



St. John Community Recovery Plan

September 2018





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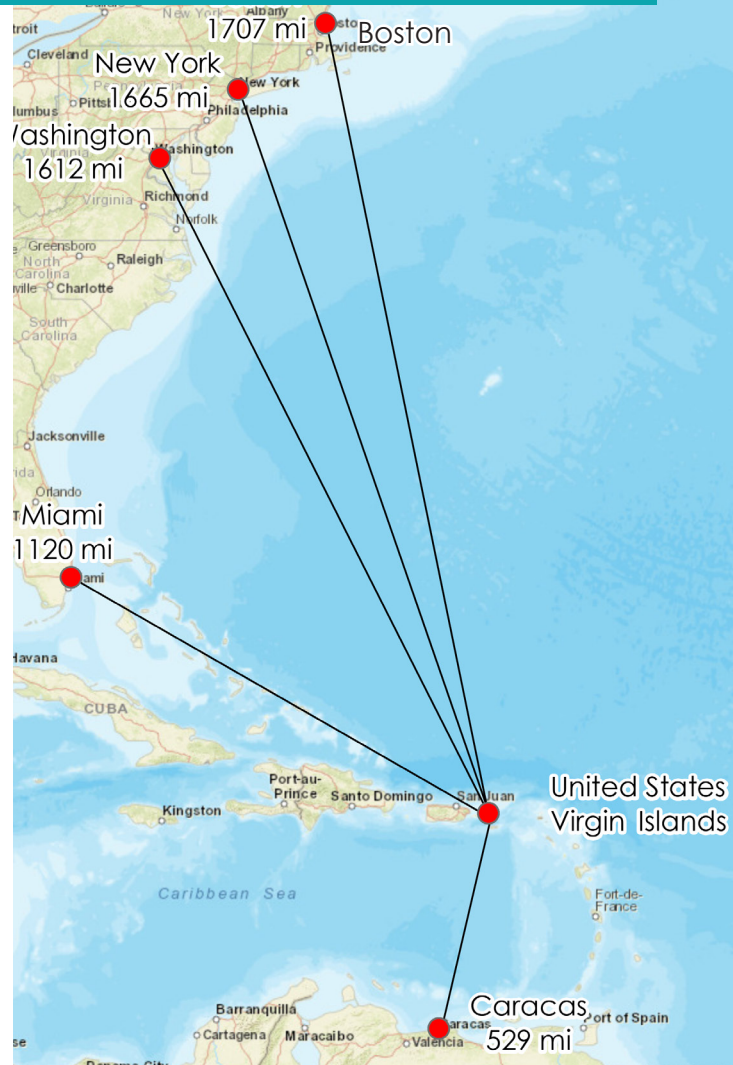
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FEDERAL EMERGENCY MANAGEMENT ENABLING AUTHORITY

The Community Planning and Capacity Building Recovery Support Function (RSF) is a FEMA led intergovernmental partnership focused on providing technical assistance to develop local disaster recovery and community capacity. The RSF derives its mandate from the Robert T. Stafford Act Section 402.3 which provides impacted communities relief via technical and advisory assistance in order to perform essential community services, assess disaster impacts, and perform recovery planning. The Community Planning and Capacity Building RSF further coordinates technical and advisory assistance under the direction of Presidential Policy Directive-8 and the National Disaster Recovery Framework. The projects outlined in this plan do not bind the federal or territory government to any actions or any financial or in-kind commitments.



UNITED STATES VIRGIN ISLANDS



The United States Virgin Islands is a part of the Leeward Islands located approx. 40 miles east of Puerto Rico and 1100 miles southeast of Miami, Florida. St. Thomas and St. John are separated by a mile wide strait and are both located approx. 40 miles north of St. Croix.

EXECUTIVE SUMMARY

Even in the darkest hours, hope and opportunity emerge. Opportunity begins with a clear vision of the future:

“St. John is a cohesive, supportive, culturally-diverse community living in and nurturing a beautiful, clean environment. We endeavor to live in a sustainable and affordable manner, while protecting and enhancing our values, culture, and natural and historic resources.”

This plan provides context for this vision while describing the challenges brought by the recent hurricanes that devastated the island. The St. John vision can only be carried out through individual and collective actions and when executed will create a community that is stronger and more cohesive. The historic storms of 2017 – Irma and Maria – produced catastrophic devastation. The majority of structures on St. John were severely damaged or completely destroyed. Today, one year after the storms, the community struggles to rebuild, return to a sense of routine and normalcy, and prepare for future storm seasons.

This plan is only a starting point of a protracted and complex journey. It incorporates input from hundreds of volunteers and stakeholders who have joined to plan this island's future. The identified projects require the community to embrace new standards not in place before the storms with a goal of a stronger, more resilient St. John.

The **Community Recovery Strategic Plan** includes projects and strategies for:

- **Recovery Projects** to rebuild and strengthen key infrastructure components, and repair facilities, homes and services damaged by the storms.
- **Disaster Resilience Projects** to make the community stronger through improved mental health services, energy systems, workforce development, affordable housing, youth programming, recycling and more.
- **Community Development Projects** to advance both the island as a whole and what makes this place so special. Included in this section are enhancing the arts, promoting and developing historic assets, and improving walkability.

The success of the projects described in this plan depends on widespread support. The St. John Recovery Plan is a tool to guide the community through necessary steps in the long-term recovery process. Success of the many projects described in this plan is achievable only through whole community engagement. The role of project stakeholders will be to take ownership of their projects to ensure efficient progress is made toward implementation.

The St. John community must remain committed to resiliency and to working cohesively to accomplish shared goals.

DOCUMENT PURPOSE

The St. John Long-Term Recovery Plan is a tool to guide the community through necessary steps in the long-term recovery process from Hurricanes Irma and Maria.

The intention of the Plan is for use as a blueprint to assist community leaders in implementing recovery projects identified as priorities. The St. John community, its leaders, partner organizations and project stakeholders are the primary audience for this plan. This is a community-driven document that contains significant input from local leaders and the general public. While the community is the primary audience, it is also designed for territorial and federal partners to reference as they make decision during the recovery process.

This document is designed to be flexible, based on ever-changing needs of the community. Over the course of time community priorities and goals will evolve; therefore, projects chosen for implementation may change. The plan contains project-based recommendations and outlines potential paths forward in the community recovery process.

In order to establish successful implementation, each project listed identifies potential funding resources and project stakeholders. The role of project stakeholders will be to take ownership of their projects to ensure efficient progress is made toward implementation.



US VIRGIN ISLANDS HISTORY

The U.S. Virgin Islands was originally settled by the Ciboney, Arawak and Carib tribes. Migrating from the Amazon River Valley, these tribes excelled at both fishing and farming and built successful communities along the coasts of the islands. Crops they commonly grew include maize, tobacco, cotton and guava.

Following Christopher Columbus' second voyage in 1493, the territory underwent a centuries long period of colonial control. Over the next 200 years, the islands now known collectively as the U.S. Virgin Islands were ruled by European powers that included: the Spanish, British, Dutch and French until the mid-18th century when all three islands came under Danish rule.

The Danish West India Company settled on St. Thomas in 1672, St. John in 1694, and purchased St. Croix from the French in 1733. In 1754, the Danes renamed the islands the Danish West Indian Islands and officially designated them as royal Danish colonies. By this time, the native population had largely been wiped out due to enslavement, violence and disease. Native population losses coupled with a desire by colonial rulers to increase agricultural and cash crop outputs led to a sharp increase in the utilization of the African slave trade. During this period, slave trading outposts were instituted in the territory and large plantations flourished with African slaves producing massive crop yields for export of sugarcane, coffee, tobacco and cotton. In 1848, non-violent revolts led to the abolishment of slavery, marking the end of the period in the territory. The territory remained under Danish rule until 1917 when the United States purchased all three islands for \$25 million.

The 1930's were an especially prosperous decade in the Virgin Islands. The end of Prohibition resulted in an increased demand for rum. Subsequently, employment soared on local plantations and the rum industry flourished as exportation to the mainland United States increased. A submarine base in the territory, utilized during World War I, also continued to be a major employer of the Virgin Islands. In 1936, all residents were officially designated citizens of the United States, further opening up economic opportunities to residents.

In more recent years, the U.S. Virgin Islands has been a hub for tourism, light industry and oil refinement. Up until 2012, when the operation closed, the territory's economy was closely linked to the HOVENSA petroleum refinery, a major economic driver and job creator. At its peak operation, the refinery was one of the top ten largest refineries in the world and was the predominant driver of economic growth for St. Croix. Today, the territory relies heavily on cruise ship docking and sees dozens of ships a year use its ports on St. Thomas and St. Croix. Cruise ships and other tourism activities have resulted in the advent of a primarily service based economy in the territory.

Hurricanes and tsunamis have had major implications for the people of the U.S. Virgin Islands throughout their histories. Historical records detail major storms and their impacts periodically during the entirety of the European colonial period. On average a hurricane passes near one of the Virgin Islands every three years. A direct hit by a hurricane occurs approximately every eight years. Prior to Hurricanes Irma and Maria in 2017, recent major storms have included the Category 4 Hurricane Hugo in 1989 and Category 3 Hurricane Marilyn in 1995. Hurricane Otto, a Category 1 hurricane also made landfall in the territory in 2010.

Transfer Day refers to the day that the Danish West Indies were formally transferred to the United States, becoming the U.S. Virgin Islands on March 31, 1917.



ST. JOHN HISTORY

Archaeological evidence suggests that humans inhabited St. John as early as 770 BC, although there were no lasting recorded modern-day settlements until the 1720s. Even though the British did not have a settlement on St. John, residents on neighboring Tortola (in what is known today as the British Virgin Islands) considered the island to be theirs. When the Danish government took possession in 1684, British claims of ownership persisted. The two countries disputed ownership for some time. The British attempted to overtake the Danes on St. John until 1762 when the British relinquished their claim. Expansion happened quickly; in 15 years, approximately 109 cotton and sugarcane plantations covered almost all of St. John. African slaves and indentured servants were brought to St. John to work the plantations. Before long, the number of slaves on the island greatly outnumbered free-men. In 1733, a revolt began on St. John against plantation owners and slavery. During the seven-month revolt, almost a quarter of the island's population was killed and large plantations were destroyed. Many slaves killed themselves instead of being captured. French and Swiss soldiers from a neighboring island came to the aid of the Danes and settled the revolt.

In 1774 a defensive fortification was constructed in Cruz Bay and subsequently turned into a civil administration headquarters in 1824. The Danish government opened this structure as a new courthouse and prison. It was intended to improve the treatment of slaves on St. John, by making justice a government issue rather than leaving it to individual planters. This building is now known as the Battery and is the only government building from the Danish Colonial period that remains.

A July 2, 1848 rebellion on St. Croix prompted liberal governor Peter von Scholten to declare that all unfree in the Danish West Indies were, from that day, free. While his proclamation was in direct contradiction of the King's orders, and plantation owners refused to accept the proclamation, slavery was abolished on July 3, 1848. With the end of slavery came the decline of St. John's plantations and a dramatic drop in population. Between 1850 and 1870, St. John is said to have lost half its population. Around 1913, the population of St. John is said to have been about 930 persons.

In 1917, the United States bought St. John from Denmark in an effort to improve military positioning during critical times of World War I. By the 1930s, news of the beautiful American island had spread to the United States mainland, beginning what was to become a tourism boom on St. John.

Laurence Rockefeller donated land to the Federal Government in 1956 to establish a National Park. The 5000 acres became the nation's twenty-ninth National Park. Since then, other donations have been made; presently the Virgin Islands National Park includes 7200 acres of land and 5600 acres of underwater area.

St. John has thrived as a vacation destination with an economy largely based on tourism. There has been a large infusion of residents from the mainland United States and abroad including other Caribbean Islands.

Note: Much of the information was taken directly from VInow, the Virgin Islands Best On-line Guide www.vinow.com/stjohn/history which draws from St. John Backtime Eyewitness Accounts from 1718 to 1956 compiled by Ruth Hull Low and Rafael Valls and John Lonzo Anderson's Random Notes on the History of St. John.

GOVERNMENT STRUCTURE



Government House located on King Street in Christiansted, St. Croix, U.S. Virgin Islands

The United States Virgin Islands (USVI) is an unincorporated and organized territory of the United States. It is administered by the Office of Insular Affairs of the United States Department of the Interior and its broad governmental structure is defined by The Revised Organic Act of the Virgin Islands of 1954. At the local level, the USVI is governed by a territorial government that consists of the governorship, its cabinet, a legislative body and a judiciary. The judiciary consists of both local and federal courts and is separate from the executive and legislative branches.

The governor's office contains the governor and lieutenant governor in addition to various appointed commissioners and their corresponding offices. Governors and lieutenant governors are elected conjointly for four year terms of service and are responsible for complete oversight of the executive branch. The territorial governor's cabinet encompasses numerous appointed commissioners. Each commissioner is tasked with the management of its specific department and reports directly to the governor's office. Commissioners are influential entities in the USVI with broad ranging responsibilities pertaining to the implementation of policy and the day to day operational functions of their departments. In all, there are a total of 26 departments within the territorial cabinet.

The legislative body in the USVI is unicameral. It consists of 15 senators; with 7 from St. Croix, 7 from St. Thomas-St. John and 1 at-large senator who is elected by the territory but must hold residency on St. John. Senatorial elections are held every two years.

The judiciary in the USVI contains both territorial and federal courts. These courts include a federal district court, a territorial superior court and a territorial supreme court. Judges on the federal district court are appointed by the U.S. president for ten year terms. Judges seated on both the territorial superior and territorial supreme courts of the USVI are appointed by the governor and confirmed by the legislature.

U.S. VIRGIN ISLAND TERRITORY DEMOGRAPHICS

The demographic profile of the United States Virgin Islands used data from the 2010 Decennial US Census, which is the latest and best available data at the sub-district level. To ensure a more accurate view of demographic characteristics of the US Virgin Islands' US Census data is supplemented with World Bank and Virgin Islands Territorial agencies.

The territory is located 40 miles east of Puerto Rico and 1100 miles from the US mainland, the US Virgin Islands is comprised of the main islands of St. Croix, St. Thomas, and St. John. Populations of under 200 people also live on Water Island and Hassel Island in the Charlotte Amalie harbor south of St. Thomas. The territory also has several dozen small uninhabited cays and islands.

According to the 2010 Census, there are 106,405 residents in the territory; though, sources vary as to the status of population increases and decreases in period since the 2010 census was conducted. St. Thomas and St. Croix have relatively similar demographic economics, while St. John is slightly more affluent. St. Croix and St. Thomas both have populations of roughly 50,000. St. John, the smallest island, has a population of 4,000 concentrated on the western side of the island in the area of Cruz Bay. St. Croix accounts for approximately 60% of the territorial land mass, while St. Thomas and St. John account for approximately 35% of the total land area.

Territory-wide the median household income in 2010 was \$37,254, approximately 35% lower than that national average. Over 65% of individuals over 18 years of age were below the poverty line in 2009, compared to the national average of 13.3% for the same demographic group nationally. The territory is 76% Black or African American, 15.6% is White; 17.4% of the population identifies as Hispanic or Latino. Single-headed households account for 29.1% of families in the territory, above the national average of 19.6%. The local population has a disability rate of 9.8%, compared to 13% on the mainland US. For a more in-depth analysis see below.

Census Subdistrict	No. of households	Median HH Income	Race (%)			% Hispanic or Latino	% Owner Occupied Homes	% Renter Occupied Homes	Median Rent (\$)	% Below Poverty	Avg. Pop. per sq. mile	% of families w/ single parents	% of pop. w/ disabilities
			Black/African American	White	Other Race								
USVI	43,214	\$37,254	76	15.6	6.2	17.4	47.9	52.1	\$767	22.5	792.2	29.1	9.8
St. Croix	19,764	\$36,044	73.6	14.3	9.3	24.3	56	44	\$657	26.2	607.3	30.2	10.8
Anna's Hope Village	1,644	\$49,500	72.1	15.4	9.9	21.1	65.3	34.7	\$801	14.5	408.6	26.3	8.4
Christensted	1,118	\$23,814	74.4	14.4	8.8	34.2	27.6	72.4	\$577	37.4	3,462.5	30.1	13
East End	1,122	\$56,800	42.7	48.2	6.5	15.1	69.6	30.4	\$973	12.5	190.0	14.7	8.5
Frederiksted	1,181	\$24,933	80	8.9	8.4	23.9	36.4	63.6	\$548	39.9	2,239.4	37.8	12.3
Northcentral	1,995	\$32,333	76	12.4	9.8	24.5	68.8	31.2	\$650	26.4	393.0	29.5	10.3
Northwest	1,927	\$31,910	73.8	16	7.8	18.1	49.3	50.7	\$544	34.1	267.3	35.9	11.2
Sion Farm	5,158	\$40,547	72	15.1	9.1	24.8	55.8	44.2	\$703	22.5	1,383.5	29.6	10.4
Southcentral	2,771	\$33,883	74.6	9.3	13.1	28.7	54.1	45.9	\$617	26.9	637.7	32.1	11.2
Southwest	2,845	\$33,522	81.4	8.9	7.3	23.8	62.5	37.5	\$708	24.0	1,361.5	31.3	12
St. John	1,894	\$40,644	56.6	38.4	3.6	10.5	46.6	53.4	\$1,017	15.0	211.8	21.8	7
Central	360	\$43,333	44.8	50.6	3.3	5.3	51.1	48.9	\$957	11.7	55.3	25.6	7.3
Coral Bay	301	\$37,083	44.2	51.3	2.2	5	55.8	44.2	\$988	17.3	332.6	21.6	8.5
Cruz Bay	1,203	\$40,472	63.4	31.4	4	13.5	42.6	57.4	\$1,024	14.8	976.2	20.9	6.5
East End	30	\$37,500	33.3	60.7	0	0	56.7	43.3	\$974	15.7	55.5	16.6	9.8
St. Thomas	21,555	\$38,233	80	15.1	3.5	11.2	40.6	59.4	\$813	19.5	1,649.1	28.8	9.1
Charlotte Amalie	7,692	\$28,964	88.1	7.2	3.2	17.2	24.5	75.5	\$724	26.0	5,494.8	34	11
East End	3,544	\$38,764	81.5	15.9	1.7	7.4	47.6	52.4	\$874	17.3	1,596.8	26.7	8.1
Northside	4,511	\$53,784	55.9	36.2	5.8	7.7	49.2	50.8	\$980	10.2	949.4	18.5	7
Southside	2,131	\$41,010	77.4	15.3	6.1	10.2	39.6	60.4	\$774	21.0	1,223.7	29	7.2
Tutu	2,634	\$38,733	94.5	3.4	1.4	7	55.5	44.5	\$824	17.6	4,525.3	36.4	10.6
Water Island	93	\$47,917	4.4	92.9	1.6	4.4	62.4	37.6	\$1,054	8.2	187.6	4.3	12.6
West End	948	\$56,848	83.5	12.5	2.1	7.3	63	37	\$894	9.3	431.7	24.1	6.2

The World Bank projects that there has been a slight increase in population while the US Federal Reserve states there was a 4% drop in the same period. <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=VI> <https://www.newyorkfed.org/medialibrary/media/press/PressBriefing-Puerto-Rico-USVI-February222018.pdf> https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_S1901&prodType=table

Data for the territory often lacks relevance and accuracy this is due to a variety of factors including, but not limited to Census data is only updated decennially, the hesitation of residents of answer surveys, federal surveys not conducted for territory, lack of adequate addressing system, among other issues. American Community Survey is not conducted in the territory.

COMMUNITY PROFILE

The island of St. John is located in the Caribbean Sea, approximately 45 miles east of Puerto Rico, 4 miles east of St. Thomas (United State Virgin Islands) and 4 miles southwest of the island of Tortola (British Virgin Islands). Just over 19 square miles in area and with a population of 4,170, St. John is the smallest of the three U.S Virgin islands. The island has two main town centers: Cruz Bay and Coral Bay. Approximately 60% of the island's total landmass is protected national park land. The U.S. Census Bureau divides Saint John into 4 sub-districts:

1. Cruz Bay (pop. 2706)
2. Coral Bay (pop. 634)
3. Central (pop. 779)
4. East End (pop. 51)

Cruz Bay is the primary population, commercial and administrative center on St. John. It is located on the western edge of the island. Important services include the U.S. National Park Office Visitor Center, a U.S. Customs and Immigration office, the U.S. postal office, and local police and fire stations. It is also home to numerous shops and restaurants that serve as popular attractions for both locals and tourists. Cruz Bay Harbor serves as a gateway to travel to St. Thomas and throughout the British Virgin Islands through the use of its ferry and barge services.

Located eight miles from Cruz Bay toward the eastern end of the island, Coral Bay is the second most densely populated area of the island. Coral Bay is primarily a leisure destination. Restaurants, bars and access to several pristine beaches make Coral Bay a popular destination for both tourists and locals.

