

February 2019

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# **DRAFT ENVIRONMENTAL ASSESSMENT**

## **SAVAN GUT PHASE II ST. THOMAS, U.S. VIRGIN ISLANDS STUDY**

### **SECTION 205 FLOOD RISK REDUCTION CONTINUING AUTHORITIES PROGRAM (CAP) CONVERSION**



US Army Corps of Engineers  
JACKSONVILLE DISTRICT

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JACKSONVILLE DISTRICT

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## **Proposed Finding of No Significant Impact**

### **DRAFT ENVIRONMENTAL ASSESSMENT SAVAN GUT PHASE II ST. THOMAS, U.S. VIRGIN ISLANDS STUDY SECTION 205 FLOOD RISK REDUCTION CONTINUING AUTHORITIES PROGRAM (CAP) CONVERSION**

The U.S. Army Corps of Engineers, Jacksonville District (Corps) has conducted an Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969, as amended (NEPA). The Corps assessed the effects of the proposed action in the Savan Gut St. Thomas, U.S. Virgin Islands (USVI) Detailed Project Report (DPR) and Environmental Assessment (EA), dated March 1982. This 2019 EA updates that analysis and adopts by reference the 1982 EA where the information is valid and applicable to this evaluation.

The proposed 1982 Recommended Plan consists of the following:

- Construction of a 2,300 foot covered channel from St. Thomas Harbor to and around the Jane E Tuitt Elementary School and terminating at a to be constructed velocity check dam;
- Replacement of three highway bridges;
- Construction of the velocity check dam;
- Construction of a floating debris barrier at the velocity check dam.

Varying levels of flood risk reduction were evaluated in the alternative analysis, including the recommended plan and the “no action” alternative. The recommended plan was identified as the National Economic Development Plan and is the environmentally preferable alternative. All practicable means to avoid and minimize adverse environmental effects have been incorporated into the recommended plan.

The Recommended Plan may affect wetlands, and mitigation may be necessary. The project design minimizes the destruction, loss, and/or degradation of wetlands and preserves and enhances the natural and beneficial values of wetlands. If impacts to wetlands require mitigation, a plan will be developed, proposed, and refined during the project’s Preconstruction Engineering and Design (PED) phase. The Corps and its contractors commit to avoiding, minimizing, and mitigating for adverse effects during construction activities.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the project was coordinated with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Services (USFWS) through the 1982 EA and will be coordinated again during the public review of this NEPA document. The Corps has determined that the project may affect, but is not likely to adversely affect, listed species under USFWS and NMFS purview. Consultation will be completed prior to the signing of this EA's Finding of No Significant Impact (FONSI). Pertinent correspondence is found in Appendix A.

Pursuant to the Coastal Zone Management Act, a Federal Consistency Determination has been submitted to the Department of Planning and Natural Resources for the USVI's review and concurrence. The Corps has determined that the recommended plan is consistent with the USVI's Coastal Zone Management Program. Pertinent correspondence is found in Appendix A.

Pursuant to the Section 401 of the Clean Water Act of 1972, as amended, water quality certification (WQC) will be obtained from the USVI prior to construction, if required. All appropriate conditions imposed by the WQC will be implemented in order to minimize adverse impacts to water quality. The Corps determined that the discharge or fill material associated with the Recommended Plan is compliant with Section 404(b)(1) Guidelines as required by the Clean Water Act.

The Corps has initiated consultation for the Recommended Plan with the USVI Historic Preservation Officer (SHPO) and the National Park Service (NPS) pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and consideration given under NEPA. The Corps is currently coordinating a Programmatic Agreement with USVI SHPO, NPS, and the Advisory Council on Historic Preservation. The Programmatic Agreement will outline the process in which the Corps will consult with the agencies to avoid, minimize, and mitigate adverse effects to historic properties and will be executed prior to the signing of this EA's FONSI. Pursuant to 54 U.S.C. 306108 § 800.14, the Corps is conducting a phased identification and evaluation of historic properties.

Technical and economic criteria used in the formulation of alternative plans were those specified in the Water Resource Council's 1983 Economic and Environmental Principles for Water and Related Land Resources Implementation Studies. All applicable laws, executive orders, regulations, and local government plans were considered in the evaluation of the alternatives. It is my determination that the recommended plan does not constitute a major federal action that would significantly affect the human environment; therefore, preparation of an Environmental Impact Statement is not required.

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Date

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Andrew D. Kelly, Jr.  
Colonel, Corps of Engineers  
District Commander

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# DRAFT ENVIRONMENTAL ASSESSMENT

## SAVAN GUT PHASE II ST. THOMAS, U.S. VIRGIN ISLANDS STUDY SECTION 205 FLOOD RISK REDUCTION CONTINUING AUTHORITIES PROGRAM (CAP) CONVERSION

### 1 PROJECT PURPOSE AND NEED

#### 1.1 PROJECT DESCRIPTION

The U.S. Army Corps of Engineers, Jacksonville District (Corps), proposes to construct 2,300 feet of covered concrete channel, a velocity check dam, and debris trap as well as replace three bridges with sections of covered channel to reduce flood damages in Charlotte Amalie, St. Thomas in the U.S. Virgin Islands (USVI). The non-Federal sponsor (NFS) is the USVI Department of Public Works.

The study area is within the Central Business District of Charlotte Amalie, the capital and largest city of the USVI. Charlotte Amalie is on the southern shore of the island of St. Thomas. Savan Gut provides the drainage for a watershed area of approximately 260 acres, flowing through densely developed Charlotte Amalie to St. Thomas Harbor in a constructed channel (see **Figure 1** and **Figure 2**).

