building standards that would be endorsed by the recognized AIA body for implementation in the permanent repair and replacement programs. These proposed standards were completed and submitted to FEMA in July 2019. Further, VIDE created stakeholder-based New School Construction Advisory Boards that, together with FEMA and local architects, would collaborate to implement these industry standards in the coming repair and rebuild programs. This effort will soon culminate in an Educational Facilities Master Plan (EFMP) roadmap to rebuild school facilities to recognized and accepted standards.



### PROGRESS IN YEAR TWO OF RECOVERY

To alleviate long-standing employee shortages coupled with a decrease in student population, the VIDE better organized its use of several aging facilities and damaged school buildings and has reduced operational costs. For the 2019-2020 school year, VIDE has reconfigured several schools and ceased the operation of some. All modular units are in place and operational. All public schools opened as scheduled on September 3, 2019.





## SCHOOLS (Continued)



Over the past several months of summer break, VIDE reassessed all campuses along with Witt O'Brien's staff in order to accurately document the Hurricane damages, pre-disaster damages, and undamaged components that are now eligible thanks to the BBA. FEMA is expected to make its determination on eligible funding by March 2020.

In the interim, the New School Construction Advisory Board has submitted the first draft of the industry standards and are currently working on the EFMP which, if approved, will provide an opportunity to recreate the footprint of the territory's campuses. In addition, procurement of design firms and demolition services are projected to be completed in early 2020.

In October 2019, VIDE will facilitate town halls to share recommendations and collect input from the community. By March 2020, the committee will leverage feedback from industry and FEMA professionals to finalize plans for the rebuilding of sites, begin new school designs, approve industry standards, and establish agreed upon fixed costs for the 428 Public Assistance Program which authorizes repair, restoration and replacement of disaster damaged public and private nonprofit facilities. The amount of approved funding will establish amounts available to conduct repairs and replacements.

When the new school construction and modernization projects are complete, students will have code compliant and industry standard school facilities throughout the Territory. The VIDE's square footage will be concentrated at a smaller number of campuses which, combined with the sustainable building features, results in lower life-cycle maintenance costs. Structuring a New School Construction Authority to implement and administer the projects will give VIDE the resources and organizational structure needed to deliver on the promise of recovery on time.

***All public schools opened on schedule on September 3, 2019.***

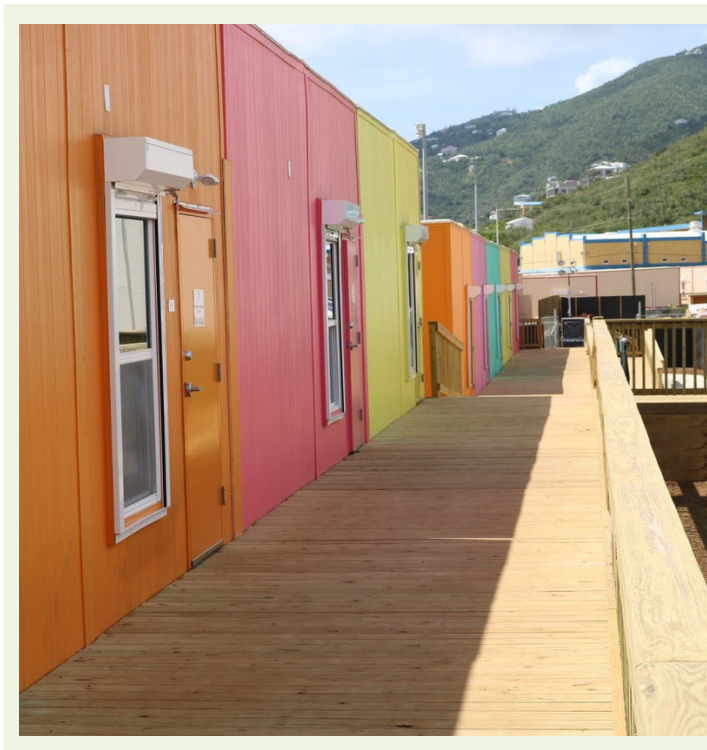


# SCHOOLS

## (Continued)

### *School Highlights*

- At Charlotte Amalie High School (CAHS) on St. Thomas, significant structural damage caused by Hurricanes Irma and Maria has rendered several buildings in the complex unsafe. Two of the three main buildings comprising CAHS have been condemned. The high school now fully occupies modular facilities previously used by the students of Addelita Cancryn Junior High School. Likely, the 428 program funds from those damages will be used to build the core of the Lockhart Elementary School, Cancryn and CAHS corridor to serve the full population of students; the rebuild will include a cafeteria, state of the art building, gym, and administrative space.
- Addelita Cancryn Junior High school campus incurred major damages to many buildings and is still shuttered at this time. The students and faculty have been relocated to temporary modular classrooms at the CAHS and Lockhart campuses. It is anticipated that the buildings on this campus will meet the FEMA replacement criteria at which time VIDE will make a determination on how to proceed with allocating these funds for replacement or distribution of the funds this project will generate, based on the future master plan.
- The sole public school on St. John is Julius E. Sprauve School serving grades K-8. Due to the extent of damages at the school, the intent is to have the institution replaced; however, at a different site. The proposed site is owned by the National Park Service. The GVI is negotiating a land swap which requires congressional approval. FEMA has received the Damage Description and Dimensions (DDD) from VIDE. Once rights to the site have been established, design work can begin.
- The Arthur A. Richards Junior High School located on St. Croix is another likely candidate for campus replacement. The new school will be built as a K-8 school at the site of the Evelyn Williams School which was closed at the time of the storm and is scheduled to be demolished once funding has been secured. A DDD was developed and the request for replacement was submitted to FEMA.

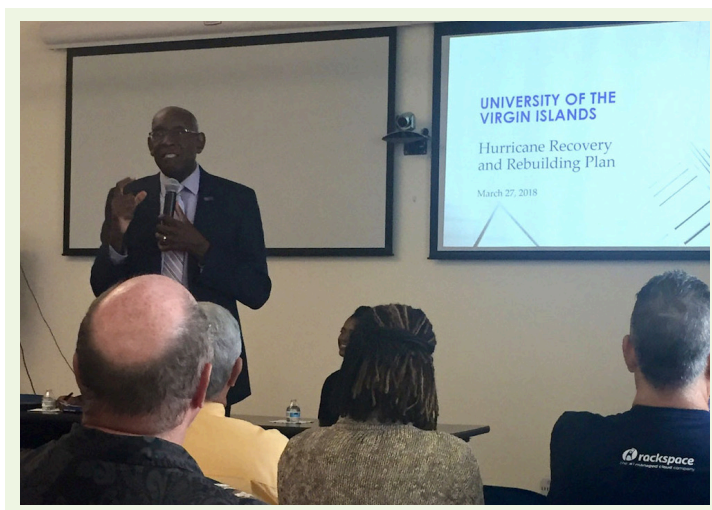




## SCHOOLS (Continued)

### School Highlights (continued)

- The University of the Virgin Islands (UVI) is the primary post-secondary educational provider in the Territory. The campus sites on St. Thomas and St. Croix received extensive damage, but progress is being made to develop an innovative strategy for redevelopment of the campus to not just replace damaged facilities, but to situate the University as a leader in the region. In the past year, substantial repairs were completed for each of the main dormitory room pods, and advanced discussions are underway for the use of modular facilities to replace learning labs that were destroyed.



The Department of Education and other agencies in the Territory continue to experience significant challenges with lack of local funding to begin permanent repairs to schools and facilities – these funds are required to get projects started and then receive reimbursement through FEMA’s Public Assistance Program. In addition, the lengthy FEMA funding process, which is partially attributable to high turnover of federal employees rotating in and out of the territory, causes disruption, rework, and significant delays in the approval process. VIDE also awaits a response to submitted Industry Standards to proceed with new school designs.

***When the new school construction and modernization projects are complete, students will have code compliant and industry standard school facilities throughout the Territory.***

**RISK  
RATING** ➔

**FEATURED PROJECT**  
**ARTHUR A. RICHARDS**  
JUNIOR HIGH SCHOOL REPLACEMENT

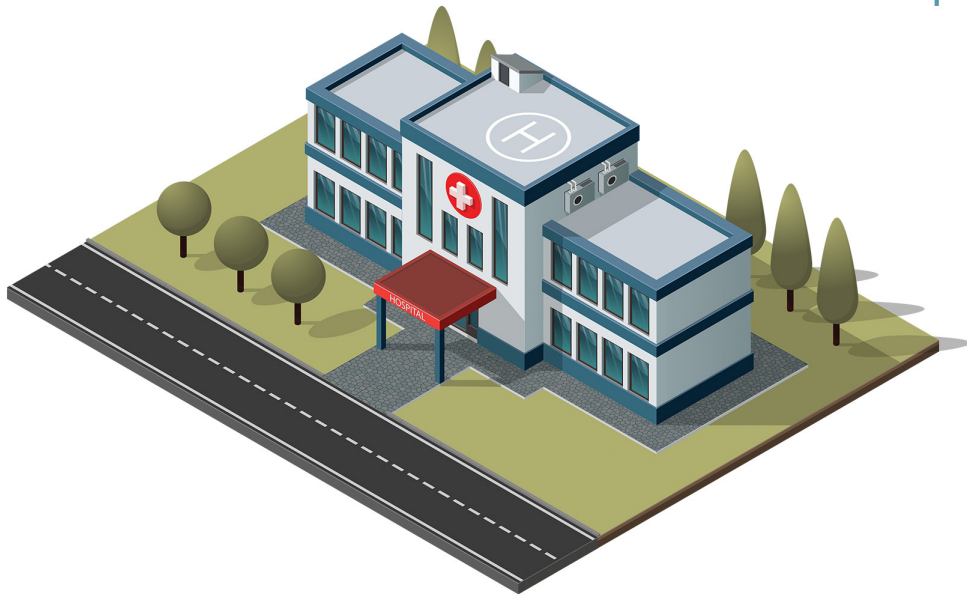
**FEMA PA**  
FUNDING SOURCE  
**OCT 2024**  
TARGET END



## IN YEAR TWO

*Temporary clinics coming online,  
key medical facility replacements  
approved*

# HEALTH AND HUMAN SERVICES



✓ **\$142M**  
COMMITTED

● **\$900M**  
ANTICIPATED

**14**  
TOP  
PROJECTS



# HEALTH AND HUMAN SERVICES

*“With the resumption of dialysis and other chronic care services in the Territory, long-term medical evacuees have been able to return home.”*

## OVERVIEW OF HEALTHCARE AND SENIOR CARE

Restoration of healthcare and senior care facilities to current industry standards remains among the top priorities. In the interim, the Territory remains fully committed to providing the best possible services under the prevailing conditions. Both hospitals, public clinics throughout the Territory, and the two homes for the aged sustained severe storm impacts. Facilities were so severely damaged that the ability to treat most serious illness, injuries and chronic conditions were greatly compromised and many of the most acutely sick had to be evacuated for continued care on the mainland.

