

**VIRGIN ISLANDS WATER AND POWER AUTHORITY
COASTAL CONSISTENCY DETERMINATION REQUEST
DIESEL EMERGENCY BACKUP GENERATOR PROJECT
CORAL BAY, ST. JOHN, U.S. VIRGIN ISLANDS**

**Diesel Emergency Backup Generator Project
Coral Bay, St. John, USVI
FEMA 4340 PW 86, GM #70346**

INTRODUCTION

The VIRGIN ISLANDS WATER AND POWER AUTHORITY (VIWAPA) is proposing to provide temporary emergency backup power generation in Coral Bay, on the island of St. John. Phase 1 of the project will provide temporary emergency generation capacity on the east end of St. John. The Phase 1 installation will consist of two diesel generator packages, generator step-up transformers, a temporary 13.8 kV interconnection to Feeder 7E, a bulk diesel fuel-oil storage and transfer system, civil/site improvements, controls, protection, testing, startup, and commissioning. The system is intended to provide emergency backup generation and limited VIWAPA-directed support during qualifying utility system emergency conditions. Under the final Phase 2 buildout, the temporary interconnection will be removed, and the generators will be tied into the future 13.8 kV Gas Insulated Switchgear (Phase 2, HMP 406, PW60). The intention of the project is for St. John to be able to go on emergency backup power generation when there are power outages or rotations from the main Randolph Harley Power Plant in St. Thomas.

VIWAPA is deploying five emergency generator units to stabilize power in the St. Thomas-St. John district, with four units specifically allocated to St. John. This is a part of an accelerated emergency reliability initiative approved by the VIWAPA Board in April 2026.

VIWAPA has been working diligently to make improvements to its power generation and distribution systems throughout the territory a part of FEMA's two major Prudent Replacement Plans (St. Thomas/St. John District Prudent Replacement Plan and St. Croix District Prudent Replacement Plan).

PROJECT LOCATION

The proposed installation is in Coral Bay on Parcel 6-4 Remainder Estate Carolina, Coral Bay Quarter, St. John at Latitude 18.349429° Longitude -64.716302° Latitude.

PROJECT OVERVIEW

The Coral Bay Phase 1 project will provide temporary emergency generation capacity at the Coral Bay site by using two 2,500 kW diesel generators. The project proposes two 20,000-gallon UL 2085 / STI F941 double-wall aboveground diesel storage tanks (AST) plus generator skid-base tanks which will provide enough on-site usable diesel inventory to support five continuous days of full-load operation. ASTs will remain in place as a part of the Phase 2 build out. The proposed project will provide a temporary 13.8 kV interconnection from the emergency backup generators to VIWAPA's Feeder 7E until Phase 2 is implemented. Phase 2 will consist of the construction of the 13.8kV switching station, and all associated equipment, components, protections & controls. Under the final Phase 2 buildout, the temporary

interconnection will be removed, and the generators will be tied into the 13.8 kV Gas Insulated Switchgear (Phase 2, HMP 406, PW60).



Figure 1. Proposed Coral Bay 4MW Emergency Generator and 13.8 kV Switching Station "H"

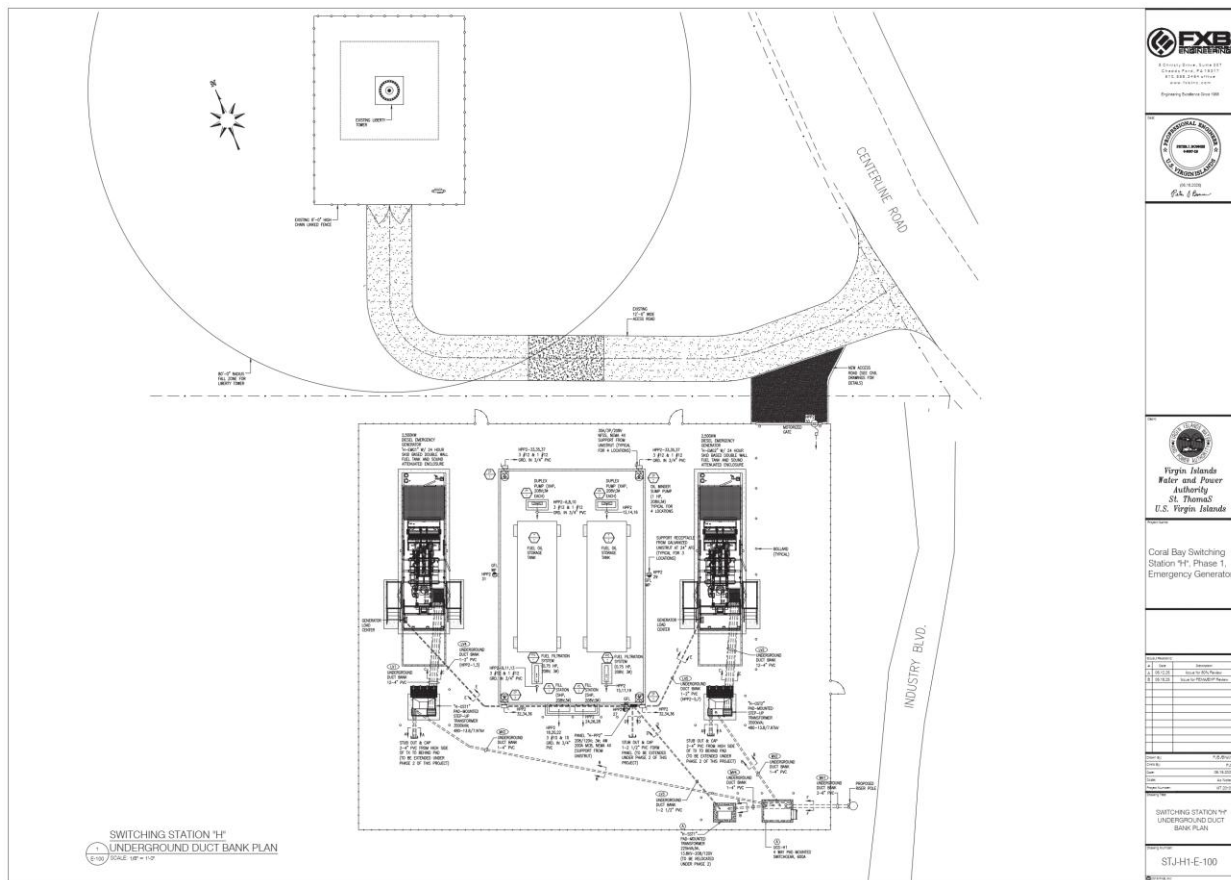


Figure 2. Layout of the Phase I Components within the Coral Bay Site.



Figure 3. Layout of the Phase 2 Components within the Coral Bay Site at final buildout.