Savan Gut (also known locally as Deyoung Gut) is located in the highly developed urbanized area of Charlotte Amalie, St. Thomas, USVI. The gut's headwaters begin in the mountainous and heavily vegetated region north of the Charlotte Amalie Harbor. The gut drains directly into the harbor via a natural gut from the vegetated area, to a combination of an intermixed lined and unlined degraded concrete channel from the Jane E. Tuitt Elementary School (flowing under the school and the schools' basketball court) to the intersection of Guttets Gade and Norte Gade. The culvert is then inaccessible and flows underneath businesses and roads of downtown Charlotte Amalie until it exits into St. Thomas Harbor.

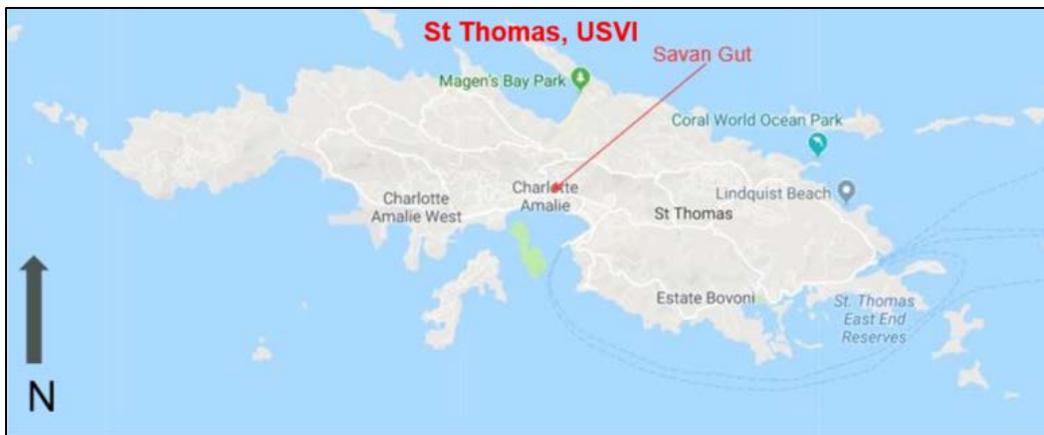


Figure 1. Project vicinity map.



the Bipartisan Budget Act (BBA) of 2018 (Public Law 115-123), authorizes the Government to conduct the study at full federal expense to the extent that appropriations provided under the Investigations heading of the 2018 BBA are available and used for such purpose.

### **1.3 PROJECT NEED OR OPPORTUNITY**

The purpose of the project is to reduce flood damages to the Jane E. Tuitt Elementary School and Central Business District in downtown Charlotte Amalie. Heavy rainfall in the upland catchment basin of Savan Gut causes rocks and other debris to be washed down the channel toward the sea. Two constrictions reduce flood flows so that the flood waters overflow the channel banks and flood the school as well as the business district. The Savan section of Charlotte Amalie has extremely high runoff rates due to the steep slopes in the upper basin. Flash floods from intense thunderstorms are a common event affecting this area and can occur anytime during the year. Effects from Hurricane Maria, which hit the island in September 2017, prompted the Corps to include the project for consideration for funding under the BBA. (Effects from the storm are discussed more in this EA's section 3.5 Hurricane Maria Storm Effects.)

This Environmental Assessment (EA) evaluates the Recommended Plan, which is described in detail in Section 2.2. This EA also completes the required analysis under the National Environmental Policy Act (NEPA) and adopts the 1982 EA by reference where the information is valid and applicable to this evaluation.

### **1.4 RELATED ENVIRONMENTAL DOCUMENTS**

The Recommended Plan is detailed in the Savan Gut St. Thomas, USVI Detailed Project Report (DPR) and EA, dated March 1982, and the 2019 CAP Conversion Addendum Report. These documents are available on the Corps' environmental website, under USVI, at the following link:

<http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branh/Environmental-Documents/>

(On that page, click on the "+" next to "U.S. Virgin Islands" and scroll down to the project name.)

### **1.5 DECISIONS TO BE MADE**

This NEPA document will analyze whether the implementation of the project will result in significant effects on the human environment. The need for mitigation measures or best management practices (BMPs) to reduce any potentially adverse effects, particularly in regards to associated activities, will be further defined in the Preconstruction Engineering Design (PED) phase. The Corps will make the decision to sign the Finding of No Significant Impact (FONSI) and move forward with the Recommended Plan if no significant impacts on the human environment are identified. If significant impacts are identified, the Corps will choose to implement mitigation measures to reduce the impacts to a lower-than-significant threshold, proceed with the Notice of Intent to prepare an Environmental Impact Statement, or not implement the Recommended Plan.

This EA concludes that the project, as described in the Recommended Plan, is in the public interest and would not significantly affect the quality of the human environment. (See Chapter 4 for the effects of the Recommended Plan.) The Corps and its contractors commit to avoiding, minimizing, and mitigating for adverse effects during construction activities. Environmental commitments, as discussed in Section 6, will be included in the contract specifications.

## **1.6 SCOPING AND ISSUES**

Pursuant to NEPA and Corps' regulations, the 1982 draft DPR/EA was circulated for comments in 1982. A public and interagency workshop was held on February 25, 1982. Comments received during the public and agency review period and public workshop were incorporated into the EA prior to the signing of the FONSI. The 2019 EA and Proposed FONSI and associated appendices will be released for a 60-day public and agency review and comment period.