The Central sub-district on Saint John consists primarily of U.S. Virgin Islands National Park lands managed by the National Park Service. The national park covers roughly 75% of the island, but private property holdings within the park reduces the total size to about 60%. Common destinations within the Central district include Trunk Bay, Cinnamon Bay, Hawksnest Bay and Maho Bay.

Vacationing tourists and part-year residents may triple the population being served to over 12,000. As the smallest of the three main US Virgin Islands, St. John has struggled to gain political capital and advocate for needed resources. Land availability on the island is limited and terrain can be rugged and challenging; approximately two-thirds of the island is in the Virgin Islands National Park (VINP).

There is no municipal government; all government functions are at the territorial level and run from the larger islands. The park is home to some of the best preserved tropical dry rainforest in the hemisphere, as well as beaches, blue waters and trail walks that tourists and locals enjoy. The VINP contributes significantly to the island's tourist economy, providing an ecotourism venue that supports many of the jobs on the island and people coming to work daily on St. John from St. Thomas.

Due to the small size of St. John, services and supplies are limited. This leaves the island dependent on St. Thomas or beyond to meet many basic needs. Transportation to St. Thomas is via an hourly passenger ferry, and a vehicle barge service, that transports both passenger cars, and all supplies, retail goods, and containers onto the island. Since the storms, (and at various times over the years), the number of barges in service has been well below the demand, creating a costly bottleneck in supporting the local economy and people. These factors also drive up the local cost of living, which is a serious issue especially amongst those who have lived on St. John all their lives and want to continue to live there.

USVI VULNERABILITY STUDY

This vulnerability analysis is based on metrics from the 2010 decennial census in an attempt to geographically categorize pre-disaster vulnerability in the US Virgin Islands (USVI). This data is based on historical disaster impact areas including employment, hospitals and healthcare systems, and factors associated with vulnerable populations pre-disaster like educational attainment; Hurricane's Irma and Maria further exacerbated these issues. The metrics used are:

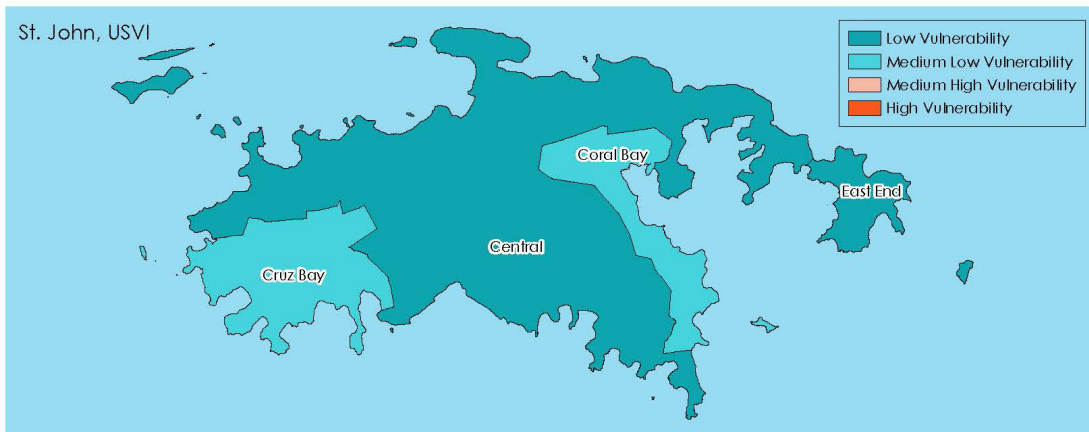
- % over 18 years of age below poverty
- % of median household income
- % of noninstitutionalized population with insurance coverage
- % noninstitutionalized population over 18 with a disability
- % 25 years of age and over without a high school diploma

The USVI is comprehensively more vulnerable than the mainland United States; thus, this study is an internal comparison of geographies within the territory. Each pre-disaster variable was selected to be split by US Census Sub-District; which are roughly equivalent to the neighborhood or subdivision level. Each variable has been divided into quartiles, with the three points awarded to the most vulnerable sub-districts and zero points awarded to the least vulnerable sub-district. Points were totaled to determine a composite vulnerability score for each US Census sub-district. The top quarter sub-districts composite scores were awarded a high vulnerability rating while the bottom quarter composite scores were awarded a low vulnerability ranking; the second and third quarter composite scores were awarded medium-low and medium-high vulnerability rankings respectively.

While the sub-districts with low and medium-low vulnerability are relatively more affluent than the other sub-districts, they are still vulnerable in comparison to the mainland US; as such, the projects outlined in each island's Community Recovery Plan are not necessarily focused on the vulnerability results of this study.

Island	Subdistrict	Subdistrict Vulnerability Composite	% over 18 below poverty	% of median household income	% with health insurance coverage	% over 18 with a disability	% over 25 with no high school diploma
St. Croix	East End	2	1			1	
St. Croix	Anna's Hope Village	3				1	1
St. Croix	Sion Farm	8	3	1	1	2	1
St. Croix	Northcentral	10	2	3	1	2	2
St. Croix	Northwest	11	3	3	1	2	2
St. Croix	Southwest	12	2	2	2	3	3
St. Croix	Southcentral	13	3	2	2	3	3
St. Croix	Christensted	14	2	3	3	3	3
St. Croix	Frederiksted	15	3	3	3	3	3
St. John	Central	3		1	2		
St. John	East End	5		2	1	1	1
St. John	Cruz Bay	5		1	3		1
St. John	Coral Bay	6		2	2	1	1
St. Thomas	Northside	1	1				
St. Thomas	West End	3	3				
St. Thomas	Water Island	4			1	3	
St. Thomas	East End	7	1	1	2	1	2
St. Thomas	Southside	8	2	1	3		2
St. Thomas	Tutu	8	2	2		2	2
St. Thomas	Charlotte Amalie	12	1	3	3	2	3

■ - Low
 ■ - Medium Low
 ■ - Medium High
 ■ - High



Noninstitutionalized refers to the part of the population that is not incarcerated or otherwise held against their will in medical facilities.



2017 HURRICANE DESCRIPTION

Hurricanes and Tsunamis have had major implications for the people of the U.S. Virgin Islands throughout their histories. Historical records detail major storms and their impacts periodically during the entirety of the European colonial period. On average a hurricane passes near one of the Virgin Islands every 3 years. A direct hit by a hurricane occurs approximately every 8 years. Prior to Irma and Maria in 2017, recent major storms have included the Category 4 Hurricane Hugo in 1989 and Category 3 Hurricane Marilyn in 1995. Otto, a Category 1 hurricane also made landfall in the territory in 2010.

Hurricanes Irma and Maria devastated the U.S Virgin Islands in the fall of 2017. Hurricane Irma struck the U.S. Virgin Islands on September 6th. With winds sustaining over 185 mph it is the strongest storm ever recorded in the Atlantic Basin. As it made landfall over St. Thomas and St. John, wind and storm waters separated roofs from houses, planted ships on beaches and flooded structures throughout the two islands.

As residents and recovery workers scrambled to respond to the impacts of Irma, Hurricane Maria made landfall less than two weeks later on September 19th. Though less impacted by Irma, St. Croix absorbed the primary force of Maria. Intense winds and flash flooding inflicted severe damage to homes and critical infrastructure, leaving residents socially and economically insecure and vulnerable to environmental harm. Additionally, excessive rain coupled with the previous impacts from Irma caused extensive water damage to the already unprotected structures on St. Thomas and Saint John.

HURRICANE IMPACTS

The impacts of Irma and Maria have been catastrophic to the U.S. Virgin Islands. Massive damage to homes, public facilities and infrastructure have left residents vulnerable to economic loss, social instability and environmental harm. With regard to housing, the territory has estimated that approximately 22,527 homes were damaged during the 2017 hurricane season. This figure accounts for 52% of all housing stock in the territory and of the 22,527 total, 5,175 homes suffered major or severe damage.

In terms of infrastructure, hurricanes Irma and Maria resulted in extensive physical damage for the energy, transportation, telecommunications and waste management sectors. Territory-wide, over 90% of all aerial powerlines were damaged and approximately 13,478 total poles received some level of damage. Moreover, power was not fully restored to the territory until February of 2018. The road networks in the territory saw considerable damage. The USVI Department of Public Works has estimated a need of 32 million dollars for emergency road repairs. All airports were closed for two weeks following the storms, and as a result of over 400 vessels sinking in the territory's harbors, all seaports were closed for 3 weeks. The waste management sector has been extremely overburdened as a result of Irma and Maria. Excessive storm flows resulted in damage to all 37 wastewater pumps in the territory. This led to wastewater overflows that disrupted 95% of public sewage services for territorial residents. In total, at least 138,000 gallons of waste water spilled into surface waterways and over land as a result of Irma and Maria. Damage to telecommunications systems resulted in transmission issues for cellular telephones, land lines telephones, internet and radio services. In total, 11 radio towers were damaged, and 75 miles of broadband cables were destroyed.

Irma and Maria impacted public facilities severely. The Virgin Islands Department of Education has reported that nearly every k-12 public school suffered damage due to the storms. More than half of the territory's schools reported that at least 50% of their facilities were damaged and in all, at least 30 schools total are in need of permanent renovation. Substantial damage to the health care system forced the evacuation of 784 critical care patients to the U.S. mainland. All of the major medical facilities in the territory were damaged during the storms and estimated repair costs are in the hundreds of millions of dollars. Many other public facilities were damaged during the 2017 hurricane season. Over 800 government properties received damage including critical public safety infrastructure such as fire and police services. This had a substantial effect on local public safety official's ability to respond to storm impacts and emergencies.



HURRICANE IMPACTS

Hurricanes Irma and Maria have had and continue to have an immense impact on the territory's economy. Economic losses can be divided into three major categories that include: lost wages, lost government revenues and commercial property damage. The estimated total lost wages for territorial residents as a result of the storms is approximately \$398 million. Whereas lost government revenues are estimated to top \$576 million dollars and commercial property damage estimates reach upwards of \$561 million. In total, these estimates account for over \$1.5 billion in economic losses as a direct result of the 2017 hurricane season.

The following table represents a breakdown of FEMA Verified losses by island for both Irma and Maria. Total FEMA Verified Loss is the value of real and personal property losses from storm impacts determined as a result of FEMA inspections. Real Property damage consists of damage to fixed property, most principally this includes damage to homes, structures and land. Personal property includes belongings exclusive of land or buildings. The inspections column represents the total number of home and property inspections performed. "Total per inspection" shows the average value of damages determined from a single inspection.

Irma FEMA Verified Loss		
	St. John	St. Thomas
Real Property	\$19,864,258	\$29,545,167
Personal Property	\$3,093,169	\$15,685,278
Total	\$22,957,427	\$45,230,445
Inspections	1847	10,439
Total per Inspection	\$12,429.58	\$4,332.83

Maria FEMA Verified Loss			
	St. Croix	St. John	St. Thomas
Real Property	\$27,622,718	\$18,864,258	\$29,545,167
Personal Property	\$14,551,803	\$3,093,169	\$15,685,278
Total	\$42,174,521	\$22,957,427	\$45,230,445
Inspections	13,920	1847	10,439
Total per Inspection	\$3,030	\$12,430	\$4,333

St. John endured two historic hurricanes in 2017. What Irma did not totally destroy, Maria ruined with drenching rain. Many people were left homeless; about half of the population was evacuated between storms as part of a humanitarian effort. The island – without power, any true communications including cell or internet and few emergency supplies – could not support all of those who remained.

Many took any action they could, clearing roadways, hacking through dense vegetation debris, and accessing damaged structures to reach and free neighbors. Restaurant owners in both Cruz Bay and Coral Bay organized; they determined who had working gas stoves, food and other needed supplies, pooled resources and set up meal programs to feed those who were able to reach these locations. Virtually everyone in the community was affected in some way. Those who didn't suffer substantial structural damage took in friends and relatives. Due to a vast level of damage many vulnerable residents evacuated; some are yet to return and may never.

Volunteer efforts were essential to support the general population and provide shelter in the aftermath of the storm. Almost a year later many residents are still displaced – unable to return to the housing they inhabited prior to the storms. Many have faced tough decisions. Due to high cost and lack of availability, many residents did not have hazard or flood insurance. The elderly and vulnerable populations have been particularly impacted. The psychological impacts of the storms have been widespread and the effects will continue for many years.

*All data derived from FEMAa Service Center geospatial view as of 7/29/2018. FEMA Verified Loss is an inspected estimate of damages to real property (physical structure) and personal property (structure contents, vehicles, etc.)

ST. JOHN RECOVERY PLANNING COMMITTEE

The long-term recovery effort took shape in ten working groups guided by an executive board. These groups each identified their own mission and vision. Together, they formed the stjANGELS:

Working Groups:

Youth Workgroup
Arts & Culture Workgroup
Health and Wellness Workgroup
Resource and Donations Workgroup
Disaster Case Management Workgroup
Housing and Construction Workgroup
Community Planning and Infrastructure Planning Workgroup
Environmental Sustainability Workgroup
Economic Development Workgroup
Volunteer Coordination Workgroup

Contributors to the ten working groups are too numerous to name here. This is a true testament to the St. John community and the thousands of volunteer hours that have contributed to the recovery progress so far.

The workgroups are led by:

Alliah Lockhart, Audrey Penn, Catikawa Richardson, Celia Kalousek, Chelsea Baranowski, Clarence Stephenson, Christy Beaty, Cory Emerson, Erin Lieb, Heidi Arnold, Hillary Bonner, Jennifer Pruss, Kristen Carmichael-Bowers, Kurt Marsh Jr., Lanny Roberts, Mary Vargo, Meaghan Enright, Priscilla Hintz Knight, Rachel McKinley, Rachel Rachfal, Rob Tutton, Sandy Colasacco, and Sharon Coldren.

Executive Board Members:

Ian Samuel, Abigail Hendricks, Steve DeBlasio, Irvin Mason, Ernest Matthias, Cid Hamling, Leona Smith, Maggie Day, Dan Boyd and Tom Secunda

Numerous nonprofit organizations, government agencies, and businesses have worked tirelessly through response and recovery. The organizations that have been key players in the recovery planning process and are working to create a stronger, more resilient island.

Organizations:

The St. John Community Foundation, Coral Bay Community Council, Love City Strong, Love for Love City, Island Health & Wellness Center, Love City Community Network, St.JanCo, The Gri Gri Project, Island Green Living, Department of Sports, Parks and Recreation, St. John School of the Arts, Houses of Worship, Department of Health, St. John Rescue, Virgin Islands Territorial Emergency Management Agency, Department of Planning and Natural Resources, Waste Management Authority, Department of Human Services, Catholic Charities, All Hands & Hearts, Family Resource Center, AHA! Arts/Humanities Alliance, Film Society, Historical society, The Island Administrator's Office, St. John Rotary, Virgin Islands Economic Development Authority

VISIONING

A vision statement was developed from a process that gathered over 600 words from individuals who were asked to describe their ideal St. John. These words were gathered on paper at churches and community events, and on large chalkboards placed in public spaces around the island. Image of board and word cloud. From these words, visioning phrases were compiled. The phrases that rose to the top were then combined into the community's vision for the future.

“St. John is a cohesive, supportive, culturally-diverse community living in and nurturing a beautiful, clean environment. We endeavor to live in a sustainable and affordable manner, while protecting and enhancing our values, culture, and natural and historic resources.”

The ten working groups each developed their own mission and vision statements as part of a cohesive effort working toward a more resilient St. John.

Youth Work Group

Vision: All of the children on St. John are connected to a supportive community that helps them grow to their full potential and to become powerful mentors, well poised to nurture the next generation.

Mission: To develop a synergy in the community that that builds collaboration among the resources on island; so every child has a place to go, to give them recreational activities, vocational training, and academic support. To enhance every child's potential, by providing facilities and materials to meet their needs, and to strongly advocate for community support for growth and sustainability.

Arts & Culture Work Group

Vision: Create synergy and encourage activities among arts and cultural groups and entities on St. John and connect them to resources and opportunities

Health and Wellness Work Group

Vision: To sustain and improve the health, wellness and design of the St. John community through collaboration with health partners to ensure affordable and accessible comprehensive care for all.

Mission: To promote, health, self-sufficiency, and an improved quality of life for all members of our community by partnering with service providers, educators and additional sources that support a wide range of high quality preventive intervention and protective services in response to public health and basic human service needs.

Resource and Donations Work Group

Vision: Works to secure grants, donations and other resources for St. John Long-Term Recovery Team and coordinates with other entities (e.g., manufacturers, suppliers, etc.) to secure donations and funding.

Disaster Case Management Work Group

Vision: Provides and/or marshals professionals to address unmet needs; provides counseling to address health and well-being (physical, emotional and spiritual) needs of clients.



VISIONING

Housing and Construction Work Group

Vision: Oversees the coordination and scheduling of all rebuilding projects for cases approved by the St. John Long-Term Recovery Team

Community Planning and Infrastructure Planning Work Group

Vision: To help assure that all implementation of public infrastructure during recovery on St. John has community involvement in planning, meets St. John's needs comprehensively, and is more resilient. Work with all work groups & appropriate agencies on key priorities of Education & Medical facilities. Work group focus areas are community centers/public spaces, roads and transportation, communications, and all-hazards planning. Also provides support & tools to the community planning process.

Environmental Sustainability Work Group

Vision: In 20 years, the community of St. John will have:

- Renewable energy resources
- A solid waste management system that is efficient and effective
- Access to clean water for consumption and recreation and a reduction in the amount of single-use water bottles used
- A realistic method and cultural habit of natural resource protection

Economic Development Work Group

Vision: Support the coordination efforts to sustain and/or rebuild businesses and employment. Develop economic opportunities that result in a sustainable and economically resilient community.

Volunteer Coordination Work Group

Goals:

- Organizing all individuals from on and off island who want to play a role in the recovery process
- Coordinating housing and projects for national and international organizations who want to come to the island to help



COMMUNITY OUTREACH OVERVIEW

The Long-Term Recovery Team, supported by FEMA's Community Planning and Capacity Building team facilitated public discussions, solicited community input and collected data to identify critical needs and issues. The team worked to include vulnerable and often isolated sectors of the St. John community in the engagement process. The identification of needs and issues was crucial in the development of projects.

Interviews

From February to April of 2018, nearly 30 in-depth personal interviews took place with community members from across the island, including representatives of key populations. Individuals were asked about immediate and long-term needs for recovery as well as their hopes, dreams, and desires for how their island can come back stronger and better. This created a foundation for the remainder of the planning process.

Community Meetings

Monthly community meetings provided an opportunity to gather input and feedback from the community at large, with some meetings drawing upwards of 200 people. Additional focus groups were used to gather more specific information. This included a National Endowment for the Arts listening session with representatives of the arts community to hear about challenges facing the arts post-storm. FEMA staff attended a Star of the Morning, Church of God service to learn about the needs and priorities of part of the Hispanic community on the island. The team also worked with the St. John Pastor's Group, which includes many island houses of worship, to hear feedback and include congregations in the conversation. There was additional outreach to organizations working with the homeless and those providing meal programs and other vital social services.

Survey

The St. John Recovery Team, with the St. John Community Foundation, conducted a survey to assess individual recovery, identify priorities for the community in the long-term, and to vet the projects that were already identified. With 600 responses, the survey gave a strong indication of the community's needs and priorities. Results are referenced throughout this plan and will continue to guide recovery.

Outcome

The result of this planning process is a series of projects that fulfill the vision, address the community needs and increase resilience. This plan is as strong as the stakeholders that will implement these projects through their collective actions.

PROJECT OVERVIEW

The following 36 projects were chosen and prioritized to address the most pressing needs identified in the St. John community planning process. They are organized into three categories:

- **Recovery Projects** to rebuild key community systems and repair facilities damaged by the storms, in the short-term
- **Resilience Projects** to strengthen community systems to restore island services and prepare for future disasters in the 1-3 year time horizon
- **Community Development Projects** to advance the island as a whole in the 3+ year timeframe

Full Implementation Steps are included in the appendix.