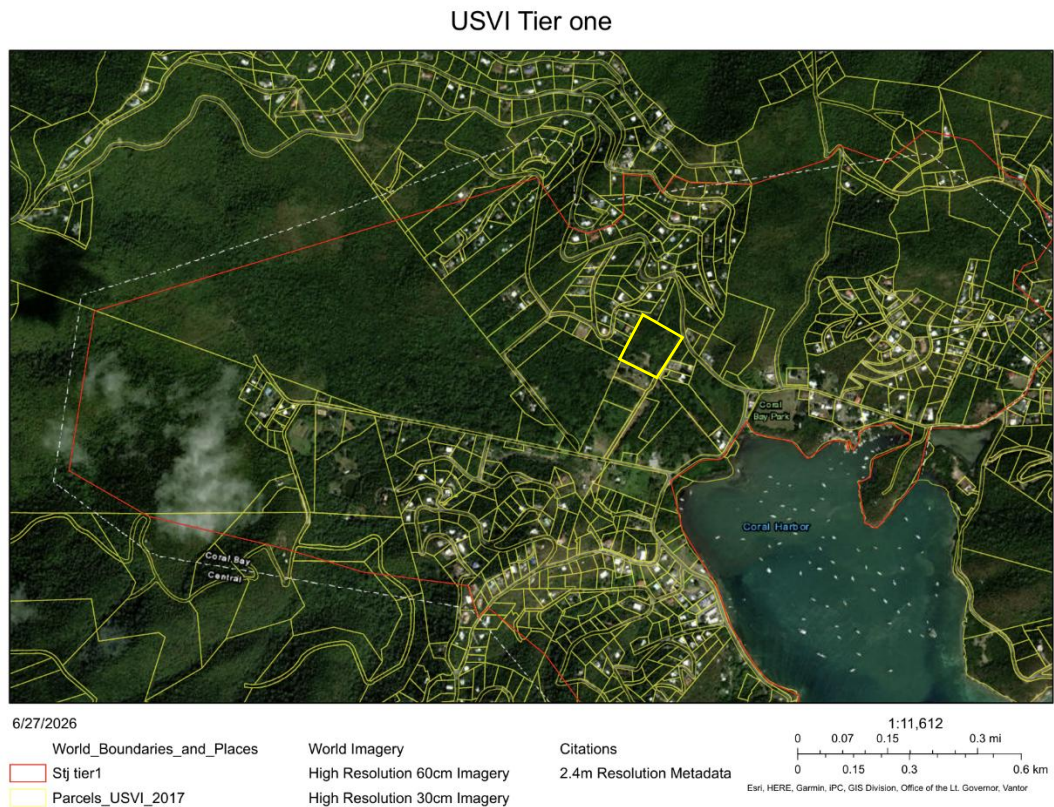


Figure 4. The property is within the Coastal Zone Management first-tier jurisdiction.

PURPOSE

The purpose of the project is to provide reliable emergency diesel generation at Coral Bay using two 2,500 kW diesel generators. Enough on-site usable diesel inventory will be provided to support five continuous days of full-load operation for the two Coral Bay generators, this includes the generator skid-base tanks include as usable inventory when there are power outages or rotations from the main Randolph Harley Power Plant in St. Thomas.

PROJECT DESCRIPTION

VIWAPA provides power to the island of St. John by means of submarine cables from St. Thomas originating from Red Hook, and Great Bay. The submarine cables land in Frank Bay which is located to the south of the town of Cruz Bay. The electrical power is generated at the Randolph Harley Power Plant and is transmitted through overhead and underground lines across St. Thomas to the submarine lines. At present St. John does not have the ability to produce its own electrical power. The proposed project will allow St. John to have its own emergency backup generation when power fails or is rotating on St. Thomas.

The project includes two step up transformers (H-GST1 and H-GST-2), two 2,500KW, 480/277V diesel emergency backup generators (H-EMG-1 and H-EMG-2) with sound attenuated enclosures (75 dBA at 7M) and 24-hour double wall skid based fuel tanks, and two 20,000 gallon above ground double wall diesel

fuel storage tanks within fuel spill containment (FT-1 and FT-2). The above ground fuel tanks will be placed on two 24" thick reinforced concrete piers (20'W x 13'-0" each).

This project is planned to be constructed in two phases. Phase 1 will consist of the preparation of the site and the installation of the two diesel emergency backup generators, step-up transformers, fuel oil system, and all supporting equipment and components to temporarily connect the backup generators to VIWAPA's existing main overhead feeder in Coral Bay.

Phase 2 will consist of the construction of the 13.8kV switching station, and all associated equipment, components, protections & controls. Under the final Phase 2 buildout, the temporary interconnection will be removed, and the generators will be tied into the 13.8 kV Gas Insulated Switchgear (Phase 2, HMP 406, PW60). The phase 1 generators and fuel oil system will remain in place to serve as the permanent solution for emergency backup generation at the Coral Bay Emergency Generator Site. It is expected that Phase I will begin in the last quarter of 2026, and that Phase 2 will be completed in commence second quarter of 2027.

Currently the site has numerous abandoned cars and these and other junk and debris on the site will be removed and properly disposed of by the contractor. The site will be graded for the generators and the fuel tanks for Phase 1 and then later for new switching station in Phase 2. An access drive will be created from the existing driveway servicing Liberty's Cell Tower. The generators and fuel tanks will be within an 8' high 125'-4" by 107'-8.5" chain-link fence with walking access gates to the north and east and a motorized gate for vehicular access on the northeast corner.

Construction demolition limits, staging, and a laydown yard will be established. The laydown yard will be located to the northeast of the generator and fuel tank site. Dust control, erosion control, safety fencing, utility make-safe, and EHP/DPNR/AHJ requirements will all be implemented before any earthwork starts and will be maintained throughout the project to prevent debris, sediment, fuel, oil, concrete washout, and contaminants from entering drainage systems, or coastal waters.

Dust suppression, erosion control, stormwater protection, and environmental controls will be implemented throughout demolition operations.

ENVIRONMENTAL IMPACTS

Climate/Weather

The new facilities are being constructed for extreme weather events. Buildings will be designed for site-specific ASCE 7 wind and seismic criteria. Buildings will be designed for hurricane risk category IV with wind loads up to 180mph and seismic site class D criteria.

It is probable that this facility will be most used after significant weather events such as hurricanes. Sedimentation and erosion will be implemented to ensure rainfall will not impact the marine environment during construction, and that runoff during operation will not be an issue. The shore of Coral Harbor is located just approximately 1150ft to the southeast. In order to insure that such impacts do not occur silt fencing will be inspected weekly and after all rainfalls of greater than 1/2inch and will be maintained and replaced as necessary.

Landform Geology, Soils and Historic Land Use

The property sits within the watershed of Coral Harbor approximately 1150ft to the northwest of the water's edge. The property is relatively steep at approximately 40ft at its northern boundary dropping to approximately 16ft at its southern boundary. The property has been altered in the past and there is a knoll that extends into the property which was created by filled around 2004.