### **1.6.1 RELEVANT ISSUES**

The Corps identified the following considerations as relevant to the Recommended Plan and appropriate for further evaluation: vegetation, wetlands, endangered and threatened species, fish and wildlife resources, essential fish habitat (EFH), coastal barrier resource system (CBRS) units, water quality, hazardous, toxic, and radioactive waste (HTRW), air quality, noise, aesthetic resources, recreation resources, socioeconomic resources, cultural resources, unavoidable adverse environmental effects, and cumulative effects. The Corps analyzed many of these issues in the 1982 EA. The 2019 EA updates that analysis and adopts the 1982 EA by reference where the information is valid and applicable to this evaluation. Please see **Table 1** for additional information.

### **1.6.2 ISSUES ELIMINATED FROM FURTHER ANALYSIS**

No issues were identified for elimination.

## **1.7 WATER QUALITY CERTIFICATION AND COASTAL ZONE MANAGEMENT ACT**

Pursuant to Section 401 of the Clean Water Act of 1972, as amended, water quality certification (WQC) will be obtained from the USVI prior to construction, if required. Pursuant to the Coastal Zone Management Act, a Federal Consistency Determination has been submitted to the Department of Planning and Natural Resources for the USVI's review and concurrence. The Corps has determined that the recommended plan is consistent with the USVI's Coastal Zone Management Program. Pertinent correspondence is found in Appendix A.

## **2 ALTERNATIVES**

This EA only evaluates the 1982 Recommended Plan to ensure that any new potential environmental consequences on the human environment are fully analyzed and disclosed to the public. Section 4 (Environmental Effects) compares the alternatives in more detail, providing a clear basis for choice to the decision maker and the public. The project's Recommended Plan best meets the project objectives and constraints and is environmentally acceptable and economically justified.

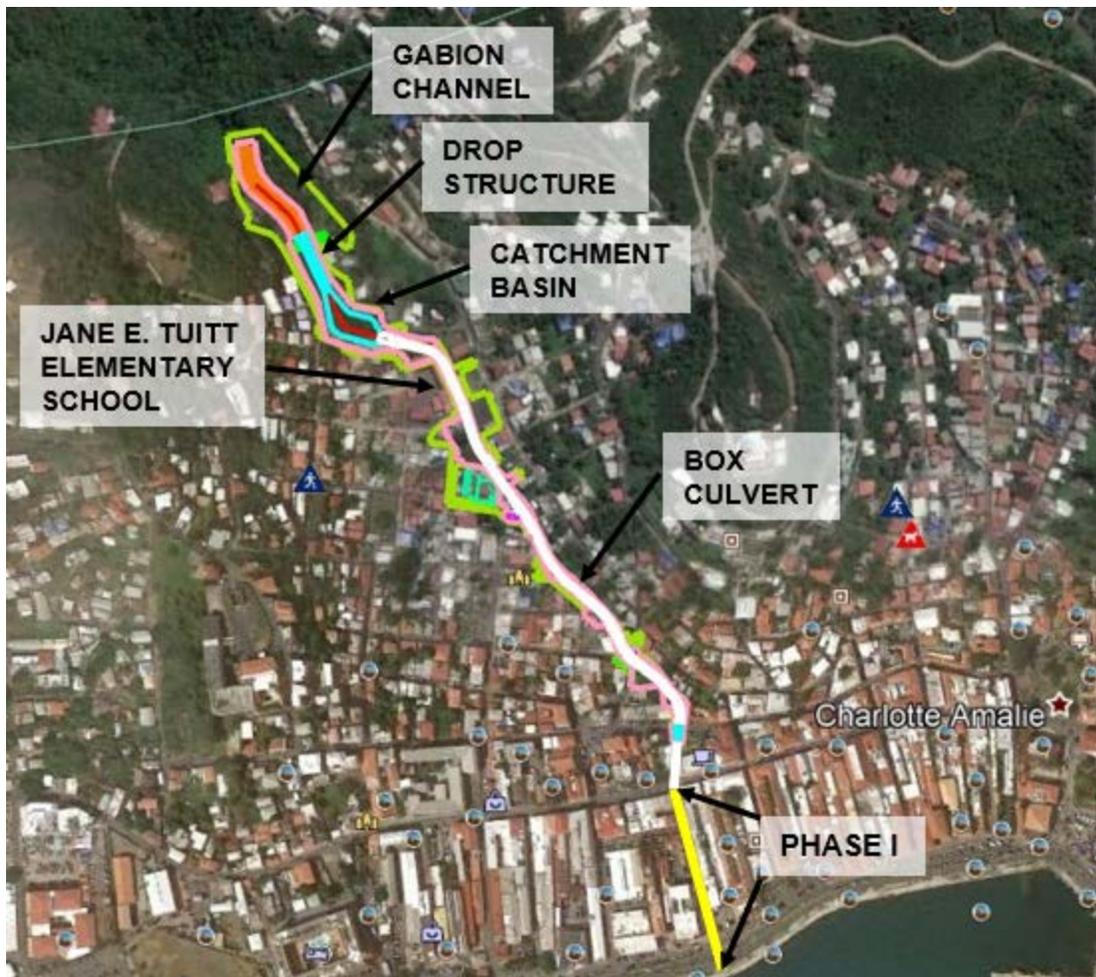
### **2.1 NO ACTION ALTERNATIVE**

NEPA regulations refer to the No Action Alternative as the continuation of existing conditions of the affected environment without implementation of, or in the absence of, the Recommended Plan and 40 C.F.R. §6.205 requires an agency to assess the No Action Alternative in an EA. Under this alternative, existing and prospective flooding conditions would continue. Damages to infrastructure experiencing the flooding (e.g. residential houses, commercial businesses, elementary school) would continue in these areas. Flooding, and its associated damages, may result in potential human health and safety issues.