By the end of the first year of recovery, it became evident that the level of damage was so extreme that nearly all key facilities in this sector would have to be replaced in their entirety or at a minimum be substantially reconstructed. Understanding that this would take several years, the second year of recovery primarily focused on making essential repairs, installing temporary facilities and laying the groundwork for the largescale restoration process ahead.

The Bipartisan Budget Act of 2018 includes special provisions outlining how disaster funding can be used and identifies emergency medical care as one of the critical care services for which reconstruction can be done to current “industry standards” as opposed to their pre-disaster condition. The Territory has worked diligently with nationally recognized experts to develop a reasonable, state-of-the-art industry standard, which now awaits approval from FEMA. Just recently, on September 11th of this year, FEMA issued new guidance and the Territory is now hopeful that this will help to expedite the approval.



# HEALTH AND HUMAN SERVICES

## (Continued)

### PROGRESS IN YEAR TWO OF RECOVERY

During the past year of the recovery, the ability to provide healthcare and senior care services has been restored—at a reduced level—with most facilities having to operate out of a combination of damaged facilities that have been partially repaired or in temporary modular structures. With the resumption of dialysis and other chronic care services in the Territory, long-term medical evacuees have been able to return home.

On St. Croix, FEMA has approved the replacement of both the 188-bed Governor Juan F. Luis Hospital and Medical Center (JFL) and the VI Department of Health's (VIDOH) Charles Harwood Clinic, which will ensure that these dilapidated facilities be completely rebuilt to new care standards.

In the meantime, a temporary 40,000 square foot modular Charles Harwood Clinic was opened in April 2019 that will be used to provide services for the next several years. Construction continues on a 110-bed temporary JFL Hospital, with the hardened structure now nearing completion; medical equipment is being purchased and installed and the facility is scheduled to open in the Spring of 2020.

Primary healthcare on St. Thomas and St. John are provided through the Roy L. Schneider Regional Medical Center (RLSMC) which consists of three health care facilities: The Roy L. Schneider Hospital on St. Thomas, the Charlotte Kimelman Cancer Institute (CKCI) on St. Thomas, and the Myrah Keating Smith Community Health Center (MKSM) on St. John. Full damage and needs assessments of all three facilities have been completed and it is anticipated that all three will qualify for substantial funding enabling full restoration to the proposed industry standards.

In the meantime, on St. John, a temporary 3,500 square foot modular Myrah Keating Smith Clinic opened in March 2019 and is providing 24-hour urgent care and general/primary care and preventive health care services to the island's 4,500 residents.

On St. Thomas, instead of constructing a modular facility, officials at Roy L. Schneider Hospital have decided that the best way for the delivery of uninterrupted quality care during the multi-year restoration process is to construct a multi-story temporary wing attached to the current hospital building. This addition will provide swing space while various parts of the facility are under construction. Design concepts are currently being evaluated and construction is expected to start in 2020.

***A temporary 40,000 square foot modular Charles Harwood Clinic was opened in April of this year that will be utilized to provide services for the next several years.***





## HEALTH AND HUMAN SERVICES (Continued)

Immediately adjacent to the Schneider Hospital, the Charlotte Kimelman Cancer Institute was the only facility in the Territory to offer radiation oncology. The facility also received severe damage and remains closed. While administrators are seeking funding to replace the building; temporary repairs are currently underway.

The VIDOH clinic is also located within the Schneider Hospital footprint and was due to operate out of a temporary modular clinic until the hospital repairs were completed. The U.S. Army Corps of Engineers attempted to construct the modular facilities but has since aborted the approach and VIDOH is now awaiting FEMA approval to renovate existing buildings at an alternate location. The new location will provide temporary services until plans and funding are finalized for a new permanent clinic.



As for senior care on St. Thomas, the Queen Louise Home for the Aged has been in poor condition since Hurricane Marilyn and is now only partially functional despite temporary repairs. The Department of Human Services is currently awaiting FEMA approval for a replacement facility to be constructed on a new site using a combination of FEMA and HUD CDBG-DR funds.

On St. Croix, the Herbert Grigg Home for the Aged is operating at limited capacity in a facility that requires significant repairs. A decision regarding how best to address damage to the facility is being finalized. Currently, it is not expected that this facility will qualify for a complete replacement under FEMA rules; however, by pairing expected FEMA repair funding with HUD CDBG-DR funds already earmarked for this project, the facility will receive a major restoration and upgrade.

### EMERGENCY SHELTERS

Shelters and safe rooms help secure the safety of the public by providing safe places for the residents to shelter during major weather events while also ensuring that emergency personnel have bases of operation from which to fulfill their critical functions. Shelters and safe rooms provide protection from wind, rain, blowing debris, and rising water. The devastation wrought by hurricanes Irma and Maria made it clear that there is a critical need to increase the sheltering capacity on all the islands. While building future school facilities to new standards will enable the use of their buildings for limited emergency sheltering, the Territory is working hard to identify other opportunities to increase sheltering capacity.





## HEALTH AND HUMAN SERVICES (Continued)



Throughout the repair and reconstruction process, many buildings are being retrofit to withstand higher wind forces. Applications are also being submitted to FEMA to add backup generators for existing emergency shelters. Over a dozen facilities have been identified as candidates for use as safe rooms, providing shelter capacity for over 1,700 people across the Territory. Of that capacity, over 1,400 spaces will be in facilities for use by residents and members of the public in addition to more than 260 spaces for first responders and emergency personnel.

On St. Croix, three major sheltering projects are in the works, including the UVI Multipurpose Center, St. Dunstan's Episcopal School, and the Alexander Theater.

Various buildings on the UVI campus have served as shelters in the past; however, the decision has been made to augment various buildings on the UVI campus that have served as shelters and constructing a new Multipurpose Center that will be able to shelter residents during storm events, while also supporting a wide variety of student life and recreational activities when not used for sheltering.

Also identified as a candidate for use in sheltering, the St. Dunstan's Episcopal School buildings and campus could be retrofitted for use as a safe room project that will provide protection for at least 175 residents. An application for this project is being developed and is near completion, including an in-depth analysis of environmental considerations on the project. It is anticipated that the project application will be submitted to FEMA for phase one approval by the end of September of 2019. Once approved, the technical design and engineering phase of the project can begin, a precursor to getting phase two approval and ultimately constructing the safe rooms.

The existing renovation of the Alexander Theater by the St. Croix Community Foundation may incorporate hardening measure for use as a safe room, providing capacity for at least 125 members of the public in St. Croix. This collaborative project with the non-profit will be reviewed in two phases. The project concept for phase one has been submitted to FEMA, which has received approval, allowing the Alexander Theater to move into design and engineering. The process for selecting and hiring an engineering firm is underway. FEMA has also given conditional phase two approval, contingent on reviewing the project specifics once the engineered plans are complete. Once received, the project will be able to enter the construction phase.



## HEALTH AND HUMAN SERVICES (Continued)

On St. Thomas, The Frenchman's Reef Hotel renovation also provides an opportunity for sheltering retrofits to be potentially included for use as a safe room. The proposed retrofits will enable over 700 residents to take shelter during a storm. This unique public/private partnership will provide funding to the hotel operator to harden one wing of the hotel especially for sheltering and will subsidize emergency utilities in exchange for sheltering local families before, during and after major storm events. The project application for the proposed retrofits has been developed, submitted and is currently under review by FEMA. The engineering and design is underway and the project partners are working diligently to move the project through FEMA's reviews quickly. Once the project is approved by FEMA and designs finalized, construction can begin.

*Over a dozen facilities have been identified as candidates for use as safe rooms, providing shelter capacity for over 1,700 people across the Territory.*

Five new saferooms throughout St. John are in the works with the St. John Community Foundation that will increase sheltering capacity for over 230 people. These facilities are critical, as the only evacuation option available to most St. John residents is to take the ferry to St. Thomas and then cross St. Thomas to reach the airport. This trip can be challenging and time consuming, particularly for vulnerable populations including those with limited mobility and medical complications. Ensuring safe and secure sheltering options on the island is therefore vital. Applications for these five projects have been submitted to FEMA for phase one approval. Similar to other projects, once FEMA provides phase one approval, the design and engineering can begin, followed by final phase two approval and construction.

An additional project led by the Department of Sports, Parks, and Recreation will create a safe room at the St. John Community Center providing sheltering for 75 members of the public. This project is also pending phase one approval. To further address the evacuation challenges on St. John, FEMA through the Hazard Mitigation Grant Program awarded the St. John Community Foundation \$7 million to retrofit homes on the island against hurricane-force wind, debris, rain, and other related hazards.


In addition to the above projects intended to protect the general public, seven additional projects are being developed to harden facilities for emergency personnel and first responders. These facilities will not just provide protection but will also enable first responders to meet and better collaborate with other agencies across each district. The locations identified for hardening are five fire stations: four on St. Croix and one in St. Thomas; St. Croix's Patrick Sweeney Police Headquarters; and the VITEMA Emergency Operations Center. Collectively, these projects will provide secure operational space for over 260 emergency personnel to perform critical emergency response functions.

**RISK RATING** ▶

**FEATURED PROJECT**  
**HERBERT GRIGG HOME FOR THE AGED**

**CDBG-DR**  
FUNDING SOURCE

**JULY 2021**  
TARGET END



## IN YEAR TWO

*6,500 Homes Repaired and over  
1,650 permanent, code-compliant  
roofs installed*

# HOUSING



**\$687M**  
COMMITTED



**\$1.3B**  
ANTICIPATED

**21**

TOP  
PROJECTS



# HOUSING

***“The Territory has embarked on an ambitious plan that will ultimately repair over 3,000 residential units and create 500 new affordable homes.”***

## OVERVIEW OF HOUSING IN USVI AND UNDERSTANDING OF STORM IMPACTS



In total, the USVI housing stock is comprised of over 105,000 households. Although building standards greatly improved after Hurricane Hugo in 1989, most homes in the Territory were not built to a standard capable of enduring the catastrophic effects of two Category 5 storms. All told, the storms caused extensive damage to over 23,000 homes, and about 85% of all residential structures had some storm-related impacts. While communities throughout mainland America have the benefit of offering displaced residents available housing for temporary relocation, many residents on the islands have been forced to shelter in place and endure both unsafe and insecure living conditions.

To address the urgent need of providing residents safe housing, the Territory implemented FEMA’s Sheltering and Temporary Essential Power (STEP) program, known locally as the Emergency Home Repair Virgin Islands (EHRVI) program. These programs were designed to remedy urgent repair issues preventing residents from sheltering in place while they await more permanent repairs or home reconstruction.

