

VIRGIN ISLANDS WATER AND POWER AUTHORITY

COASTAL CONSISTENCY DETERMINATION REQUEST

LBJ PUMP STATION RELOCATION

ST. CROIX, U.S. VIRGIN ISLANDS



PREPARED FOR

**COASTAL ZONE MANAGEMENT
DEPARTMENT OF PLANNING AND NATURAL RESOURCES**

PREPARED BY

**BIOIMPACT, INC.
P.O. BOX 132 KINGSHILL
ST. CROIX, U.S. VIRGIN ISLANDS 00851**

AND

**OASIS CONSULTING SERVICES
45 WOODSTOCK STREET
ROSWELL, GEORGIA 30075**

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INTRODUCTION

The Virgin Islands Waste Management Authority (VIWMA) is proposing to relocate the LBJ Pump Station and is seeking a Federal Consistency Determination from the Department of Planning and Natural Resources. The existing LBJ Pump Station will be decommissioned, and a new pump station will be constructed on a 1.67ac portion of Remainder Parcel 11, Penitentiary Land, St. Croix. This site is a previously developed site and was the location of the Ralph de Chabert housing project which has been demolished since 2013. The site is a vacant lot with scattered concrete and secondary growth.

The new pump station includes pumps with wet wells, a building with a cistern, a generator as well as three retention areas for storm water and overflow. A retaining wall will be present around the perimeter of the facility with gate access. The public water supply connection will be present on the eastern perimeter of the facility. The proposed building will have a roof water drain to facilitate rainwater collection to the on-site cistern. The new pump station design considers elevating the station controls to above flood levels and providing flood protection measures for the station.

This Environmental Assessment only covers the new pump station and does not cover the connecting sewer line route or the demolition of the existing LBJ pump station.

PROJECT LOCATION

The project area for the proposed relocation of the LBJ pump site covers approximately 6,500m² and is in the US Virgin Islands on the island of St. Croix, at 17.747985°N, -64.713144°W, west of Christiansted Harbor and southwest of the WAPA Power Plant. The existing pump site is located 600m to the NW, on the other side of the WAPA Power Plant at 17.752490°N, -64.716245°W. The existing pump is < 20m from the coastline while the new location will be over 100m from the coastline.

While the existing pump site is shown in project maps and occasionally discussed, this Federal Consistency determination request only applies to the new construction at the proposed relocation site and does not include potential impacts from or an assessment of the demolition of the existing LBJ pump station.