### **2.2 1982 RECOMMENDED PLAN**

#### **COVERED CONCRETE CHANNEL, VELOCITY CHECK DAM, AND DEBRIS TRAP FOR STANDARD PROJECT FLOOD**

The 1982 Recommended Plan (see **Figure 3**), maximizes the National Economic Development benefits and consists of the phased construction of a 2,300-foot-covered concrete channel extending from St. Thomas Harbor upstream to and around Jane E. Tuitt Elementary School. The benefits for the project assume the originally designed total project would be completed; however, due to program capacity and funding challenges, the project was split into two phases. Phase I construction was completed by the Corps in 1989 and consisted of channelization of approximately 655 feet from St. Thomas Harbor to Prindsesse Gade. Phase II construction includes the remaining channelization work as well as a velocity check dam approximately 150 feet upstream of the Jane E. Tuitt Elementary School. A barrier will be included in the check dam to trap debris. The new channel ends at the velocity check dam. Replacement of three highway bridges with sections of covered channel will also be included in the project. A more detailed description of the project can be found in the 1982 DPR/EA as well as the 2019 CAP Conversion Addendum Report.



**Figure 3. Recommended Plan.**  
 (SOURCE: Corps 2018)

### 2.2.1 2019 EVALUATION OF THE 1982 RECOMMENDED PLAN

In order to meet current Federal, state, and local laws, regulations, and policy, as well as Corps standards and guidelines, the 1982 Recommended Plan will be reviewed and potentially modified during the PED phase. If changes to the project result in effects that have not been previously evaluated, then pursuant to NEPA, the Corps will prepare a separate NEPA document to address the changes and evaluate the associated effects. The Corps and its contractors commit to avoiding, minimizing, and mitigating for adverse effects during construction activities. The 1982 project did not include wetland mitigation; however, the Recommended Plan may affect wetlands, and mitigation may be necessary. The project design minimizes destruction, loss, and/or degradation of wetlands and preserves and enhances the natural and beneficial values of wetlands. If impacts to wetlands require mitigation, a plan will be developed, proposed, and refined during the project's PED phase.

### 2.3 ALTERNATIVES ELIMINATED FROM FUTURE EVALUATION

In addition to the 1982 Recommended Plan, relocation and a variety of design conditions (e.g. 100-year design, 50-year design, 25-year design, 10-year design) were considered

in the 1982 DPR/EA. These alternatives did not best meet the project needs and were eliminated from further evaluation. Additional information on these alternatives can be found in the 1982 DPR/EA.

#### **2.4 RECOMMENDED PLAN AND BASIS FOR CHOICE**

**Table 1** in Section 4 lists the factors considered in the alternatives comparison process and provides the analysis of the major features and consequences of each alternative in comparison to one another. The No Action Alternative is not carried forward as it does not meet the mission. In consideration of applicable factors listed in 33 CFR section 320.4, the Corps has determined the 1982 Recommended Plan is not contrary to public interest and is therefore, carried forward as the preferred alternative. However, in order to meet current Federal, state, and local laws, regulations, and policy, as well as Corps standards and guidelines, the 1982 Recommended Plan will be reviewed and potentially modified during the PED phase.

### **3 EXISTING ENVIRONMENT**

The Existing Environment Section describes the existing environmental resources of the areas that would be affected if any of the alternatives were implemented. This section describes only those environmental resources that are relevant to the decision to be made. It does not describe the entire existing environment, but only those environmental resources that will affect or that will be affected by the alternatives if they were implemented. This section, in conjunction with the description of the “No Action Alternative,” forms the baseline conditions for determining the environmental effects of the reasonable alternatives.

A brief summary of existing conditions is included in this section; however, a full detailed analysis is provided within the 1982 DPR/EA and is hereby incorporated by reference within this EA. (The 1982 DPR/EA is available on the Corps’ environmental website, under “U.S. Virgin Islands”.)

#### **3.1 NATURAL SETTING (VEGETATION, WETLANDS, ENDANGERED AND THREATENED SPECIES, FISH AND WILDLIFE RESOURCES, AND EFH)**