## PROGRESS IN YEAR TWO OF RECOVERY

Since launching in March 2018, the STEP program has made immediate repairs to over 6,500 homes. In August 2018, recognizing the lack of emergency sheltering capacity in the Territory, FEMA for the first time ever approved a permanent roof phase of STEP which by the end of the program in April 2019 had completely installed or repaired fully code-compliant roofs on 1,650 homes. Throughout the implementation of these critical programs, the Territory has worked with federal partners to seek additional funding and timeline extensions to ensure that all residents in critical need receive assistance. Unfortunately, FEMA did not support any additional time extensions beyond April 15, 2019, which left more than 400 homes with badly damaged roofs untouched.



## HOUSING (Continued)

In the Disaster Recovery Reform Act of 2018 enacted in October of last year, Congress gave FEMA new authorization to allow states and territories to run their own FEMA-funded Permanent Repair and Construction programs under Section 408 of the Stafford Act. Although this law was made retroactive to benefit the 2017 hurricane impacted areas, FEMA has not issued the new program's implementation guidance. Recognizing that this would take time, Congress gave FEMA the ability to approve pilot projects under this authority using interim rules. To capitalize on these special considerations by Congress, the Territory applied to FEMA for such a pilot program. The application was denied in the spring, effectively ending FEMA involvement in housing reconstruction from the 2017 hurricanes.

### LOOKING AHEAD TO YEAR THREE AND BEYOND

Because urgent housing needs remain, the focus has now transitioned to working with the Department of Housing and Urban Development (HUD) to implement USVI's congressional allocation of disaster relief funds using Community Development Block Grant Disaster Recovery (CDBG-DR) programs.

These efforts are being led in tandem by the Virgin Islands Housing Finance Authority (VIHFA) and the Virgin Islands Housing Authority (VIHA), which have embarked on an ambitious plan that will ultimately repair over 3,000 residential units and create 500 new affordable homes. To accomplish this, the agencies are implementing three key initiatives:

#### 1. Repair and/or Replacement of Storm Damaged Single Family and Multi-Family Homes

The Virgin Islands Housing Finance Authority (VIHFA) has developed the EnVision Tomorrow program to assist eligible homeowners whose primary residence sustained damage by Hurricanes Irma and/or Maria. Program assistance, in addition to other funds received or to be received, will be used for the reconstruction or rehabilitation work necessary to make the home habitable and compliant with floodplain, environmental, and other local requirements.

The program will serve low-to-moderate income homeowners in need of reconstruction, prioritizing available funds for these individuals in round one. Beyond these homeowners in most need, remaining funds will be prioritized for low-to-moderate income homeowners whose homes require minor to moderate repairs to return them to a safe and sanitary condition.

***“In addition to the homeowners seeking assistance to their primary residence, VIHFA has also launched the EnVision Rental Properties Program to provide safe, affordable housing for the many island residents seeking rental properties.”***





## HOUSING (Continued)

The program implemented an application process for those homeowners who require assistance. As of September 1, 2019, the program has received over 1,400 applications and is in the process of conducting applicant intake meetings to determine eligibility and to explain the program process to potential recipients.

In addition to homeowners seeking assistance to their primary residence, VIHFA has also launched the EnVIsion Rental Properties Program to provide safe, affordable housing for the many island residents seeking rental properties. To achieve this, the program is designed to provide funding for repairs to small rental properties, defined as properties containing 20 units or under. Participation in the program requires potential property owners to make the repaired units available to low-moderate income individuals with a priority given to Housing Choice Voucher Program recipients. The application for the Rental Rehabilitation and Reconstruction Program is accessible online at <https://vistormrecovery.com/rental-recovery>.

VIHFA will also work closely to assist the most vulnerable populations through the rehabilitation, reconstruction, and development of new housing, particularly among low-income seniors and those persons and families experiencing homelessness or prolonged displacement from their pre-storm homes.



### 2. Replacement of Public Housing and Redevelopment of Affordable Housing

VIHFA is working closely with the VIHA to identify a strategy for effective redevelopment and replacement of storm damaged public housing units throughout the Territory. Even prior to the storms making landfall, the units throughout the Territory were in dire need of repair. In fact, over 93% of all existing Housing Authority units were built prior to 1973. Due to budget constraints, locally and at a federal level, capital improvements at communities and housing developments across the islands have been largely absent. While VIHA had been in advanced discussions with HUD on strategies for replacing aging housing developments, the damages wrought by the storms accelerated the need for new public housing communities. The Housing Authority has a strategic overarching vision to weave together both federal and private funding in the hopes of redeveloping over 1,500 units throughout the Territory. This strategy represents an over \$800 million investment over ten years and seeks to reduce community density while prioritizing care and housing for the aged.



# HOUSING

## (Continued)

Conceptual design for the first phase of this strategy is underway and represents the redevelopment of over 530 units at the former Estate Tutu Apartments, Walter I.M Hodge Pavilion, William's Delight Villas, and Ralph deChabert Housing Community. Implementation of phase two awaits the release of the CDBG-DR Tranche 2 allocation, but accounts for the redevelopment of an additional 414 units across five housing communities. Both phases represent a \$190 million investment between the Territory, federal recovery partners and selected developers.

### 3. Development of Affordable Housing Options For Homeowners and Renters

VIHFA is leading efforts to provide new affordable rental housing stock including subsidized and mixed-income rental units. These activities include development of low-income and mixed-income housing units, infill construction of new housing units, and substantial rehabilitation of vacant or uninhabitable housing units within commercial mixed-use projects. VIHFA also offers numerous homeownership opportunities, providing pathways for first time homebuyers to obtain existing developed properties or to purchase and develop the construction of a new home. Pairing existing VIHFA programs with the availability of federal recovery aid allows for greater efficiency and deployment and development of these properties and opportunities.

VIHFA has several new projects underway on both St. Croix and St. Thomas. Overall, the use of various available funding sources presents an opportunity to provide infrastructure and/or new construction for over 212 new homes. Much of this work is slated to begin in early 2020.

Additionally, VIHFA intends to repurpose the development of a planned new construction site at Ross Taarneberg on St. Thomas to serve ongoing recovery efforts over the next 5-10 years. The building was initially envisioned as a commercial rental and residential mixed-use development but, as a result of VIHFA needing to hire additional employees to administer the CDBG-DR grant, the commercial portion will now provide additional office space for VIHFA. The development will include the construction of new affordable rental units and contribute to the revitalization of this area. The Authority expects to break ground on the estimated 18,000 square foot building in the second quarter of 2020.



## HOUSING (Continued)

*The Housing Authority has a strategic overarching vision to redevelop over 1,500 units throughout the Territory.*



### EMERGENCY HOUSING

In addition to the above initiatives, VIHFA is also tasked with providing emergency housing in the Territory. VIHFA currently has five Emergency Housing Communities throughout the Virgin Islands. They include 33 units at two sites on St. Thomas, and 46 units on three sites on St. Croix. Of these limited units, 32 were severely damaged during the storm. VIHFA is working with FEMA to define the full scope of necessary repairs at the damaged units and address repairs as funding from the agency becomes available.

To address the growing need for emergency housing, VIHFA recently purchased Kronegade Inn, an 18-unit inn in St. Croix. Engineering reports for the redevelopment of the site will be completed later this year, with construction on necessary updates to begin shortly after. The Authority also plans to develop 16 emergency housing units in St. Thomas using CDBG-DR funds. The plans for these units are currently under development and the units are expected to be completed in 2020.

**FEATURED PROJECT**  
**TUTU HIGHRISE**  
**PHASE 2 - CONSTRUCTION**

**FEMA PA**  
FUNDING SOURCE

**JAN 2022**  
TARGET END

**RISK RATING** ▶

CAUTION  
AREA UNDER  
CONSTRUCTION





## IN YEAR TWO

*Nearly 2,000 Newly Installed  
Composite Utility Poles Withstand  
The Test Against Hurricane Dorian*

## UTILITIES



✓ **\$1.37B**  
COMMITTED

⊙ **\$2.15B**  
ANTICIPATED

**27**  
TOP  
PROJECTS



# UTILITIES

***“WAPA has invested \$2.7 million for emergency backup generators on the island of St. John which include two standby four-megawatt generating units and two megawatts of battery storage.”***

## OVERVIEW OF WAPA

### Power

The Virgin Islands Water and Power Authority (WAPA) operates the electric generation, transmission and distribution system, and a water production and distribution system for approximately 55,000 and 12,000 customers respectively. The Territory 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. Residents and businesses on St. John and Water Island each 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.

The hurricanes damaged more than 90% of above-ground power lines and knocked down more than half of all wood poles. Initial recovery efforts focused on providing uninterrupted energy to hospitals and restoring power to water treatment plants and other critical facilities and eventually personal residences and businesses.

### Water

WAPA supplies water to less than 30% of the Territory’s residents, with plans to extend distribution to new communities. In addition to mechanical failures at two large pump stations and leaks in tanks and pipelines, the hurricanes also impacted the water distribution lines through uprooting of trees and utility poles caused by extreme winds. There were additional damages to the distribution system that compromised its functionality, but those damages were harder to identify. In Year One, pipeline and tank leaks in the public water distribution caused by the hurricanes were repaired and various hardening-related projects at tanks and pump stations were identified. The Authority is under long-term agreements with Seven Seas Water Corporation to produce drinking water through modern seawater reverse osmosis facilities on St. Thomas and St. Croix.





# UTILITIES

## (Continued)

### PROGRESS IN YEAR TWO OF RECOVERY FOR WAPA

#### Power

With power restored through emergency repairs and initial hardening well underway, WAPA is launching a three-pronged Transformation Plan that will position the Authority to maximize eligible disaster recovery funding and operating capital to improve resiliency, increase greater renewable penetration and improve efficiency over the next three to five years.

#### 1. Improved Resiliency

WAPA's resiliency plan is multifaceted with over \$742 million in mitigation projects (FEMA/HUD funded) in place, and involves: a) increased underground power; b) installation of composite poles; c) hardening of infrastructure; and d) emergency backup generators.

WAPA's goal is to transition 50% of customers to underground power with the remaining using above ground composite poles. In addition, underground circuit designs for St. Croix, St. John and St. Thomas have progressed and additional underground capacity has been designed for Christiansted with an RFP recently issued. The St. John (Cruz Bay) Underground RFP has also been completed and advertised.

In addition, over 1,670 composite poles that are rated for 200 mph winds have been installed across the territory with Water Island being completed this past summer and St. Croix, St. Thomas and St. John targeted for late 2020. Once all islands are completed, this territory-wide project will total approximately 7,000 poles installed with FEMA funds covering the approximately \$870 million investment.

WAPA will continue to harden infrastructure with projects like the construction of a new, concrete reinforced substation on St. Thomas's East End that is underway to replace the damaged structure from the storm funded by FEMA at \$12 million.

Additional Gas Insulated Switchgears will be installed in two other substations in the St. Thomas / St. John district.