PROJECT NAME	CATEGORY
Engage public in the design of community facilities	RECOVERY
Build community/youth centers in Cruz Bay and Coral Bay	RECOVERY
Improve roads and transportation services	RECOVERY
Improve systems for post-storm communications	RECOVERY
Improvements to 911 system	RECOVERY
St. John Roll-Call	RECOVERY
Coordinate resources to assist owners in rebuilding homes stronger	RECOVERY
Improve storm water management	RECOVERY
Coordinate and exercise preparedness planning	RECOVERY
Improve access to mental health services	RESILIENCE
Provide access to health care for the uninsured/underinsured	RESILIENCE
Emergency medical services & transportation	RESILIENCE
Develop telemedicine	RESILIENCE
Cooperative working space for artists	RESILIENCE
Resilient energy system	RESILIENCE
Develop recycling facilities, reduce solid waste	RESILIENCE
Improve land-use planning and enforcement.....	RESILIENCE
Increase options for affordable housing	RESILIENCE
Improve access to local, healthy food	RESILIENCE
Develop programs to create a more resilient workforce.....	RESILIENCE
Develop permanent shelters for vulnerable populations	RESILIENCE
Develop a strong community supported education system.....	RESILIENCE
Create advocacy group for non-English speakers	RESILIENCE
Build a senior living facility.....	RESILIENCE
Protect natural resources	RESILIENCE
Identify/improve secondary access routes	RESILIENCE
Home Health Care & Hospice program.....	COMMUNITY DEVELOPMENT
Improve the ability of medical providers to securely share records.....	COMMUNITY DEVELOPMENT
Improved walkability, public spaces, & waterfront access.....	COMMUNITY DEVELOPMENT
Implement beautification projects around town.....	COMMUNITY DEVELOPMENT
Create a Small Business Alliance.....	COMMUNITY DEVELOPMENT
Promote the Cruz Bay Historic District.....	COMMUNITY DEVELOPMENT



RECOVERY PROJECTS

Rebuild Key Community Systems and Repair Facilities Damaged by the Storm



PUBLIC SCHOOL AND HEALTHCARE

The St. John community has an opportunity to participate in the design of public facilities by having its ideas brought forth through public involvement early in the design process; such public involvement is critical, but only viable with buy-in from appropriate government agencies. Due to limited land availability, any new facility should be able to accommodate additional public functions with an auditorium, meeting rooms, playfields, and parking areas that can be used by the public at large.

Key Players: Dept. of Education; Dept. of Health; Schneider Regional Medical Center St. John LTRT Group

Alignment: IS, CPCB, HHS, Econ RSFs

Cost: < \$100,000 for each design process

Timeline: Three - Five Years

Public School: The K-8 Julius E. Sprauve School (JESS) is the sole public education site for students on St. John; high-school students must travel to St. Thomas to attend public school, requiring long commute times. A long-discussed idea to rebuild and relocate JESS became a critical need following the recent storm damage. During the storms, JESS served as the community's shelter and the nearby ballfield was used as a helipad for relief supplies. In addition to JESS serving as a school and shelter, the community would like to see it serve as a central community gathering place. According to the 2014 USVI study, JESS is undersized by more than 50%.

IMPLEMENTATION STEPS

1. Determine a process, timeline and support that is needed for continued public input in collaboration with the Department of Education
2. Articulate a method for determining feasibility of proposed design, programming and services.
3. Conduct a population projection to determine future populations as a part of the feasibility analysis
4. Develop a communication strategy to inform the community about how to get involved

The community has expressed interest in locating the school mid-island and including a gymnasium, auditorium, playing fields, basketball courts, art facilities, computer rooms and a school garden. Additionally, the facility could host vocational training programs. This may best be accomplished through a public/private partnership and including nonprofit organizations to provide additional resources.

Medical Emergency and Primary Care Facilities: The Myrah Keating Smith Community Health Center (MKS) on St. John is a division of Schneider Regional Health Center on St. Thomas; post storms, it is sharing space with the Department of Health's DeCastro Clinic in Cruz Bay. This has resulted in an outdated, poorly maintained structure, struggling with inadequate equipment, communication problems and no on-site medical director. One private medical practice, Cruz Bay Family Practice, and a nonprofit clinic, Island Health & Wellness, account for the remainder of the health care providers and facilities on St. John.

A public outreach process can help determine the best location for emergency and primary care services and can help to build consensus around which services are needed and feasible on St. John vs. St. Thomas.



STORM SHELTERS

Currently, there are no community centers capable of functioning as shelters or indoor meeting areas for the youth and the community of St. John. A community survey identified that almost 70% of people think that a community center is an important public space to be offered on St. John. This is one of the biggest needs of the island. The community has outgrown casual use of churches and other buildings as stop-gap measures; the proposed shelters will address a critical gap in public safety and preparedness for the upcoming storm season.

Key Players: Dept of Education; Dept. of Sports, Parks and Recreation; Coral Bay Community Council; St. John Community Foundation

Alignment: Econ, HSS, IS RSFs

Cost: \$1 Million +

Timeline: > Three Years

All of the buildings used as storm shelters were damaged or destroyed during the hurricanes, leaving the island without a safe sheltering plan.

IMPLEMENTATION STEPS

1. Hold design charrettes to determine the best locations and scope for community facilities in Cruz Bay and Coral Bay as rebuilding takes place
2. Hold a conference of stakeholders (or incorporate in other meetings) to discuss the best model for long-term successful operation of these facilities
3. Compile a stakeholder advisory committee to assist in the outreach and design for construction of the two community centers/storm shelters

Coral Bay

Temporary modular facilities are being installed at the Guy Benjamin School site for use as a community center. Guy Benjamin School was operational as an elementary school until 2014. It is an important community space in Coral Bay that is still owned by the Department of Education. Community stakeholders, including the Department of Education, are considering turning this site into a community center or another type of community space. Coral Bay Community Council has also proposed an emergency shelter/community center as a part of a new “commercial/government” center area with shelter space for at least 100 people.

Cruz Bay

The Department of Sports, Parks and Recreation has plans to develop a hardened Community Center that will serve as shelter for the community in the case of a natural disaster. The St. John Community Foundation is interested in supporting this effort and/or developing additional community space.



ROAD AND BARGE ACCESS

St. John's road network consists of federally, territorially, and privately owned roads. Due to rugged terrain, many areas of the island are served by a single road that is often narrow and, in some areas, unpaved and unimproved. Accessibility is fragile; landslides isolate areas of the island, slowing disaster response and delivery of critical supplies. Continuous ground movement and stormwater flow, led to a need for constant maintenance for the upcoming storm season.

Key Players: Dept. of Public Works; Dept. of Planning and Natural Resources; Port Authority; Barge and Ferry Companies

Alignment: IS, CPCB RSFs

Cost: \$1 Million +

Timeline: > Three Years

The car barge system is a transportation lifeline for the island, composed of multiple private vendors operating at Virgin Island Port Authority terminals. This system is currently over capacity; fewer barges now operate than did before the storms; there is increased demand including critical debris

IMPLEMENTATION STEPS

Roads

1. Identify all public and private roads, properly title them and transfer to public as appropriate to help clarify maintenance responsibilities.
2. Determine legal authorities for road repairs and funding sources, including funding for regular and long-term road maintenance.

Barge

1. Determine a method to continually update and publicize the car barge schedule
2. Develop information for current and future services, hurricane emergency plans, and maintenance schedules from each barge company

removal and demand for construction supplies. Public communications related to current barge schedules is lacking, including when barges are out of service; there is no scheduled rotation of barges for maintenance "time-out".

The goal of this project is to identify and map all roads on St. John and determine methods and funding sources to implement necessary repairs. This includes immediate repair, as well as actions to mitigate future loss and ongoing routine maintenance. This mapping and repair is complementary to other important actions including the 911 addressing project, hardening any additional routes into Coral Bay and Fish Bay, and stormwater management. Bus service is more limited post storm due to equipment damages. New buses or repairs to existing buses should be funded through federal government agencies.



IMPROVE COMMUNICATIONS

No communications services were operable immediately after the storms, except for a few cell towers on St. Thomas and individual HAM radio operators that had off grid power and volunteered their services to help in emergency communications. This affected the ability to call for emergency aid, use credit cards, get money from ATMs, access medical and prescription information, and more.

Key Players: Bureau of Information Technology; viNGN; Love City Community Network (LCCN); VITEMA; St. John Rescue; Communication Companies

Alignment: IS, CPCB RSFs

Cost: < \$1 Million

Timeline: > Three Years

The communications system on St. John includes viNGN, a territory-wide, fee-based broadband "middle mile" fiber network enabling Internet Service Providers (ISPs) to provide internet connection to their customers. The agency is now working to bury fiber cables territory-wide, although St. John is scheduled to be last in the territory. Several ISPs offer fiber optic and wireless internet services. Private internet providers only began returning internet service to St. John's customers in January 2018.

IMPLEMENTATION STEPS

1. Support Love City Community Network to build out their emergency communications network, including hardening of equipment and formalizing the Rapid Emergency Communication Network Deployment Plan. Identify funding sources for equipment and staff.
2. Support St. John Rescue to train Ham Radio operators and build-out a Ham radio emergency communications system.
3. FCC requires that telecom companies must be able to demonstrate their ability to remain functional in emergency situations. Community groups will push companies to honor this requirement

St. John, which is traditionally last to regain service, needs an additional measure of resiliency; this includes setting up a self-sufficient solar-powered internet service for after storms. Love City Community Network (LCCN) was born out of the storms to provide this important service. Volunteers stepped up to provide internet service in public locations and critical services through line-of-sight beams that connected to underground fiber optic cables. This project seeks to ensure that all people on St. John will have access to affordable internet service and will be able to quickly regain service following another major hurricane – even if major vendors' services are not reaching various locations on St. John due to remoteness, terrain, or other issues.

Love City Community Network is currently reinforcing existing network systems and building in redundancy for the 2018 hurricane season. The long-term plan is to build out a resilient internet system that can function continuously through a storm. Additionally, the network systems operate using point-to-point antennas and radios instead of wires or fiber optic cables that are often strung along powerlines, which are vulnerable to high winds. The power systems are constructed in a "Pod" architecture, making them easily stored and deployed post-storm, by following a Rapid Emergency Communication Network Deployment Plan.

St. John Rescue is leading ham radio education efforts on St. John. They are educating and licensing operators and donating a radio to new operators. The group is also developing a network to support future emergency communications at important emergency response locations.

IMPROVEMENTS TO 911 SYSTEM

St. John does not have its own 911 call center, and getting assistance for emergencies on St. John can be a complex and time-consuming process. Emergency calls from St. John are routed to the center on St. Thomas; in the event that dispatchers on St. Thomas are busy, the call is supposed to be automatically rerouted to St. Croix's 911 center to a "redundant" system, sharing the same information.

Key Players: VITEMA; Police and Fire Departments; St. John Rescue

Alignment: IS, CPCB RSFs

Cost: > \$1 Million

Timeline: > Three Years



Protocol for the Emergency Communication Center for the St. Thomas-St John District is that the 911 dispatcher calls the Emergency Medical Service (EMS), the police, the fire department, and any other agency as needed, such as the Water and Power Authority if a power pole is hit by a car. None of the emergency responders, including, Fire, Police, St. John Rescue, etc., are authorized to self-deploy, even if an emergency happens when they are close by. This process needs to be more closely examined on an island where travel time from one side to the other can be over 45 minutes. In addition, cell phone users, especially those on the north shore of St. John, have had problems with their calls being picked up by British Virgin Islands phone companies.

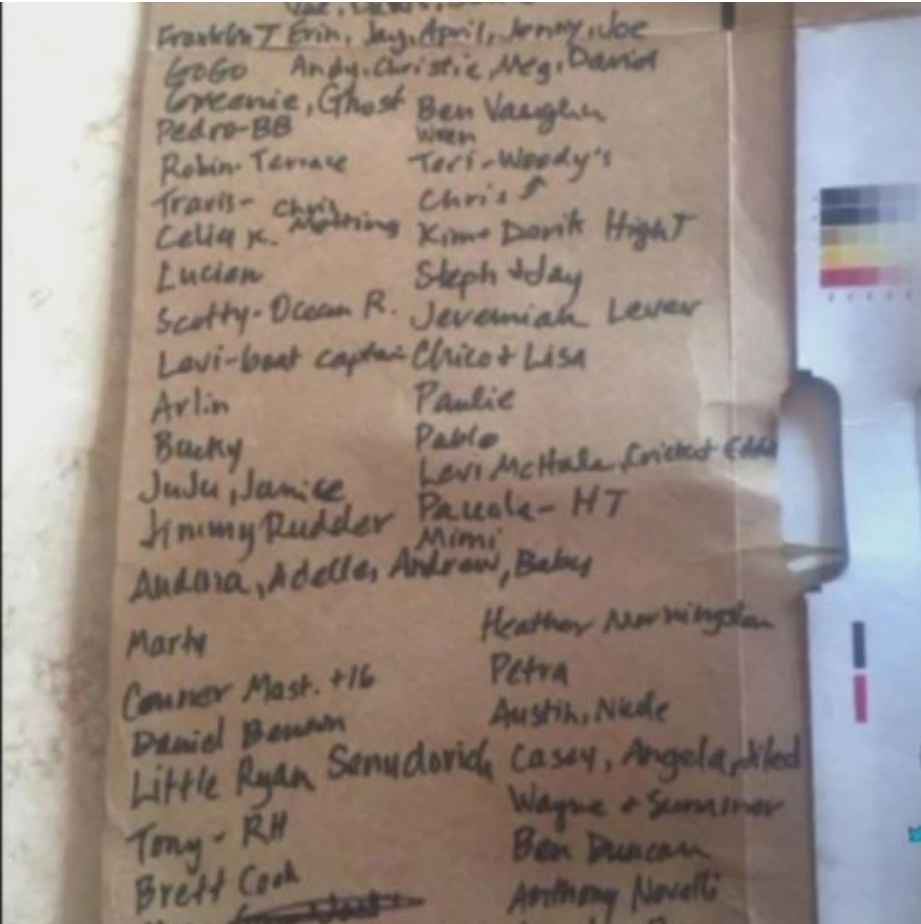
IMPLEMENTATION STEPS

1. Determine the best system to make use of St. John Rescue resources and complete memorandum of understanding (MOU).
2. Provide comprehensive training for 911 dispatchers and first responders in customer service, CPR, first aid, and what to do in crisis situations including active shooters, bombings, terrorist attacks, tsunamis, and hurricanes.
3. Identify options to improve cell phone/wireless internet and/or land connectivity to ensure that all residents can call 911.
4. Educate and encourage home and villa owners on St. John to have written directions to their home for use with first responders in the event of an emergency. Villa owners should provide such information at the front of their guest packets.

This project involves a territory-wide effort to identify opportunities to improve the 911 system and provide a better system for first responders. Territory efforts to enhance the 911 call centers and revive The Street Addressing Initiative (SAI) are being pursued. The goal of the Street Addressing Initiative is to create a street address for every home, business, and other building within the U.S.V.I. A pilot project was completed to test the addressing system and street naming process on each island. On St. John, initial steps to improving the 911 response system include better coordination with private and non-profit organizations, like St. John Rescue, to better integrate into the chain of responders. An education and outreach campaign is also needed to spread awareness that calling 911 from a cell phone may not reach the correct call center. Coral Bay Community Council has begun an outreach campaign to dial 911 by using the full number 340-776-9110; this effort could be expanded upon. Residents can submit feedback to Google Maps to ensure that roads are mapped correctly.

ISLAND-WIDE ROLL CALL

Lack of power, internet and cell phone service in the aftermath of Hurricanes Irma and Maria curtailed nearly all communications on St. John, leaving no way for survivors to contact loved ones. An impromptu stateside alliance stepped in to help. They used Facebook and other electronic and social media to gather information. They then posted the status of St. John community members online. On-island, survivors made a list of people that were safe.



Key Players: St. John LTRT

Alignment: HSS, CPCB RSFs

Cost: < \$100,000

Timeline: < One Year

In Coral Bay, a poster was created and shared on Facebook. Survivors used any means possible to record and share the names of survivors so that people on and off island would know that their loved ones were safe.

A central system, established before an event, to handle the logistics of allowing people to check-in, was lacking and is

IMPLEMENTATION STEPS

1. Coordinate with current administrators of stateside Facebook roll call groups
2. Recruit volunteers based on duties/job descriptions
3. Develop a zone map to organize neighborhood canvassing.
4. Determine a process to compensate or otherwise incentivize key volunteers
5. Communicate with Love City Strong Go Teams, St. John Rescue and first responders to establish a reporting process
6. Develop a database website and cell-phone applications
7. Develop mobile applications and text message alerts
8. Conduct an outreach campaign
9. Secure a grant to make use of Language Line Solutions for translation services

needed. Based on the lessons learned, the Volunteer Management Long-term Recovery Group is putting together an organized system to account for community members. The mission of St. John Roll Call, A Crisis Safety Check, is to assess and report the safety status of all individuals for use in the event of an emergency. This information system will aid search and rescue efforts, as well as account for and help ensure the wellbeing of all individuals on-island, following a disaster. A website has been established to manage a check-in process. Post-storm, individuals can log in to check in as safe. A neighborhood canvassing effort will be undertaken to account for everyone, and names can be uploaded from locations with hardened internet service. St. John Rescue, Love City Strong's Go Teams, government agencies and other first responder groups will also canvass the island and will be in communication with Roll Call volunteers to identify any further medical or safety issues. The primary goal of Roll Call is to communicate the safety of individuals to their loved ones and identify anyone that is unaccounted for. Community members can establish a profile ahead of time, providing an opportunity to document any vulnerabilities, and dependents such as children and pets. Profiles are self-managed so people can mark themselves as safe or off-island.

REBUILDING HOMES STRONGER

The storms left behind incredible devastation to St. John's housing. The ordinarily arduous task of rebuilding is especially challenging due to limited contractors, difficulties obtaining building supplies, and delays with insurance and storm reimbursement programs. Nearly a year later, many families are still living in storm damaged homes, including structures in need of roof repairs.

Key Players: St. John LTRT; Love City Strong

Alignment: Housing RSFs

Cost: > \$1 Million

Timeline: One - Three Years



RESOURCES TO ASSIST HOMEOWNERS

Coordination of rebuilding can help ensure that individuals are taking advantage of all applicable resources and rebuilding in the most effective and efficient way possible. The rebuilding process is an ideal time to implement key mitigation strategies that will better allow buildings to withstand future storms. The Territory has adopted the most recent building codes, but education is needed to ensure individuals have the most current information to help make decisions about how to rebuild or how to retrofit homes to withstand future storm impacts.

IMPLEMENTATION STEPS

1. Continue vetting rebuilding projects through the Disaster Case Management system
2. Coordinate the construction process through housing and construction coordinators hired by the Long-term Recovery Group and Love City Strong
3. Support and train construction crews to incorporate mitigation best practices
4. Track rebuilding activity and incorporate this data into a GIS database
5. Secure additional funding to increase the number of houses and rental units that can be repaired through this process
6. Provide education about building homes to withstand hurricanes, understanding the new building codes, and the importance of following the codes

The Housing and Construction Long-term Recovery Working Group, in coordination with Love City Strong and the St. John Community Foundation, have established a Resilient Housing Initiative to complete rebuild/repair of homes in the most efficient way possible, taking advantage of all public funds, private donations and volunteer labor while avoiding any duplication of benefits. The group is identifying a mechanism to bring skilled labor to St. John to fill an ongoing void. This well-defined process has the ability to ramp up quickly and get people back in a safe and secure living environment. As additional funds are acquired, this initiative has the potential to continue to expand to include building/repairing rental units and building new affordable housing.

REPAIR WASTEWATER TREATMENT PLANT

St. John's strong environmental values are apparent in prior and current attempts to address stormwater and wastewater issues. Steep terrain, combined with construction, creates stormwater issues; rapid property development, haphazard road and subdivision approvals, and a lack of regulations and enforcement all contribute to diversion of water from natural ghuts and from groundwater recharge systems. Stormwater-related drainage issues lead to road washouts, landslides and flash flooding, with many of the island's roads severely undermined due to poor drainage.

Key Players:

Dept. of Public Works; Coral Bay Community Council, St. John Community Foundation

Alignment: IS, NCR, CPCB RSFs, USDA

Cost: > \$1 Million

Timeline: < Three Years



IMPROVE STORM WATER MANAGEMENT

Necessary funding for long-term solutions is historically lacking. Updates and regular maintenance are needed for the island's sole wastewater treatment plant and sewage piping transport system. The Department of Public Works has addressed some related issues on an as-needed basis; long-term

IMPLEMENTATION STEPS

1. Conduct hydrology study, hydrological and hydraulic models for all watersheds on St. John
2. Create a watershed management plan for all of the watersheds on St. John
3. Evaluate the concept of Watershed Utility Districts to provide funding for upkeep and maintenance
4. Provide education to the construction industry and the public about stormwater flow
5. Institute shared protocols across agencies and community groups and share data
6. Update wastewater treatment plant
7. Seek opportunities for workforce development related to jobs in this field

stormwater project planning and implementation is needed if this critical environmental problem is to be effectively addressed.

Coral Bay Community Council (CBCC) has taken a leadership role in stormwater management, applying for, receiving and administering various grants to address specific drainage issues, largely in the Coral Bay watershed, and providing grant application support and advice for all of St. John. Sewage leaked from the Cruz Bay wastewater treatment plant for months after the storms. Some sewage pump stations failed to work. Repairs, which were needed prior to the storms, are now much more imperative.

COORDINATE AND EXERCISE

Preparedness planning and related exercises are ongoing needs which include communications, necessary materials, evacuations, and first responders' roles. VITEMA had a comprehensive preparedness plan developed before the storm, which is a good starting point to conduct an after-action review and update the plan to include lessons learned.

Key Players:

VITEMA; St. John Rescue; Love City Strong

Alignment: IS, CPCB RSFs

Cost: < \$100,000

Timeline: One Year



PREPAREDNESS PLANNING

One of the key preparedness issues that arose post-storms is the need for more emergency shelters. Currently, going into the 2018 hurricane season, there are no designated emergency shelters on St. John.