Four soil types are identified within the footprint of the proposed emergency backup generator site according to the Custom Soil Survey of the United States Virgin Islands. The soil to the southwest is identified as **Cinnamon Bay loam, 0 to 5 percent slopes, occasionally flooded (CbB)**. Cinnamon Bay loam is found at the toe of slope and is an alluvial soil. The upper 0 to 11 inches is loam, which is underlain at 11 to 21 inches with clay loam and then between 21 to 60 inches there is sandy clay loam. Most of the property is **Lameshur gravelly sandy loam, 2 to 12 percent slopes, rubbly (LmC)** which is usually found on alluvial fans and terraces. In the upper 0 to 6 inches there is gravelly sandy loam underlain between 6 to 18 inches with extremely gravelly sandy loam. From 18 to 35 inches there is extremely stony sandy clay loam and between 35 to 60 inches there is extremely stony loamy sand. Depth to rock is usually more than 80 inches.

The southeastern corner of the property is **Victory-Southgate complex, 2 to 12 percent slopes, very stony (VsC)** and the northern portion of the property is **Victory-Southgate complex, 12 to 20 percent slopes, very stony (VsD)**. Victory-Southgate soils are found on hillslopes and ridges, and the upper 0 to 11 inches

is loam underlain between 11 to 20 inches with very gravelly loam and between 20 to 33 inches with very gravelly loam. Bedrock is found between 33 to 50 inches.



Figure 5. Custom Soil Map for 6-4 Reminder Estate Carolina.

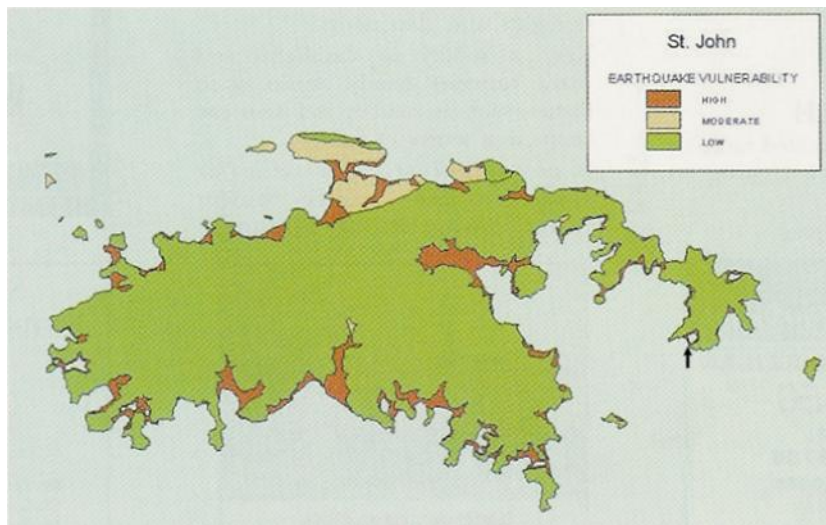


Figure 6. Earthquake Vulnerability Map for St. John.

The maps displayed below show how earthquake hazards vary across the Virgin Islands. Hazards are measured as the likelihood of experiencing earthquake shaking of various intensities.

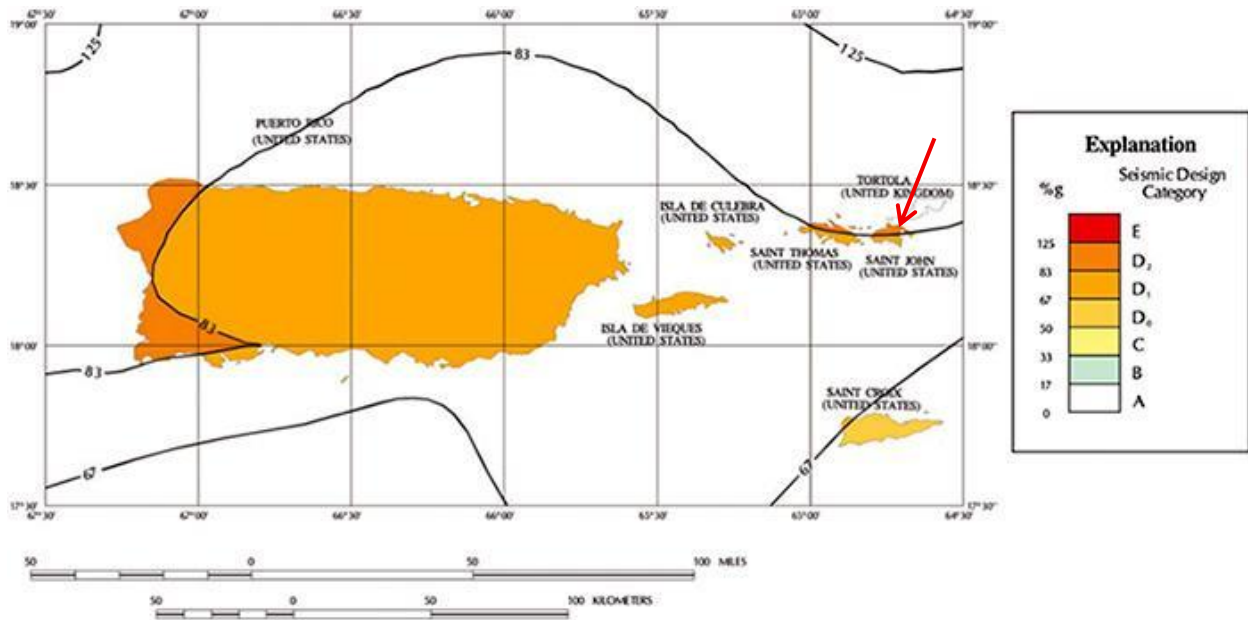


Figure 7. Soil Design Category (SDC) map of Puerto Rico, and the United States Virgin Islands for low-rise Occupancy Category I and II structures located on sites with average alluvial soil conditions. <https://www.fema.gov/earthquake-hazard-maps>.



Figure 8. The 1954 USGS Aerial Service photograph shows that much of the property and area were clear in 1954.



Figure 9. The 1971 and 1983 USGS Aerial Service photographs show the site has been allow to grow in and then cleared again.