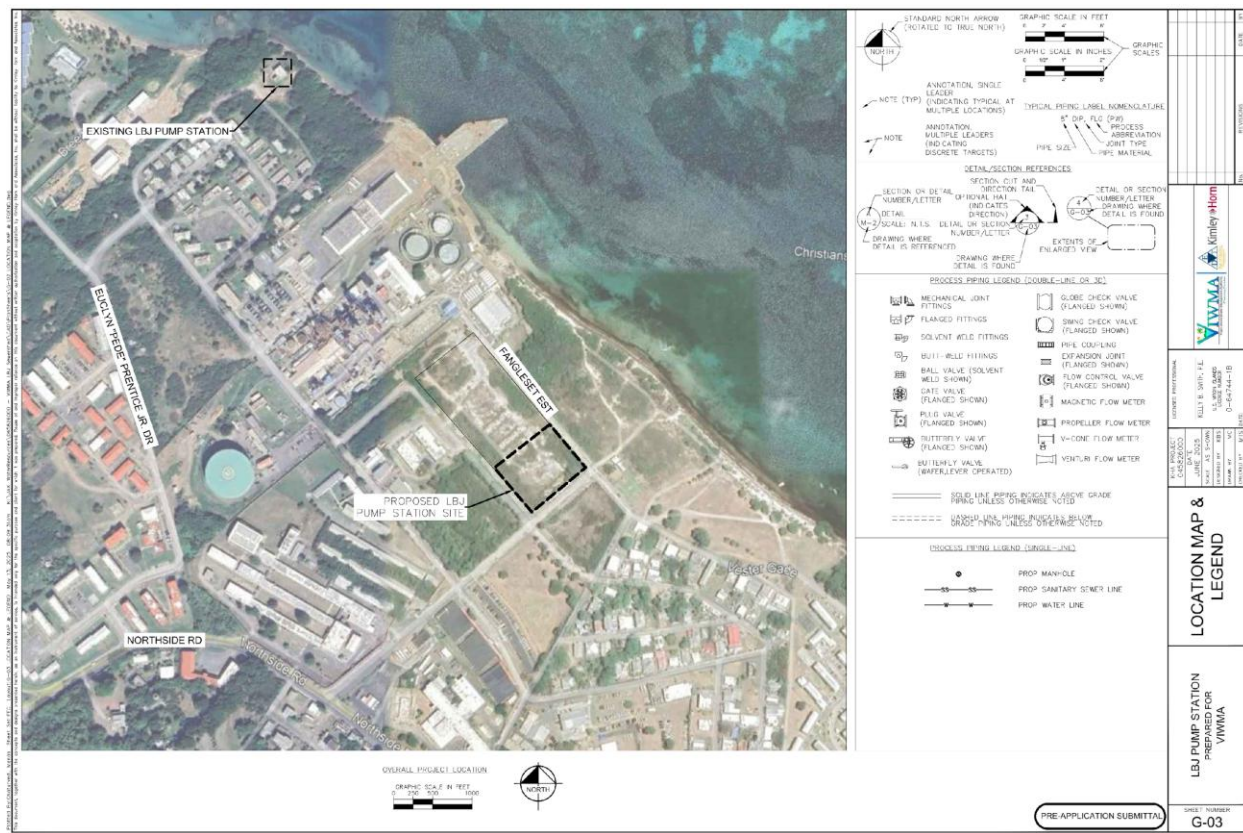


Figure 1. Existing and Proposed LBJ Pump Station locations

The current LBJ pump station location and the proposed relocation area for the LBJ pump site are both within the first-tier jurisdiction of Coastal Zone Management (CZM).



Figure 2. Project Location in reference to the Coastal Zone Management Jurisdictional Limit

PROJECT DESCRIPTION

The project involves the development of a new pump station to replace the existing LBJ pump station to the northwest of the project site. The new pump station includes pumps with wet wells, a building with a cistern, a generator as well as retention areas for storm water and overflow. A retaining wall will be present around the perimeter of the facility with gate access. The public water supply connection will be present on the eastern perimeter of the facility. The proposed building will have a roof water drain to facilitate rainwater collection to the on-site cistern.

Prior to construction of the new pump station, a Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure (SPCC) Plan as well as necessary permits will be in place. the site will be prepared for construction activities using Best Management Practices (BMPs) including adequate sedimentation and erosion control.

To prepare the site for construction activities, a stabilized construction entrance will first be constructed along with the installation of silt fence and inlet protection. Then clearing, grubbing, and demolition as necessary will occur. Phase 2 of the construction sequence is when mass grading, including rough grading to establish a proposed drainage patter will be performed. Then proposed drainage infrastructure will be constructed. The construction site will be temporarily seeded throughout

construction in disturbed areas that will be inactive for 7 or more days, as required. Then proposed improvement including the building pad will be constructed. Once final grading and stabilization is achieved, temporary erosion control measures will be removed.

Detailed plans are found in Appendix I.