VITEMA coordinates preparedness planning for the territory and for St. John. This project encourages continued coordination between preparedness groups, including the St. John Community Foundation, St. John Rescue, Love City Strong and VITEMA. Nonprofit groups, the business community, and others can play a key role in supplementing VITEMA's resources in order to best respond to an emergency with distribution of supplies, neighborhood volunteer groups that can check in with their area and report people as safe, quickly resuming internet service, and more. An island-wide preparedness plan should be created, shared with the public and exercised annually.

RESILIENCE PROJECTS

Strengthening Community Systems to Restore and Prepare for Future Disasters



MENTAL HEALTH SERVICES

Access to mental health services has always been lacking on St. John and in the US Virgin Islands. Psychological distress post-storms, along with prior unaddressed community mental health needs has created a critical need for mental health services. Providing increased ease-of-access to those in economic need is also vital. In a post-storm survey, almost 50% of people indicated that therapy/counseling is an important service to them.

Key Players:

Dept. of Health; Schneider Medical Center; Island Health and Wellness; Cruz Bay Family Practice

Alignment: HHS RSF

Cost: \$100,000 - \$1 Million

Timeline: < 1 Year

This project aims to increase the amount of mental health services offered on-island from basic therapy to more advanced psychological services for severe mental illness. This will be achieved through

IMPLEMENTATION STEPS

1. Recruit and fund more therapists to work on St. John in coordination with Island Health & Wellness and the Dept. of Health.
2. Identify locations where they can work, and long-term funding sources to ensure that this resource is always available.
3. Identify methods to make the service more appealing to all community members
4. Develop a network of service providers and volunteers to provide wrap-around services to families and children
5. Determine a funding source to provide Family Engagement for Teachers trainings.
6. Train teachers and frontline service providers in psychological first aid

increasing the amount of professionals offering services on-island. It includes training and supportive services of teachers and other important service providers to increase capacity in the community to support one another. Island Health and Wellness, a nonprofit health care provider, has been able to secure funding to offer therapist services at an affordable rate, five days a week. However, funding is short term. Growth in this area is still necessary as well as securing additional long-term funding.

FOR THE UNINSURED AND UNDERINSURED

A pre-storm survey identified more than half of St. John residents as uninsured, and nearly three-quarters of residents do not have health insurance that covers primary/preventive care. Since the storm, several of the major employers that offered health insurance have not returned. In a post-storm survey, one-third of respondents indicated that they do not get their basic health care needs met on St. John because they have no insurance or insurance doesn't cover.

Key Player:

Island Health & Wellness

Alignment: HHS RSFs

Cost: < \$100,000

Timeline: < One Year



HEALTHCARE FOR ST. JOHN

Some residents are only able to get stateside insurance that is not accepted in the Virgin Islands. Open-ended responses indicated that some respondents are able to get their basic health needs met on St. John because of Island Health & Wellness, a nonprofit medical provider that offers services at a low flat-rate fee. The annual income eligibility for Medicaid in the USVI is very low: \$6,581 for a single person household and increases by \$2,292 per household member. The federal funding for Medicaid to the territory is capped – meaning that not everyone who is eligible for Medicaid may be able to receive it.

IMPLEMENTATION STEPS

1. Continue to recruit a pediatrician to work at Island Health and Wellness or to be a sponsor for that location. Identify funding for this position. Possibly make use of the National Health Service Corps Loan Forgiveness Program as a recruiting tool
2. Continue to seek creative solutions or partnerships to provide pediatric services at Island Health & Wellness
3. Review the revolving loan fund and redevelop bylaws/support the board of directors as necessary. Pursue additional funding to meet the increasing needs of island residents

The only private practice on St. John, Cruz Bay Family Practice, is able to offer the full scope of medical services for all ages, prenatal to geriatric. They accept Medicare and can offer discounts and payment plans for those in need, but there is still a large uninsured population that cannot afford this option, as well as many residents with stateside insurance plans that are not accepted or not in-network at providers in the territory. Morris F. DeCastro Clinic, a public health facility in Cruz Bay, and Myrah Keating Smith, a division of the Schneider Regional Health Center public hospital on St. Thomas, are both able to accept Medicaid. In the wake of the hurricanes, these two facilities are sharing an overcrowded location. Pediatric services are offered the last Friday of every month.

This project seeks to identify the gaps in the ability for on-island providers to offer affordable services to everyone. A gap that was identified in the planning process is pediatric care. Island Health and Wellness does not have a pediatrician on staff, so while adults are able to access affordable health care at this location, children are not. Island Health & Wellness has pursued options to be able to offer pediatric care, but more work is needed to make that a reality. Another gap is for patients that need specialized care or lab work that goes beyond the scope of what can be provided at a primary care office. The St. John Revolving Fund Charitable Trust offers a revolving loan program for medical expenses but needs to be expanded due to increasing needs post-storms.

MEDICAL AND TRANSPORTATION

The main medical facility on St. John, the Myrah Keating Smith Clinic, was destroyed during Irma and remains closed. Services were consolidated and pressed into a second, much smaller clinic that received less damage. Consistent availability of emergency medical transportation to the nearest full-service hospital, Schneider Regional Medical Center in St. Thomas, remains severely limited for island residents and visitors alike.

Key Players:

Dept. of Health - Emergency Medical Services; St. John Rescue

Alignment: IS, HHS RSFs

Cost: > \$1 Million

Timeline: One - Three Years



EMERGENCY SERVICES

Emergency care has been consistently noted as the most important medical service to residents of St. John and the one most in need of improvement. The emergency medical services on St. John are linked to St. Thomas because an

IMPLEMENTATION STEPS

1. Determine methods for community involvement in rebuilding of Myrah Keating Clinic
2. Identify locations for small-scale emergency clinics in Coral Bay and other locations across the island
3. Work at the territorial level to determine feasibility of additional/alternative options for emergency evacuation by boat/air
4. Procure funding for smaller ambulances that are more appropriate for the terrain than the current fleet
5. Convene a focus group to identify challenges and opportunities regarding emergency care in St. John. This effort may be informed by the work of a Johns Hopkins evaluation

ambulance is needed to transport patients from the boat to medical facilities once they arrive on St. Thomas. Several residents have reported extremely long wait times due to either the lack of or lack of ability to coordinate a transport ambulance on St. Thomas, often extending what could be a 30- to 40-minute trip into one that takes hours.

This project aims to ensure that basic emergency care is available at key locations across the island at all times and to improve emergency care services as the Myrah Keating Clinic is rebuilt. It also seeks to improve emergency transportation/evacuation both inter-island and to the mainland.



REMOTE CARE

Access to specialized medical expertise is economically challenging due to the island's remoteness and its limited full-time population. Telemedicine - the remote delivery of certain healthcare services, such as specialized assessments or consultations, over the telecommunications infrastructure - is seen as one way to bridge medical care gaps and distance for St. John. In 2009, telemedicine was introduced on St. John at the Myrah Keating Clinic through a partnership with Cleveland Clinic Florida in Weston, Florida.

Key Players:

Dept. of Health; Schneider Regional Medical Center; Medical Providers

Alignment: IS, HHS RSFs

Cost: > \$500,000

Timeline: One - Three Years

The project was funded by a local philanthropist and St. John Rotary for three years. At the end of the three years, funding was then transferred to the Department of Health. The department was unable to justify the monthly payments, and the contract with Cleveland Clinic expired February 21, 2013, at which point the leased equipment was returned to Florida. In its final year, there were 90 visits to the clinic that involved using the telemedicine link.

IMPLEMENTATION STEPS

1. Create a project committee charged with researching telemedicine providers and resources and which providers and services could be made available on St. John. The Cleveland Clinic is a good starting point, since it already has a history with telemedicine on St. John
2. Inventory existing equipment to see what can be reused and what needs to be replaced. For instance, a T1 line was previously installed at the clinic
3. Seek outside funding for telehealth and telemedicine services on St. John and determine a method to create a sustainable funding stream to allow the project to continue indefinitely and to update its technology as needed

When St. John set up its telemedicine link with the Cleveland Clinic in 2009, telemedicine was very much in its infancy. In a 2013 interview with The St. Thomas Source, the Myrah Keating Director noted that the majority of patients who would have benefitted most from the telemedicine link had medical issues which required bloodwork, something not possible to perform and analyze at the time through telemedicine. Through developments as recent as 2017, "digital diagnostics" technology now makes this possible.

If St. John were to implement a new and improved telemedicine program utilizing digital diagnostics, residents and visitors could again be on the cutting edge of medical technology but this time likely could utilize it in a more beneficial way. Great strides have also been made in the capabilities of mental telehealth since 2009, and integrating this as a component of a telemedicine program on St. John could be a key way to increase and improve mental health options available on the island. This would increase the value of the investment that will be required to initiate and maintain the systems.



FRESH AND HEALTHY FOODS

Access to fresh, healthy food is very limited on St. John. Produce is often sparse and expensive in the grocery stores. Pop-up vegetable stands offer more affordable options, but their timing is uncertain. This can create a cost-burden and health issues, particularly for low-income families and individuals. The Supplemental Nutrition Assistance Program typically does not provide an adequate amount of money for individuals and families to feed themselves for the month.

Key Players:
TBD

Alignment: HHS RSFs

Cost: < \$100,000

Timeline: < One - Three Years

Food banks are limited, and hot meal distribution to people in need was also limited pre-storm. The Catholic Charities increased their meal program to five days a week, which provides a healthy meal for vulnerable populations all week.

There is still a gap on the weekend, which the Seventh Day Adventist Church is hoping to fill.

IMPLEMENTATION STEPS

1. Conduct an analysis on food insecurity on the island. Identify effect on vulnerable populations such as children and seniors
2. Support churches and other groups in developing food banks and community kitchens. Identify funding sources
3. Assess community support for starting a community garden and proceed to do so if supported
4. Conduct a community food systems assessment in partnership with Iowa State University Community Food Systems program
5. Reach out to the coordinators of recent pre-storm projects in sustainable local agriculture that may be able to be continued, expanded to, or replicated on St. John with additional support

This project could identify options to increase the supply of fresh, locally-produced food on St. John and from surrounding islands. Food grown on St. John will primarily be small scale and could include projects such as supporting small-scale farmers, developing community gardens and providing training and support for backyard gardening, potentially including the use of hydroponic shipping crate farm units. Strong support for community gardens was identified in a community survey, especially among renters. This project also seeks to support and expand efforts to provide healthy food to people in need.



WORKFORCE DEVELOPMENT PROGRAMS

St. John's economy is mostly tourism-based. The hurricanes shut down the two main resorts on the island, which resulted in many layoffs and significantly hurt other service-based businesses that rely on the guests the resorts attract. A resilient workforce should be more diverse and not rely primarily on one industry.

Key Players:

Dept. of Labor; Dept. of Education; Love City Strong; St.JanCo

Alignment: Econ, CPCB RSFs, USDA

Cost: > \$500,000

Timeline: One - Three Years

An ongoing influx of new jobs supporting recovery and redevelopment efforts highlights one of the areas of potential for workforce development: construction and trades. St. John also has a strong artist community that can contribute to a resilient workforce.

IMPLEMENTATION STEPS

1. Identify strategies to interconnect tourism with other industries such as agriculture, green energy, aquaculture and environmental conservation
2. Determine the feasibility of increasing local agricultural products and lowering dependency on imported foods
3. Identify and evaluate fields in which to focus workforce development, including construction and trades; arts and craftsmanship; renewable energy and energy conservation, etc.
4. Develop training programs through the development of a technical and vocational school

Resilience necessitates new ways of thinking (e.g., new ways of putting risks and assets together for planning) and new ways of doing (e.g., new ways of working together to problem-solve). Many of the projects in this plan include a workforce development component. This project can be considered in a two pronged approach: diversifying the economic drivers of the economy as well as strengthening and diversifying skills of the workforce.



CO-WORKING ARTIST SPACE

The high cost of housing and commercial space is a large obstacle to artists who live and create on St. John. A cooperative workspace for artists would allow for a shared economy. This collaborative space would help people to learn a craft - allowing artistic cultural heritage to traverse generations. This is a key element of sustainability for recovery.

Key Players:

St. JanCo; St. John LTRT

Alignment: Econ RSFs

Cost: \$100,000- \$500,000

Timeline: < One - Three Years

COOPERATIVE WORK SPACE FOR ARTISTS

This model also allows for tourism, which can often dilute existing culture, to become a driving force in cultural preservation. This space can become a part of creating culture-tourism that focuses on the heritage and history of this special place.

IMPLEMENTATION STEP

1. Identify a space and procure necessary agreements/funding. A design process for the facility can be accomplished through a collaborative process with current and upcoming artists to ensure the space is designed in the best way possible.

The vision is to have a cooperative artist working space and exhibits co-located. Visitors could commission art, and visit the gallery. This will help tourists and residents make a more personal connection and give artists a better economic opportunity. It will also provide much needed space for artists to get started and gain momentum toward developing their own working/selling space. It is often challenging for beginning artists to afford a space to sell their product. This model will sustain itself as an artist becomes established and is able to build their own space, thus freeing up the cooperative space.



LOCAL POWER GENERATION

Electrical systems exhibited significant vulnerability during the storms, resulting in 100% loss of power for months to homes, businesses, public facilities and services including critical communications (cell phone towers, internet, and emergency communications repeaters). As a stop-gap measure, personal-size generators were distributed to some residents by relief groups. While temporarily helpful, this is not a long-term solution.

Key Players:
Water and Power Authority; St. John Long Term Recovery Team

Alignment: Econ, IS, NCR RSFs

Cost: < \$1 Million

Timeline: < Three Years

St. John depends on power generation from St. Thomas, so outages on St. Thomas directly affect St. John. Adding generation redundancies, including backup generators and micro-grid systems, are critical for faster power restoration following an outage.

IMPLEMENTATION STEPS

1. Support the Governor's Taskforce and WAPA's initiative to establish St. John as a global model for energy sustainability and resilience
2. Educate residents and visitors on the environmental and monetary benefits of energy conservation and efficiency. Encourage energy conservation measures in new construction and retrofitting of older homes and businesses.
3. Promote energy audits as a first step in identifying energy conservation measures.
4. Seek out training opportunities for workforce development related to renewable energy and energy efficiency.
5. Encourage the use of Solar and Water Pods

The need to incorporate public input in support of a cohesive strategy, in partnership with WAPA, is paramount. Hardening of the power grid has begun; composite power poles have replaced traditional wooden poles in many critical areas. Plans are in place to underground select lines in Cruz Bay, to locate large backup generators in Cruz Bay and Coral Bay, and to incorporate solar energy into WAPA's generation efforts, including a residential roof-top program.

REDUCE SOLID WASTE

On St. John, the current solid waste disposal program limits collection of household and commercial trash to open-top dumpsters, which are often overflowing. Trash is regularly blown across the landscape, into environmentally sensitive areas and directly into the ocean. The Susannaberg Transfer station on St. John has been unable to install any of the planned modernization of the facility for over a decade and is over capacity.

Key Players:

Waste Management Authority; Island Green Living; St. John LTRT

Alignment: CPCB, IS, NCR RSFs, USDA

Cost: \$100,000 - \$1 Million

Timeline: < Three Years



DEVELOP RECYCLING FACILITIES

Capital Improvement funds currently pay for waste hauling by trucks on barges to Bovoni Landfill on St. Thomas; the Bovoni Landfill is under a Federal Consent Decree to close and is also beyond capacity, further increasing urgency to overhaul and redesign the current waste management system. Ninety-eight percent of survey respondents said they supported recycling and would participate in a recycling program.

IMPLEMENTATION STEPS

1. Review recycling studies that have been conducted and, if necessary, do additional financial feasibility assessment.
2. Develop island-scale models to incorporate into a comprehensive plan for solid waste management
3. Build multipurpose waste and recycling/composting facilities across the island
4. Develop home-based education program on recycling and source separation
5. Support the rebuilding and expansion of the one recycling facility
6. Create training opportunities and skill development to address industry-related workforce needs

Over the past 20 years, small-scale recycling and source separation efforts have been embraced but have not had the opportunity to develop into a larger, more resilient recycling system. Significant barriers exist, including the cost of transportation off island to recycling facilities, the cost of establishing and running the recycling programs and limited markets or recycling uses. Composting is another way to use solid waste locally and reduce the volume of solid waste handled. This project seeks to divert and reduce solid waste volume at landfill sites, expand the local economy, improve island aesthetics and reduce pollution sources.

Develop a comprehensive waste recycling program; this would include a few larger, multi-purpose facilities offering convenient waste separation, recycling, and reuse opportunities. Proposed facilities could be shuttered and prepared, pre-storm, to offer resiliency.

- This project is driven by the following objectives:
- To significantly divert and reduce solid waste volume at landfill sites, successfully decommission landfills, and reduce items from the solid waste stream going to any landfill.
 - To derive valued commodities from the standard waste stream for local use or export, to diversify and expand the local economy. Enhance employment opportunities as recycling-associated products create new commerce
 - To greatly improve island aesthetics, reduce pollution sources that include toxic leachates that destroy terrestrial and marine ecosystems, and to control fugitive methane, which contributes greatly to accelerated climatic warming.



UPDATE REGULATION

Land-use planning is an integral component of any attempt to either change or preserve a community's aesthetic or functional character. A land-use plan provides direction for future development that is then implemented through a development code. This is a best practice for natural hazard risk management by considering disaster risks and their spatial distribution to steer more sustainable land development.

Key Players:

Dept. of Planning and Natural Resources; Coral Bay Community Council

Alignment: IS, Econ, Housing, CPCB

Cost: < \$100,000

Timeline: < One Year

A Comprehensive Plan for the Virgin Islands was completed by the Department of Planning and Natural Resources (DPNR) in the 90's but has not been accepted by the legislature or the public.

IMPLEMENTATION STEPS

1. Review the two documents described in the background section and prioritize sections relevant to the territory today, as appropriate
2. Determine which sections of this compiled document need further updating
3. Reviewing the outreach process notes from the Rutgers effort on to identify issues with the current zoning code and associated issues, then open a new dialogue for a new comprehensive planning process for 2020 and beyond
4. Form a Stakeholder Advisory Committee

The zoning code, which was adopted in the 70's, has only received minor updates – such as spot rezoning. In 2014, a team of consultants led by Rutgers University completed an update of the zoning code for DPNR, which has not yet been adopted. There are no permanent planning staff assigned to St. John, and planning staff for the entire territory is limited to one planner and an administrative assistant on St. Croix and two planning technicians on St. Thomas.



INCREASE HOUSING OPTIONS

Affordable housing is inherently challenging on St. John due to extremely limited availability of land, which will naturally increase the cost of land and housing. Before the hurricanes, there was a shortage of housing for low to moderate income households. The significant loss of rental units exacerbated an already restricted rental market. Two affordable housing developments, developed through a public/private partnership, exist on St. John. Bellevue Village Apartments is located mid-island, and Calabash Boom Apartments is on the “southside” of Coral Bay.

Key Players:

Virgin Island Housing Finance Authority; Love City Strong

Alignment: Housing, CPCB RSFs

Cost: < \$1 Million

Timeline: < Three Years

Thirty percent of St. John residents spend more than half of their income on housing according to the 2010 census. The overall level of poverty is well above national figures. Combined with increasing housing costs and stagnant employment growth, the difficulty in providing affordable housing options is amplified. Factors affecting the affordability of home ownership and rentals include demand for short-term rentals

IMPLEMENTATION STEPS

1. Analyze housing situation and align incentives
2. Homebuyer education
3. Developer/Construction education – workforce development
4. Address Title Issues and Property Taxes

from the tourism industry, limited local workforce for rebuilding, land supply, limited inventory of affordable housing, and the cost of electricity, water and homeowners insurance.

The goal of this project is to identify mechanisms to develop more affordable housing and to find opportunities to make homeownership and long-term rentals more affordable. A first step is to understand what the housing needs and desires are by conducting a comprehensive analysis of the current housing stock and land availability, as well as identifying the primary barriers to rebuilding housing and affordable housing. Strategies to identify incentives for developing affordable housing will be reviewed to determine whether these incentives are sufficient, or if additional public funds will need to be invested to ensure adequate supply of affordable housing. An outreach and education campaign may be necessary to educate developers on the benefits of developing affordable housing. Part of the solution could be helping residents gain legal access to their land by clearing title issues, streamlining estate probate process, as well as reviewing the property tax structure, which may be placing an undue burden on long-term residents.



**HOUSE VULNERABLE
POPULATIONS**

Women and children, including those dealing with domestic violence issues, have no housing safety net on St. John. The island’s homeless population is often relegated to the streets or the woods. Facilities to provide basic living space, with other needed support services, are lacking on St. John. It is critically important to have a plan in place to support these vulnerable populations.