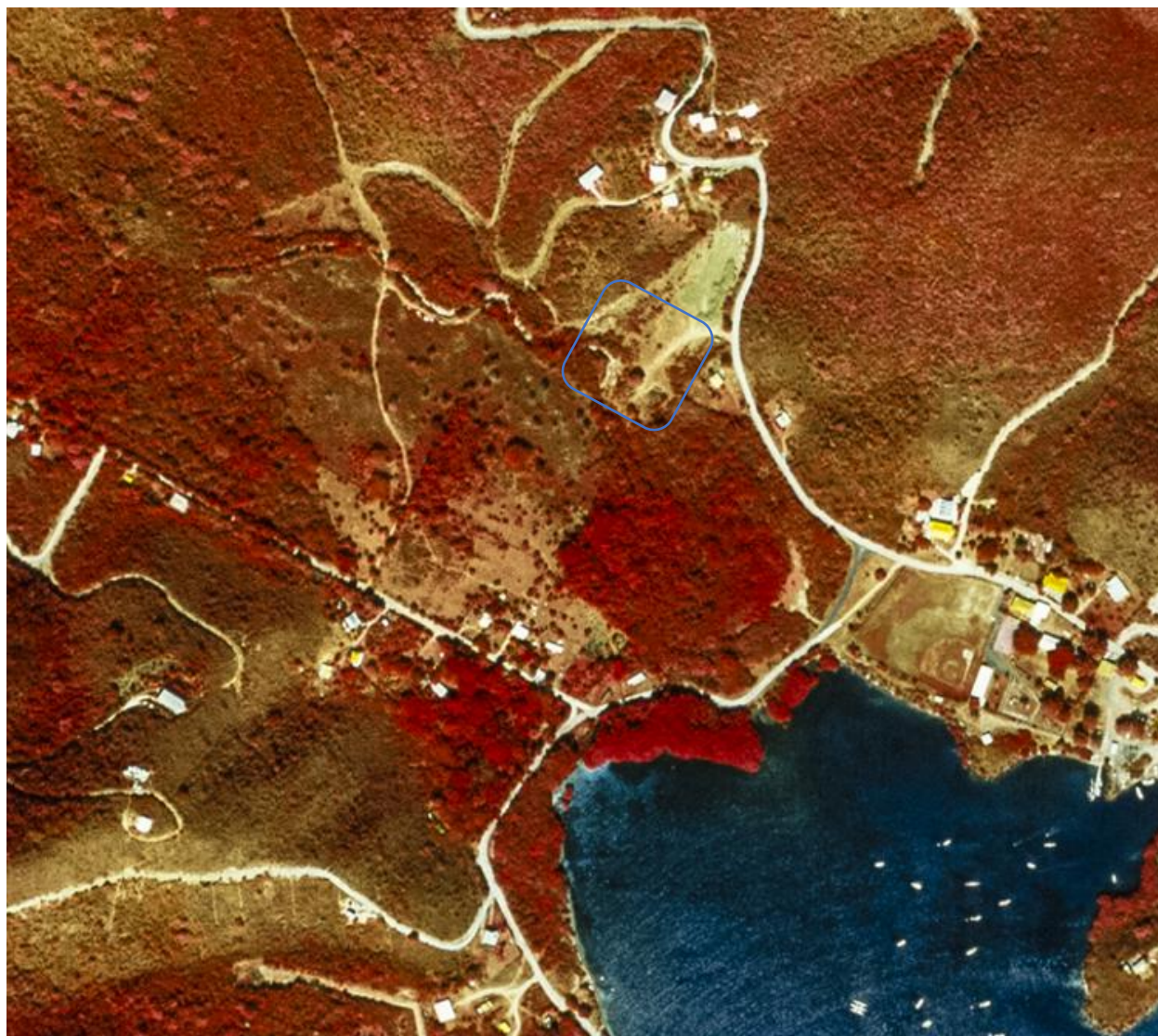


Figure 10. The 1983 infra-red aerial of the site delineates a drainage which runs across the southern portion of the site.



Figure 11. The February and September Google Earth Aerials from 2004 show that a large amount of fill material was deposited on the site.

Drainage, Flooding and Erosion Control

Sedimentation and Erosion Control will be implemented during cleanup, and all earthwork. As much as an acre of land will be disturbed, therefore coverage under the General TPDES Permit will be sought. A construction entrance will be placed at the entrance to the project area and silt fencing will be placed around the extent of each the current phase as construction progresses.

Drainage Patterns.

The project will require grading and therefore will impact existing drainage patterns. Grading will be such that runoff will sheet flow in the drainage way located to the south of the development area. There is a catchment to the north of the access roadway which was improved by the Coral Bay Community Council and a culvert runs under the access roadway and discharges into a drainage to the east of the project site. The project will neither be affected by or will affect this drainage way. There is a large drainage way to the south of the development footprint, it will be important that sedimentation from the development of the site have proper sedimentation and erosion control so that sediment does not enter this drainage and be carried into Coral Harbor.

Coastal Floodplain

There are two flood zones on the proposed development parcel as shown on FEMA FIRM map 35 of 94, April 16, 2007 (Figure 12). Zone A where 100-year coastal flooding is expected but flood elevations have not been determined, which occupied the southern portion of the property. And Zone X which includes the northern portion of the property where 100-year coastal flooding is not expected. The USVI Flood Hazard Advisory Maps provide flood elevations within this area and the Advisory Base Flood Elevation (ABFE) 1% is 17.1ft, and the ABFE 2% is 18.93ft. The southern switching station building will be constructed outside of the flood zone in Zone X and will be elevated above the ABFE by a minimum of 1ft.

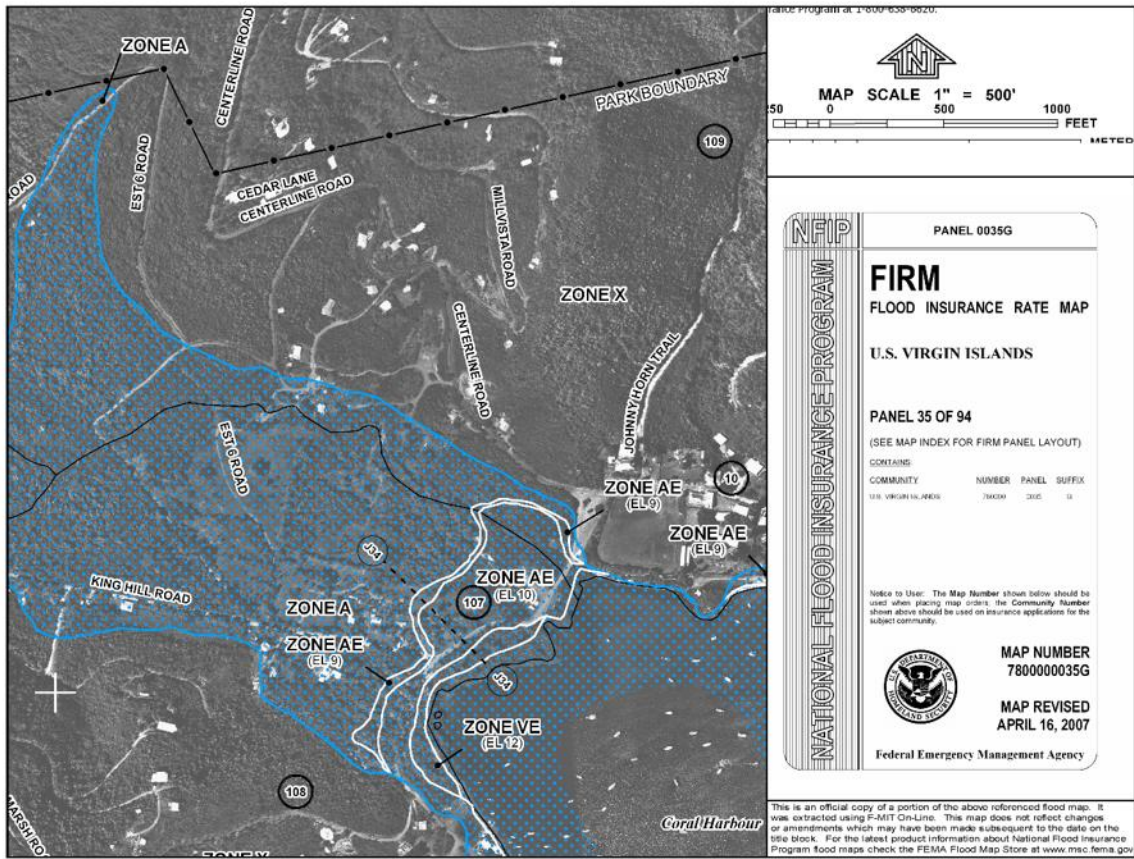


Figure 12. FEMA FIRM 35 of 94.