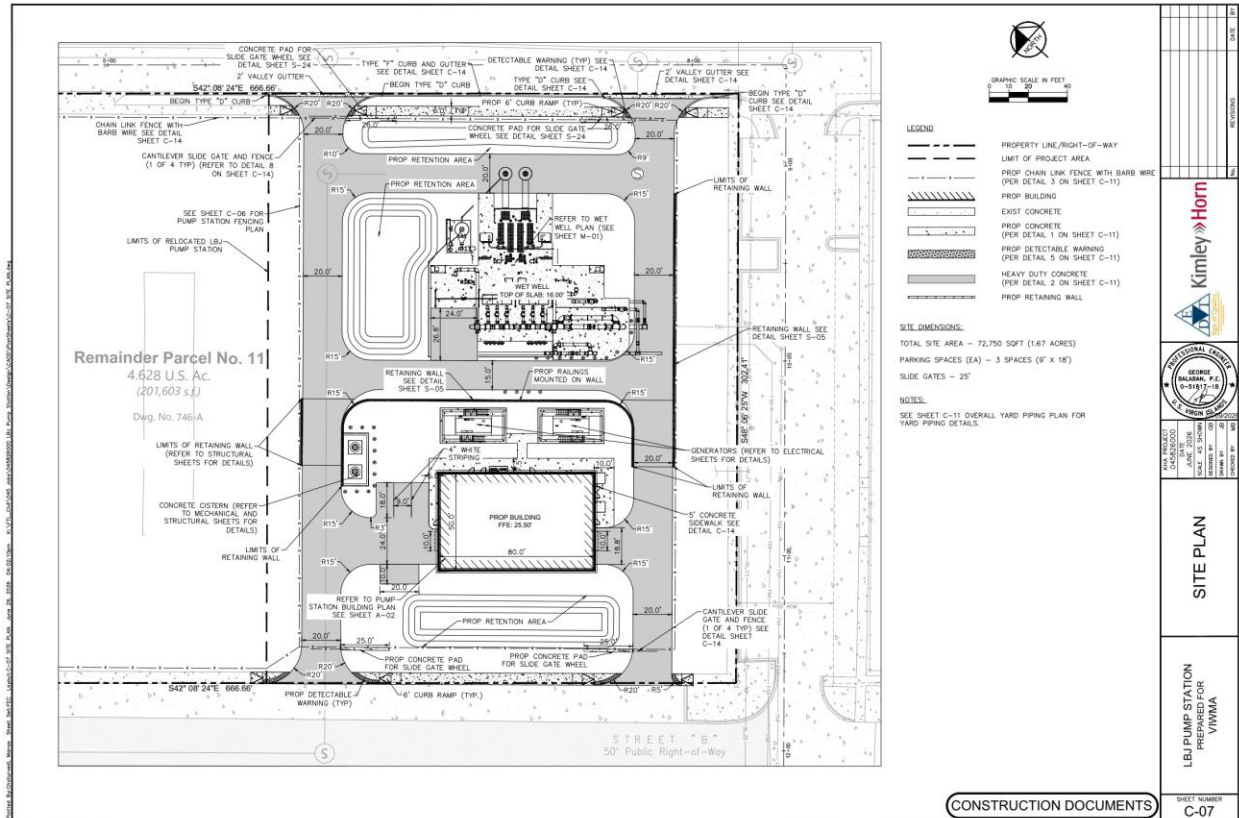


Figure 3. Relocated LBJ Pump Station Site Plan

Existing Conditions

The proposed relocation area at Remainder Parcel 11 is a mostly flat, previously disturbed field. The existing habitat is largely scattered grasses and weedy plants in the center with small to medium sized trees around the perimeter. Trash from smaller items such as food cans and plastic bags to larger items such as metal debris and tires are present on the site but not in an unusual abundance. There is evidence of horses being tied up for grazing as well as goat and deer scat throughout the property although none were witnessed during the site inspection. It is assumed the area receives periodic brush clearing due to the lack of tree growth in the center of the plot as well as brush piles haphazardly distributed in the area. The site was once a part of the Ralph de Chabert Housing Project which was torn down in 2013.



Figure 4. Ground view of project area facing east, standing on one of the old housing foundations.



Figure 5. Ground view of the project area facing west. The soil is compacted gravel (from previous development) and clay.



Figure 6. The brush pile indicates the recent clearing of the site.

ENVIRONMENTAL IMPACTS

Climate/Weather

The project erosion control will address issues created by runoff as the result of rainfall; especially significant rainfalls associated with tropical storms and hurricanes. There are numerous disturbances during the year, especially squalls and thunderstorms. These occur most frequently during the summer, lasting only a few hours and causing no pronounced change in the trade winds. Hurricanes occur most frequently between August and mid-October with their peak activity occurring in September. The annual probability of a hurricane is one in sixteen years.