Key Players:

Dept. of Human Services; Family Resource Center; St. John LTRT

Alignment: Housing, HHS RSFs

Cost: > \$1 Million

Timeline: > Three Years

The St. John community has consistently identified permanent sheltering options as a high-priority project. In an outreach effort to prioritize the projects that have been identified, permanent shelters ranked third highest priority.

IMPLEMENTATION STEPS

1. Conduct a feasibility study to determine the number of people that may need to make use of a shelter
2. Determine whether one facility or multiple facility will be needed to serve potential clients
3. Identify affordable options to meet the need
4. Gain community support around the preferred and feasible solutions

This project will review options to provide a safety net for the island’s vulnerable population. A physical location with access to medical services will likely be needed, although it may be necessary to think creatively about the space and provide some services in the field.

A safe location for domestic violence victims is very important. It may be most effective to transport individuals to safe spaces in St. Thomas. It is also necessary to think ahead about the post-storm needs of these vulnerable populations as well as seniors and other vulnerable populations. This project overlaps with “Improving Access to Mental Health Services” as well as “Developing Programs to Create a More Resilient Workforce” to help the homeless population enter the workforce.



BEFORE AND AFTER SCHOOL

A strong education system on St. John requires the effort of the entire community to support the children before, during and after school. A dedication to the St. John youth has been clearly documented throughout the planning process. After-school tutoring, previously provided by the Department of Sports, Parks and Recreation, needs to be revived and supported.

Key Players:

St. John Schools; Dept. of Sports, Parks and Recreation, St. John LTRT

Alignment: HSS, CPCB RSFs

Cost: < \$1 Million

Timeline: One - Three Years

The Department would like to rebuild their computer lab and offer after-school homework assistance. In the long-term, they plan to build a community center with a focus on the youth. A Youth Long-term Recovery Work Group has formed to coordinate the current youth programs, improve their accessibility to the community; and develop additional programs as needed.

IMPLEMENTATION STEPS

1. Offer transportation for students after school hours
2. Continue coordination and outreach for current youth programming and expand as necessary
3. Improve athletic Facilities and playgrounds
4. Create partnerships with Sprauve School and Giff Hill School
5. Support the development of community centers and youth center

This project aims to support all schools (on and off island) and homeschool programs in meeting the educational and extracurricular needs of all students; coordinate among groups that provide activities for children, determine any gaps that exist in supporting the youth; and create additional professional development opportunities.

After-school programs are imperative to the cohesiveness of the island since they allow children to intermix and form life-long relationships. Other community actions to support education include solving the challenge of access to child care, implementing solutions to provide additional support for after-school homework help; providing transportation to after-school activities, and developing vocational and technical education opportunities.

IMPROVE ESL PROGRAMS

There is a growing need for English as a Second Language (ESL) classes for students to communicate with teachers as well as for parents to learn English. After-school programs supported by the community and champions for ESL will improve the teacher's ability to communicate with their students irrespective of age.



Key Players:

Dept. of Education; Houses of Worship

Alignment: HSS, CPCB RSFs

Cost: < \$100,000

Timeline: < One Year

As of April 2017, one-quarter of all the children currently enrolled in grades K-8 at the Julius E. Sprauve School are English language learners, as reported by the St. John Tradewinds. Some of the barriers to providing additional support through Sprauve School include recruiting additional teachers and the lack of ability to offer competitive pay.

IMPLEMENTATION STEPS

1. Identify leaders and begin to build a network to provide supportive services
2. Identify and communicate needs within the community and develop any needed skills
3. Empower all communities and to improve networking between groups
4. Develop an advocacy group to build support within and between various groups and help individuals navigate legal systems and gain access services

The population of St. John is small but very diverse. Languages spoken include English, Spanish, French, Creole, and Patois (Patwa). Non-English speakers can be disconnected from the rest of the community and therefore, more vulnerable. An advocacy group could help build support within and between various groups, assist individuals in navigating the legal system and gaining access to other services.

This projects seeks to create advocacy groups that can provide supportive services to diverse populations that may struggle to navigate current systems. The goal is to empower all communities and to improve networking between groups.



NATURAL RESOURCES

Extreme hurricane damage to the beaches, mangroves and upland forest of St. John has reshaped the landscape. St. John is home to one of the best preserved tropical dry forests, largely due to its protection as part of the Virgin Islands National Park (VINP). The VINP contributes to the beauty and open space that make this island a true gem of the Caribbean. The damage to coral reefs and forests have put additional strain on endangered species, including plants and animals.

Key Players:

Caribbean Oceanic Restoration & Education Foundation; Coral Bay Community Council; National Park; Dept. of Planning and Natural Resources

Alignment: NCR RSFs, USDA

Cost: < \$1 Million

Timeline: One - Three Years

Important rare species that are only found on this island are in danger and invasive species may have an opportunity to spread. The mangroves that

IMPLEMENTATION STEPS

1. Coral reef restoration
2. Implement a plan for forest recovery
3. Encourage planting native plants and trees
4. Protect mangrove areas for regrowth and restoration
5. Support a lionfish reduction program
6. Sargassum protection and removal program
7. Promote Dark Skies Initiative (in support of protecting sea turtles; star visibility)
8. Foster additional education about mangroves, migratory birds, and bats
9. Encourage and support trash cleanups

protect the island have been damaged. Prior to the storms, St. John had a strong volunteer program to control the lionfish population – an invasive species which threatens the health of the coral reefs. Urgent storm-related repairs have limited volunteer time to dedicate to this effort and the lionfish population appears to once again be increasing. Plans are in place to rejuvenate and expand the program. Overall, additional programs to protect the island's natural resources while enhancing cultural connectivity are needed.

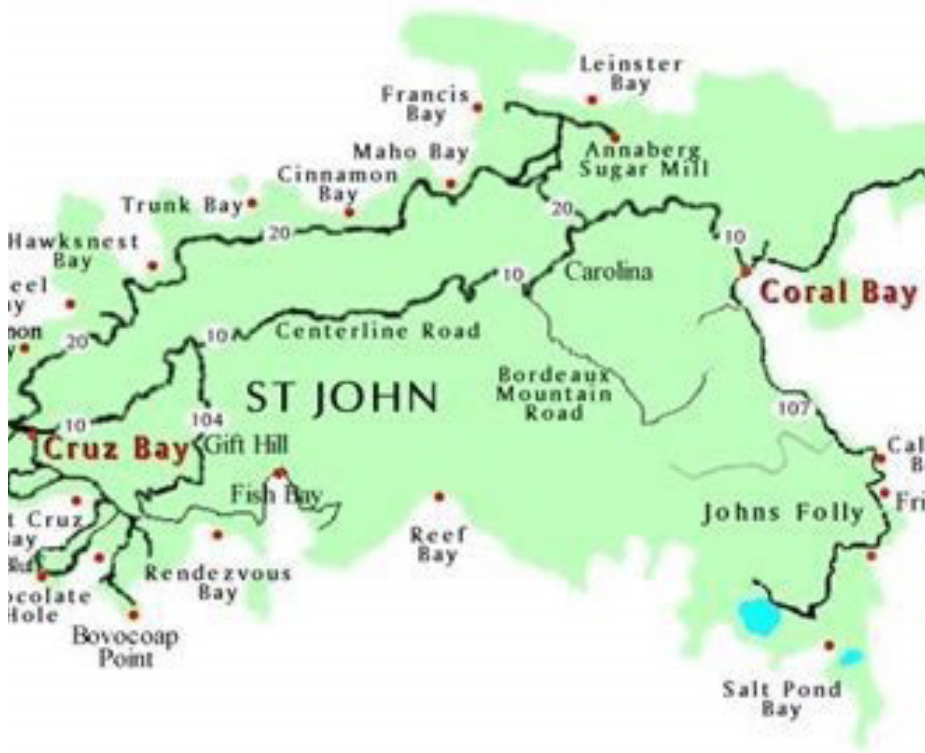
BETTER ROADS TO CORAL AND FISH BAY

Infrastructure damage from the storms, including landslides and undermining of roads, temporarily cut off access to Coral Bay and Fish Bay. Lack of communications infrastructure made contact with these areas virtually impossible; access by sea was an important method of reaching local residents in this areas until road could be better cleared and reopened. Volunteers cleared one lane for vehicle traffic all the way from Coral Bay to Cruz Bay within 4 days after Irma, albeit a somewhat risky route that remained officially closed and often blocked by recovery vehicles.

Alignment: IS, NCR, CPCB RSFs

Cost: < \$100,000

Timeline: One Year



IMPROVE SECONDARY ACCESS

Residents feel that road damage, undermining, and landslides from the storms have left areas vulnerable to future weather events. Community members have expressed a desire to improve connections across the island in good times as well.

IMPLEMENTATION STEPS

1. Determine whether/when DPW and DPNR could lead a planning process focused on roads and connectivity in St. John
2. Compile a Stakeholder Advisory Committee and create a public involvement plan
3. Secure funding to support the planning process as well as for construction and maintenance

Community members recommend looking at alternative routes to be used in case of disaster from Cruz Bay to Coral Bay. In Coral Bay, there are numerous options to improve existing roads to create better connectivity for residents living in Coral Bay and out toward Salt Pond. A planning process designed to look at road connectivity across the island would identify all possible solutions and help identify creative solutions.

COMMUNITY DEVELOPMENT

Advancing the St. John Community as a Whole



SECURELY SHARE E-HEALTH RECORDS

Electronic health record (EHR) adoption is becoming the standard due to the Health Information Technology for Economic and Clinical Health (HITECH) Act and the Centers for Medicare and Medicaid Services (CMS) EHR Incentive Program. However, medical records on St. John, as with much of the US Virgin Islands, are still mostly paper-based. Some of the providers are able to share medical records, but this is particularly challenging with the emergency clinic.

Key Players:

Healthcare providers on St. John

Alignment: HSS RSFs

Cost: < \$500,000

Timeline: Three Years

EHRs make health information available instantly and securely to authorized users whenever and wherever they need them. EHRs could help streamline the healthcare workplace, improve quality of care, update information easily, and exchange data with other care providers. However, implementing an EHR system on St. John will come

IMPLEMENTATION STEPS

1. Select a Key Player and recruit a support team for the project
2. Initiate an informational campaign to increase buy-in from local providers and healthcare recipients
3. Select an EHR provider (assess St. John's needs, cost factor, resources, technical expertise available) that is cloud-based
4. Establish a governance process and a project plan, communicate with healthcare staff and patients, redesign workflows and provide education

with unique challenges, such as the frequent lack of connectivity on the island, finding an EHR suitable to the combination of providers and island setting, a limited HIT workforce to initiate and service the system, and possible difficulty obtaining community buy-in as well as buy-in from health providers. Healthcare staff on St. John are limited and often working very busy schedules and long hours, as well as frequently taking on multiple roles, which will make dedicating time to this effort a challenge.

This project will implement an EHR system on St. John that allows a patient to opt-in to having their medical records stored electronically and shared across providers whether they are private, government or nonprofit. This will ideally involve coordination across the territory in order to ensure optimal integration into one health information exchange.



WALKABILITY & PUBLIC SPACE

The need to improve walkability in the commercial cores of Cruz Bay and Coral Bay has been well documented. Over 80% of respondents in a community survey said that St. John needs more sidewalks, and open-ended responses indicated a need for better walking infrastructure across the entire island, in both residential and commercial areas and making connections between the two.

Key Players:

Dept. of Planning and Natural Resources; Dept. of Public Works; St. John Community Foundation; Coral Bay Community Council

Alignment: HSS, CPCB, IS RSFs

Cost: < \$100,000

Timeline: One - Three Years

The lack of walkability and public space can cause safety concerns for residents and could stifle economic development due to lack of public gathering space and parking, as well as access to businesses and events. Public space is limited,

IMPLEMENTATION STEPS

1. Compile relevant information, including past plans and studies, zoning, and property ownership
2. Conduct a planning process/design charrette, involving all stakeholders to determine the best long-term design for Cruz Bay and Coral Bay
3. Coordinate with WAPA and determine where and when power lines will be placed underground and prioritize redesign in those areas according to their timetable for construction efforts
4. Establish "complete streets" design guidelines for public roadways

especially in Cruz Bay. It is important to make well-informed decisions about the location and design of public spaces and facilities to best capitalize on available space. The rebuilding process offers a unique opportunity to rethink and improve public spaces.

This project will require conducting a planning process and/or design charrette that includes all stakeholders and the public to plan intentionally for improving public spaces and walkability during the rebuilding process.



ST. JOHN BEAUTIFUL

Intentional community design, beautification projects, and public art have long been known to improve community cohesion and create a shared sense of place, which is important to foster as residents return to old patterns in the months and years after a disaster and their shared recovery objectives begin to diverge. Results of the St. John Long-Term Recovery Team’s community survey indicated strong support for efforts to clean up and enhance the beauty of the downtown area.

Key Players:

St. John LTRT; Small Business Alliance

Alignment: Econ, CPCB, IS RSFs

Cost: < \$100,000

Timeline: One Year

IMPLEMENT BEAUTIFICATION PROJECTS

In particular, 86.3% of respondents noted a desire for the removal of litter and debris in Cruz Bay, and 81.4% desired more and better maintained trash cans. Support for improved public bathrooms, better walkability features, and painting and fixing up damaged buildings were also documented. Cruz Bay is the gateway to St.

IMPLEMENTATION STEPS

1. Gather and coordinate volunteers that can be mobilized to complete projects
2. Identify and prioritize key areas to focus beautification efforts that will have the biggest impact and/or are feasible in the short term
3. Raise community support and funding for beautification
4. Establish a process to incentivize building owners to undertake beautification projects, including monetary incentives, volunteer labor, legal aid, etc.
5. Establish a process to maintain cleanliness and landscaping – such as an “adopt-a-block” model

John, with approximately 1.7 million passengers disembarking the ferry annually and sets the tone for what visitors will expect of the rest of the island, potentially influencing their decisions of whether to stay and spend their money.

Examples of potential objectives for this project include repainting or re-siding dilapidated or storm-damaged buildings, removing trash and debris and adding more public trash cans, and adding landscaping and repairing roadways and walkways. An “adopt-a-block” program could help to keep streets or blocks clean, as well as potentially sponsor additional improvements, such as trash cans or landscaping. This project has overlap with promoting the Cruz Bay Historic District as well as designing Cruz Bay and Coral Bay for improved walkability, public spaces and waterfront access. The projects are complementary and can build upon one another.



SMALL BUSINESS NETWORK

The majority of businesses on St. John are very small. These businesses have a tendency to be more vulnerable to environmental and economic changes such as those introduced through the hurricanes. Operating a small business can already be a struggle in a relatively stable environment, and the impact of the storms only served to intensify the inherent difficulties of small business ownership and management.

Key Players:
St. John LTRT

Alignment: Econ RSF

Cost: < \$100,000

Timeline: One Year

The logistical challenges faced by St. John residents after the storms include the loss of several barges for vehicle traffic from St. Thomas and shutdown of the US Customs operation on the island, eliminating the ability to directly import materials. Many businesses were left without functional structures from which to operate—or lost important equipment. Others saw their employees leave due to either evacuation or losing their homes in the storms. Many of the businesses rely on the tourism and because their revenue streams

IMPLEMENTATION STEPS

1. Finish creating mission statement, create goals and establish roles and funding sources
2. Find an outside expert on creating successful business alliances and invite them to speak
3. Determine whether membership dues will be required and how they will be decided
4. Determine whether a paid position will be necessary to coordinate and manage the alliance
5. Create a list of actions and projects the Alliance wishes to undertake; assign members to lead those projects

were impacted, their futures remain uncertain. Developing an alliance through which small businesses on St. John can pool recovery resources is sure to assist with keeping recovery rates on St. John high and making island businesses more resilient.

Prior to the storms, there had been some discussion among small business owners on the island regarding the creation of a Small Business Alliance. Following the storms, the Economic Long-Term Recovery Working Group identified the creation of a small business alliance as a key factor in increasing post-storm resiliency, and the idea has continued to receive strong support from local business community.

The Alliance is expected to provide networking and professional growth opportunities for local small business owners and managers. In addition, since tourism dollars are the main sustainer of most businesses on St. John, the Alliance expects to work closely with the USVI Department of Tourism to ensure St. John's successful recovery as a tourism destination is well represented in all promotions. The Alliance also hopes to support members by combining resources and numbers to acquire group insurance policies for members and to provide opportunities for discounts through group/bulk purchasing.

PROMOTE HISTORIC DISTRICT

In 2016, the US Department of Interior determined that Cruz Bay meets the criteria for quality of significance to American history, architecture, and culture to be placed on the National Register of Historic Places as a National Historic District. This designation was the result of the hard work of volunteers and was a big win for the island: it has the potential to open up new revenue streams and can be leveraged to draw tourism dollars and interest back to St. John after the storms.

Key Players:

USVI State Historic Preservation Office; St.JanCo

Alignment: Econ, NCR, IS RSFs

Cost: < \$100,000

Timeline: One - Three Years



CRUZ BAY HISTORIC DISTRICT

The St. John community survey administered by the Long-term Recovery Team indicated strong support for local arts, cultural heritage, and historic preservation on the island, with over 90% of respondents desiring to see more activity in this area. Seventy percent of respondents indicated restoration of downtown buildings as one of their most desired improvements in Cruz Bay. The survey results support the findings of the economic and the arts and culture working groups: The people of St. John care about preserving, protecting, and expressing their island's history and culture.

IMPLEMENTATION STEPS

1. Identify a coordinating entity to create a vision, brand, and plan for preserving and promoting the historic district
 2. Engage residents and stakeholders to develop a plan that summarizes the assets that the neighborhood has to offer and implements a range of creative strategies to reinforce the new brand
 3. Conduct market research, set goals, and identify target markets for heritage tourism
 4. Continually monitor results and refine their strategies to ensure that the goals are met
 5. Install signs and plaques to educate community
- To build Cruz Bay back strong, recovery efforts need to do more than restore buildings to operable condition—they also need to make the case for investment by current and future residents, businesses and stakeholders. This can be done in part by building a positive neighborhood brand. The newly designated historic district provides a perfect jumping-off point for the Cruz Bay community to build such a brand and thereby rebuild market demand and outsider confidence in the long-term viability, marketability, and stability of Cruz Bay, and by extension, St. John. This could be viewed as heritage tourism, focusing on telling the history of the island in public and private spaces. In the long-term, this project can expand beyond the historic district to promote the historic nature of St. John and tell the story through educational and arts displays in public and private spaces/facilities – in the National Park and in Coral Bay and the eastern side of the island, which is the home to many historic areas and events.



LOCAL ART

Support and enhancement of the artist economy for St. John is critical to a sustained long-term recovery. Art is one of the top three contributors to the U.S. economy, adding more to the economy than agriculture, transportation and warehousing, according to data from the National Endowment for the Arts. Many of the artists on St. John are stretched very thin and have had limited assistance with recovery.

Key Players:
 St. JanCo; The Gri Gri Project; St. John School of the Arts

Alignment: NCR, Econ RSFs

Cost: < \$100,000

Timeline: One - Three Years

There was almost no help for artists to get back on their feet. While some may have been eligible for an SBA loan, many did not or could not tap into that assistance. Overall, artists are having a difficult time, post-storm, making ends meet - challenged

IMPLEMENTATION STEPS

1. The Team: Continue collaboration with the various arts related organizations including St. JanCo, the Gri Gri Project, the St. John School of the Arts, Virgin Islands Council on the Arts and VI National Park
2. Identify all current and new projects that support and expand the arts.
3. Prioritize based on feasibility, contribution to the mission, and funding
4. Align programs with "brick and mortar" projects like constructing an artist cooperative space, building a museum space, or renovating the historic Battery into a museum space

with fewer tourists available to purchase goods, while trying to rebuild physical structures to house their businesses, as well as lost inventory. Many artists are trying to work other jobs if possible, have limited time to create and lack space to do their work. Many also struggle with marketing their work and reaching beyond the Virgin Islands. In addition, individual artists and art teachers are not eligible for grants because they are not part of a 501c3 nonprofit organization.

Expanding and supporting the arts involves a holistic and long-term approach. Relevant programs could include providing working space for artists, creating a low-interest loan fund, incorporating workforce development, partnering with the National Park to develop Arts in the Parks, increasing the number of arts and music events and supporting youth programs such as the St. John School of the Arts and the Pan Dragons.



MUSEUM PARK

There are no museums to display or house artifacts, collectibles, or antiquities on St. John. Items that are earmarked for the historical society or held in private collections are at risk for damage from future storms. Development of a museum would reduce this inherent risk as part of preparedness planning.

Key Players: St.JanCo; Island Administrator

Alignment: NCR, Econ RSFs

Cost: > \$1 Million

Timeline: One - Three Years

St. John has previously been home to several small museums, but these facilities are no longer operating. A museum would help protect items of cultural significance to St. John and provide a new tourism site.