WAPA has invested \$2.7 million for emergency backup generators on the island of St. John which include two standby four-megawatt generating units and two megawatts of battery storage. These units are procured and will be located at Cruz Bay and Coral Bay with a cutover target of December 2020. This new capacity will increase restoration time for St. John and reduce dependency upon St. Thomas in the event of a power interruption. The Emergency Generation Hazard Mitigation Project for St. John is funded through FEMA on a 90-10 match. WAPA's 10% match will be satisfied using federal grant money provided by HUD.

### 2. Greater Renewable Penetration

In 2009, the USVI passed Act 7075, which established goals for the contribution of renewable energy generation in terms of "peak demand generating capacity" of 30% by January 2025.

In furtherance of these goals, WAPA plans to use available CDBG-DR funding for solar and wind projects across the Territory. The first of these projects includes 28 mega watts of utility scale solar with battery storage at two locations on St. Croix. The RFP's for these projects have been prepared and the Authority will soon be submitting the related documents to the VIHFA for final approval. It is anticipated that these projects can be operational by mid-2021.

Subject to available funding, WAPA has additional renewable energy projects on its priority list including rooftop solar with net energy billing. Recently, WAPA, the VI Energy Office and the VI Public Service Commission unveiled a new net energy billing proposal that will provide all customers with rooftop solar panels to sell excess power to WAPA during sunny days in exchange for credits for WAPA-generated power to be used whenever sunshine is not available.

### 3. Improved Efficiency

WAPA plans to transition all new and upgraded generation to smaller, more efficient and renewable compatible generators using clean burning propane as the primary fuel. Currently, 50% of the Authority's generation is delivered by these types of units and this transformation will continue in the coming years. One of the first projects is to add new generators with battery storage at St Thomas's Randolph Harley Power Plant and is set for activation in December 2020. The project is \$95 million and funded by the CDGB-DR program. These new generators are 40% more fuel efficient and will result in lower charges for customers.

***“One of the first projects is to add new generators with battery storage at St Thomas's Randolph Harley Power Plant and is set for activation in December 2020.”***



## UTILITIES (Continued)

### Water

This past year focused primarily on both repairing drinking water tanks and damaged water distribution networks. To fully understand the system-wide impacts to water distribution, WAPA and a team of experts developed a methodology to further study pipe failures triggered by pressure surges. By identifying and understanding pre- and post-hurricane break frequencies, WAPA will enhance discovery of damaged distribution lines because of pressure surges when power is restored.

In addition to ongoing repairs, WAPA is also working to expand their water distribution network. Existing water systems managed by WAPA account for just 50% of all residential households in the Territory. Many of the remaining residents rely on cisterns as their primary water supply, which are susceptible to running dry during occasional droughts. Residents who rely on cistern systems must have water delivered during these droughts, accounting for \$800-\$1,500 in added expenses per year. To reduce the ongoing financial burden for these residents, WAPA is currently working to extend potable water service connections throughout the Territory by utilizing \$50 million of CDBG-DR funding.

Limited availability of maintenance records that document pipe failures in months immediately after September 2017 is an impediment in determination of damages attributable to the hurricanes, and other sources of information are being explored to provide further insights into hurricane-related damages.

WAPA plans to continue the analysis and identify locations of frequent failures in the water distribution system after relevant data is available. Projects will be identified to replace or rehabilitate the damaged infrastructure. Input from WAPA engineers and field staff will identify projects to replace corroded iron distribution lines and relocate distribution lines to prevent contamination through interaction with wastewater caused by both infiltration and exfiltration from gravity sewers.



***“WAPA is currently working to extend potable water service connections throughout the Territory by utilizing \$50 million of CDBG-DR funding.”***



## OVERVIEW OF WASTE MANAGEMENT

### *Wastewater*

The wastewater infrastructure on the U.S. Virgin Islands is managed by the semi-autonomous Virgin Islands Waste Management Authority (VIWMA) and includes 8 wastewater treatment plants (WWTP), 31 pump stations, force mains, and the gravity collection network.

The wastewater infrastructure system of the USVI was underperforming compared to minimum industry standards prior to hurricanes Irma and Maria and the stresses of the storms further damaged an already fragile system. The initial activities after the storm involved immediate repairs to critical infrastructure to meet the minimum level of service. In addition, assessments on hardening-related improvements at pump stations and wastewater treatment plants were completed.

This past year VIWMA attained funding for hardening-related repairs and replacement of wastewater infrastructure. Projects were proposed at 8 WWTPs, 4 major pump stations, 27 minor pump stations, and 8 gravity sewer locations. In addition, progress has been made in determining the systemic impacts on the wastewater infrastructure, including mapping of the majority of the wastewater infrastructure. Initial findings indicate significant levels of infiltration and inflow of stormwater into the wastewater system, resulting in system failures due to lack of adequate capacity and non-compliance caused by overflow of untreated wastewater. Industry Standards for the wastewater sector have been developed based on a review of available information on existing infrastructure, storm-related damages, and meetings with various stakeholders. Subsequent determination of systemic damages will enable the Territory to leverage appropriations under the Bipartisan Budget Act (2018) by developing projects to upgrade the infrastructure to industry standards. Limited knowledge of the location of wastewater infrastructure in certain areas will require surveys to identify its current condition.



VIWMA will continue the analysis to determine systemic damages and relevant projects will be identified to replace or repair infrastructure using a phased process with prioritization in areas with frequent non-compliance. Wet weather flows stress the existing system, pushing it beyond and therefore broader options such as source reduction, stormwater flow mitigation, and equalization storage will be explored on a system-wide basis as part of a comprehensive planning and performance-optimization activity for the wastewater sector.

A significant proportion of VIWMA's resources are engaged in repairing the frequent breakdowns of wastewater infrastructure that have been exacerbated by the hurricanes. This lack of capacity is expected to become a barrier in the timely implementation of future identified projects.





## UTILITIES (Continued)

### *Solid Waste*

VIWMA also provides solid waste collection, treatment, and disposal services to protect public health and preserve the environment of the USVI. The hurricanes created an estimated 825,316 cubic yards of debris, a great deal more than the Territory's solid waste infrastructure could handle. The Territory is served by two primary landfills, Anguilla on St. Croix and Bovoni on St. Thomas, and both are under a consent decree to cease operations at the current sites and relocate to new sites. There are no recycling facilities on the islands.

All 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 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 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, VIWMA 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 destroyed during the storm, further slowing recovery efforts. The current landfills must be expanded, or new sites must be found to handle additional waste. One site on St. Croix has been identified and preliminary environmental test results have been conducted. For St. Thomas, a plan to expand the current facility and bring the new portion into compliance with the Resource Conservation and Recovery Act Sub-Title D requirements is already in process.

For solid waste management and infrastructure development, WMA has identified emergency response needs of \$173 million, with additional repair and resilience needs of \$169 million. For the first time ever, FEMA will be able to pay for damages to selected critical services facilities including wastewater and it will be able to reconstruct these facilities to the most modern industry standards. Currently VIWMA is focused on securing CDBG-DR funding for both major landfills on St. Croix and St. Thomas as well as converting 15 unmanned drop-off sites to staffed, secured Neighborhood Convenience Centers.



## OVERVIEW OF TELECOMMUNICATIONS

The communications sector in the USVI is comprised of two main components: Public sector and private sector.

### *Public Sector Communications*

The public sector is comprised four primary components:

1. Bureau of Information Technology (BIT) which handles all Land Mobile Radio (LMR) systems for the first responders and IT functions for many agencies of the government;
2. Virgin Islands Next Generation Network (viNGN) which provides middle-mile fiber services to Internet Service Providers (ISP's) in the territory;
3. Virgin Islands Public Broadcasting System (VIPBS) which provides television/radio to the general public under the call signs of WTJX-TV and WTJX-FM.
4. The Virgin Islands Territorial Emergency Management Agency (VITEMA) is also considered a part of this sector as they provide the 911 call center operations and dispatching function for all public safety agencies as well as being responsible for the Tsunami and Integrated Public Alert Warning System (IPAWS) alerting systems. All these networks sustained significant damage in Hurricanes Irma and Maria, which, in many cases, resulted in system wide disruptions for many months. The use of FEMA 404, 406, and 428 funds as well as CDBG-DR funds are being allocated for various projects in this sector.

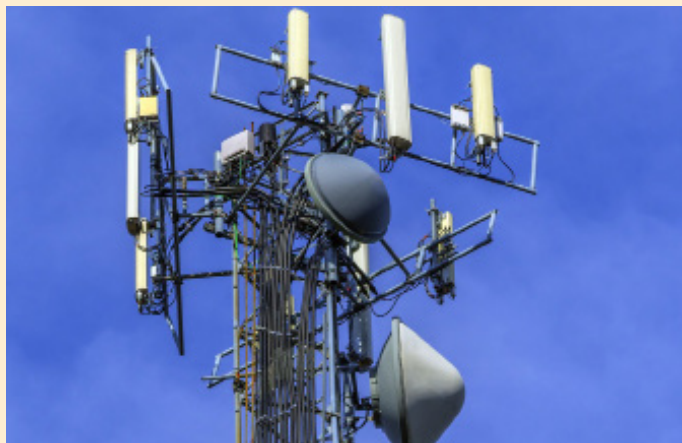
### *Progress in Year Two for Public Sector Communications*

The territory continued to capitalize on the strong momentum from a productive first year of restoration and saw the return to normal service by implementing repair activities to many parts of the infrastructure, and entities began to leverage federal funding to implement projects targeting the replacement and mitigation of many of the systems. The damaged Land Mobile Radio (LMR) system has received funding to contract with professional engineers to perform an assessment and design of the existing network and to bring it up to the P-25 industry standard. This will begin in Fall 2019 and conclude in early 2020. The output of the study will be used to request funding for the building of the new network. The existing 44 site Tsunami Outdoor Warning System suffered extensive damages. In March 2019, FEMA obligated \$1.6 million to repair and add mitigation to the Tsunami system. Efforts are underway to deploy the new system in early 2020.

The viNGN network was also impacted for nearly 100% of the fiber which was attached to above ground poles. Service has largely been restored and much of this cable has been attached to new WAPA composite poles. Additionally, FEMA funds are being requested to bury as much of the remaining aerial cable installations as possible



## UTILITIES (Continued)



BIT issued a contract using FEMA funds for an engineering firm to evaluate the possibility of consolidating government IT operations and phone services. After evaluating what is in place today, they will make recommendations for improvements such as eliminating duplicative equipment and services to improve service and user support, reduce costs, and make the overall network more resilient.

VIPBS' biggest impact to their broadcasting and telecasting services is the loss of a major production studio on St Thomas. WTJX is seeking federal funding to rebuild its St. Thomas studio as a hardened facility and rebuild

additional backup transmission tower and radios. Further, if approved, this new facility will provide a backup emergency operations center for the main VITEMA Emergency Operations Center (EOC) and enhance public safety data sharing with datacasting capabilities.