The average annual rainfall on St. Croix is approximately 40 inches, ranging from 30 inches toward the eastern end of the islands to more than 50 inches at the higher elevations to the west. The project area receives approximately 40 inches of rainfall a year. Rainfall usually occurs in brief, intense showers of less than a few tenths of an inch and major rainfall events are associated with weather systems (National Weather Service). The Virgin Islands have no sharply defined wet season.

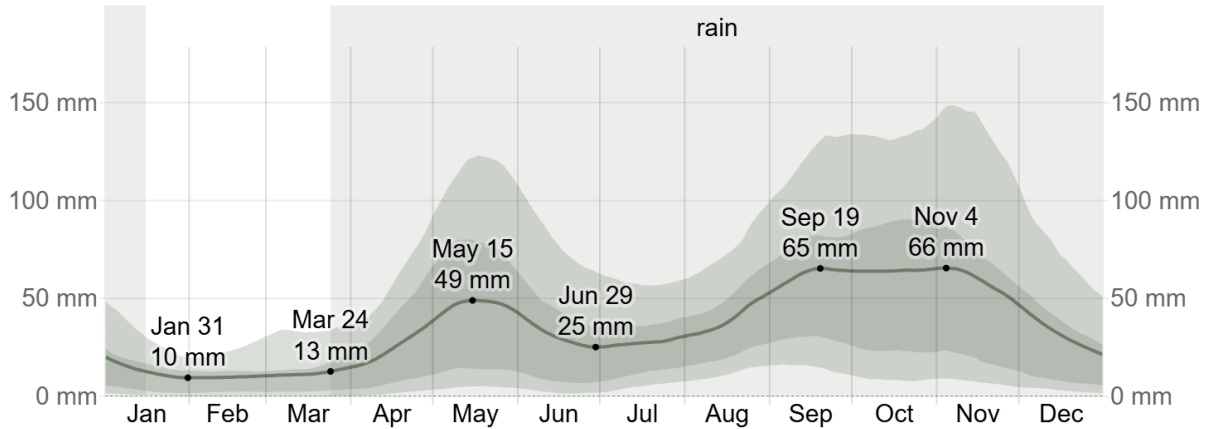


Figure 7. Average monthly rainfall for St. Croix (Henry E. Rohlsen Airport) 1980-2016 (<https://weatherspark.com>)

Landform Geology, Soils and Historic Land Use

The new pump site will be placed within an area that has previously been developed and already heavily impacted by man's use. The project site was undeveloped in 1954, but the area was cleared and there was considerable development in the greater area. The Ralph de Chabert Housing project was built in the 1960s, but in September 1989 Hurricane Hugo badly damaged the structures and they were abandoned in 2003 and demolished in 2013. In the following years the area has been used for storage and staging but currently sits vacant.