An ongoing effort to identify, assess, and repair damaged historic properties, items, and artifacts is being undertaken by St. John Historical Society and the Virgin Islands State Historic Preservation Office (VISHPO) in partnership with the Division of Libraries, Archives, and Museums (DLAM), the Council on the Arts, and the Virgin Islands Territorial Emergency Management Agency (VITEMA). This project involves locating usable public space or building an appropriate structure to house artifacts, artwork, and other items of historic value to St. John and the territory. Plans are being developed for St. John Historical Society to build a permanent location for a museum and archives.

IMPLEMENTATION STEPS

1. Support the Historical Society to develop a museum and archives on the St. John Community Foundation's historic Bellevue Estate site on Giff Hill Road

undertaken by St. John Historical Society and the Virgin Islands State Historic Preservation Office (VISHPO) in partnership with the Division of Libraries, Archives, and Museums (DLAM), the Council on the Arts, and the Virgin Islands Territorial Emergency Management Agency (VITEMA). This project involves locating usable public space or building an appropriate structure to house artifacts, artwork, and other items of historic value to St. John and the territory. Plans are being developed for St. John Historical Society to build a permanent location for a museum and archives.

A newly formed nonprofit, St.JanCo, is pursuing a project to renovate the historic Cruz Bay Battery for museum space. This is complementary to the newly declared Cruz Bay Historic District and part of a larger effort to tell the story of historic St. John. The Battery was originally constructed as a defensive fortification in 1774 and transitioned to the civil administration headquarters in 1824. The Battery has watched over the historic town of Cruz Bay for nearly two-and-a-half centuries. The Battery is the oldest standing utilized structure within the Historic District and the town's most distinguished landmark.

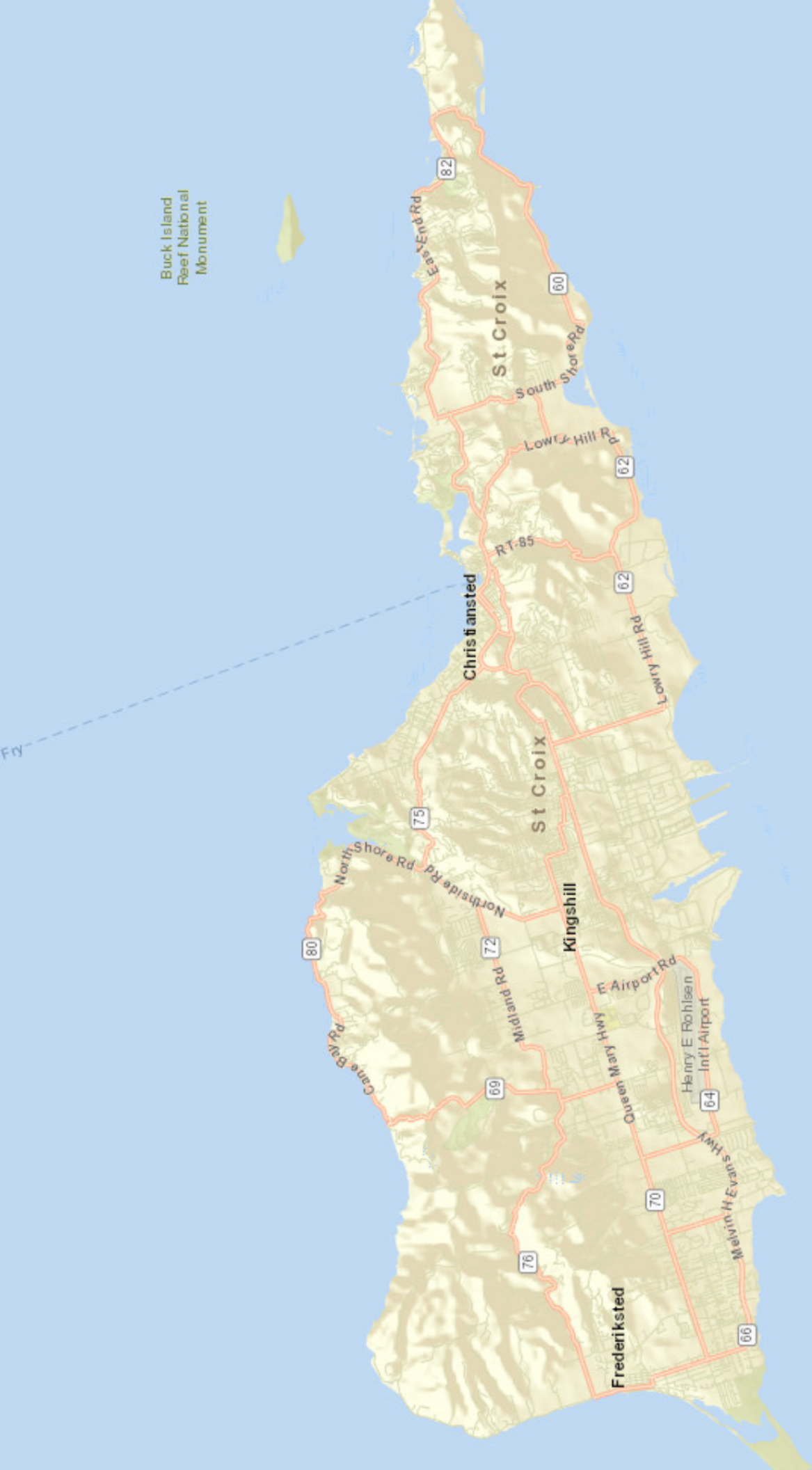
APPENDIX

maps

acronyms

planning tools

implementation steps & funding opportunities

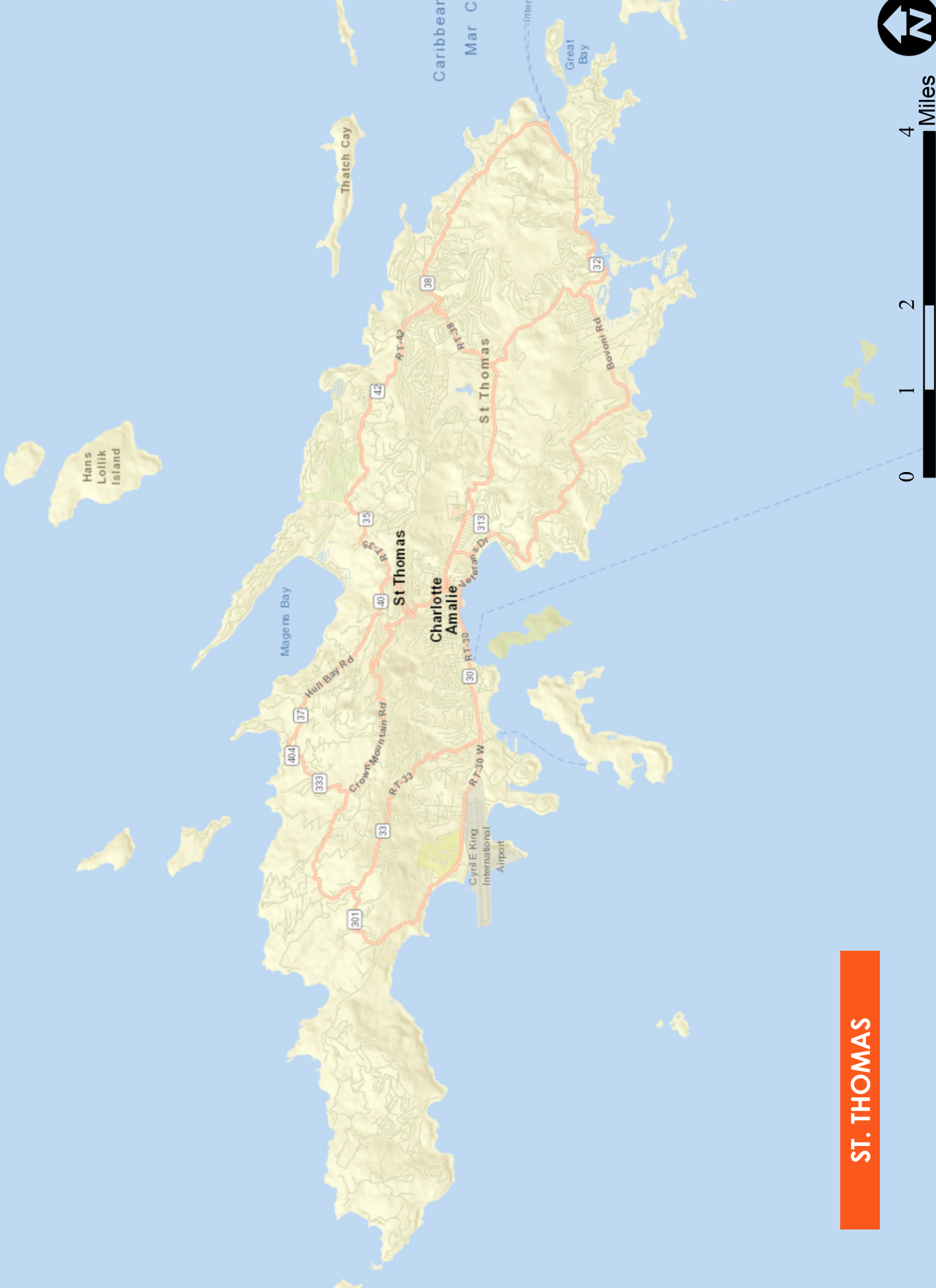


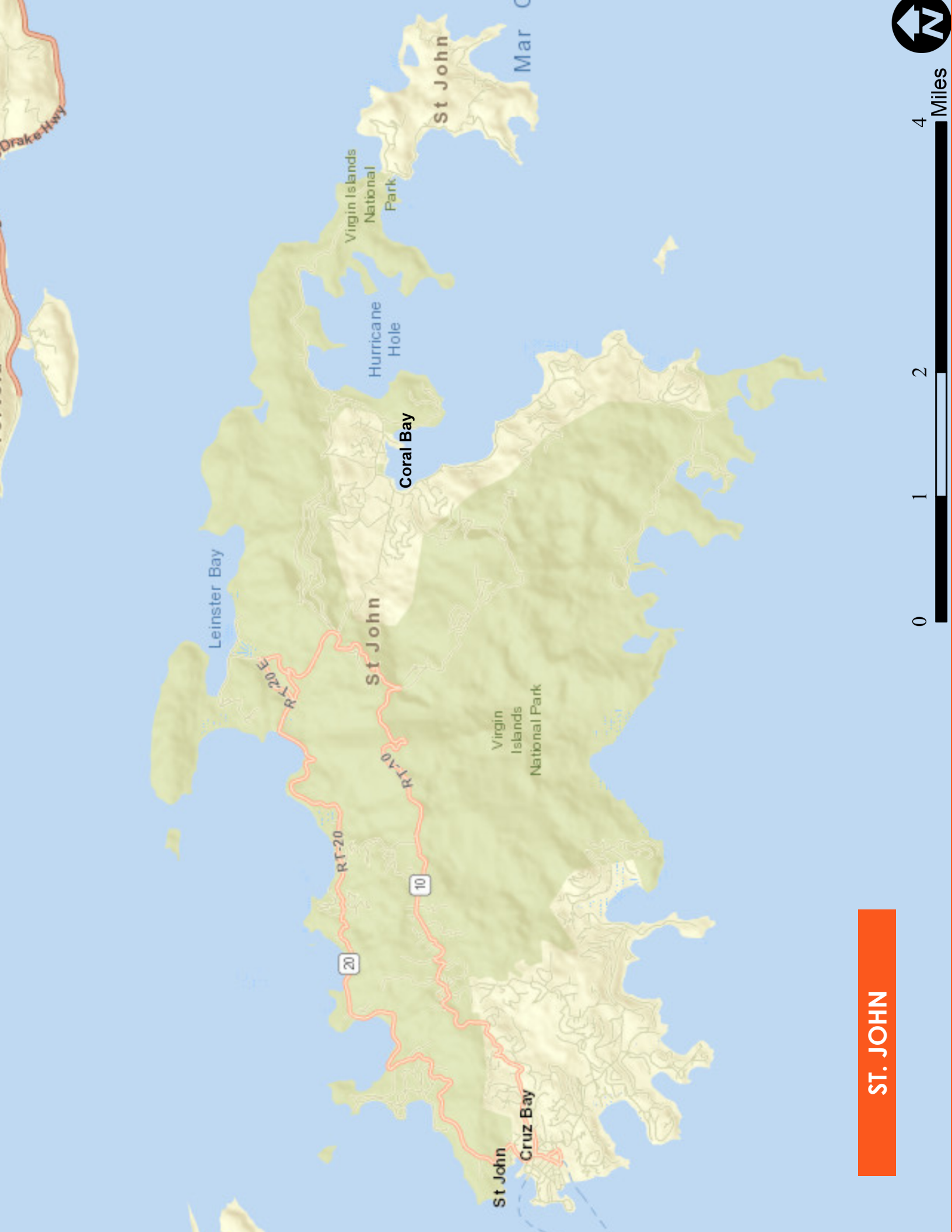
Buck Island
Reef National
Monument

ST. CROIX



ST. THOMAS





Drake Hwy

Leinster Bay

Virgin Islands National Park

Hurrricane Hole

Coral Bay

St John

Virgin Islands National Park

20

10

RT-20 E

RT-20

RT-10

St John

Cruz Bay

St John

Mar C

ST. JOHN



ACRONYMS

ACRONYM	FULL LENGTH WORDS
AARP	American Association of Retired Persons
APA	American Planning Association
ADA.....	Americans with Disabilities Act
Ag	Agriculture Recovery Support Function
CERT.....	Community Emergency Response Team
CDBG.....	Community Development Block Grant
CPCB	Community Planning and Capacity Building
DRSI	Disaster Recovery Support Initiative
Econ.....	Economic Recovery Support Function
EDA	Economic Development Administration
EOC.....	Emergency Operations Center
EPA.....	Environmental Protection Agency
FEMA.....	Federal Emergency Management Agency
HHS.....	US Department of Health and Human Services
Housing.....	Housing Recovery Support Function
HIPAA.....	The Health Insurance Portability and Accountability Act
HSS	Health & Social Services Recovery Support Function
HUD	US Department of Housing and Urban Development
IS	Infrastructure Systems Recovery Support Function
LTRP	Long Term Recovery Plan
MOU	Memorandum of Understanding
NASCIO	National Association of Chief Information Officers
NCR.....	Natural and Cultural Recovery Support Function
NDRF	National Disaster Recovery Framework
PFA.....	Psychological First Aid
PTSD	Post Traumatic Stress Disorder
PV	Photovoltaic
ROTC.....	Reserve Officers' Training Corps
RSF.....	Recovery Support Function
LTRT.....	Long Term Recovery Team
UNESCO.....	United Nations Educational, Scientific and Cultural Organization
USDA	United States Department of Agriculture
USVI.....	United States Virgin Islands
VICA.....	Virgin Island Council on the Arts
VIRP	Virgin Island Recycling Partnership
VITEMA.....	Virgin Islands Territorial Emergency Management Agency
VITRAN	Virgin Islands Transit
WAPA.....	Water and Power Authority

MAP AND DESIGN TOOLS

CommunityViz

<http://www.placeways.com/communityviz/index.htm>

CommunityViz planning software is an extension to ArcGIS Desktop that shows you the implications of different plans and choices. Planners, resource managers, local and regional governments, and many others use CommunityViz to help them make decisions about development, land use, transportation, conservation and more.

Urban Footprint

<https://urbanfootprint.com>

Urban Footprint is a cloud-based urban planning software that gives the user access to comprehensive environmental, social, and fiscal data to assess existing conditions, compare impacts, and build proposals.

Envision Tomorrow

<http://www.envisiontomorrow.org/>

Envision Tomorrow (ET) is an open-access scenario planning package that allows users to analyze how their community's current growth pattern and future decisions impacting growth will impact a range of measures from public health, fiscal resiliency and environmental sustainability.

PostGIS

<http://www.postgis.net/>

PostGIS is a spatial database extension for SQL that allows for basic location awareness.

QGIS

<http://www.qgis.org/>

QGIS is a free and open source geographic information system (GIS) for any computer operating system that allows users to create, edit, visualize, analyze, and publish geospatial information.

GRASS

<https://grass.osgeo.org/>

GRASS GIS is a free and open source GIS software suite used for geospatial data management and analysis, image processing, graphics and maps production, spatial modeling, and visualization.

SketchUp

<http://www.sketchup.com/>

SketchUp is an intuitive graphic design software for architects, engineers, and other users to draw scale plans and models of renovations, buildings, landscapes, and other physical design applications.

HAZUS

www.fema.gov/hazus

Hazus uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. It graphically illustrates the limits of identified high-risk locations due to earthquake, hurricane, flood, and tsunami.

MAP AND DESIGN TOOLS

SWMM

<https://www.epa.gov/water-research/storm-water-management-model-swmm>

The US Environmental Protection Agency's Storm Water Management Model (SWMM) is used for single event or long-term simulations of water runoff quantity and quality in primarily urban areas—although there are also many applications that can be used for drainage systems in non-urban areas. It is used throughout the world for planning, analysis, and design related to storm water runoff, combined and sanitary sewers, and other drainage systems.

NOAA Digital Coast Tools

<https://coast.noaa.gov/digitalcoast/>

Digital Coast is a platform of training and tools focused on helping communities address coastal issues.

EJ Screen

<https://www.epa.gov/ejscreen>

In order to better meet the Agency's responsibilities related to the protection of public health and the environment, EPA has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports.

Google Earth

www.google.com/earth/

Google Earth is a mapping tool hosted either on the web or on your desktop that computes distances and areas using measuring tools, allows for visualization, manipulation, and export of GIS data, and allows you to go back in time with historical imagery.

Surging Seas

<http://sealevel.climatecentral.org/>

Surging Seas is a mapping software that allows planners to visualize the level of sea rise due to climate change and determines risk to land areas for the future.

UrbanSim

<http://www.urbansim.com/home/>

UrbanSim is a simulation platform for supporting planning and analysis of urban development, incorporating the interactions between land use, transportation, the economy, and the environment.

LocalData

<http://localdata.com/>

LocalData is a cloud-based mapping platform that helps cities and communities make data-driven decisions by capturing and visualizing street-level information in real time.

TRANSIT TOOLS

SeeClickFix

<http://en.seeclickfix.com/>

SeeClickFix is a customizable smartphone application that allows users to snap pictures of issues that need to be corrected and geo-locates each issue to form reports for designated entities to correct.

OpenBike

<http://openbikeinitiative.org/>

The Open Bike Initiative was a project with the goal of designing and developing a model for bike sharing based on open hardware and open source software.

Walk [Your City], Wayfinding Signs

<https://walkyourcity.org/>

Walk [Your City] helps book community walkability, linking informational street signs for people with web-based campaign management and data collection to complement traditional approaches to way finding.

WALKscope

<http://www.walkscope.org/>

WALKscope allows residents and visitors to collect data related to sidewalks, intersections, and pedestrian counts. This information will help create an inventory of pedestrian infrastructure, identify gaps, and build the case for improvements

PRIORITIZATION, COMMUNICATION, AND ENGAGEMENT

CrowdGauge

<http://crowdgauge.org/>

CrowdGauge is an open-source framework for creating educational online games. It first asks users to rank a set of priorities, then demonstrates how a series of actions and policies might impact those priorities. The third part of the sequence gives users a limited number of coins, asking them to put that money towards the actions they support most.

UserVoice, ideation platform

<https://www.uservoice.com/product/>

UserVoice ties rich customer data to product feedback so you can prioritize your roadmap and quantify the business impact of features.

Field Papers, capturing data using paper maps

<http://fieldpapers.org/>

Field Papers allows for the making of an atlas online that you can print to take into the field and record observations and upload your field notes into an organized database.

PRIORITIZATION, COMMUNICATION, AND ENGAGEMENT

Engaging Plans

<https://www.urbaninteractivestudio.com/engagingplans/>

EngagingPlans reaches, informs, and involves citizens and stakeholders in public projects and decision making. This one-stop hub forms the backbone of your project communications, keeping documents, events, news and FAQs clear and up-to-date in one accessible location. Give community members a voice and collect feedback via discussions, surveys, or an idea wall.

NationBuilder

<https://nationbuilder.com/software>

NationBuilder empowers you to tackle your website content, email communications, social insights, and people management all in one place. Work seamlessly with data imported from the apps you're using now, in a system built to grow with you.

MetroQuest

<https://metroquest.com/>

MetroQuest is a website design application that focuses on building engaging websites, collecting user data, and producing reports for analysis

Textizen

<https://www.textizen.com/>

Interactive Text's web platform sends, receives, and analyzes text messages.

Park[ing] Day

https://www.asla.org/uploadedFiles/CMS/Events/Parking_Day_Manual_Consecutive.pdf

Park[ing] Day is an annual event that encourages community members, students, and designers to transform metered parking spaces into temporary parklets.

Project for Public Spaces (PPS)

<https://www.pps.org/>

PPS is a nonprofit planning, design, and educational organization dedicated to helping people create and sustain public places that build stronger communities.