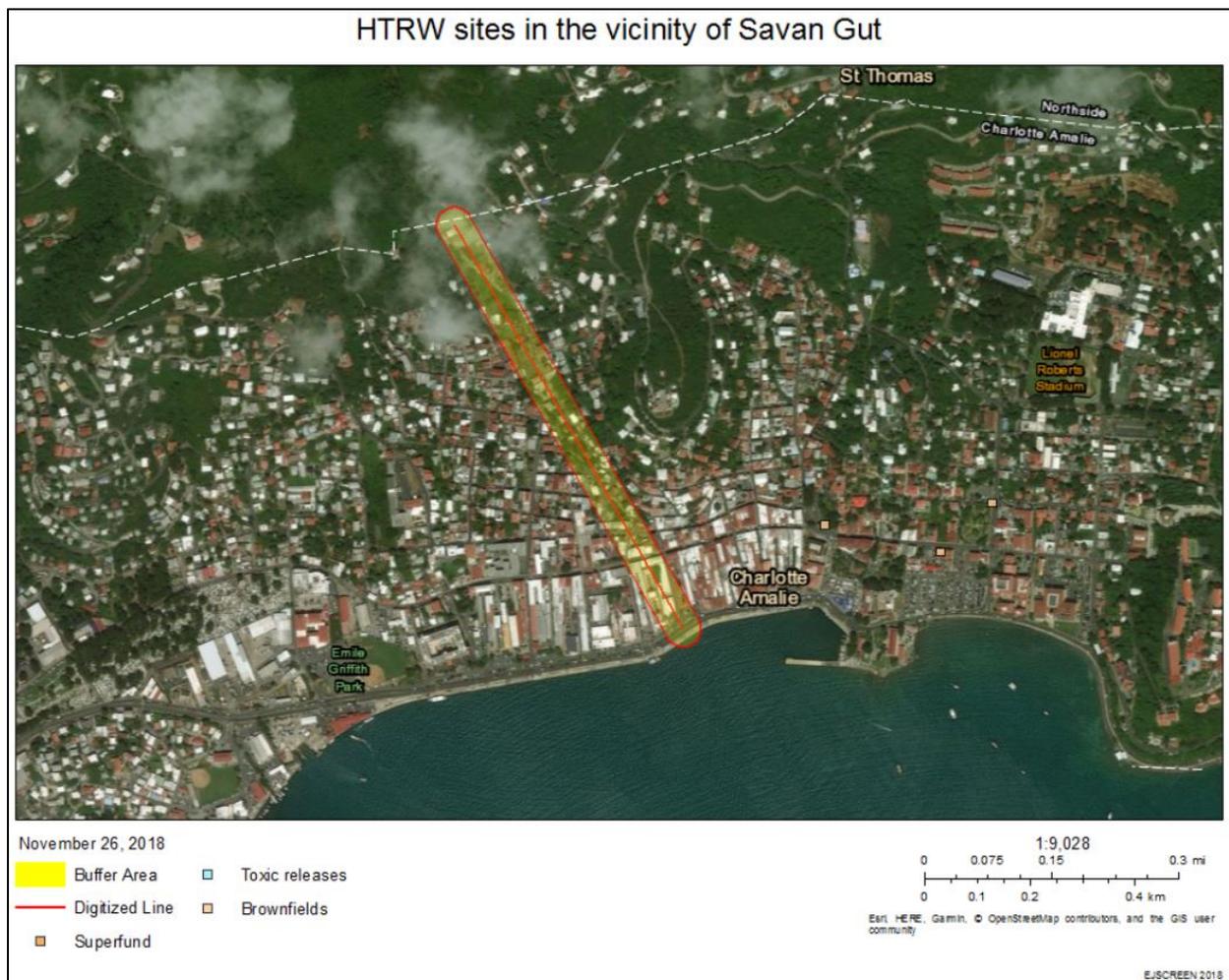
Due to the volcanic origin of the island, topography of Savan Gut varies from steep slopes with dense vegetation to moderate slopes with rock lined channels, especially in areas that have been developed. Wildlife in this area is not very diverse or unusual. Species, such as lizards, frogs, birds, and rats are commonly seen in the area. In a letter dated December 17, 1980, the U.S. Fish and Wildlife Services (USFWS) determined the project would not adversely affect fish and wildlife resources in the project area. The USFWS 1980 Coordination Act Report (CAR) did not identify any threatened or endangered species; however, the federally listed endangered Virgin Islands tree boa (*Epicrates monensis granti*) may occur in the project area. No effect to EFH is anticipated as the project occurs inland, out of the Essential Fish Habitat under jurisdiction of the National Marine Fisheries Service (NMFS). Wetlands may be present at or near the northern portion of the project, which contains steep slopes resulting in less development.

#### **3.2 PHYSICAL SETTING (CBRS, WATER QUALITY, HTRW, CLIMATE CHANGE, AIR QUALITY, NOISE)**

Savan Gut is an intermittent gut and is therefore classified as Class I (IF) Inland surface waters. Per Title 12, Chapter 7, Sub-Chapter 186 of the USVI Water Quality Standards, designated uses of Class I (IF) waters include maintenance and propagation of desirable species of wildlife (including threatened, endangered species listed pursuant to section 4 of the Federal Endangered Species Act and threatened, endangered and indigenous species listed pursuant to Title 12, Chapter 2 of the Virgin Islands Code), and primary contact recreation.

St. Thomas Harbor, where Savan Gut empties is classified by the USVI as Class C Waters. Per Title 12, Chapter 7, Sub-Chapter 186 of the USVI Water Quality Standards, designated uses of Class C waters include maintenance and propagation of desirable

species of aquatic life (including threatened and endangered species listed pursuant to Section 4 of the Federal Endangered Species Act and threatened, endangered and indigenous species listed pursuant Title 12, Chapter 2 of the Virgin Islands Code), primary contact recreation (swimming, water skiing, etc.), industrial water supplies, and shipping and navigation. This Class allows for evident changes in structure of the biotic community and minimal changes in ecosystem function. Evident changes in structure due to loss of some rare native taxa; shifts in relative abundance of taxa (community structure) are allowed but sensitive-ubiquitous taxa remain common and abundant; ecosystem functions are fully maintained through redundant attributes of the system. No CBRS units are located near the project area. The project area is highly developed; therefore, hazardous waste sources such as gas stations, dry cleaners, etc., exist in and around the project area. A review of the U.S. Environmental Protection Agency's (USEPA) EnviroMapper in November 2018 confirmed there are no documented superfund, toxic release, or brownfield sites in the project vicinity (see **Figure 4**); however, open channel areas are used as refuse dumping and sewage sites by nearby residents.



**Figure 4. USEPA resource mapper HTRW sites.**  
(SOURCE: USEPA EnviroMapper)

The climate in this region is characteristically tropical. Flash floods from intense thunderstorms are a common event affecting this area and can occur anytime during the year. Climate change was not considered in the 1982 DPR/EA. Analysis of the effects of climate change will occur during the project's PED phase. Charlotte Amalie is located in Air Quality Control Region "U.S. Virgin Islands", which is considered as being in attainment with the National Ambient Air Quality Standards. The project area is located in a highly urbanized environment, where sources of noise include recreational activities at the elementary school (e.g. outdoor sports), vehicles, commercial vessels transiting up and down the coast, and natural sounds from the physical and biological environment.