US Virgin Islands - Advisory Flood Hazard Resources Map

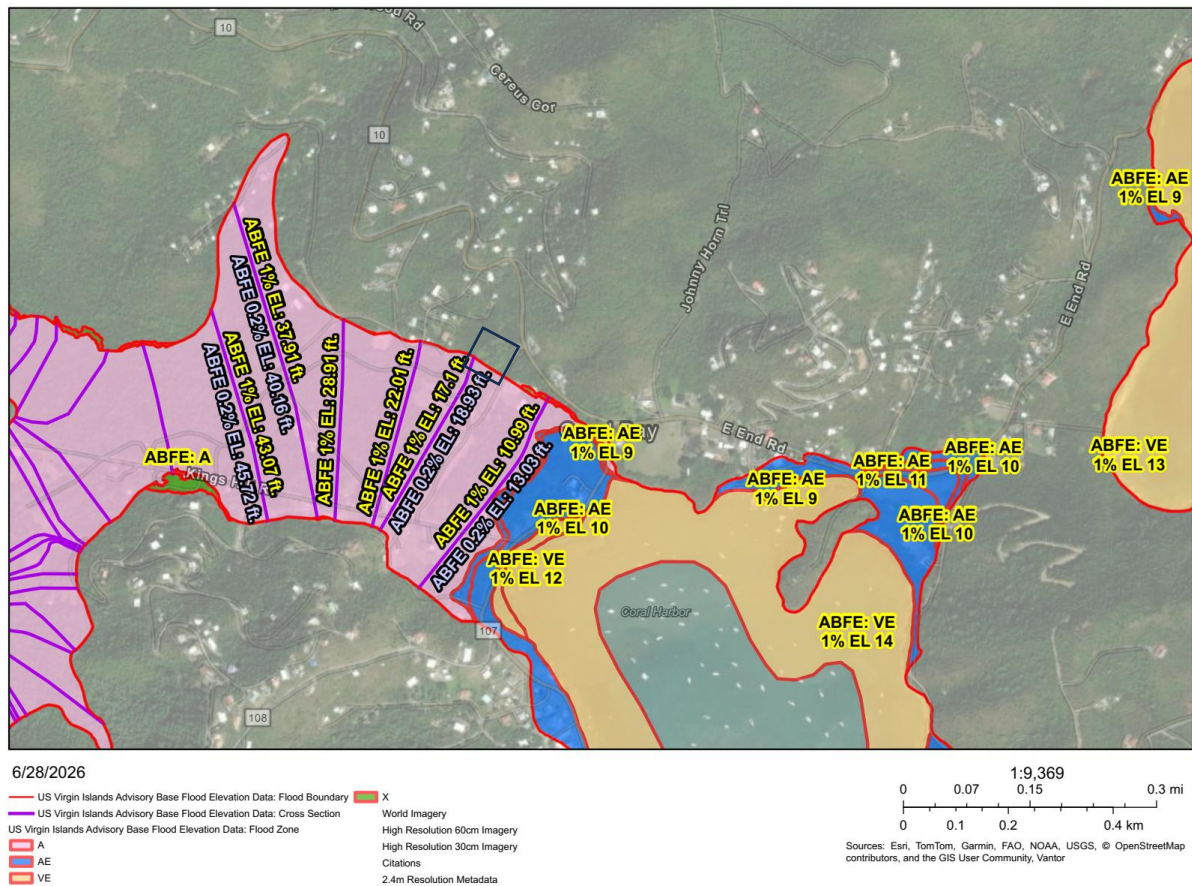


Figure 13. Virgin Islands Flood Hazard Advisory Map

Fresh Water Resources

The project will have no impact on Fresh Water Resources. No freshwater ponds or streams occur within the project footprint. The property spans a portion of the alluvial aquifer. The project should have no impact on this aquifer. The project has no water demand nor potable water on the site.

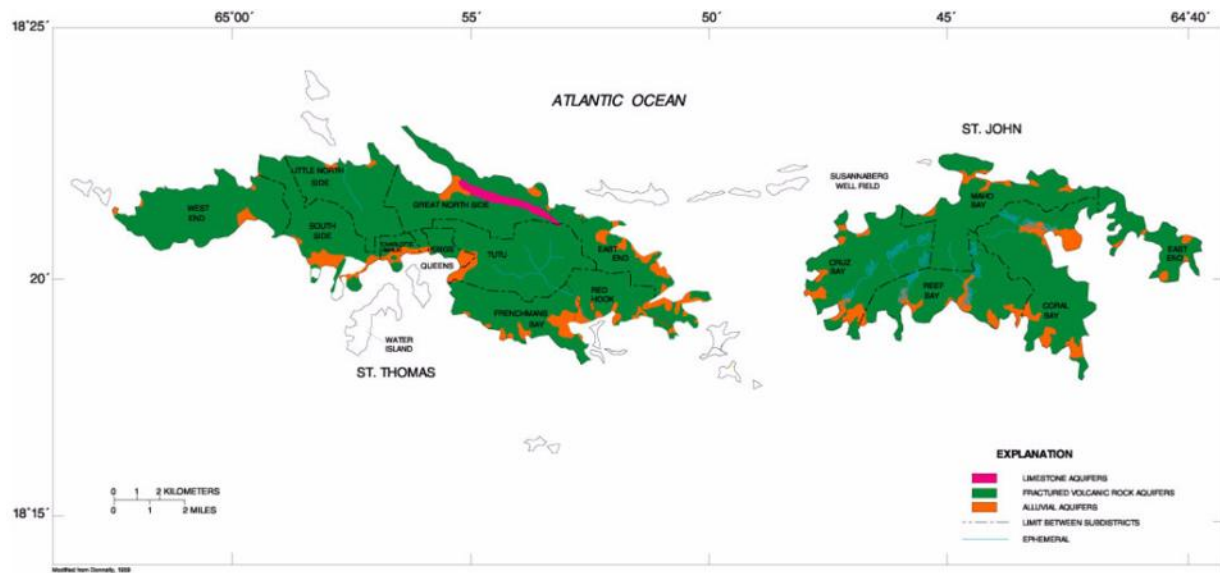


Figure 3.1.1.D-1 Principal aquifers in St. Thomas and St. John, U.S. Virgin Islands.

Atlas of Ground-Water Resources in Puerto Rico and the U.S. Virgin Islands

Figure 14. Principal aquifers in St. Thomas and St. John.