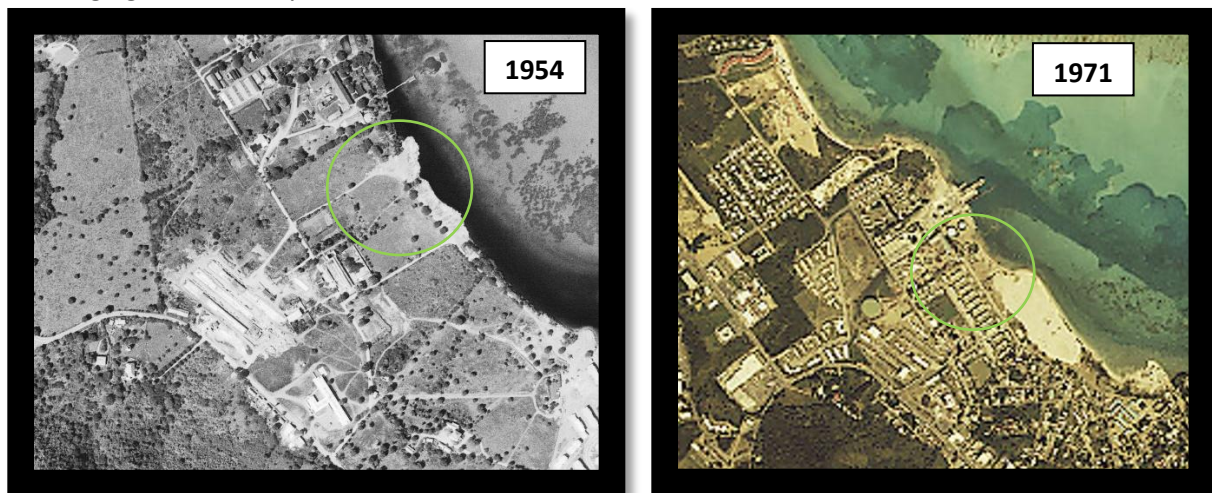


Figure 8. Historical USGS aerials show early development in the area.



Figure X. Time series from 2006 - 2023 of proposed LBJ pump relocation site. Project area denoted by green box.

The entire project area for the new LBJ pump site has the soil type Urban land-Glynn complex, 0 to 12 percent slopes (UgC). UgC is a mixture of Urban land and Glynn soils and does not have restrictive layers in the upper 60 inches. It is not prime farmland and has been highly altered by man.

The soil between the project area and the shoreline is classified as Ustorthents (Us). Ustorthents are young soils with limited development, found in regions with a dry climate and some periods of moisture. Lack of significant vegetation on these soils can lead to increased risk of being dislodged and carried off in stormwater flow. This will be taken into consideration as runoff from the project area is likely to impact the adjacent property and could increase soil discharge into coastal waters located to the north.

OTHER FEATURES

■ Limit of Study
■ Jurisdiction Boundary

#
N

1 inch = 500 feet **1:6,000**

0 250 500 1,000 1,500 2,000 Feet

0 50 100 200 300 400 Meters



PAGE 71 OF 94

ISLANDS

MAP NUMBER
78000000710
EFFECTIVE DATE
April 16, 2007

Figure 10. FEMA Flood Insurance Rate Map (FIRM) Panel 71 of 94. The existing pump station is boxed in pink and proposed boxed in green. The existing pump site falls within flood zone VE, and the proposed site falls outside of any FEMA flood zone.

A sedimentation and erosion control plan has been developed and will be implemented throughout construction.

Drainage Patterns

Due to previous development the project area receives very little run-on, most stormwater is directed around the site. The site itself has not developed defined drainage patterns and therefore there will be no alteration of drainage patterns because of the development of the new pump station.

Erosion Control

Prior to beginning excavation work, erosion control fencing must be installed at the around the site and down gradient of any stockpiles. In no case will excavated material be stockpiled on paved surfaces or places where material can run off on to the roadways or adjacent properties. All disturbed earth surfaces shall be stabilized in the shortest practical time and temporary erosion control devices will be employed until adequate soil stabilization is achieved. Temporary storage of excavated material shall be stabilized to minimize erosion.

During construction silt fencing, and sediment ponds will be utilized to protect against sedimentation. Stockpiles will be protected by silt fencing and covered when necessary. Best Management Practices will follow NOAA's 2014 "Stormwater Management Pacific and Caribbean Islands". Once work is complete soils will be stabilized by pavement, concrete, and native grass will be used to stabilize soils which are disturbed and will not be paved or concreted.

Fresh Water Resources

The proposed LBJ pump station relocation will have no impact on freshwater resources as it will only be impacting an area which was previously disturbed and previously developed.

Oceanography

The application is for relocation of the LBJ pump station. The project will not be affected by oceanographic processes, nor will it affect them. If proper sedimentation and erosion is implemented and properly maintained the project should have no impact on marine water quality.

Marine Resources

The application is for relocation of the LBJ pump station. The project will not directly affect any marine habitats. If proper sedimentation and erosion protection is implemented and properly maintained the project should have no impact on marine resources.