### **3.3 SOCIOECONOMIC RESOURCES (ECONOMICS, AESTHETIC RESOURCES, RECREATION RESOURCES, NAVIGATION)**

The housing inventory does not appear to have changed much since the 1982 report. A majority of the structures appear to be inhabited and all show considerable signs of aging. There are numerous vehicles on every street in the study area. The main tourist areas in Charlotte Amalie are undergoing a significant revitalization with decorative paver streets and expansion of the main route to a multi-lane highway. Since the report was written, the cruise ship industry has seen dramatic increase in visitation. Currently, approximately 1.7M cruise ship visitors call on St. Thomas annually.

During a site visit conducted on November 10, 2018, a majority of the storefronts were closed due to the early hours, but the signs on the buildings appeared current and their businesses appear to be open. A majority of the structures on Veterans and Main streets appear to be active businesses. These businesses include multiple upscale/high-end retail clothing and jewelry stores that exist in the first two blocks from the harbor. However, as the majority of the buildings did not contain windows it was impossible to determine content. The further from the harbor the more vacancies appear with several vacant buildings noted on Back Street (Williamsementte). Personal and property safety also appears to be a concern the further removed from Main and Veterans street.

Tourism, trade, and other services are the primary economic activities, accounting for nearly 60% of the USVI's gross domestic product (GDP) and about half of total civilian employment. Close to two million tourists per year visit the islands. The government is the single largest employer. In 2016, government spending (both federal and territorial together) accounted for about 27% of GDP while exports of goods and services, including spending by tourists, accounted for nearly 47%. The agriculture sector is small, with most food being imported. The manufacturing sector consists of rum distilling, electronics, pharmaceuticals, and watch assembly. Rum production is significant. Shipments during a six-month period of fiscal year 2016 totaled 8,136.6 million proof gallons.

### **3.4 CULTURAL RESOURCES**

Previous consultation with the USVI Historic Preservation Office (SHPO) and a current review of the listing of the National Register of Historic Places (NRHP) indicates the Savan Gut Phase II Project's area of potential effect (APE) includes the Charlotte Amalie Historic District listed on the NRHP in 1976 (see **Figure 5**). The historic district then

included 574 contributing buildings, three contributing structures, and a contributing object. The Charlotte Amalie Historic District includes buildings, dwellings, and sites that represent the town's early colonization and rich history. Important features in the district include Fort Christian, a National Historic Site constructed circa 1666 and completed in 1680; Skystborg (Blackbeard's Castle), a watchtower overlooking the harbor built by the Danes in 1678; and Emancipation Park, commemorating the emancipation of slaves by Governor Peter von Scholten in 1848. The architecture extant in the Charlotte Amalie Historic District especially in the project area's residential section known as "The Savanne" or "Savan" spans three centuries having great significance in understanding the historical development of the town of Charlotte Amalie. This area west of Denmark Hill was laid out in a grid plan in 1764, and is predominantly single family residential in use with some commercial buildings bordering its eastern boundary. Cottages in the Savanne area are almost exclusively single-storied buildings of frame construction with shingled hip roofs.

Based on the presence of existing cultural resources and standing structures within the Charlotte Amalie Historic District and high probability for additional historic properties to be identified within the project's APE, a cultural resources survey of the proposed Savan Gut alignment was conducted (Righter and Mitchell 1981). As a result of this cultural resources survey, archaeological monitoring during construction and further documentation of extant structures and features to the HABS/HAER standards was recommended to be the most effective method for identifying and evaluating historic properties that would potentially be adversely effected by the proposed Savan Gut Phase II undertaking. Following this survey, and due to monetary constraints, the Corps developed a historic preservation mitigation plan with the USVI SHPO to divide the Corps' Savan Gut Phase II Project into two mitigation planning phases (identified as Phase II and Phase III in the historic preservation mitigation plan). As a result, the Corps' Savan Gut Phase II Project reduced the northern extent of the flood control footprint and eliminated the pedestrian park.

Subsequently, for both of the historic preservation mitigation Phase II and Phase III plans, it was agreed that the Contractor would be required to monitor and control construction vibrations that may affect historic structures. Specifically, the Phase I plan called for the Contractor to dismantle and record to HABS/HAER standards, the two historic ovens, the General Gade bridge arch and wall, and the historical architectural features in the deJongh wall. The historically significant brick from the dismantled historic properties was to be stored on the Department of Public Works property during Phase II of the historic preservation mitigation plan. The ovens were then to be rebuilt and the architectural features of the bridge arch and wall and the deJongh wall were to be incorporated into the flood control project during Phase III of the historic preservation mitigation plan. In addition, all of the remaining restoration work including the Banaba Well, and placement of the commemorative plaque were to be deferred to Phase III of the historic preservation mitigation plan.

Due to the age of these previous surveys and evaluations, the current Savan Gut Phase II Project requires renewed coordination and consultation with the USVI SHPO and

National Park Service (NPS) as changes in criteria for evaluating historic properties need to meet current standards to fulfill the requirements of Section 106 of the National Historic Preservation Act (36 CFR Part 800). Additional cultural resources surveys are needed to conduct a phased identification and evaluation of historic properties during the project's PED phase. The Corps is currently coordinating a Programmatic Agreement with USVI Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP). The Programmatic Agreement will outline the process in which the Corps will consult with the agencies to avoid, minimize, and mitigate adverse effects to historic properties and will be executed prior to the signing of this EA's FONSI. Dependent on further consultation/reevaluation with these agencies and the results of monitoring and Phase I cultural resources investigations, project design modification may be necessary to avoid or minimize impact to historic properties. Phase II NRHP eligibility testing or mitigation may be required if impacts cannot be avoided.



