



Vol 1. March 2021

TRI-ISLAND MITIGATION PROJECTS

WAPA has identified an array of projects that will strengthen the territorial electric system. Together these initiatives create a strategic transformation plan that will be funded primarily by the Federal Emergency Management Agency (FEMA) and the U.S. Department of Housing and Urban Development (HUD).

In identifying these projects, the overarching goal is creation of a more robust electric system that can rapidly respond to power outages and handle the impacts of windstorms efficiently.

On **ST. CROIX**, WAPA will transition much of the overhead electrical infrastructure to underground. The undergrounding will focus on the main backbones of the transmission & distribution feeders, the interconnection of critical facilities

and fire. Approximately 4,000 such poles will be installed across St. Croix.

WAPA will also hybridize the generation system by integrating more renewables, battery energy storage systems and conventional generation. New generation on the order of 24 megawatts is planned at the Richmond Power Plant coupled with batteries. The battery system will provide various levels of support services to the power plant as well as black start capabilities and grid support for the generation system. In addition, an array of renewable energy resources and battery systems will be installed on the western end of St. Croix creating a self-sufficient microgrid system that provides emergency electrical service to the island's west end.

The projects for **ST. JOHN** were among the first developed after the storms of 2017. St. John has no generation system of its own and relies on generation from

the Randolph Harley Power Plant as well as the transmission network on St. Thomas. To make St. John more independent, (2) four-megawatt standby generators will be installed in Cruz Bay and Coral Bay. Battery systems will be coupled to the generation systems and four megawatts of solar energy will come together to provide a microgrid system for St. John. Additionally, new switchgear equipment will be installed at the existing St. John substation. Undergrounding is planned in the downtown Cruz Bay area to support

critical and emergency facilities of the island. While not a part of the original plan, WAPA, at the request of the National Park Service, converted the composite pole project along North Shore Road to an underground installation.

lines. The cable will continue along to the Bovoni Landfill where it will interconnect with the existing underwater cables that service St. John. Electrical equipment will be installed underground throughout the island with a goal of transitioning approximately 82% of wooden poles. As on the other islands, composite poles will be installed with a total of 2,333 poles planned for St. Thomas.

The electrical substations on St. Thomas received significant damage from the 2017 hurricanes. Existing equipment in the Donald Francois, Tutu and East End substations will be replaced with safer, more reliable switchgear and other equipment. A centralized control center will be constructed to house operations for the electric division.

On **ST. THOMAS**, underground installations have been planned for as many customers as possible, as well as composite poles where undergrounding is not feasible.

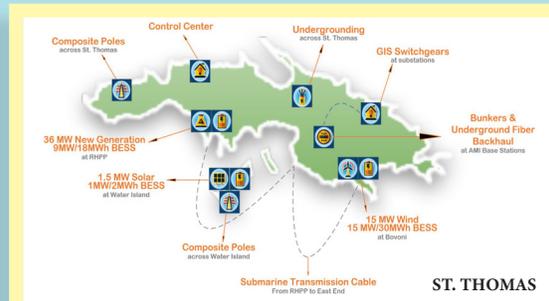
New generation, renewable resource integration and replacement of damaged substation equipment are a part of the mitigation projects identified for this island. At the Randolph Harley Power Plant, 36 megawatts of new generation will be provided by Wartsila North America along with a battery energy storage system. 15 megawatts of wind energy will be installed along the Bovoni ridge with a battery system to create a microgrid on the eastern end of St. Thomas.

A submarine transmission system will be installed from the Harley Power Plant to the WICO cruise ship dock for potential ship-to-shore power agreements with the cruise

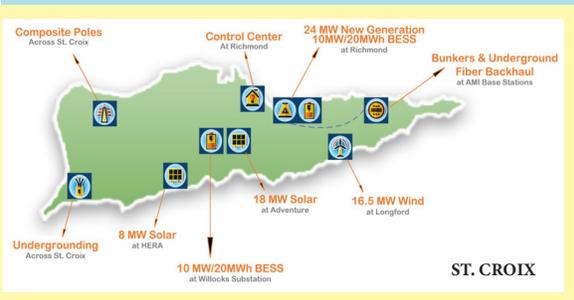
On Water Island, 200 composite poles were installed to harden the electric grid. A microgrid comprised of approximately 1.5 megawatts of ground-mounted solar arrays and battery energy storage systems will be installed to provide emergency generation to these customers. WAPA will also have the capability of back feeding this generation through the existing submarine cable system to the Harley Power Plant as a means of providing additional power resources.



ST. JOHN



ST. THOMAS



ST. CROIX

such as emergency services, schools, shelters, banks, supermarkets, other entities that facilitate basic needs and the interconnection of as many residential areas as possible.