The NCI Charrette System

www.charretteinstitute.org/

The National Charrette Institute is a collaborative system that helps people work together for building design capacity through group map analysis community planning activities

ENGAGE PUBLIC IN THE DESIGN OF COMMUNITY FACILITIES

Implementation Steps	Status
Public Schools	
Determine a process, timeline and support that is needed for continued public input in collaboration with the Department of Education for school location, design, programming, and services.	
Articulate a method for determining feasibility of proposed design, programming and services.	
Conduct a population projection to determine future populations as a part of the feasibility analysis. Include: <ol style="list-style-type: none"> 1) Current post-storm year-round population by age and location 2) five-year expected year-round population, by age and location 3) 20-year long-term vision population 	
Develop a communication strategy to inform the community about how to get involved, and how decisions were made and ensure that the community and stakeholders are invested in the final product.	
Care Facilities	
Determine a process, timeline and any support that is needed for continued public input in collaboration with the Department of Health for clinic location, design, and services.	
Articulate a method for determining feasibility of proposed design and services.	
Develop a communication strategy to inform the community about how to get involved, and how decisions were made; ensure that the community and stakeholders are bought-in to the final product.	

FUNDING OPPORTUNITIES

- Community Development Block Grant -Disaster Recovery
- Department of the Interior Capital Improvement Project Funding
- American Institute of Architects Center for Communities by Design
- USDA Rural Housing & Community Facilities Programs, Community Facilities Loans & Grants
- American Planning Association: Community Planning Assistance Teams

STAKEHOLDERS

USVI Department of Education; USVI Department of Health; Schneider Regional Medical Center and all medical providers; St. John Long-term Recovery Group; Coral Bay Community Council; St. John Community Foundation; Love City Strong; St. John School of the Arts; Partnerships in Hope; Giffit Hill School; Christian Academy; Rotary St. John Rescue; AARP; Citizen's Integration Team; Family Resource Center; Island Health and Wellness

BUILD COMMUNITY/YOUTH CENTERS IN CRUZ BAY AND CORAL BAY THAT CAN ALSO FUNCTION AS STORM SHELTERS

Implementation Steps	Status
Hold design charrettes to determine the best locations and scope for community facilities in Cruz Bay and Coral Bay as rebuilding takes place (see overlap with other projects such as public involvement in the design of facilities and walkability)	
Hold a conference of stakeholders (or incorporate in other meetings) to discuss the best model for long-term successful operation of these facilities. For example: local maintenance vs. St. Thomas responsibility.	
Compile a stakeholder advisory committee to assist in the outreach and design for construction of the two community centers/storm shelters.	

FUNDING OPPORTUNITIES

- FEMA Public Assistance & Hazard Mitigation Grant Program
- USDA-Rural Development
- HUD CDBG-DR

STAKEHOLDERS

Lt. Governor's Office; USVI Department of Education; USVI Department of Sports, Parks and Recreation; USVI Department of Human Services; Partnerships in Hope; Coral Bay Community Council; St. John Community Foundation; Love City Strong; My Brother's Workshop; Boy's and Girl's Club; STJ Rotary, LTRT

IMPROVE ROADS AND TRANSPORTATION SERVICES

Implementation Steps	Status
Roads	
Identify all public and private roads, properly title them and transfer to public as appropriate to help clarify maintenance responsibilities.	
Determine legal authorities for road repairs and funding sources, including funding for regular and long-term road maintenance.	
Identify improvement priorities, such as Route 10 Centerline Road. It is five years overdue for rebuild, including needed redesigned stormwater management. Current design and structures are from the 70s and earlier.	
Assess light pollution from recent street light modifications, and related safety concerns including temporary blinding, sleep reduction for humans and impact on wildlife; review intensity of lighting, and footprint of beams, updated to "turtle safe" lighting where needed.	
Barges	
Determine a method to continually update and publicize the car barge schedule, for instance noting when one barge is down; develop information for current and future services, hurricane emergency plans, and maintenance schedules from each barge company.	
Continue working with the three barge companies to identify collaboration opportunities with the Port Authority about scheduling, standards and responsibilities.	
Convene a stakeholder group to determine methods for supporting and expanding services that best meet customer needs. Consider topics such as: <ul style="list-style-type: none"> • Equitable methods for barge companies to share round-trip tickets • Government agencies paying ahead for service • Webcams for real-time congestion data and information • Financing for increased capacity Regulatory structure and opportunities to subsidize • Barge Capacity 	
Buses	
Identify funding for new buses or repairs to existing buses.	

FUNDING OPPORTUNITIES	STAKEHOLDERS
<ul style="list-style-type: none"> • FEMA Hazard Mitigation Grant Program • EPA Green Infrastructure • EDA Disaster Supplemental Funding • USDA Rural Development • FHWA and Public Assistance for Roads • Federal Transportation grants and bond financing for ferries/barges 	USVI Department of Public Works; USVI Department of Planning and Natural Resource; National Park Service; Port Authority; VITRAN; Taxi Association; Coral Bay Community Council; St. John Community Foundation; Homeowners Associations; Barge and Ferry Companies

IMPROVE SYSTEMS FOR POST-STORM COMMUNICATIONS

Implementation Steps	Status
Support systems for emergency communications system	
Support Love City Community Network to build out their emergency communications network, including hardening of equipment and formalizing the Rapid Emergency Communication Network Deployment Plan. Identify funding sources for equipment and staff.	
Support St. John Rescue to train Ham Radio operators and build-out a Ham radio emergency communications system.	
Advocate for communications providers to increase preparedness for future storms	
FCC requires that telecommunication companies must be able to demonstrate its ability to remain functional in emergency situations. Community groups could push companies to honor this requirement.	

FUNDING OPPORTUNITIES

- FEMA Hazard Mitigation Grant Program
- USDA-Rural Development Rural Broadband Access Loan
- EDA Disaster Supplemental Funding
- HUD CDBG-DR

STAKEHOLDERS

Bureau of Information Technology; viNGN; USVI Police Department; USVI Fire Department; Love City Community Network (LCCN); VITEMA; St. John Rescue; AT&T; VIYA; Broadband VI (and other Internet Service Providers), USVI Department of Licensing and Consumer Affairs, the Federal Communications Commission, U.S. Geological Survey; HAM radio club

IMPROVEMENTS TO 911 SYSTEM

Implementation Steps	Status
Determine the best system to make use of St. John Rescue resources and complete memorandum of understanding (MOU).	
Provide comprehensive training for 911 dispatchers and first responders in customer service, CPR, first aid, and what to do in crisis situations including active shooters, bombings, terrorist attacks, tsunamis, and hurricanes.	
Identify options to improve cell phone/wireless internet and/or land connectivity to ensure that all residents can call 911.	
Educate and encourage home and villa owners on St. John to have written directions to their home for use with first responders in the event of an emergency. Villa owners should provide such information at the front of their guest packets.	
Continue and expand Coral Bay Community Council's initiative to provide magnets with emergency phone numbers and directions to provide emergency responder.	

FUNDING OPPORTUNITIES

- USDA-Rural Development Telecommunications Infrastructure Loan and Community Facilities Program

STAKEHOLDERS

Virgin Islands Government departments, including the Tax Assessor, GIS, Public Works, Planning and Natural Resources; Water and Power Authority, Historic Preservation; VITEMA (Emergency Management/E-911), Police, Health; University of the Virgin Islands; Eastern Caribbean Center; St. John Rescue; EMS Coral Bay; viNGN; Love City Community Network (LCCN); St. John Long-term Recovery Group; Coral Bay Community Council

ST. JOHN SAFETY ROLL-CALL

Implementation Steps	Status
Coordinate and Organize	
Coordinate with current administrators of stateside Facebook roll call groups – Stateside St. Johnians Alliance for Hurricane Irma; St. John Roll Call Safe from Irma, St. John Roll Call Safe From Maria and the associated website applications	
Recruit volunteers based on duties/job descriptions: Regional Coordinator (east side of island, and west side of island) Zone Managers, Neighborhood Canvasser and Stateside Coordinator.	
Develop a zone map to organize neighborhood canvassing.	
Communicate with Love City Strong Go Teams, St. John Rescue and first responders to establish a reporting process for any health or safety issues during a post-disaster canvassing effort.	
Determine a process to compensate or otherwise incentivize key volunteers to ensure coverage of duties and/or transfer of responsibilities should someone be off-island for an extended period.	
Develop a database website and cell-phone applications	
Determine if refinement of applications used in Irma and Maria would perform needed functions, or if developing a new application, based on the desired functionality of the website, is needed	
Develop mobile applications and text message alerts	
Communications and Outreach	
Conduct an outreach campaign; get people to opt-in as part of the project including indicating whether or not they would like to be publicly listed as safe	
Involve shelter managers, churches, homeowners associations	
Secure a grant to make use of Language Line Solutions for needed translation services	

FUNDING OPPORTUNITIES	STAKEHOLDERS
<ul style="list-style-type: none"> • FEMA Hazard Mitigation Grant Program • Americares • American Red Cross • Other Private Foundations 	USVI Department of Public Works; USVI Department of Planning and Natural Resource; National Park Service; Port Authority; VITRAN; Taxi Association; Coral Bay Community Council; St. John Community Foundation; Homeowners Associations; Barge and Ferry Companies

COORDINATE RESOURCES TO ASSIST HOMEOWNERS IN REBUILDING HOMES STRONGER

Implementation Steps	Status
Continue vetting rebuilding projects through the Disaster Case Management system Coordinate the construction process through	
Coordinate the construction process through housing and construction coordinators, hired by the Long-term Recovery Group and Love City Strong.	
Support and train construction crews to incorporate mitigation best practices.	
Track rebuilding activity and incorporate this data into a GIS database that can serve as a central point for information.	
Secure additional funding increase the number of houses and rental units that can be repaired through this process	
Provide education about building homes to withstand hurricanes, understanding the new building codes, and the importance of following the codes.	

FUNDING OPPORTUNITIES

- USDA-Rural Development
- HUD CDBG-DR

STAKEHOLDERS

VITEMA; USVI Department of Planning and Natural Resource; USVI Housing Finance Authority; St. John Construction and Housing Long Term Recovery Work Group; Love City Strong; St. John Community Foundation, All Hands and Hearts; private contractors

IMPROVE STORM WATER MANAGEMENT AND REPAIR WASTEWATER TREATMENT PLANT

Implementation Steps	Status
Conduct hydrology study for all watersheds on St. John	
<p>Conduct hydrology study for all watersheds on St. John. Develop a hydrological & hydraulic model that:</p> <ol style="list-style-type: none"> 1. Incorporates the island's unique topography, geology and climate conditions 2. Includes variables such as: 100-year, 200-year and 500-year floods, severe storm events and climate change (i.e. sea level rise) 3. Test water infiltration rates and soil types 4. Assesses surface water flow and groundwater locations along with their properties (i.e. water quality) 	
Create a watershed management plans for all of the watersheds on St. John, similar to the Coral Bay Watershed Management Plan.	
Evaluate the concept of Watershed Utility Districts to provide funding for upkeep and maintenance, and to approve development plans for water flow implications.	
Identify and prioritize stormwater management construction projects to improve natural drainage, and stabilize roadways, cut slopes and other terrain.	
Develop and institute protocols across agencies and community groups to make use of available data and information to implement resilient stormwater management techniques in development and redevelopment.	
Update wastewater treatment plant. The Cruz Bay wastewater treatment plant has experienced issues related to heavy stormwater runoff and drainage.	
Seek out opportunities for workforce development related to jobs in these specialties.	

FUNDING OPPORTUNITIES

- FEMA – Hazard Mitigation Grant Program and Public Assistance
- Grants from: Federal Highway Administration, Environmental Protection Agency, NOAA, and the Economic Development Administration

STAKEHOLDERS

U.S. Federal Highway Administration (FHWA), VITEMA, USVI Department of Public Works, Virgin Islands, USVI Department of Planning and Natural Resources, U.S. Environmental Protection Agency, Coral Bay Community Council, St. John Community Foundation, St. John Long Term Recovery Team

IMPROVE ACCESS TO MENTAL HEALTH SERVICES

Implementation Steps	Status
Increase mental health therapy & address storm-related post-traumatic stress	
Recruit and fund more therapists to work on St. John in coordination with Island Health & Wellness and the Dept. of Health.	
Identify locations where they can work, and long-term funding sources to ensure that this resource is always available.	
Consider offering group therapy.	
Identify methods to make the service more appealing to all community members.	
Supportive services for children and families	
Develop a network of service providers and volunteers to provide wrap-around services to family and children.	
Support teachers and parents in providing a healthy and supportive environment for youth as they recover from the trauma and disruption caused by the hurricane.	
Determine a funding source to provide Family Engagement for Teachers trainings.	
Train teachers and frontline service providers in psychological first aid and ensure that the capacity remains on island to continue providing trainings, long-term.	
Address chronic and acute mental health issues	
As a part of the Territorial Health Plan that is being developed, include options to treat chronic mental illness and substance abuse issues on St. John. Assertive Community Treatment (ACT) is a model that has been proven to work in other communities.	

FUNDING OPPORTUNITIES

- Americares
- HUD CDBG-DR
- USDA-Rural Development

STAKEHOLDERS

The USVI Department of Health, Substance Abuse and Mental Health Services Administration, National Alliance on Mental Illness, Schneider Medical Center; Island Health & Wellness, and Private providers such as Cruz Bay Family Practices.

PROVIDE ACCESS TO HEALTH CARE FOR THE UNINSURED/UNDERINSURED POPULATION ON ST. JOHN

Implementation Steps	Status
Continue to recruit a pediatrician to work at Island Health and Wellness or to be a sponsor for that location. Identify funding for this position. Possibly make use of the National Health Service Corps Loan Forgiveness Program as a recruiting tool.	
Continue to seek creative solutions or partnerships to provide pediatrician services at Island Health & Wellness.	
Review the revolving loan fund and redevelop bylaws/support the board of directors as necessary. Pursue additional funding to meet the increasing needs of Island residents.	

FUNDING OPPORTUNITIES

- Americares
- Robert Wood Johnson Foundation
- The Charles A. Frueauff Foundation Inc.

STAKEHOLDERS

USVI Department of Health; Island Health & Wellness, Cruz Bay Family Practice; St. John Health Long-term Recovery Team

EMERGENCY MEDICAL SERVICES & TRANSPORTATION

Implementation Steps	Status
Determine methods for community involvement in rebuilding of Myrah Keating Clinic.	
Identify locations for small-scale emergency clinics in Coral Bay and other locations across the island, in particular locating potential scalable workspace for providing emergency care during a crisis/disaster.	
Work at the territorial level to determine feasibility of additional/alternative options for emergency evacuation by boat/air.	
Procure funding for smaller ambulances that are more appropriate for the terrain than the current fleet.	
Convene a focus group to identify challenges and opportunities regarding emergency care in St. John. This effort may be informed by the work of a Johns Hopkins evaluation.	

FUNDING OPPORTUNITIES

- USDA- Rural Development Community Facilities Program;
- FEMA Assistance to Firefighters Grants
- Foundation for First Responders and Firefighters Grants

STAKEHOLDERS

The USVI Department of Health - Emergency Medical Services; USVI Departments of Police & Fire; St. John Rescue; Coral Bay Community Council; St. John Community Foundation; Love City Strong

DEVELOP TELEMEDICINE

Implementation Steps	Status
Create a project committee charged with researching telemedicine providers and resources and which providers and services could be made available on St. John. The Cleveland Clinic is a good starting point, since it already has a history with telemedicine on St. John.	
Inventory existing equipment to see what can be reused and what needs to be replaced. For instance, a T1 line was previously installed at the clinic.	
Seek outside funding for telehealth and telemedicine services on St. John and determine a method to create a sustainable funding stream to allow the project to continue indefinitely and to update its technology as needed.	

STAKEHOLDERS

USVI Department of Health, Schneider Regional Medical Center; USVI Police Department; Virgin Islands Fire Service; Virgin Islands National Park; St. John Rescue; Coral Bay Community Council; St. John Community Foundation; Love City Strong

IMPROVE ACCESS TO HEALTHY FOOD

Implementation Steps	Status
Conduct an analysis on food insecurity on the island. Identify effect on vulnerable populations such as children and seniors.	
Support churches and other groups in developing food banks and community kitchens. Identify funding sources. Assess community support for starting a community garden and proceed to do so if supported.	
Conduct a community food systems assessment in partnership with Iowa State University Community Food Systems program.	
Determine methods to increase food production locally and purchase fresh/healthy food from nearby islands.	
Reach out to the coordinators of recent pre-storm projects in sustainable local agriculture that may be able to be continued, expanded to, or replicated on St. John with additional support include endeavors such as the Ridge to Reef CSA on St. Croix and the Crate Crops VI on St. Thomas and determine their feasibility on St. John and what support would be required.	

FUNDING OPPORTUNITIES

- The Charles A. Frueauff Foundation Inc.
- Robert Wood Johnson Foundation
- USDA Food and Nutrition Services Program
- USDA-Rural Development Community Facilities Program

STAKEHOLDERS

Department of Agriculture, UVI Cooperative Extension Services; Catholic Charities; Seventh Day Adventist Church and other houses of worship; the Garden Club; Iowa State University Extension's Community Food Systems; Farmers

DEVELOP PROGRAMS TO CREATE A MORE RESILIENT WORKFORCE

Implementation Steps	Status
Diversifying the economic drivers of the economy	
Identify strategies to interconnect tourism with other industries such as agriculture, green energy, aquaculture and environmental conservation.	
Determine the feasibility of increasing local agricultural products and lowering dependency on imported food by harnessing the use of hydroponic shipping container farms through a project such as or similar to Crate Crops on St. Thomas using containers such as those made by CropBox or Freight Farms in the States.	
Continue to support efforts to increase solar and other green energy use to reduce dependence on off-island fossil fuels, create on-island energy sources, and create new innovations and jobs in the green energy sector for island residents.	
Continue to develop niche tourism markets such as heritage-tourism, which will build a strong market for local artists and will be a part of documenting the story of this unique place.	
Strengthening and diversifying the skills of the workforce	
Identify and evaluate fields in which to focus workforce development, including construction and trades; arts and craftsmanship; renewable energy and energy conservation; internet technologies; waste reduction; green product development; local food production/export of local products.	
Develop training programs through the development of a technical and vocational school. It could potentially be funded through a public/private partnership with the VI Dept. of Education, the University of the Virgin Islands, nonprofit organizations and private businesses.	
Develop an artist cooperative workspace to give new artists an affordable option to create and sell their craft and an opportunity for artists to network and support one-another.	

FUNDING OPPORTUNITIES	STAKEHOLDERS
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<ul style="list-style-type: none"> • Project Management Institute Educational Foundation • Youth Build • Economic Development Administration Disaster Supplemental Funding • USDA Rural Development- Community Development Initiative Grants • AT&T Foundation 	<p>USVI Dept. of Labor, VI Economic Development Authority, USVI Dept. of Tourism, Caribbean Center at USVI, VI Dept. of Education, Love City Strong and the St. John Community Foundation; St.JanCo</p>
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COOPERATIVE WORKING SPACE FOR ARTISTS

Implementation Steps	Status
The first step in this project is to identify a space and to procure necessary agreements/ funding. A design process for the facility can be accomplished through a collaborative process with current and upcoming artists to ensure the space is designed in the best way possible.	

FUNDING OPPORTUNITIES

- CDBG-DR, National Endowment for the Arts – Our Town Grant,
- Communities Thrive Challenge
- Economic Development Administration Disaster Supplemental
- The Kresge Foundation
- Puffin Foundation

STAKEHOLDERS

Virgin Islands Council on the Arts; St.JanCo; the Gri Gri Project; St. John Arts & Culture Long-term Recovery Team

RESILIENT ENERGY SYSTEM

Implementation Steps	Status
Energy Infrastructure	
Support the Governor’s Taskforce and WAPA’s initiative to establish St. John as a global model for energy sustainability and resilience; this would include building two hybrid microgrids in Cruz Bay and Coral Bay and developing at least 4-6 MW of additional photovoltaic solar capacity through utility-scale projects and grid-tied distributed rooftop solar, to achieved solar capacity equal to 100% of St. John’s peak load.	
Energy Education and Conservation	
Educate residents and visitors on the environmental and monetary benefits of energy conservation and efficiency.	
Promote energy audits as a first step in identifying energy conservation measures. Seek out training opportunities for workforce development related to renewable energy and energy efficiency.	
Encourage energy conservation measures in new construction and retrofitting of older homes and businesses.	
Residential and commercial preparedness	
Encourage the use of Solar and Water Pods as an alternative to gasoline- and diesel-powered generators. A solar pod is a solar powered generator that can be modified to provide appropriate-sized storage for home and industry, and can be packed away and easily deployed; it includes solar panels and batteries capable of running a refrigerator, water pump, and lights and can charge cell phones or laptops. These pods may also be adapted to a permanent installation. Additional funds are needed to distribute these units to households in need.	