### *Private Sector Communications*

The private sector is comprised of privately held companies which provide a variety of services such as cellular, landline, cable TV, international cable stations, internet (ISP) services, and commercial broadcasting and television services to the general public. The companies providing cellular service include: AT&T, Sprint, and Viya with their own infrastructure and equipment as well as T-Mobile and Verizon via roaming agreements with the three main companies. Landline and cable TV service is provided by Viya. There are over 20 ISP's providing internet service in the territory. Radio broadcasting is also provided by commercial radio broadcasters which number nearly 30 (including AM and FM). There are 4 full power commercial TV stations and more than 10 using low power. The extent of damages to this sector ranged from fully destroyed towers and equipment to minor adjustments to antennas and transmission equipment.

### *Progress in Year Two for Private Sector Communications*

Much of the work has been completed to restore services to pre-storm conditions. It is obvious, however, that much more work is needed in the private sector for mitigation actions to their networks and their day-to-day operations.



### *The FCC has pledged over \$200 million to extend and strengthen private sector telecommunication infrastructure.*

Cellular companies had the most “exposure” of their damages and outages given such a high degree of dependence on their services by all sectors of the government as well as by private citizens. Many of these companies have really stepped up their future network performance capabilities after the storms. For instance, Viya has made a concerted effort to begin burying many miles of their aerial fiber (and cable TV) facilities. Viya has also fully replaced all their damaged cellular network with newer 4G technology and added several new cellular sites such as their newest cell site in Coral Bay (St John). AT&T just prior to the storms received a multibillion-dollar contract from the U.S. Department of Commerce to create a public safety focused network called FirstNet. In the USVI, their recovery and mitigation efforts will incorporate this new public safety network design which will bring added cellular towers on St. Croix, St. Thomas and St. John.

The ISP's are especially vulnerable in that their network feed connections to the world are dependent on the international cable stations as well as the viNGN network. The international cable stations did not suffer any damages as their facilities and cables were constructed to the highest standards and survived the hurricanes very well. As for the outside antennas used by many of the ISP's, they cannot withstand hurricane force winds in the higher hurricane speed categories. Most companies are however improving their spare equipment inventories and response capabilities in order to return their customers to service quicker than their previous efforts allowed.

The commercial radio and TV stations in the territory suffered many outages. As with the cellular and LMR systems, they rely on tall towers to mount their antennas on high hills and mountains to get their signals out. Similar to the cellular companies, these private companies do not provide much detail on their mitigation efforts but there is work underway to better understand their needs for future storms so that assistance can be delivered, when applicable.

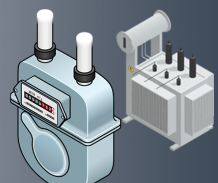
Funding being provided by the FCC for mitigation and enhancement of the broadband and cellular networks will be continued. In 2018, the FCC pledged over \$200 million to extend and strengthen private sector telecommunications infrastructure. In August of 2018, \$11 million from the Connect USVI Fund was provided to several companies to begin this work and the remaining \$191 million is to be delivered this year. For this next round, there are significant requirements the FCC is mandating for disaster preparedness and mitigation to ensure these companies are stepping up their efforts.

**FEATURED PROJECT**  
**EMERGENCY GENERATION ST. JOHN**

**RISK RATING** ▶

**FEMA PA**  
FUNDING SOURCE

**DEC 2020**  
TARGET END





## IN YEAR TWO

*Preparing for more than half a billion dollars of modernization projects*

# TRANSPORTATION



✓ **\$595M**  
COMMITTED

● **\$1.25B**  
ANTICIPATED

**19**  
TOP  
PROJECTS



# TRANSPORTATION

*“On September 4th of this year, FEMA approved the Territory’s request to rebuild local roads to the federal highway standards.”*

## OVERVIEW OF PUBLIC WORKS

The strength and capacity of the Territory’s infrastructure has a direct impact on the quality of life of its residents, the viability of businesses and the health of its economy. Residents of the USVI felt the direct impact and destruction brought on by two Category 5 hurricanes thirteen days apart. Following these storms, debris-filled roads, culverts, inlets, and guts directly impacting the transportation of critical goods and services to the people of the USVI. Meanwhile, the roadways were exposed to high amounts of rainfall and an unprecedented number of heavy trucks and high-axle vehicles which subjected the roadways to stress causing complete infrastructure failure in certain areas across the Territory.



While the first year after the storms was dedicated to immediate needs such as debris removal and emergency protective measures, year two was focused on getting access to necessary funding to redesign and rebuild the roadways across the USVI. The Virgin Islands Department of Public Works (DPW) team employed engineers to analyze how they could not only repair damaged roads but rather re-construct them so that they could withstand damage from future storms. The teams were able to develop engineering plans to include topographical reports, soil data, pictures, and GIS data that clearly demonstrated the need and importance of rebuilding roads instead of simple repairs. This data was shared with FEMA representatives and through a collaborative effort DPW was able to gain agreement on the more extensive road repairs.



# TRANSPORTATION

## (Continued)

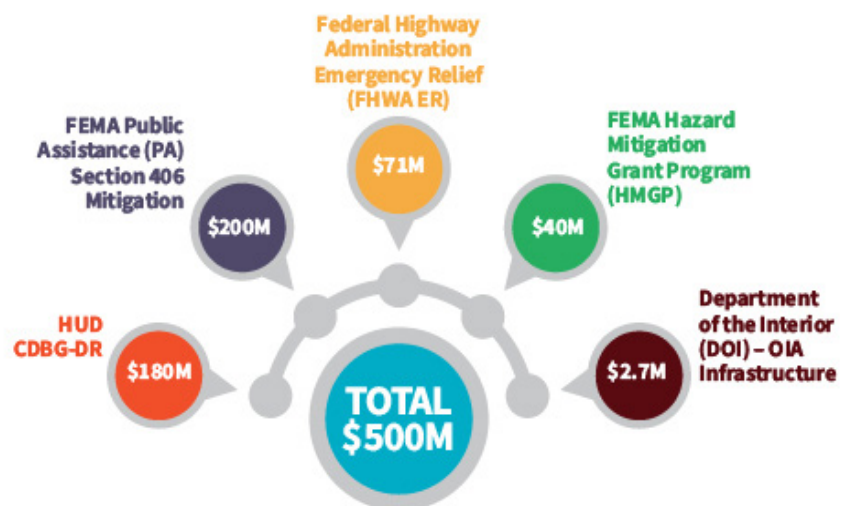


Typically, FEMA eligibility is based only on formally adopted standards in place at the time of the disaster; however, the Disaster Recovery Reform Act of 2018 provides significantly more flexibility and on September 4th of this year, FEMA approved the Territory’s request to rebuild local roads to the U.S. Federal and Highway Administration (FHWA) standards. This significant win for the Territory is recognition of the work over the past two years to develop road rebuilding standards that will serve the Virgin Islands for years to come. DPW has worked with FEMA to identify nearly 90 roads and road segments that have been damaged by the storms and in need of repairs that will now have new scopes of work and cost estimates devised in accordance with the newly approved federal highway standards. In addition, FEMA’s PA 406 Mitigation funding will be utilized to the maximum extent possible to additionally strengthen these roads and improve roadside drainage.

Kicking off year three, DPW is preparing to build back stronger and smarter. The agency is currently assessing its entire disaster recovery roads portfolio totaling over \$500 million to determine the most strategic approach for bundling projects. Below is a breakdown of the Territory’s disaster recovery road funds.

The Department of Public Works has CDBG-DR funded projects about to go out to bid for two major roads, Donoe Road on St. Thomas and Northside Road on St. Croix. These roads are major thoroughfares that sustained significant damages during Irma and Maria. The DPW is scheduled to receive \$30 million in Tranche 1 for the repair of these roads and an additional \$150 million in subsequent CDBG-DR tranches that will be applied to other major roads throughout the Territory.

### Estimated Federal Recovery Aid for Roads





## TRANSPORTATION (Continued)

Within the past year, 98 individual roadway repair projects have been fully approved by the FHWA under their Emergency Relief (FHWA-ER) program totaling over \$71 million for road repairs across the Territory. These funds will be used on major roadways territory-wide including the replacement of two important bridges on St. Croix that were compromised by the hurricane associated floodwaters.

Proper drainage is essential to maintaining the roadways. To improve the longevity of the roads, DPW is planning on using FEMA's Hazard Mitigation Grant Program (HMGP) funds to complete an analysis across all three islands to improve and harden vulnerable infrastructure, such as retaining walls and culverts. Drainage improvement projects have been submitted for St. Thomas' Smith Bay Road and the East End Reserve Area, and for Mahogany Road, Hannah's Rest, and Gallows Bay Road on St. Croix. Watershed drainage studies will be executed to help identify additional projects to reduce the impacts of heavy rain and potential failure along impacted road surfaces in the Territory's eight priority watersheds. These studies will help to ensure that the various drainage improvement projects will be developed to produce integrated solutions.



The Department of Public Works is actively pursuing the opportunity to consolidate grants on similar projects under a single federal agency. Being able to develop a single bid package that covers an entire geographic region will result in better bid responses and minimize the transportation disruptions by simplifying work sequencing and supporting streamlined project management. The USVI recognizes that doing this will be challenging for the federal partners but is encouraged by the provisions of the Insular Areas Act (IAA) which promotes this type of grant consolidation. While this section of the IAA has traditionally been used to consolidate grants within individual departments, expanding the use to cross federal agency lines would be an enhancement well-aligned with the overall intent. This expansion would significantly minimize the administrative burden and would also create opportunities for cost savings.

***“Within the past year, 98 individual roadway repair projects have been fully approved by the Federal Highway Administration (FHWA) under their Emergency Relief (FHWA-ER) program totaling over \$71 million for road repairs across the Territory.”***





## TRANSPORTATION (Continued)

*“DPW is anticipating over \$100M in funds from the Army Corps of Engineers to implement mitigation drainage solutions to mitigate flooding in Turpentine Gut, Savan Gut, and La Grange Gut.”*

An additional element of DPW’s contracting strategy is the availability of resources to build and repair the roads to federal standards. DPW has done an analysis of the local asphalt production capacity to help determine the sequencing of road projects and to identify project bundles that would attract large enough contractors to help offset the local asphalt deficiency. This is important because it will increase the number of projects that can be worked on at a time and will shorten the schedule durations across their portfolio.

Another key to success for DPW will be the continued coordination, collaboration and communication among its utility partners which has been critical in developing a successful approach for a more resilient Territory. The two CDBG-DR funded projects, Donoe Bypass on St. Thomas and Northside Road on St. Croix have proven to be great examples of critical agencies coming to the table to discuss opportunities to address upgrades to their technology systems, climate adaptation strategies and mitigation components to support the needs of Virgin Islanders.