We intend to transition approximately 83% of the wood poles to underground utilities. Areas where underground installations are not feasible will receive composite poles. Composite poles are more resilient than ordinary wood poles and are composed of a fiberglass material that allows them to flex in high wind events. They are also more resistant to rot, deterioration



the Pipeline

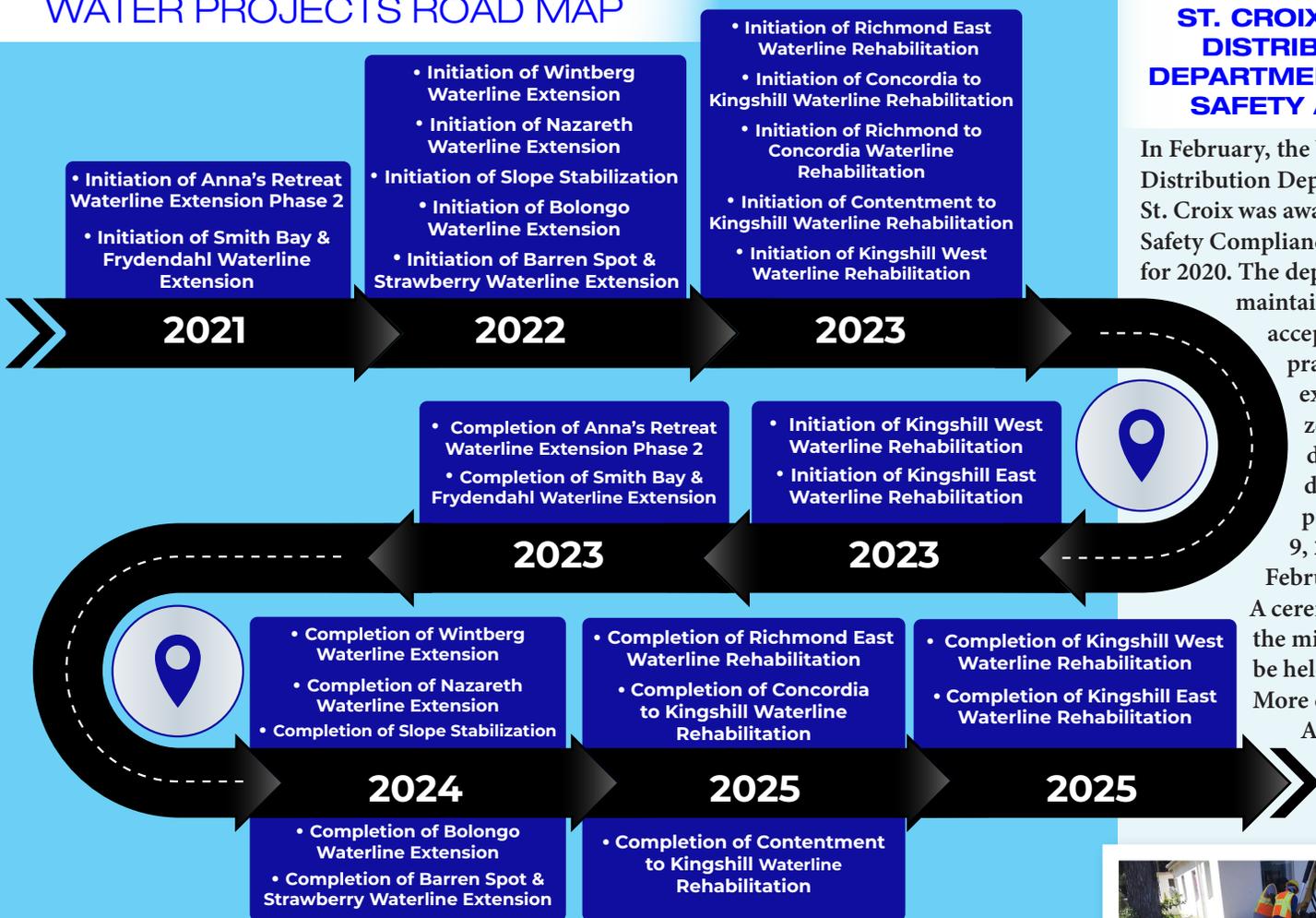
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TRI-ISLAND MITIGATION PROJECTS WATER PROJECTS ROAD MAP

ST. CROIX WATER DISTRIBUTION DEPARTMENT EARNS SAFETY AWARD

In February, the Water Distribution Department on St. Croix was awarded the Safety Compliance Award for 2020. The department maintained

acceptable safety practices and experienced zero lost time due to injuries during the period January 9, 2020 – February 9, 2021. A ceremony to mark the milestone will be held on March 5. More details in the April edition.



WATER SYSTEM MAINTENANCE REPAIRS

In February, Water System maintenance crews conducted repairs to a ruptured copper service line in Estate Whim. Crews exposed the leaking line and replaced it with a PVC line which feeds two meter boxes. Crews laid Detectable Underground Waterline Warning Tape along the repaired waterline.

The tape is used to alert other utility companies during future excavations.

Also in Estate Whim, crews repaired a damage waterline in Peter's Rest near the Falcon VI Gas Station. Once repairs were completed, the crews resurfaced the open trench with Quickcrete, a cold asphalt product used to resurface small work areas.



Crews replace old copper lines with new PVC pipes which are fed from a 10" mainline