Terrestrial Resources

The proposed relocation site is a grassy field with a ring of more mature trees around the perimeter. Of the significant tree growth, there are mostly tan tan (*Leucaena glauca* L.), some white manjack (*Cordia alba*), casha (*Acacia tortuosa*.), dog caper (*Capparis spinosa*) and a few tamarinds (*Tamarindus indica*). There was one relatively large T. indica on the northeast corner of the project area. Within the grassy and weedy central area there were many insects present (ex: dragonflies, butterflies, beetles, ants, etc.) as well as 2 bird species observed on site: the Rock Pigeon (*Columba livia*) and the Zenaida dove (*Zenaida aurita*).

IMPACT OF LBJ PUMP STATION RELOCATION

The project area is a brown field site, one that has been altered for more than 70 years and one that has been densely developed for more than 50 years. The redevelopment of brown fields rather than green field areas are the best development practices.

The project also upgrades an old pump station and moves it inland away from the coastline where it could potentially impact and be impacted by coastal processes.

Wetlands

There are no wetlands near the proposed relocation site. The LBJ pump station relocation project will not impact wetlands.

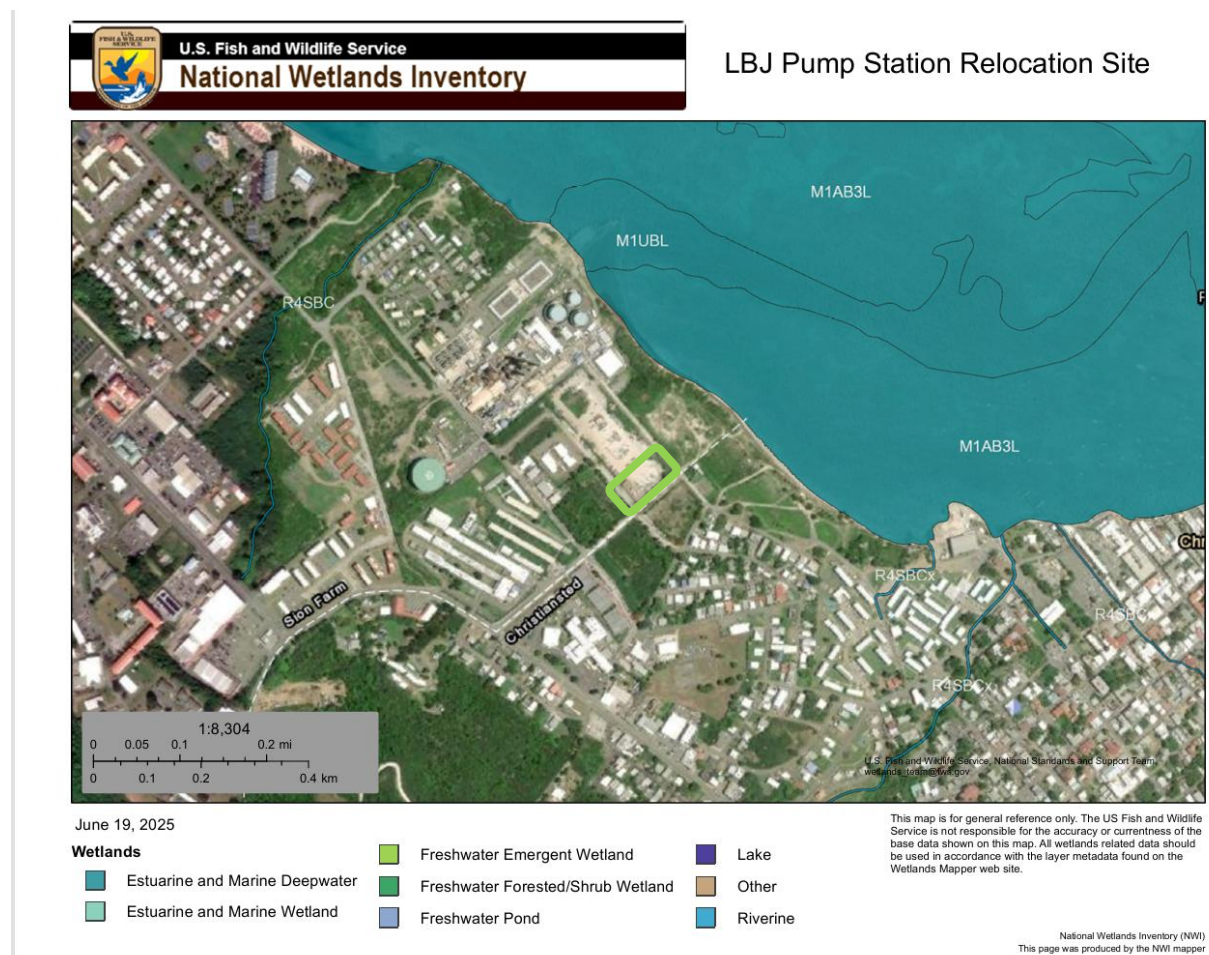


Figure 11. Wetland map for area from Fish and Wildlife Services Wetland Inventory (<https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>)

Rare and Endangered Species

No endangered, or threatened, species or endangered species habitat exist within the proposed project area. According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) project tool no endangered or threatened species, critical habitat or migratory birds are expected to occur in the proposed project area.

There is an endangered ground lizard, *Ameiva polops*, on the island of St. Croix, but this lizard is only found on Protestant Cay and Ruth Cay. There are also three endangered plant species on St. Croix – i.e., *Agave eggersiana*, *Buxus vahlii* and *Catesbaea melanocarpa* – but they primarily occur in exposed, dry areas. There are three known populations of *B. vahlii* on St. Croix, and all are well removed from the proposed project site. There is one known population of *C. melanocarpa* on St. Croix, and it is also located outside the proposed project site. Neither the endangered ground lizard nor any of the endangered plant species are found within the proposed project footprint.