**Figure 5. St. Thomas, USVI National Register of Historic Places: Cultural Resources and Historic District in vicinity of Savan Gut Phase II Project.**  
(SOURCE: NPS)

### 3.5 HURRICANE MARIA STORM EFFECTS

Site inspections after Hurricane Maria revealed Savan Gut overtopped its banks causing debris and sediment accumulation throughout the gut (see **Figure 6** through **Figure 9**).

One to two feet of soil erosion was observed downstream of the low-water crossing on Gamble Street. Approximately 15 feet of collapsed channel wall near the damaged road was also noted. Heavy and sustained rain over multiple days will cause the Savan Gut to flood in its current condition if protective measures are not in place, causing more damage to property owners.



**Figure 6. Sediment build up in the channel.**  
(SOURCE: Corps staff, October 2017)



**Figure 7. Channel wall damage and erosion.**  
(SOURCE: Corps staff, October 2017)



**Figure 8. Debris accumulation in the channel.**  
(SOURCE: Corps staff, October 2017)



**Figure 9. Collapsed channel wall.**  
(SOURCE: Corps staff, October 2017)

In coordination with the USVI, Federal Emergency Management Agency (FEMA) is executing a long term recovery and resilience program in the USVI following the damaging 2017 hurricane season. The 1982 DPR/EA note the presence of utility lines that occur in or cross the gut that will need to be relocated and or considered during this project. The FEMA recovery mission may include upgrades and repairs of some of these utility lines. Coordination with the USVI Department of Public Works and USVI Waste Management Authority will occur to avoid potential conflicts during construction.

## 4 ENVIRONMENTAL EFFECTS

The anticipated changes to the existing environment (including direct and indirect effects) for the No Action Alternative and Recommended Plan are included in **Table 2**. Cumulative effects are also discussed in **Tables 3** and **4** of this section.

In order to meet current Federal, state, and local laws, regulations, and policy, as well as Corps standards and guidelines, the 1982 Recommended Plan will be reviewed and potentially modified during the PED phase. If changes to the project result in effects that have not been previously evaluated, then pursuant to NEPA, the Corps will prepare a separate NEPA document to address the changes and evaluate the associated effects. The Corps and its contractors commit to avoiding, minimizing, and mitigating for adverse effects during construction activities.

**Table 1. Summary and comparison of the potential environmental consequences associated with the implementation of the No Action Alternative and Recommended Plan.**

Environmental Factor / Resource	No Action Alternative	1982 Recommended Plan	2019 Evaluation of the 1982 Recommended Plan
Vegetation	No effect	Construction of the project would lethally affect vegetation through excavation or burial.	Same as 1982 Recommended Plan
Wetlands	No effect	No analysis completed; no mitigation proposed.	Debris and vegetation would be removed during the channelization, clearing, and grubbing activities. The Recommended Plan may affect wetlands, and mitigation may be necessary. The project design minimizes destruction, loss, and/or degradation of wetlands and preserves and enhances the natural and beneficial values of wetlands. If impacts to wetlands require mitigation, a plan will be developed, proposed, and refined during the project's PED phase.
Endangered and Threatened Species	No effect	No effect on any federally listed endangered or threatened species. The 1980 USFWS CAR did not identify any endangered or threatened species or effects to designated critical habitat.	Construction activities may affect, but are not likely to adversely affect, the Virgin Islands tree boa ( <i>Epicrates monensis granti</i> ). USFWS and Virgin Islands Division of Fish and Wildlife (VIDFW) standard protection measures will be implemented to protect any boas that may occur in the project area. Consultation with USFWS is ongoing.

**Table 1. Summary and comparison of the potential environmental consequences associated with the implementation of the No Action Alternative and Recommended Plan.**

Environmental Factor / Resource	No Action Alternative	1982 Recommended Plan	2019 Evaluation of the 1982 Recommended Plan
Fish and Wildlife Resources	No effect	In a letter dated December 17, 1980, USFWS concurred with the Corps determination and stated no negative impacts on the fauna are expected.	The project lies within a highly urbanized area. Temporary displacement of wildlife during construction due to noise and/or construction activities may occur; however, these effects are expected to be minor and will cease with the completion of construction.
EFH	No effect	No analysis completed	No effect
CBRS	No effect	No analysis completed	No effect
Water Quality	Erosion and sediment loss upstream of Back Street will continue and turbidity downstream within the bay (Class C waters) will increase, due to lack of sediment containment.	There will be a temporary increase in turbidity levels downstream of the construction areas. These elevated turbidity levels will be temporary and are not expected to be significant. If dewatering is required, BMPs will be implemented to ensure compliance with USVI water quality requirements. No long-term adverse effects to water quality are expected.	There will be a temporary increase in turbidity levels at the construction areas during construction. These elevated turbidity levels will be temporary and are not expected to be significant. Pursuant to Section 401 of the Clean Water Act of 1972, as amended, WQC will be obtained from the USVI prior to construction, if required.
HTRW	No effect	No analysis completed.	No effect
Air Quality	No effect	Minor, temporary degradation of air quality will occur due to emissions during construction operations as well as heavy equipment and truck haul emissions.	Same as 1982 Recommended Plan

**Table 1. Summary and comparison of the potential environmental consequences associated with the implementation of the No Action Alternative and Recommended Plan.**

Environmental Factor / Resource	No Action Alternative	1982 Recommended Plan	2019 Evaluation of the 1982 Recommended Plan
Noise	No effect	A temporary increase in the noise level in the project area would occur during construction operations; however noise levels would return to normal following completion of the construction.	Same as 1982 Recommended Plan
Aesthetic Resources	No effect	No analysis completed	The project area is highly urbanized. The area south of the Inte Gade bridge possesses very low visual aesthetic quality, whereas the area north of the bridge is too steep for structures and is mainly lush vegetation. Equipment used for construction of the project will be visible and may be considered unsightly by members of the public, resulting in a temporary reduction in the aesthetic value in the construction area.