Oceanography

The project occurs entirely in upland areas and will not be impacted by oceanographic factors during major storm events. The development of this parcel should not impact marine water quality if stringent sedimentation and erosion control measures are implemented. It is the intent to bring generators in by barge to the boat ramp in Coral Harbor to minimize transit distance on public roadways and to minimize the impact on traffic.

Marine Resources

The property is located 100% inland, just over 1150ft from the shoreline therefore the development of the new backup power generation will have no direct impact on the marine environment. During earthwork at the site the potential of sedimentation and erosion will exist, and it will be important for stringent sedimentation and erosion control to be implemented to prevent any impacts to the marine environment due to sediment laden runoff. It is the intent to bring generators in by barge to the boat ramp in Coral Harbor to minimize transit distance on public roadways and to minimize the impact on traffic. No disturbance to the shoreline or marine environment are proposed.

Terrestrial Resources

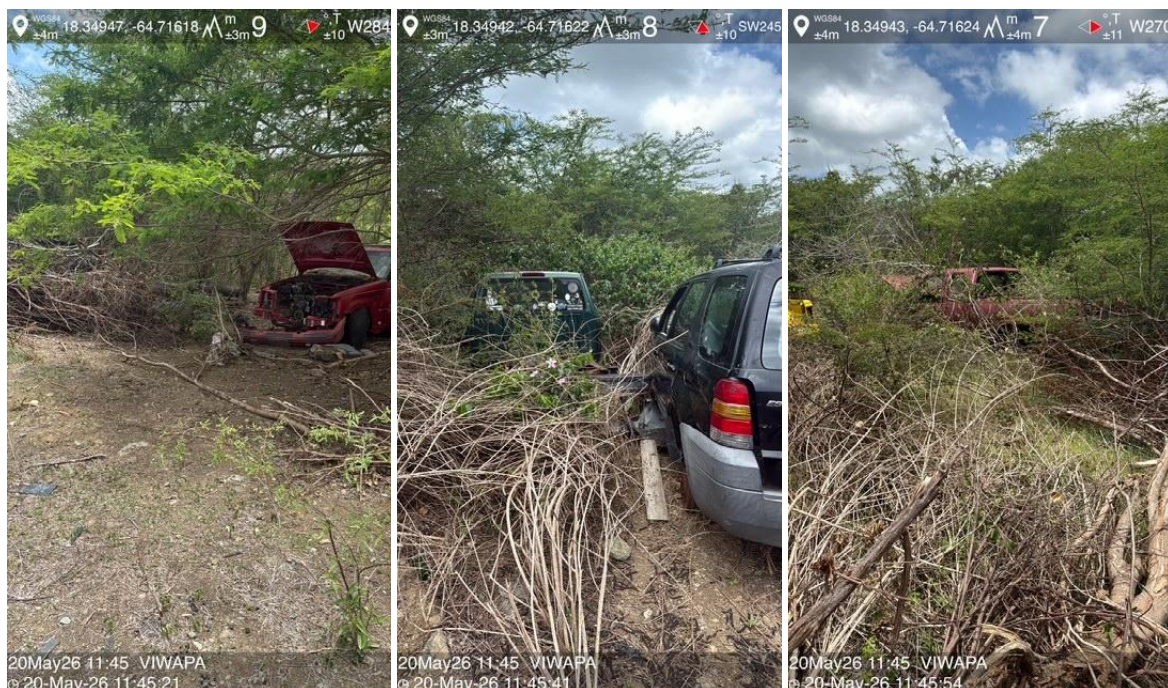
The new backup power generating facility is proposed to an area which has been repeatedly impacted in the past and partially filled as shown in Figures 8-11. In surrounding unaltered areas scattered Water mampoo (*Pisonia subcordata*), Amarat (*Acacia muricata*), Turpentine (*Bursera simaruba*), Pigeonberry (*Bouyeria succulenta*), Black caper (*Capparis cynophallophora*), Limber caper (*C. flexuosa*), *Savia sessiliflora*, *Eugenia cordata*, *Eugenia ligustrina* and genip (*Melicoccus bijugatus*), Nothing nut (*Cassine xylocarpa*), Bertero's barbasco, *Jacquinia berteroi*, and Inkberry (*Randia aculeata*). Maran (*Croton* spp.), are present in disturbed area as are a number of opportunistic plants within the area include guinea grass (*Panicum maximum*), tan-tan (*Leucaena leucocephala*), casha (*Acacia tortosa*), capers, malpighia vine (*Malpighia* sp.) Eleusine indica, *Rhynchelytrum roseum*, *Chloris inflata*, beggars tick (*Bidens pilosa*) *Boerhavia diffusa*, *B. erecta*, physic nut (*Jatropha curcas*), sensitive plant (*Mimosa pudica*), and mexican

creeper (*Antigonon leptopus*). There are also landscape plants which are probably the result of dumping such as Indian rubber vine (*Cryptostegia grandiflora*).

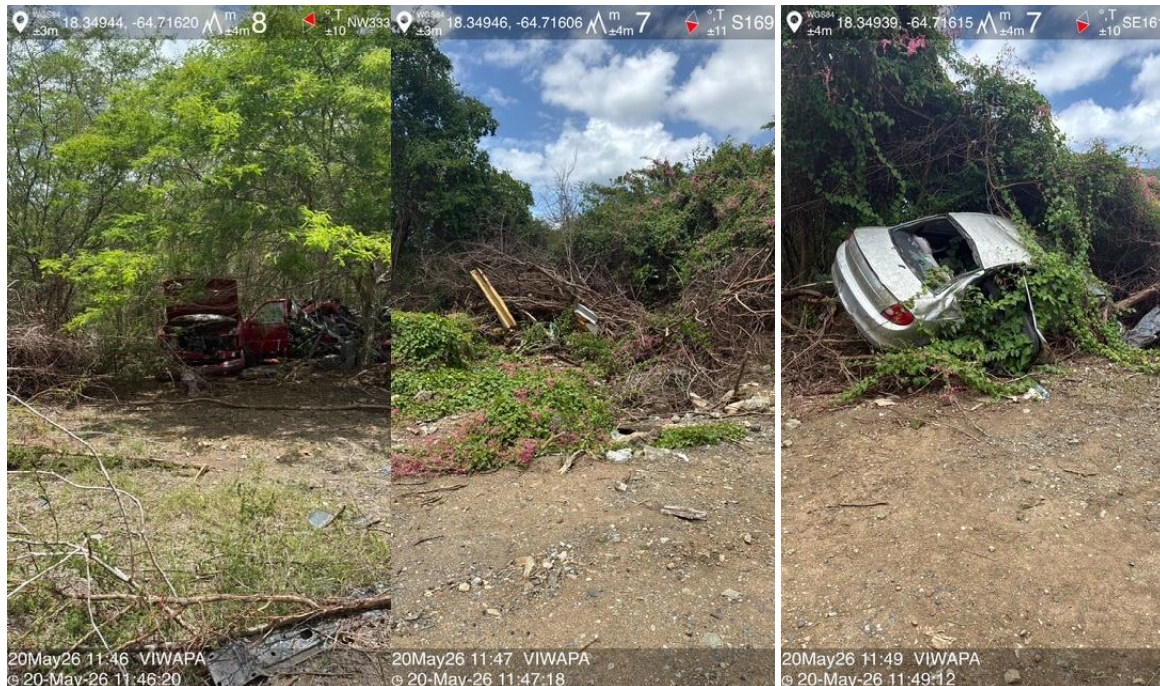
The Liberty cell tower has been built to the north, and it appears that vegetative debris and vehicles and other junk on that site has been pushed into the development parcel.