Critical habitat for three ESA-listed sea turtles (*Chelonia mydas*, *Eretmochelys imbricata*, and *Dermochelys coriacea*) occurs along the coastline of in the land adjacent to, and downslope from, the project area. If proper sedimentation and erosion is implemented and properly maintained the project should have no impact on these nearby critical habitats. Because the area is open between the project site and the coastline any lighting should be directed away from the coastline!

ESA-listed Roseate terns (*Sterna dougallii dougallii*) could have historical nesting habitat along the coastline adjacent to, and downslope from, the project area. However, widespread impacts to these habitats from development and invasive species have driven remaining breeding pairs to offshore cays, mostly in the northern USVI. It is not anticipated that any breeding pairs would frequent the project area and no critical habitat has been identified.

Air Quality

All of St. Croix is designated Class II by the Environmental Protection Agency, in compliance with National Ambient Air Quality Standards. In Class II air quality regions open burning, visible air contaminants, particulate matter emissions, volatile petroleum products, sulfur compounds and internal combustion engine exhaust are all regulated (Virgin Islands Code Rules and Regulations). Heavy equipment will be used during project construction and will create combustion engine exhaust. Upon project completion, air quality will return to pre-construction conditions. VIWMA will apply for a Permit to Construct and a Permit to Operate from the Division of Environmental Protection, Department of Planning and Natural Resources for the proposed generator.

IMPACT ON MAN'S ENVIRONMENT

Land and Water Use Plans

The improvement of the public wastewater collection system is in accordance with the laws and regulations of the U.S. Virgin Islands.

Visual Impacts

The site was once a public housing development and for the last 10 years it has been an empty lot. The redevelopment of the site will have a negligible change in the visual landscape.

Traffic

The impact on traffic will be most significant during construction with vehicles, equipment and construction workers coming to and from the site. It is probable that equipment and construction personnel will park along the streets. The immediate area is undeveloped, and the scope of the project is limited. The route is not heavily traveled but is used by workers and visitors going into VIWAPA's

Richmond Power facility. The development of the pump station will have a limited impact on traffic and no impact on parking.