Areas throughout the Territory have acute flooding challenges which often make routes impassible and eventually causes roads to erode, damaging their structural integrity. Two particular areas with severe flooding issues are included in DPW’s drainage improvement projects. DPW is anticipating over \$100 million in funds from the U.S. Army Corps of Engineers (USACE) to implement drainage solutions to mitigate flooding in Turpentine Gut, Savan Gut, and La Grange Gut. In coordination with the Department of Planning and National Resources, DPW is pursuing additional USACE assistance in developing potential flood and environmental mitigation solutions for Mangrove Lagoon on St. Thomas. Further, DPW will also be deploying the use of testing labs to ensure that the quality of the road repairs will withstand future environmental impacts.



# TRANSPORTATION

## (Continued)

### OVERVIEW OF PORT AUTHORITY

As an autonomous governmental agency, the Virgin Islands Port Authority (VIPA) has the vast responsibility for developing and maintaining the ports of the USVI to accommodate current and future demands and to provide safe port facilities. Hurricanes Irma and Maria put VIPA to the test; ports were closed, debris filled the waterways and airport traffic was halted. Windows were blown out, roofs were destroyed, and flooding was reported at the Cyril E. King Airport (CEKA) in St. Thomas. In St. John, U.S. Customs facilities were wiped out and the Theovald Moorehead Dock and Terminal



at Enighed Pond was filled with boats and debris, which resulted in relocating critical barges for cleanup. The damage and closure of the ports hindered the pace of evacuation efforts and delayed the delivery of supplies for emergency relief. Inter-island and domestic travel stopped, hindering business continuity. The mission was critical for VIPA to standup its infrastructure on St. Thomas and St. John for the safety and welfare of the USVI residents.

VI Port authority has allotted dollars to the rebuilding effort and has sought and received federal grants. Funds have been awarded to upgrade, repair, and reconstruct VIPA's facilities and infrastructure throughout the Territory. The outlook for VIPA is promising with the expansion of the CEKA General Aviation Apron and the building of a third taxiway bridge. Repairs to the apron at gate five of the CEKA Terminal and construction of a multi-level, 700-space Parking Garage and Transportation Center at CEKA are slated for design and construction in the next fiscal year. Additionally, VIPA is working on expanding St. Croix's Henry E. Rohlsen (HERA) domestic terminal waiting area and building a new U.S. Customs and Border Protection facility in Red Hook, St. Thomas. VI Port Authority also plans on performing major dredging in St. Thomas' Crown Bay and the Charlotte Amalie Harbor, and Schooner Bay Channel in Gallows Bay, St. Croix using \$40

million of the CDBG-DR funds allotted to the agency. These are all efforts being made by VIPA to increase the number and size of cruise ships visiting the U.S. Virgin Islands.

The airport and dredging projects are critical to revitalize the Territory's tourism driven economy and to increase the USVI's access to goods and resources. Each of these efforts are intended to repair what was damaged and to expand for additional travel and trade within the USVI.

**FEATURED PROJECT**  
**CYRIL E. KING AIRPORT**  
**TRANSPORTATION CENTER**

**EDA**  
**FUNDING SOURCE**

**DEC 2021**  
**TARGET END**

**RISK RATING** ▶ 





## IN YEAR TWO

*Restoration Of Our Territorial  
Treasures Begins*

# GOVERNMENT BUILDINGS



✓ **\$103M**  
COMMITTED

◎ **\$150M**  
ANTICIPATED

**4**  
TOP  
PROJECTS



# GOVERNMENT FACILITIES

***The repair and restoration must be undertaken with careful consideration of the significance and historic character, so the culture and identity of the Virgin Islands is not only preserved but celebrated.***

## OVERVIEW OF GOVERNMENT HOUSES

The Government House buildings are the “people’s houses” and have served as cornerstones of cultural, architectural, and economic significance to the Virgin Islands. The design of the structures is reminiscent of the Danish colonial era and preserves an important part of the history of the islands. The buildings function primarily as offices for the Office of the Governor and facilitate the daily operations to include social and cultural events. The repair and restoration must be undertaken with careful consideration of the significance and historic character, so the culture and identity of the Virgin Islands is not only preserved but celebrated. These iconic pillars of the community also contribute to the economy in their role as regular stops on sightseeing tours where residents and visitors of all ages can share in the appreciation of the rich history of the territory.



Commencing repairs on the Government House – St. Thomas, St. John Battery, Government House – St. Croix, and the St. Thomas Annex (Catherineberg Museum) remains among the top priorities for the Territory.

## PROGRESS IN YEAR TWO FOR GOVERNMENT HOUSES

### *St. Thomas*

The Government House on St. Thomas sustained roof failure on the third-story building, allowing water to completely permeate the building. This resulted in the near destruction of the facility and made it uninhabitable. The Office of the Governor has overseen the design and engineering of the repair plans and anticipates awarding the construction contract before the end of 2019. The repairs will restore the building in keeping with its historic character while incorporating hazard mitigation elements to better protect the structure in the future. The design includes a roof that meets Virgin Islands code requirements and improved storm shutter latches. The drawings for this project were completed and forwarded to DPW for





## GOVERNMENT FACILITIES (Continued)

review. DPW, after signing off on the design drawings, forwarded the bid package to the Department of Property and Procurement (DPP) for advertisement. This project has been obligated at approximately \$2.25 million which includes damages and mold remediation and anticipates an additional \$500 thousand to be obligated for contents. St. Thomas Government House is targeting an early spring completion date. Public Works, after signing off on the design drawings forwarded the bid package to the division of Property and Procurement for Advertisement.

The Catherinberg Museum sustained broken windows, allowing water to breach this historic facility and damage government-owned artwork and artifacts. Repair and restoration work are pending FEMA funding approval.

### *St. John*

The Government House on St. John, referred to as “The Battery” sustained catastrophic damage. High winds resulted in the complete loss of the roof and the subsequent wind-driven rain caused widespread water damage throughout the facility.

The current strategy for repair of the facility will take place in two main phases: Phase I is the roof restoration, with Phase II being the rest of the building including the interior. The design and engineering work for the roof repair was recently completed and forwarded to DPW for review. DPW, after signing off on the A/E drawings has forwarded the bid package to the Department of Property and Procurement for advertisement. The project construction is slated to begin upon successful award of the repair contract. The interior repairs must await the completion of the first phase but upon completion, this important territorial treasure will be restored to its original historic character while providing the necessary improvements to endure future severe weather events. This project has been funded totally by insurance. St. John Government House is targeting an early summer 2020 completion date.



### *St. Croix*

There are two Government Houses on St. Croix. The Frederiksted Government House, a.k.a. the Old Danish School, which sustained limited damage from wind and from water intrusion. The damages originally captured in the DDD are being enhanced to address the required repairs and the repair process is underway. The Christiansted Government House sustained more extensive damage, including damage to the existing historical replica glass windows and door openings. Efforts are underway to evaluate the best options to address the repairing or replacement of the damaged windows openings with historically appropriate fittings replacements that meet the wind ratings requirements



# GOVERNMENT FACILITIES

## (Continued)

necessary to mitigate against future damage during a large storm. Additionally, work is being done to ensure that the full scope of the storm damages captured by FEMA is addressed so that the funds necessary for the repairs and additional funds for hazard mitigation are available.

### OVERVIEW OF THE DEPARTMENT OF SPORTS, PARKS, AND RECREATION (DSPR)

The Department of Sports, Parks, and Recreation (DSPR) is responsible for maintaining public parks and recreation areas throughout the Territory. These facilities are imperative to the community because they provide opportunities for social interaction and athletic recreation for both children and adults. DSPR suffered significant damages from Hurricanes Irma and Maria in 2017.

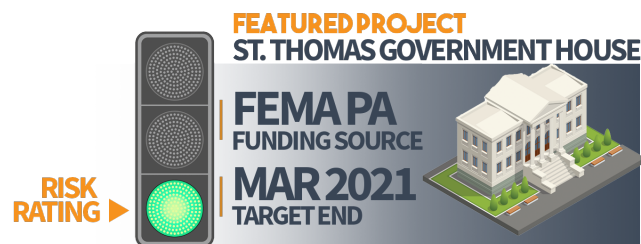
### PROGRESS IN YEAR TWO FOR DSPR

Many public recreation facilities and parks across the USVI were damaged and destroyed by wind, flying debris, and heavy rain. Since the storms, DSPR has been working diligently to restore these important facilities so that the public has opportunities and safe place to gather and socialize, and so that the Virgin Islands youth have an outlet to drive sportsmanship, teamwork, and leadership.

As the most used facility in St. Thomas, the Emile Griffith Park is a centrally located ballpark with facilities that cater to youth and adult sport leagues. Recently, the playground and jungle gym severely damaged during the hurricanes, were replaced with new equipment and a grand opening was held to celebrate and welcome back the community's young people. This effort was funded by Carnival Cruise Lines. DSPR is still working to solidify FEMA PA funds to repair the baseball field, basketball courts, concession stand, and restrooms.

Since the 2017 storms, the only public swimming pool on St. Croix, the Vincent F. Mason Coral Resort Park and Pool on the outskirts of Frederiksted town, has been closed. This DSPR facility suffered damages from severe winds, heavy rainfall, and wave action from ocean surge. The pool has been a gathering area for Virgin Islanders for many years and members of the community anxiously await its re-opening. The Department of Sports, Parks, and Recreation is waiting for FEMA PA funding to be obligated to begin repairing the damage to the pool and the surrounding buildings.

The coming year holds great promise as DSPR is poised to commence restoration of more than a dozen facilities territory-wide.