The site has been disturbed over the years by clearing at various times, most recently associated with the construction of the liberty tower.



Cars have been dumped on this site for years as has land scaping debris.



Some of the debris from the recent construction of the Liberty tower was pushed onto this parcel.



The drainage to the south has been heavily scoured.

The development of the site will require the removal of the vehicles and other debris; the vehicles and debris will be taken to the Bovoni landfill in St. Thomas. The site will be graded for the placement of the tanks, generators and switching station which will require removal of the secondary growth vegetation. Post construction Indian rubber vine will be placed along the fence to act as a visual barrier and will also further reduce sound from the facility (sound attenuation already posted that will limit noise levels to 75dBA at 22ft.)

The development of the facility should reduce future dumping at the site.

Wetlands

No wetlands occur within the footprint of the proposed Coral Bay emergency backup power generation project. The drainageway which extends into the south end of the property is classified as R4SBC—Riverine, Intermittent, Streambed, Seasonally Flooded—which indicates a seasonally flowing gut or stream channel with a streambed substrate that carries water only during wet periods. This feature is not considered a USACE jurisdictional wetland because it lacks a continuous surface connection (Sackett, 2023). The construction activities will be set well back from the drainageway.

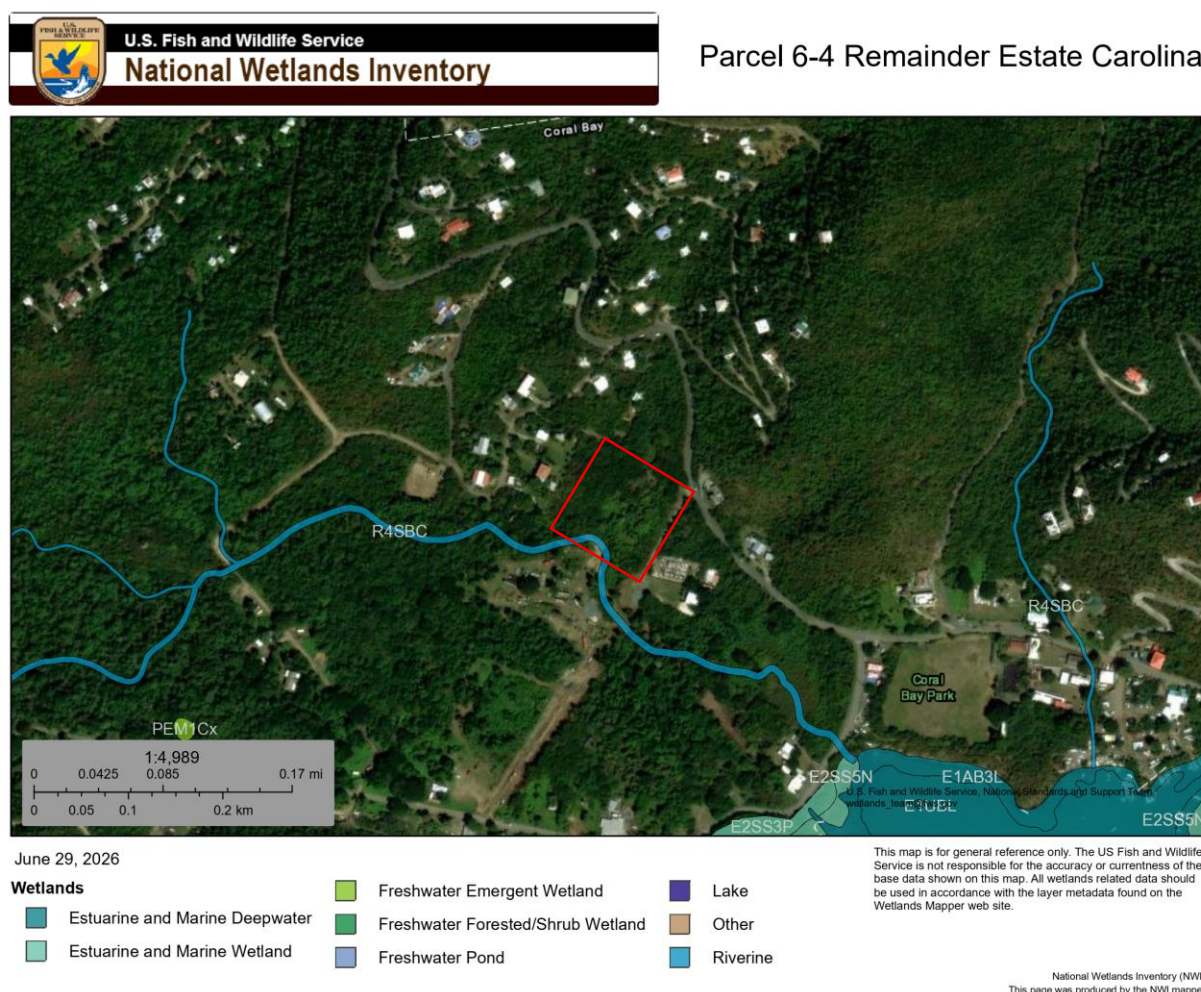


Figure 15. Wetlands as shown in the FWS Wetland Inventory

Rare and Endangered Species

No endangered species or endangered species were noted during the surveys of the development site. There are two plant species, Marron Bacora (*Solanum conocarpum*) and St. Thomas prickly-ash (*Zanthoxylum thomasianum*) listed on the iPaC report. The surveyor is familiar with both of these species and neither were present on the site. The project will have on impact on endangered species.



Solanum conocarpum



Zanthoxylum thomsonianum

Air Quality

The entire island of St. John is in EPA Attainment area. As such any new construction wherein air pollutants are emitted must file for air permits. The emergency diesel generator are a “minor source” of air emissions since it will be limited to operate at a maximum of 500 hours per year and use an EPA approved emergency diesel engine. Air permits have been received for the generators from the Division of Environmental Protection. The engine, fuel and operating permit limits from the DPNR will ensure that the air quality levels there will be maintained. No special permits will be required for construction related activities since these are of a short-term nature and measures will be used to mitigate dust in the adjacent areas.

IMPACT ON MAN’S ENVIRONMENT

Land and Water Use Plans

The proposed installation of two diesel emergency generator packages, associated generator step-up transformers, and a temporary 13.8-kV interconnection to Feeder 7E is an allowable use within the R-2 zoning district. Under Title 29, V.I. Code, public-utility infrastructure—including electrical distribution equipment, emergency standby generation, and temporary or permanent interconnection facilities—is classified as an essential service, which is permitted in all zoning districts, including R-2.