FUNDING OPPORTUNITIES

- FEMA – Hazard Mitigation Grant Program
- EDA Disaster Supplemental Funding
- U.S. Department of Agriculture Rural Energy for America Program
- Office of Energy Efficiency and Renewable Energy
- Charles Stewart Mott Foundation

STAKEHOLDERS

USVI Water and Power Authority, USVI Dept. of Public Works, Love City Community Network, USVI Energy Office, USVI Public Service Commission, Environmental Sustainability Long-Term Recovery Working Group

DEVELOP RECYCLING FACILITIES, REDUCE SOLID WASTE

Implementation Steps	Status
Review recycling studies that have been conducted and, if necessary, do additional financial feasibility assessment.	
Develop island-scale models to incorporate into a comprehensive plan for solid waste management on St. John. Evaluate environmental and economic impacts associated with creation of novel commodities for use on-island or shipped overseas.	
Build multipurpose waste and recycling/ composting facilities across the island.	
Develop home-based education program on recycling and source separation.	
Support the rebuilding and expansion of the one recycling facility in existence prior to the storms, operated by Island Green Living, a not-for-profit organization. The facility is planned to be rebuilt to exhibit and interpret recycling technologies.	
Create training opportunities and skill development to address industry-related workforce needs.	

FUNDING OPPORTUNITIES

- FEMA – Hazard Mitigation Grant Program
- USDA Rural Development Solid Waste Management Grants

STAKEHOLDERS

USVI Waste Management Authority; Island Green Living; Coral Bay Community Council, Environmental Sustainability Long-term Recovery Group

IMPROVE LAND-USE PLANNING AND ENFORCEMENT

Implementation Steps	Status
Actions to take Territory-wide	
Review the two documents described in the background section and prioritize sections relevant to the territory today, as appropriate.	
Determine which sections of this compiled document need further updating.	
Review the outreach process notes from the Rutgers effort on to identify issues with the current zoning code and associated issues, then open a new dialogue for a new comprehensive planning process for 2020 and beyond.	
Actions to take on St. John	
Form a Stakeholder Advisory Committee, hosted by DPNR – including representatives from relevant nonprofit organizations and government agencies, individuals representing all neighborhoods, and individuals representing all demographic groups. This group should guide the entire process and be in charge of a community outreach campaign.	

FUNDING OPPORTUNITIES

- CBDG-DR; American Planning Association – Community Planning Assistance Teams
- American Institute of Architects – Center for Communities by design

STAKEHOLDERS

USVI Department of Planning and Natural Resources – Division of Comprehensive and Coastal Zone Planning, VI Legislature, Office of the Governor, St. John Administrator, St. John Long-term Recovery Team, Coral Bay Community Council

INCREASE OPTIONS FOR AFFORDABLE HOUSING

Implementation Steps	Status
Analyze housing situation and align incentives	
Conduct housing analysis – focused on supply and demand. Determine the number of houses that are currently short-term rental, long-term rental, and owner occupied or vacant. Analyze the current and future demand for housing type.	
Identify existing incentives for affordable housing and determine whether they are sufficient. Incentives include programs such as Low Income Housing Tax Credit (LIHTC), USDA-Rural Development 538 loan guarantee program.	
Determine if additional incentives are needed and if so how to fund them.	
Homebuyer education	
Coordinate with the VI Public Housing Finance Authority to conduct a Home Buyers Education Program.	
Provide Counseling services to reach homeownership goals, including pre-purchase, post-purchase and foreclosure prevention	
Provide education about NFIP, homeowner's insurance.	
Provide education about mitigation strategies.	
Developer/Construction education – workforce development	
Connect with the Virgin Islands Housing Finance Authority to document the lessons learned in the development of the affordable housing units currently on St. John.	
Provide education and outreach about the best way to package incentives to make an affordable housing development financially viable. Provide technical assistance for planning, construction, legal aid.	
Develop workforce development program to increase skilled labor and trades.	
Provide workshops and training opportunities on the updated codes and mitigation strategies.	
Title Issues and Property Taxes	
Determine methods to clear outstanding title issue and provide legal aid to individuals.	
Review property tax structure to determine if the system is equitable and if there are opportunities to increase the certainty of future taxes.	

FUNDING OPPORTUNITIES	STAKEHOLDERS
<ul style="list-style-type: none"> • CDBG-DR; Home Depot Foundation – Veteran Housing Grants Program • HUD HOME Investment Partnership Program • Neighbor Works America • USDA Rural Community Development Initiative Grants • Kresge Foundation 	<p>Virgin Island Housing Finance Authority; Virgin Island Housing Authority; U.S. Department of Housing and Urban Development; Love City Strong; St.JanCo</p>

DEVELOP PERMANENT SHELTERS FOR VULNERABLE POPULATIONS

Implementation Steps	Status
Conduct a feasibility study to determine the number of people that may need to make use of a shelter.	
Determine whether one facility or multiple facility will needed to serve potential clients.	
Identify affordable options to meet the need.	
Gain community support around the preferred and feasible solutions.	

FUNDING OPPORTUNITIES

- HUD CBDG-DR
- The Ittleson Foundation
- Tzu Chi Foundation
- US Dept. of Justice Grants
- The Charles A. Frueauff Foundation Inc

STAKEHOLDERS

USVI Department of Human Services; Family Resource Center; St. John Community Foundation; Love City Strong; St. John Long Term Recovery Team

DEVELOP A STRONG COMMUNITY SUPPORTED EDUCATION SYSTEM, DURING AND AFTER SCHOOL HOURS

Implementation Steps	Status
Transportation for students after school hours	
Secure funding for two vans, and drivers. The vans could be owned by the Dept. of Sports Parks & Rec and will be used to ensure that a lack of transportation is not keeping any kids from participating in activities.	
Continue coordination and outreach for current youth programming and expand as necessary	
Continue use and promotion of a new Facebook page STJYO as a central online location for youth activities. Develop boards to post information about activities at the Dept. of Sports, Parks, and Recreation and the St. John Community Foundation.	
Identify any gaps in afterschool programming for all children and develop a plan to expand.	
Developer/Construction education – workforce development	
Continue use and promotion of a new Facebook page STJYO as a central online location for youth activities. Develop boards to post information about activities at the Dept. of Sports, Parks, and Recreation and the St. John Community Foundation.	
Identify any gaps in afterschool programming for all children and develop a plan to expand.	
Improve Athletic Facilities and Playgrounds	
Work with the National Park, Dept. of Sports, Parks, and Recreation, and others to ensure adequate outdoor recreational amenities – particularly while the Sprauve School field is being used for modular classrooms.	
Create Partnerships with Sprauve School and Giff Hill School	
Partnerships between the schools and nonprofits organizations, businesses and agencies can allow the community to fill in the gaps where the schools are unable to – examples include providing technical and vocational training and mental health services. In the long-term, a vocational school could be built and operated through a public-private partnership.	
Support the development of community centers and youth center	
Several organizations have plans for developing multipurpose community/youth centers to fill the need for more community space, meeting space and youth facilities. These facilities are planned for both ends of the island and will be most effective if planned in concert. It could include space for other youth organizations including My Brother's Workshop and a Boys & Girls Club.	

FUNDING OPPORTUNITIES
<ul style="list-style-type: none"> • HUD CBDG-DR • USDA-RD Community Facilities Programs • KEEN Effect Grant Program • Community Foundation of the Virgin Islands • Good Sports; KIDS in the GAME: Go! Grants for Schools • Action-Based Learning Game Changer Grant; Action for Healthy Kids Grants; • The Charles A. Frueauff Foundation Inc. • Charles Stewart Mott Foundation

STAKEHOLDERS
<p>USVI Department of Education, USVI Department of Sports, Parks and Recreation, Sprauve School, Giff Hill School, St. John Community Foundation; Coral Bay Community Council, the Rotary Club of St. John, Love City Strong; My Brother's Workshop, Boys and Girls Club and the Youth Long-Term Recovery Work Group</p>

**CREATE AN ADVOCACY GROUP FOR NON-ENGLISH SPEAKERS AND IMPROVE ESL PROGRAM
IN SCHOOLS**

Implementation Steps	Status
Identify leaders and begin to build a network to provide supportive services	
Identify and communicate needs within the community and develop any needed skills	
Empower all communities and to improve networking between groups	
Develop an advocacy group to build support within and between various groups and help individuals navigate legal systems and gain access services	

FUNDING OPPORTUNITIES

- HUD CBDG-DR
- CLIF Bar Family Foundation
- Community Foundation of the Virgin Islands
- St. John Community Foundation
- The Charles A. Frueauff Foundation Inc.
- Charles Stewart Mott Foundation

STAKEHOLDERS

USVI Department of Education; Houses of Worship, St. John Community Foundation, St. John Long-term Recovery Team.

BUILD A SENIOR LIVING FACILITY

Implementation Steps	Status
This first step is to conduct a demand analysis study to determine the feasibility of this project and appropriate sizing of the facility. Land will need to be acquired, ideally in close proximity to the Myrah Keating Smith Health Center.	

FUNDING OPPORTUNITIES

- HUD CBDG-DR
- USDA – RD Community Facilities Program and Community Development Initiative Grants
- The Kresge Foundation

STAKEHOLDERS

USVI Department of Health; USVI Department of Human Services; St. Ursula's Senior Center, Adrian Senior Center (currently closed due to storm damage); St. John Community Foundation; Love City Strong

PROTECT NATURAL RESOURCES

Implementation Steps	Status
Coral reef restoration	
Implement a plan for forest recovery	
Encourage planting native plants and trees	
Protect mangrove areas for regrowth and restoration	
Support a lionfish reduction program	
Sargassum protection and removal program	
Promote Dark Skies Initiative (in support of protecting sea turtles; star visibility). The Environmental Sustainability work group is conducting a lighting audit identify lights that are bright enough to be potentially damaging to sea turtles	
Foster additional education about mangroves, migratory birds, and bats	
Encourage and support trash cleanups including in environmentally sensitive mangroves	
Encourage bat-house building and placement in support of conservation and public health	
Provide roosting sites and encouraging the presence of these bats helps reduce the spread of Dengue, Chikungunya, and Zika.	
Plastic-free island campaign - Plastic, carelessly disposed in both land and the marine environments, threatens animals and creates an unhealthy environment. This effort supports the elimination of disposable, single-use cups, drinking straws, bottles and shopping bags, and seeks to actively promote these efforts in public and private venues.	
Public water stations for bottle refills and to discourage single-use bottles	

FUNDING OPPORTUNITIES	STAKEHOLDERS
<ul style="list-style-type: none"> HUD CBDG-DR KEEN Critical Coastlines Grant Program The Ittleson Foundation The Lawrence Foundation Community Foundation of the Virgin Islands The Curtis and Edith Munson Foundation Quadratec Cares "Energize the Environment" Grant Program The Nature Conservancy US Department of Agriculture: Natural Resources Conservation Service, Tree Assistance Program and Olmsted Center for Landscape Preservation US Department of Homeland Security: Federal Emergency Management Agency: Hazard Mitigation Grant Program US Department of the Interior: National Park Services: Technical Assistance US Department of Interior: Office of Insular Affairs: Coral Reef & Natural Resources Initiative US Environmental Protection Agency: Technical Assistance 	<ul style="list-style-type: none"> USVI Department of Planning and Natural Resources Caribbean Oceanic Restoration & Education Foundation Coral Bay Community Council Environmental Sustainability Long-term Recovery Group Get Trashed St. John Island Green Living Association VI National Park Friends of the National Park

IMPROVE SECONDARY ACCESS ROUTE TO CORAL BAY AND FISH BAY

Implementation Steps	Status
Determine whether/when DPW and DPNR could lead a planning process focused on roads and connectivity in St. John.	
Compile a Stakeholder Advisory Committee and create a public involvement plan. As a part of the public outreach, conduct an activity that allows people to prioritize investments using fake money. For example participants can be given a budget for construction and maintenance and determine whether they would rather invest in an additional new road, or improving existing roads and see how that impacts ongoing maintenance costs paid from local taxes.	
Secure funding to support the planning process as well as for construction and maintenance.	

FUNDING OPPORTUNITIES

- American Planning Association – Community Planning Assistance Teams
- American Institute of Architects – Center for Communities by design

STAKEHOLDERS

USVI Dept. of Public Works, USVI Dept. of Planning and Natural Resources, VITEMA; National Park Service, Coral Bay Community Council, St. John Community Foundation; Home Owner Associations

HOME HEALTH CARE & HOSPICE PROGRAM

Implementation Steps	Status
Conduct a feasibility study to determine the need for this service and the level of use could be expected.	
Convene a group of stakeholders to determine and evaluate options.	
Determine whether to expand the St. Thomas hospice service (Continuum Care) or develop a new service for St. John.	
Determine what would be necessary to fill this need – for instance, three nurses living on St. John that could cover any needs, on call at all times.	

STAKEHOLDERS

Health care providers on St. John, Virgin Islands Dept. of Health

IMPROVE THE ABILITY OF MEDICAL PROVIDERS TO SECURELY SHARE ELECTRONIC RECORDS

Implementation Steps	Status
Select a Key Players and recruit a support team for the project.	
Initiate an informational campaign to increase buy-in from local providers and healthcare recipients.	
Select an EHR provider (assess St. John's needs, cost factor, resources, technical expertise available) that is cloud-based to: reduce upfront hardware and software costs, address ongoing maintenance costs, ensure a higher level of IT service available and allow for scaling.	
The pre-implementation phase should include: establishing a governance process and a project plan, communicating with healthcare staff and patients, redesigning workflows and providing education.	
Consider tailoring the system to meet St. John requirements, establishing a change-management process, determining how to backload patient medical histories from paper copies and helping participating practices account for time staff needs to learn and use the system.	
Set up a process for monitoring and measuring implementation success and make adjustments as needed.	

FUNDING OPPORTUNITIES

- Medicaid (eligible for 100% Federal assistance for updating EHR and 90% for administrative costs for Health Information Technology)
- National Network of Libraries of Medicine Southeastern/Atlantic Region

STAKEHOLDERS

Health care providers on St. John, Virgin Islands Dept. of Health

DESIGN CRUZ BAY AND CORAL BAY FOR IMPROVED WALKABILITY, PUBLIC SPACES, AND WATERFRONT ACCESS FOR PEDESTRIANS AND BOATS

Implementation Steps	Status
Planning and Design	
Compile relevant information, including past plans and studies, zoning, and property ownership.	
Conduct a planning process/design charrette, involving all stakeholders to determine the best long-term design for Cruz Bay and Coral Bay. The results of this planning process could include a design for the two commercial areas and plans for pedestrian infrastructure; and green infrastructure/stormwater management.	
Coordinate with WAPA and determine where and when power lines will be placed underground and prioritize redesign in those areas according to their timetable for construction efforts. Identify any additional opportunities for coordination during the rebuilding process.	
Policy	
Establish “complete streets” design guidelines for public roadways with the aim to enable safe access for all users. Work with DPNR to ensure that new codes and guidelines are followed as infrastructure upgrades are made.	
Create design standards in conjunction with the National Historic District.	

FUNDING OPPORTUNITIES

- AIA – Center for Communities by design
- AIA – Codes Advocacy Program
- EDA Disaster Supplemental Funding
- EPA Building Blocks for Sustainable Communities
- US Department of Transportation-Federal Highway Administration

STAKEHOLDERS

USVI Department of Public Works, USVI Water and Power Authority, USVI Department of Planning and Natural Resources, Virgin Islands Port Authority, St. John Island Administrator, St. John Long-term Recovery Team, St. John Community Foundation, Coral Bay Community Council

IMPLEMENT BEAUTIFICATION PROJECTS

Implementation Steps	Status
Identify a Key Players to coordinate beautification efforts.	
Gather and coordinate volunteers that can be mobilize to complete projects.	
Identify and prioritize key areas to focus beautification efforts that will have the biggest impact and/or are feasible in the short term.	
Raise community support and funding for beautification.	
Establish a process to incentivize building owners to undertake beautification projects, including monetary incentives, volunteer labor, legal aid, etc.	
Establish a process to maintain cleanliness and landscaping – such as an “adopt-a-block” structure where individuals or organizations can take responsibility for a section of town.	

FUNDING OPPORTUNITIES

- HUD CDBG-DR

STAKEHOLDERS

Virgin Islands Department of Public Works, USVI Port Authority, St. John LTRT, St. John Community Foundation, (proposed) Small Business Alliance, USVI Dept. of Tourism, VITRAN, Love City Strong, Business owners and town residents

CREATE A SMALL BUSINESS ALLIANCE

Implementation Steps	Status
Establish the structure	
Finish creating mission statement, create goals and establish roles and funding sources.	
Find an outside expert on creating successful business alliances and invite them to speak to the founding members and provide advice for how to achieve success.	
Determine whether membership dues will be required and how they will be decided, as well as potential participation requirements and the topics, schedule, and regularity of any necessary or desired meetings.	
Determine whether a paid position will be necessary to coordinate and manage the alliance. Create a job description and identify an initial funding source. Determine if this position can be maintained through dues or whether ongoing outside funding will be necessary.	
Programming	
<p>Create a list of actions and projects the Alliance wishes to undertake; assign members to lead those projects, and determine their priority and a timeline for their completion. Programs could include:</p> <ul style="list-style-type: none"> • Health insurance pool • Intra-Alliance mentorship program to support members • Mentorship and job training program to place local youth in work experience and learning roles with local small businesses • Guest speaker series • Web development support for members • Coordinated bulk ordering/purchasing of commonly used goods 	
Long-Term Sustainability	
Create a long-term plan for how the Alliance will be managed, funded, and will grow and adapt to ever-changing needs of the business community over time to ensure that the Alliance continues to be an asset to and serves the community for a very long time.	

FUNDING OPPORTUNITIES

- EDA Disaster Supplemental Funding
- Communities Thrive Challenge

STAKEHOLDERS

USVI Economic Development Authority; USVI Dept. of Tourism; St. Thomas/St. John Chamber of Commerce; St. John Rotary; Small Business Development Agency; Economic Long-term Recovery Group, St. John Community Foundation, Coral Bay Community Council

PROMOTE THE CRUZ BAY HISTORIC DISTRICT

Implementation Steps	Status
Identify a coordinating entity to create a vision, brand, and plan for preserving and promoting the historic district.	
Engage residents and stakeholders to develop a plan that summarizes the assets that the neighborhood has to offer and implements a range of creative strategies to reinforce the new brand.	
Conduct market research, set goals, and identify target markets for heritage tourism. These strategies should create a sense of pride and generate buzz beyond Cruz Bay and St. John, reaching to the greater Virgin Islands and beyond.	
Continually monitor results and refine their strategies to ensure that the goals are met.	
Install signs and plaques to educate community members and tourists about the important historic landmarks. Develop historic walking tours/ maps and other educational opportunities.	
Establish a process to maintain cleanliness and landscaping – such as an “adopt-a-block” structure where individuals or organizations can take responsibility for a section of town.	

FUNDING OPPORTUNITIES

- HUD CDBG-DR
- EDA Disaster Supplemental Funding
- The Kresge Foundation
- National Endowment for the Arts – Art Works

STAKEHOLDERS

USVI State Historic Preservation Office, USVI Dept. of Planning and Natural Resources, VI Dept. of Public Works, Arts & Culture Long-term Recovery Work Group, St.JanCo and St. John Historical Society

SUPPORT & EXPAND THE ARTS

Implementation Steps	Status
The Team: Continue collaboration with the various arts related organizations including St.JanCo, the Gri Gri Project, the St. John School of the Arts, Virgin Islands Council on the Arts; National Park	
Identify all current and new projects that support and expand the arts.	
Prioritize based on feasibility, contribution to the mission, and funding	
Align programs with “brick and mortar” projects like constructing an artist cooperative space, building a museum space, or renovating the historic Battery into a museum space.	
Install signs and plaques to educate community members and tourists about the important historic landmarks. Develop historic walking tours/ maps and other educational opportunities.	
Establish a process to maintain cleanliness and landscaping – such as an “adopt-a-block” structure where individuals or organizations can take responsibility for a section of town.	

FUNDING OPPORTUNITIES

- HUD CDBG- DR
- L’Aiglon Foundation
- The Kresge Foundation
- Puffin Foundation
- National Endowment for the Arts

STAKEHOLDERS

Virgin Islands Council on the Arts; Virgin Islands National Park; St.JanCo; The Gri Gri Project; St. John School of the Arts; Pan Dragons; Dynamic Dancers; Arts & Culture Long-term Recovery Committee.

DEVELOP THE BATTERY AS A MUSEUM PARK AND PURSUE ADDITIONAL MUSEUM LOCATIONS

Implementation Steps	Status
Support the Historical Society to develop a museum and archives on the St. John Community Foundation's historic Bellevue Estate site on Gift Hill Road.	
Support St.JanCo and others to secure the permission and resources necessary to renovate the Battery and develop a museum.	

FUNDING OPPORTUNITIES

- HUD CDBG- DR
- The Kresge Foundation
- NEA- ART WORKS

STAKEHOLDERS

Virgin Islands Council on the Arts; St. John Historical Society; USVI State Historic Preservation Office; St.JanCo; The Gri Gri Project; St. John Community Foundation