## IN YEAR TWO

*Gross tax revenue increases by \$90 Million and over 70% of visitor accommodations now open for business*

# ECONOMY OF THE U.S. VIRGIN ISLANDS



✓ **\$66M**  
COMMITTED

◎ **\$100M**  
ANTICIPATED

**6**  
TOP  
PROJECTS



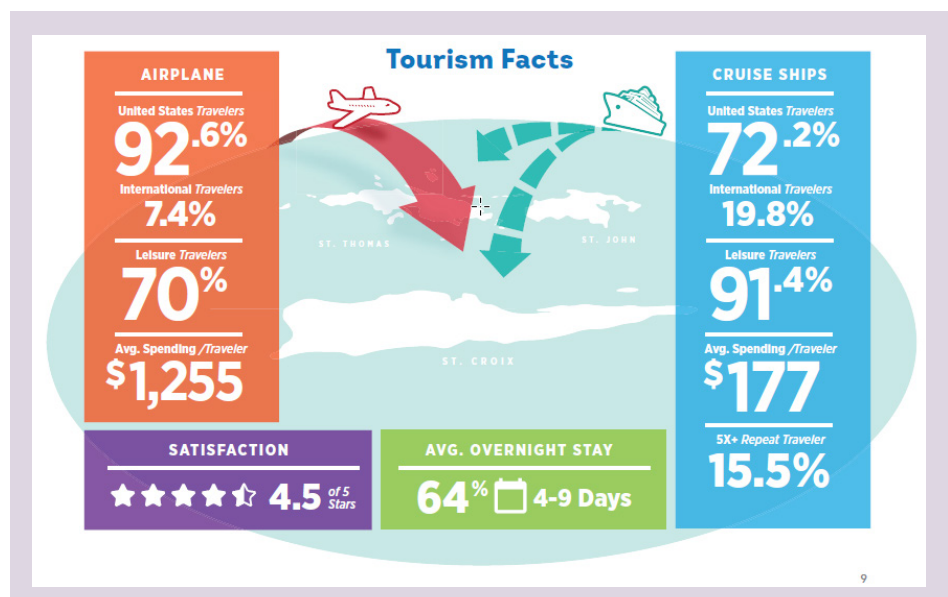
# ECONOMY OF THE U.S. VIRGIN ISLANDS

***“Unemployment in the Territory is below 5% - the lowest since the 1970’s.*”**

The Territory’s location in the Caribbean makes it a key tourist destination for both mainland and international travelers. As such, Tourism continues to be the key economic driver of the U.S. Virgin Islands, and collectively represents over 60% of the Territory’s GDP. A recent study released by MMGY Global called the “Portrait of American Travelers 2019-2020” lists Caribbean destinations as a top choice for American travelers. The Caribbean was the second to Europe as the most popular region for American travelers, and the U.S. Virgin Islands second to the Bahamas in terms of popularity, with 25% of those surveyed expressing interest in visiting the Territory within the next two years.

The storms had an immediate and devastating impact not just to physical assets, but wholesale across all spectrums of the tourism industry. Seaports across the three main Virgin Islands were closed for over three weeks and the St. Croix airport remained closed for over a month. All told, the economic loss in the first year after the storms is estimated at close to \$1 billion, a gross reduction of nearly 70% year over year from 2015 and 2016. Of the 4,500 accommodations previously available prior to Irma and Maria’s landfall, only 1,800 had re-opened by the end of 2017. By the end of the first-year post-storm, only 50% had been returned to service.

However, Year Two of the recovery has shown dramatic improvement. What might be described as “disaster tourism” has helped to mitigate some of the long-term economic impacts of closed facilities. Monies provided by FEMA for housing of recovery workers in the post-hurricane period has sustained a number of hotels and Airbnb rentals throughout the territory. Work directly related to recovery efforts has infused millions of dollars into the economic stream due to recovery workers purchasing at local supermarkets, department stores, restaurants, gas stations, food trucks, and entertainment venues.





## ECONOMY OF THE USVI (Continued)

While it is recognized that these disaster dollars will not last, the immediate effect is that there is now some breathing room in which the government has been able to begin the more permanent restoration of the Virgin Islands economy across all sectors. New businesses are launching, as seen in the number of new business licenses issued. The number of approved new business licenses across all sectors rose 43% in 2018 compared to 2017, and within areas related to recovery work it grew even stronger, with a 139% increase compared to 2017. In total, tax revenue has increased \$90 million from the prior year.

Tourism, too, is on the rebound and nearing pre-storm levels, with over 70% of visitor accommodations open for business (including hotels, timeshares, villas, and short-term rentals). To help aggressively push the tourism-based economy over the pre-storm threshold, VIHFA obtained a regulatory waiver to use HUD issued CDBG-DR funds specifically for tourism marketing. This special initiative will make \$10 million available to the Department of Tourism for programs and advertising strategies designed to displace perceptions that the Territory is not a suitable vacation location by marketing that the islands are open for business.

Year Three of the Recovery looks even more promising for the tourism sector, with several major hotels completing renovations and returning to service between December 2019 and June 2020. Amongst them, the 400 room Marriott Frenchman's Reef Resort and 180 room Ritz Carlton on St. Thomas, and the Renaissance Carambola and 200 room Divi Carina Bay Resort on St. Croix. Major timeshare resorts, such as Bluebeard's Castle, Bluebeard's Beach Club, and Elysian Resorts on St. Thomas are due to fully open by March 2020, with 100 rooms already open at Bluebeard's Castle.

A critical component of facilitating timely recovery, the local workforce has seen unprecedented opportunity for employment. Over 2,500 jobs have been created over the past 2 years, and the unemployment rate has trended below 5% for the past 10 straight months. This represented one of the lowest unemployment rates since the early 1970s. Key business opportunities are slated to come online in the next year spearheaded by both Frenchman's Reef, St. Thomas and Limetree Bay Refinery and Terminal on St. Croix. The restart of the Limetree Bay Refinery specifically represents the return of over 700 permanent jobs and nearly \$40 million in direct revenue to the Government of the Virgin Islands.



## ECONOMY OF THE USVI (Continued)

In the years ahead, the Virgin Islands will embark on a new chapter of recovery, with major constructed projects slated to begin and continue through the next five to seven years. To ensure that residents of the USVI have the opportunity to take an active role in the redevelopment of the Territory's critical assets, the VIHFA and the Virgin Islands Department of Labor (VIDOL) have partnered to leverage \$10 million in recovery aid for workforce development programs. These programs are designed to increase the recovery capacity of the Territory and will provide technical and skilled labor training for nearly 1,000 island residents. The Skills for Today Program will enable applicants to learn specialized trade skills such as carpentry, electrical work, plumbing, finishing, and general construction. The courses will be led by NCCER certified instructors, and tool kits will be supplied for individuals who complete the 11-week training programs. The Department of Labor will also implement an on-the-job initiative specifically to enable local businesses to develop purpose driven skilled labor by subsidizing the hiring and training of eligible candidates.

Collectively, these programs will ensure local residents are vested in the continued recovery of their homes and provide a new pathway of opportunity for them well after the recovery work has been completed.

The Virgin Islands Economic Development Authority (VIDEA) is also looking to expand their Economic Development Commission's (EDC) tax participation program from 70 participating businesses to 130 by the end of FY 2020-2021. Existing EDC participants represent over 6,400 jobs, generating over \$1.5 billion in gross annual revenue supplying approximately \$300 million in direct tax revenue to the GVI.

VIDEA is also spearheading Vision 2040, a Governor Bryan-led initiative to outline a 20-year economic plan. This \$1 million initiative seeks to receive community driven active input not just from current USVI residents, but also from the estimated thousands of Virgin Islanders of the diaspora who may not have yet returned home. And to ensure that the Territory is best positioned to benefit from key investments stemming from Opportunity Zones made available in the 2017 Tax Cuts and Jobs Act, numerous adjustments to existing legislation are under consideration.

***VIDEA is also spearheading Vision 2040, a Governor Bryan-led initiative to outline a 20-year economic plan.***



## IN YEAR TWO

*Funding approved for new Territory  
Emergency Operations Center and several  
police and fire stations to make them more  
resilient.*

# EMERGENCY SERVICES



✓ **\$33M**  
COMMITTED

🎯 **\$150M**  
ANTICIPATED

**7**  
TOP  
PROJECTS



# EMERGENCY SERVICES

***“In March of 2019, FEMA approved \$1.6 million for the repair, replacement and upgrade of existing infrastructure for the Tsunami Early Warning System (TEWS).”***

## OVERVIEW OF EMERGENCY SERVICES

Emergency services in the USVI are coordinated between numerous agencies. In addition to the Virgin Islands Police Department (VIPD), the Virgin Islands Fire Services (VIFS), and the Emergency Medical Services (EMS), critical preparation and response for emergency management is facilitated with the support of Virgin Islands Territorial Emergency Management Agency (VITEMA) and the Virgin Islands National Guard (VING). These efforts are commonly closely supported by volunteer rescue groups on each island who provide specialized rescue services.

The necessary coordination and response in the days before, during and after Hurricanes Irma and Maria put all aspects of the Territory’s emergency services to the test. The loss of critical communication infrastructure and rescue equipment including vehicles and vessels hindered response times and stressed all aspects of the emergency management network across the territory. In spite of this, the dedicated members of each of these critical emergency services agencies worked together hand in hand to rescue and care for displaced and injured residents.



However, these extreme challenges now offer VITEMA and all emergency response agencies the opportunity to review what worked, how future response operations can be managed and what equipment is now necessary to ensure appropriate response. VITEMA, VIPD, VIFS, EMS, rescue squads, VI National Guard (VING), and local amateur radio operators worked together in the face of widespread facility damage, 911 outages, lack of staff, and damages to several communications networks. Numerous repairs have already been completed; however, many additional repair and mitigation efforts are still being worked with FEMA.





# EMERGENCY SERVICES

## (Continued)

### PROGRESS IN YEAR TWO FOR EMERGENCY SERVICES

To better respond to future events, the Territory has worked diligently to implement new processes of cross-territory coordination, including: Redefining the role of the St. Croix Emergency Operations Center (EOC) as a lead function for managing events for the entire territory; new 911 dispatching software and procedures for coordinating daily as well as disaster response operations; enhanced preparedness of fire, police, Emergency Medical Services (EMS), and volunteer search and rescue groups; regular and coordinated emergency planning meetings and pre-storm preparation across all government agencies; hardening critical response assets against weather impacts; and enhancing communications infrastructure to survive future storms.

#### Emergency Management Centers

In order to effectively manage disaster response, emergency response personnel must have a safe operational base to coordinate widespread response and rescue efforts. The Territory's portfolio of EOC's were not appropriately hardened to endure the conditions face by the impacts of the storms and now require extensive repair. The Territory is working closely with FEMA to secure the necessary funding to address the remaining required repairs for the facilities on St. Thomas and St. John, which are expected to be completed in early 2020.

St. Croix's existing EOC and Emergency Command Center (ECC) are in separate leased buildings that received extensive damage. To appropriately serve the emergency response needs of the Territory, a new facility location has been identified and \$22 million has been obligated for the development of a new state of the art EOC. To better facilitate the cross coordination necessary to effectively manage response, the Bureau of Information Technology (BIT) will also relocate their offices to this new facility. Advanced planning is currently underway for the new facility with design and architectural work slated begin in early 2020.

Another critical component of the Territory's emergency management network, the Tsunami Early Warning System (TEWS) received catastrophic damage. Of the 44 TEWS sites throughout the Territory, 15 were completely destroyed. In March 2019, FEMA approved \$1.6 million for the repair, replacement and upgrade of existing infrastructure for the TEWS network. The system is expected to be back in full operation in the Spring of 2020.

#### Police Departments

All VIPD facilities across the Territory received varying but significant levels of damage. Seventeen stations endured damage to roofs, windows, doors, fencing, mechanical and electrical equipment, flooring, and interior components. To address the necessary repairs for these facilities, the VIPD has secured over \$2.7 million to date and is working with FEMA to fully identify any additional work necessary to bring the properties up to current industry standards while providing safe, secure operational space for VIPD personnel throughout future events.