The project is being implemented by the Virgin Islands Water and Power Authority (WAPA) as part of the FEMA HMP 406 PW60 resilience program to provide island-wide emergency backup power generation for St. John during outages, rotations, or instability at the Randolph Harley Power Plant on St. Thomas. The temporary 13.8-kV tie-into Feeder 7E will be removed under the Phase 2 buildout, at which point the generators will interconnect directly to the planned 13.8-kV Gas-Insulated Switchgear (GIS) facility.

As a public-utility emergency generation project serving a critical island-wide electrical function, the installation meets the definition of an essential public facility, is consistent with long-term FEMA-supported hazard-mitigation improvements and is therefore zoning-compliant within the R-2 district.

Visual Impacts

The current site is undeveloped and has been used as an illegal dumping ground for cars, landscape debris and other refuse. The clean-up of the site will be an improvement to the existing view shed, sound screen is proposed that will help shield the generators and landscaping (planting of additional Indian rubber vine which is currently thriving at the site) between the units and the properties will be done.

Social Impacts and Economic Impacts

The installation of dedicated emergency power generation on St. John has beneficial social and economic impacts by reducing the island's vulnerability to outages caused by disruptions at the St. Thomas power plant or along the undersea cable. Reliable backup generation ensures continuity of essential services—including health care, public safety, communications, and potable water distribution—which directly supports community well-being and reduces the social disruption typically experienced during extended outages. Economically, improved energy resilience decreases business downtime, protects perishable goods and tourism-dependent operations, and reduces the financial losses associated with repeated power interruptions. The project enhances overall stability and supports long-term economic recovery and resilience for St. John.

Historical and Archaeological Resources

The project involves the development of a site which has been previously disturbed by dumping, grading and filling. A SHPO Clearance letter has been requested from the State Historic Preservation office.

Waste Disposal and Accidental Spills

Throughout the construction equipment will be kept in good operating conditions. Equipment will not be fueled on site. Any excess excavated material and debris will be collected, taken off-site and properly disposed of. The new fuel storage will be in secondary containment, and the plant will have a Spill Contingency and Countermeasure Plan.

The two 20,000-gallon storage tanks shall be UL 2085 / STI F941 double wall tanks, will include interstitial leak detection, and will be located within a liquid tight spill containment pit complying with all applicable SPCC requirements.

The liquid tight spill containment pit has been sized to contain the entire capacity of one of the 20,000-gallon storage tanks, plus sufficient freeboard for precipitation.

The two generators' skid-based fuel tanks shall be UL 142 listed double wall tanks. The two duplex fuel pumps and automatic fuel filtration / polishing systems will be located within the spill containment pit. The fuel oil piping between the containment pit and each generator will be double wall containment piping with leak detection monitoring of the secondary containment pipe.

COASTAL CONSISTENCY

The project has a negligible potential for impacting, environmental resources, or ambient water quality during construction and a sedimentation and erosion control plan will be implemented during construction as necessary to protect the marine environment. The construction is proposed for a site which has been previously impacted by illegal dumping of debris and vehicles and has negligible potential of impacting historical or cultural resources.

The Coastal Zone Management Act of 1972 requires federal actions to be consistent to the maximum extent practicable with the enforceable policies of a coastal state's federally approved Coastal Management Plan. The installation of emergency power generation as proposed will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the U.S. Virgin

Islands Coastal Zone Management Program. This federal consistency determination demonstrates the installation of emergency power generation's compliance with the U.S. Virgin Islands Coastal Zone Management Program.

The following policies are set forth in the Virgin Islands Code Title Twelve Conservation, Chapter 21 § 903 (b).

(1) protect, maintain, preserve and, where feasible, enhance and restore, the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the United States Virgin Islands;

- *The installation of emergency power generation is designed to be within previously impacted and developed areas. The project will not impact any previously undisturbed natural resources and will not negatively impact the surrounding viewshed.*

The installation of emergency power generation as designed protects, maintains, preserves and enhances the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the United States Virgin Islands and therefore is consistent with this policy of the Virgin Islands Code Title Twelve Conservation, Chapter 21 § 903 (b).

(2) promote economic development and growth in the coastal zone and consider the need for development of greater than territorial concern by managing: (1) the impacts of human activity and (2) the use and development of renewable and nonrenewable resources so as to maintain and enhance the long-term productivity of the coastal environment;

The installation of emergency power generation promotes the economic development and growth in the coastal zone by providing more reliable, resilient electrical energy to the St. John community as a whole including the coastal environment.

(3) assure priority for coastal-dependent development over other development in the coastal zone by reserving areas suitable for commercial uses including hotels and related facilities, industrial uses including port and marine facilities, and recreation uses;

This project involves installation of new emergency power generation on VIWAPA controlled site which is not on the coastline and therefore does not impact other areas which could be used for coastal development.

(4) assure the orderly, balanced utilization and conservation of the resources of the coastal zone, taking into account the social and economic needs of the residents of the United States Virgin Islands;

The installation of emergency backup power generations will provide more reliable and resilient power to the citizens of Coral Bay and therefore will meet and protect the economic needs of the residents.

5) preserve, protect and maintain the trust lands and other submerged and filled lands of the United States Virgin Islands so as to promote the general welfare of the people of the United States Virgin Islands;

- *The installation of emergency power generation will not impact public trust or other submerged and filled lands of the Virgin Islands.*

(6) preserve what has been a tradition and protect what has become a right of the public by insuring that the public, individually and collectively, has and shall continue to have the right to use and enjoy the shorelines and to maximize public access to and along the shorelines consistent with constitutionally protected rights of private property owners;

- *The installation of emergency power generation will in no way affect public access or use of the shoreline or access to and along the shoreline.*

(7) promote and provide affordable and diverse public recreational opportunities in the coastal zone for all residents of the United States Virgin Islands through acquisition, development and restoration of areas consistent with sound resource conservation principles;

- *The installation of emergency power generation will not affect public recreational opportunities in the coastal zone.*

(8) conserve ecologically significant resource areas for their contribution to marine productivity and value as wildlife habitats, and preserve the function and integrity of reefs, marine meadows, salt ponds, mangroves and other significant natural areas;

- *The installation of emergency power generation is designed so that it impacts only areas of secondary growth and will have a negligible impact on natural resources. The project will utilize BMPs and will minimize areas of disturbance to protect both terrestrial and marine habitats.*

(9) maintain or increase coastal water quality through control of erosion, sedimentation, runoff, siltation and sewage discharge;

- *The installation of emergency power generation will have no long-term change on sedimentation or erosion. The project will not result in an increase of wastewater. During construction, the project will implement BMPs as necessary to prevent loss of sediment from the project site and protect the surrounding marine environment.*

The installation of emergency power generation as designed maintains coastal water quality through control of erosion, sedimentation, runoff, and siltation and therefore is consistent with this policy of the Virgin Islands Code Title Twelve Conservation, Chapter 21 § 903 (b).