Social Impacts and Economic Impacts

The public wastewater system improvements will have both a positive social and economic impact on Virgin Islanders by improving the collection of wastewater for Virgin Islands Residents. The installation of a new plant will also reduce the incidences of bypasses of wastewater into Christiansted Harbor and will improve water quality for swimmers, beach goers and the marine environment.

Historical and Archaeological Resources

The site has been completely developed in the past and any historical resources which may have been in the area were significantly impacted when the housing project was constructed. The VISPHPO concurrence letter is attached herewith in Appendix B.

Waste Disposal and Accidental Spills

Equipment will be kept in good operational condition during the proposed project and will not be fueled on site. Any excess excavated material and debris will be collected, taken off-site and properly disposed of. The generator for the facility will have a double walled fuel tank. A Spill Prevention, Control, and Countermeasure (SPCC) Plan will be developed for the facility prior to construction.

ALTERNATIVE ANALYSIS

The project is limited to locations along the existing wastewater line route, and this location is one with extremely limited impact and is a government owned property.

No Build

The pumpstation improvements could not be made, and conditions would remain the same and the existing pump station would continue to deteriorate, and existing wastewater collection, including bypass issues would continue.

COASTAL CONSISTENCY

The proposed relocation of the LBJ pump site has negligible potential of impacting environmental resources, or ambient water quality during construction if stringent sedimentation and erosion control is implemented and maintained. Necessary sedimentation and erosion control measures will be implemented during earthwork to ensure that no environmental impacts occur. The proposed project occurs only within previously altered areas. Project activities will stop if historic remains or resources are encountered, and SHPO will be contacted to determine the best course of action.

The Coastal Zone Management Act of 1972 requires that federal actions, within and outside the coastal zone, which have reasonably foreseeable effects on any coastal use (land or water), or natural resources of the coastal zone be consistent with the enforceable policies of a state's federally approved coastal management program. The relocation of the LBJ pump site, 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 (CZM) Program. This federal consistency determination demonstrates the LBJ pump station relocation projects' compliance with the U.S. Virgin Islands' CZM Program.

The following policies are set forth in the U.S. Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903(b)]. The proposed relocation of the LBJ

pump station project meets each of the basic goals of the USVI for its coastal zone. Additional details are as follows:

USVI 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 proposed relocation of the LBJ pump station project is designed to be within a currently disturbed area. The project will have a minimal impact on natural resources, archeological resources, and will improve wastewater collection for the Christiansted area.

(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 to maintain and enhance the long-term productivity of the coastal environment.

- The proposed project promotes economic development and growth in the coastal zone by providing better wastewater collection for residents and visitors and limiting future sewage bypasses.
-

(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.

- The proposed project involves the improvement of wastewater collection service for commercial uses such as hotels and related facilities within the coastal zone.

(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 project has been designed to minimize impacts on resources. By moving the pump station out of the flood zone and further away from sensitive coastlines, it has been designed to enhance protection of critical infrastructure and, therefore, will meet and protect the economic and social needs of the St. Croix residents.

(5) Preserve, protect, and maintain the trust lands and other submerged and filled lands of the United States Virgin Islands to promote the general welfare of the people of the United States Virgin Islands.

- The proposed project will not impact trust lands or other submerged or filled lands of the U.S. Virgin Islands.

(6) Preserve what has been a tradition and protect what has become a right of the public by ensuring 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 proposed project will in no way affect public access to, or use of, 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 proposed project will not affect public recreational opportunities in the coastal zone and may lead to better water quality by limiting sewage bypasses.

(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 project will have negligible impact on natural resources and will implement best management practices (BMPs) to minimize areas of disturbance, thereby protecting adjacent habitats.

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

- As necessary, the project will implement sedimentation and erosion control BMPs to prevent loss of sediment from the project area during construction. The new pump station will limit wastewater discharges in the future.

The proposed relocation of the LBJ pump station, as designed, will maintain coastal water quality through control of erosion, sedimentation, runoff, and siltation, protect island resource and benefit Virgin Islanders by providing more reliable wastewater collection. It is, therefore, consistent with the policy set forth in the U.S. Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903(b)].