# EMERGENCY SERVICES

## (Continued)

In addition to the building projects, the territory-wide Community Security Surveillance Camera project was heavily damaged during the storms. VIPD has worked with FEMA in hopes of seeking replacement of the entire network. It is anticipated that this may total more than \$2 million.

### Fire Services

Fire services for the Territory are managed via 10 operational fire stations: 4 on St. Thomas; 4 on St. Croix; and 2 on St. John. While all were damaged during the storms, two stations on St. Thomas and two stations on St. Croix will require complete replacement. Thus far, VIFS has secured \$2.1 million from FEMA for the repairs and replacement of damaged stations and equipment. This total is expected to increase as a result of incorporation of proposed industry standards for new facilities.



Independent of storm damage repairs, four stations: Emile Henderson; Sr., Charles A Seales; Emile E. Berry; and Estate Fortuna have been awarded over \$6.1 million for infrastructure retrofits under FEMA's hazard mitigation program. The Territory is aggressively seeking similar funding awards for many of the remaining facilities. While reconstruction of the facilities will require comprehensive design and engineering services, repairs on existing facilities are expected to be completed by 2020. In the interim, all stations remain operational and are servicing their respective communities.

### Emergency Medical Services (EMS)

The EMS agency uses Schneider Medical Center and the Harwood Clinic as its bases of operations. Both facilities were heavily damaged, and while the Department of Health officials continue to work on a pathway for repair and/or replacement options for existing facilities, EMS personnel are currently operating out of temporary spaces. To better streamline the delivery of EMS services in the future, Governor Bryan has directed that EMS functions be integrated with VIFS in the future. The planning for this effort is underway and it is expected that individual operations will be fully integrated throughout 2020.

**FEATURED PROJECT**  
**TSUNAMI WARNING SYSTEM**

**FEMA PA**  
**FUNDING SOURCE**

**MAY 2020**  
**TARGET END**

**RISK RATING** ▶



## IN YEAR TWO

*Although the Territory has submitted draft USVI-specific industry standards for several critical services sectors for review in accordance with the BBA Implementation Policy, FEMA has not yet formally approved any of them*

## CHALLENGES TO RECOVERY



# CHALLENGES TO RECOVERY

While there has been substantive progress in the second year of recovery as detailed herein, there has also been challenges, not the least of which have been delays in federal agency actions to implement major reconstruction projects.

Since the 2017 hurricane season, Congress has passed several new laws that include special provisions critical to the U.S. Virgin Islands' recovery, including the Bipartisan Budget Act of 2018, the Disaster Recovery Reform Act of 2018 and the Disaster Relief Act of 2019). Given the significance of these law, it has unfortunately taken considerable time for the federal agencies, especially FEMA and HUD, to release the associated policy guidance and take other actions necessary to enable implementation of the laws as Congress intended.

## **Delays in FEMA policy**

Signed by the President in February 9, 2018, the BBA made sweeping changes to the Stafford Act for Hurricane Maria disasters (USVI and Puerto Rico only), enabling FEMA to:

- a. 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
- b. 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

Given the significance of these changes to recovery, the USVI has been actively engaged with FEMA over the past year in defining and refining the associated doctrine. In September 2018, FEMA released two key documents: 1) Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program FEMA Recovery Policy FP- 104-009-5; and 2) Public Assistance Alternative Procedures (Section 428) Permanent Work Guide FEMA-4340-DR-VI. Throughout this time period, the USVI has continued to express the importance of FEMA adhering as closely as possible to Congressional intent. Although some progress has been made, including FEMA issuing a much-improved Version 2 of the BBA Implementation Policy on September 11 of this year, there is still much work to be done to optimize the positive impacts of this important legislation.

In addition, although the Territory has submitted draft USVI-specific industry standards for several critical services sectors for review in accordance with the BBA Implementation Policy, FEMA has not yet formally approved any of them. In the interim, on August 31, 2019, FEMA released "baseline standards" common to the USVI and Puerto Rico, which can serve as a starting point, but do not account for the local nuance and community-specific adaptations that are called for in the policy. Until USVI-specific industry standards are agreed upon, many key recovery projects will continue to experience delays.





## CHALLENGES TO RECOVERY (Continued)

*“Unfortunately, even though the USVI’s Action Plan Amendment for the second tranche of \$779 million was approved on March 2, 2019, the grant agreement is still awaiting HUD action more than six months later.”*

Version 2 of the BBA Implementation Policy also includes updated guidance on making repair vs. replacement decisions for damaged facilities that contain modifications to FEMA’s 50% Rule calculation in accordance with the Disaster Relief Act of 2019 and reinforces FEMA’s commitment to making “prudence” a valid decision-making factor in this process. This section of the Act is critically important to the Territory because if properly enacted, it will enable the USVI to replace facilities that were already badly dilapidated before the hurricanes as Congress intended. FEMA has released draft guidance for review and the USVI is hopeful that final guidance will be forthcoming soon.

Given the substantial amount of funding at stake, the USVI has been delayed in finalizing its cost estimates for many projects while awaiting FEMA action, including hospitals and clinics, schools, and utilities, pushing back construction on most of the highest priority projects.

### **Delays in release of HUD CDBG-DR funds**

In the BBA, Congress generously allocated HUD CDBG-DR funds to 2017 hurricane-stricken regions, including the USVI. This allocation plus CDBG-DR funds from other appropriations have made a total of \$1.9 billion available to the USVI. Subsequently, the USVI’s Action Plan was approved in the summer of 2018 and in late September 2018, the HUD signed the agreement releasing the first tranche of \$243 million.

Unfortunately, even though the USVI’s Action Plan Amendment for the second tranche of \$779 million was approved on March 2, 2019, the grant agreement is still awaiting HUD action more than six months later. In addition, the Federal Register Notice for the third tranche of \$774 million for critical hazard mitigation projects was delayed for over a year and only released on September 6, 2019. Only now can the USVI begin to work on its Action Plan for this third tranche with HUD anticipating approvals no sooner than mid-2020. Finally, HUD has yet to announce the timing for the USVI’s remaining \$67 million for improvement of the electric grid.

Now that the Federal Register Notice has been released, the USVI will continue to work with HUD in the short term to secure expedited release of the second tranche funds while working diligently on the Action Plan for the third tranche.



# CHALLENGES TO RECOVERY

## (Continued)

### Poor understanding of construction costs in the USVI

While all federal agencies have recognized that the cost of construction is higher in the USVI than in most other parts of the country, translating this understanding into a definitive cost escalation factor to be applied to every FEMA project is critically important.

After more than a year of discussion and academic study, FEMA has concluded that an interim cost escalation factor of 1.51 is appropriate; however, the U.S. Department of Defense used a factor of 1.41 prior to the disaster and the Territory has provided FEMA with voluminous documentation demonstrating that construction costs have increased exponentially since the 2017 hurricanes, that there is no reason to expect this situation to abate in the foreseeable future and that a higher escalation factor is needed in order to develop realistic cost estimates for fixed grant agreements using FEMA's Section 428 Public Assistance Alternative Procedures.

Fortunately, in releasing their interim cost escalation factor on July 22, 2019, FEMA acknowledged that more analysis is needed and based upon the recommendations of their technical panel have agreed to work with the Territory on refining this factor. This approach is satisfactory to the USVI and will enable many project cost estimates to move forward. All that the Territory is waiting for is FEMA written assurance that once a revised cost escalation factor is derived, that it will be applied retroactively to all projects for which cost estimates using the factor of 1.51 have already been completed.

### Need for flexibility in cost share

In recognition of the persistent economic challenges in the Insular Areas of the U.S., which include the USVI (but not Puerto Rico), the Insular Areas Act (48 USC §1469a) authorizes that "any department or agency, in its discretion, may (i) waive any requirement for matching funds otherwise required by law to be provided by the Insular Area involved."

Waiving various non-federal matching funds using the Insular Areas Act authority has been a common practice in disaster recovery for more than two decades, especially after catastrophic events. In fact, in recognition of the severity of Hurricanes Irma and Maria, FEMA has already invoked the Insular Areas Act authority to waive the 25% non-federal matching requirement for the Hazard Mitigation Grant Program in the USVI.



#### High shipping costs

Ships bringing supplies to USVI usually stop first in Puerto Rico and incur additional costs to reach USVI, after which they return with minimal cargo.

> Less availability and higher cost for construction materials



#### Shortage of local construction labor

USVI has a shortage of skilled construction labor, forcing it to contract from U.S. mainland and allocate scarce housing for imported labor.

> Higher cost of labor



## CHALLENGES TO RECOVERY (Continued)

Since Hurricane Katrina, the federal government has been averse to 100% federal cost share, especially on permanent work. The reason for this is that there is a perception that governments with no “skin in the game,” such as was then the case in Louisiana, had little incentive to stop pressing FEMA for costly expanded scopes of work since they did not have to worry about coming up with any matching funds of their own. As a result, contentious disputes went on for years, prolonging the recovery and driving up the costs to the federal taxpayer.

The USVI appreciates this situation; however, the circumstances in the aftermath of the 2017 hurricanes are vastly different with the Territory invariably demonstrating reasonableness in its requests. Furthermore, with new laws intended to promote a much more resilient recovery, which are wholeheartedly embraced by the Government of the Virgin Islands, the local match requirement currently in place diverts badly needed HUD CDBG-DR funds from other critical projects to serve as local match on FEMA funding

Under the current situation, the USVI will have to dedicate a substantial portion of its HUD CDBG-DR funds—more than \$400 million—to cover the non-federal share. If the 10% cost share is waived, the USVI can instead redirect these funds to help rebuild the thousands of homes damaged by the hurricanes and to protect the federal investments in reconstructed critical infrastructure to lessen the need for taxpayer funded disaster assistance in the future.

In the aftermath of these two unprecedented storms, the USVI is in a very difficult financial position with significant loss of revenues projected over several years attributable to the hurricanes, including sizable tourism related losses. Nevertheless, the USVI has already strongly demonstrated its financial commitment to sharing the cost of recovery by agreeing to maximize the amount of the FEMA Community Disaster Loan (CDL) funding up to the limits of its borrowing capacity.

Furthermore, the USVI has already committed to using FEMA’s Section 428 Alternative Public Assistance Program Procedures to the maximum extent possible to develop capped, fixed grants which have been proven to be the most cost-effective approach, even though these projects carry substantive potential financial risk for the Territory.

The USVI will continue to lobby FEMA for consideration to waive the 10% non-federal cost share on all FEMA Public Assistance Program Work (Categories A-G), including Direct Federal Assistance, and Other Needs Assistance under the Individual Assistance program.









UNITED STATES VIRGIN ISLANDS  
HURRICANES IRMA AND MARIA RECOVERY

# PROGRESS REPORT