**Table 1. Summary and comparison of the potential environmental consequences associated with the implementation of the No Action Alternative and Recommended Plan.**

Environmental Factor / Resource	No Action Alternative	1982 Recommended Plan	2019 Evaluation of the 1982 Recommended Plan
Recreation Resources	No effect	No analysis completed on the project area.	Implementation of the Recommended Plan will affect the Jane E. Tuitt Elementary School basketball court. The Corps is committed to working with the NFS and Jane E. Tuitt Elementary School to ensure any loss of recreational areas is offset through the restoration or replacement of resources lost. The top of the concrete box culvert will serve as a linear park for the project. Seven pocket parks, which include landscaping, hardscaping, vegetation, and lighting, will be constructed along the linear park.

**Table 1. Summary and comparison of the potential environmental consequences associated with the implementation of the No Action Alternative and Recommended Plan.**

Environmental Factor / Resource	No Action Alternative	1982 Recommended Plan	2019 Evaluation of the 1982 Recommended Plan
Socioeconomic Resources	Taking no action would avoid any possible adverse impacts from proposed remedial plans but would result in continuation of, and potentially expanding, losses to property and threats to health and life from storm-induced flooding.	The selected plan will maintain both the identity of the Central Business District of Charlotte Amalie and the community spirit and close-knit relationships within the Savan area. There should be no significant additional financial burden placed on the residents as a result of these flood damage reduction measures. There should be no significant change in land use activities within the study area, with residents and shop owners being afforded the assurance of lessened flood damages. Along with a reduction of health hazards, the flood control project should lower the risk of displacement as a result of flooding conditions.	Same as 1982 Recommended Plan.

**Table 1. Summary and comparison of the potential environmental consequences associated with the implementation of the No Action Alternative and Recommended Plan.**

Environmental Factor / Resource	No Action Alternative	1982 Recommended Plan	2019 Evaluation of the 1982 Recommended Plan
Cultural Resources	No effect on cultural resources listed or eligible for listing in the NRHP.	Cultural resources monitoring/surveys, and coordination with the USVI SHPO, ACHP, and NPS is necessary to evaluate cultural resources and determine effects of the Recommended Plan on historic properties.	Cultural resources monitoring/surveys will be required as identified in the 1982 Recommended Plan. The Corps is currently coordinating a Programmatic Agreement with USVI SHPO, NPS, and the ACHP. The Programmatic Agreement will outline the process in which the Corps will consult with the agencies to avoid, minimize, and mitigate adverse effects to historic properties and will be executed prior to the signing of this EA's FONSI. Dependent on further consultation/reevaluation of effects on cultural resources, project design modifications may be necessary to avoid or minimize impacts to historic properties. Phase II NRHP eligibility testing or mitigation may be required if impacts cannot be avoided.

**Table 1. Summary and comparison of the potential environmental consequences associated with the implementation of the No Action Alternative and Recommended Plan.**

Environmental Factor / Resource	No Action Alternative	1982 Recommended Plan	2019 Evaluation of the 1982 Recommended Plan
Unavoidable Adverse Environmental Effects	No effect	No analysis completed.	Effects from the construction activities to fish and wildlife, including threatened and endangered species, are expected to be insignificant and temporary as the motile organisms are able to relocate and avoid direct effects. While construction will lethally affect existing vegetation in the footprint, native vegetation will be planted following completion of construction. These effects are expected to be short-term and minor.

#### 4.1 CUMULATIVE EFFECTS

Cumulative effects are defined in 40 C.F.R. §1508.7 as those effects that result from “...the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.”

Past, present and reasonably foreseeable actions and plans are summarized below in **Table 2**. Section 1.4 of this EA contains more details on environmental reports completed in/around the project’s vicinity. No other Federal projects exist in the project’s immediate vicinity; however, channel improvements to Turpentine Run (east of the project area near Nadir) are planned for construction by the Corps in 2020. In addition, it is expected that the public and local governments could have permitted activities in or around the project area. Activities completed by the Federal government are evaluated under NEPA directly for each project. Other projects that could result in a cumulative effect, occur in-water, or would affect wetlands are evaluated under a permit issued by the Corps’ Regulatory Division and are incorporated by reference.

The implementation of the Savan Gut Section 205 Project, when considered with past projects in the area and potential future projects, has no significant cumulative impact on the environmental conditions of the project area. A summary of cumulative effects on environmental factors from past, present, and reasonably foreseeable actions and plans is provided in **Table 3**.

**Table 2. Past, present, and reasonably foreseeable actions and plans affecting the project area.**

Past Actions/Authorized Plans	Current Actions and Operating Plans	Reasonably Foreseeable Future Actions and Plans
- Savan Gut Section 205 Phase I - General urbanization	- Veteran’s Drive Improvements Project (includes widening Veteran’s Drive from 2 to 4 lanes and waterfront enhancement) - FEMA recovery and resiliency efforts (e.g. utility upgrades)	- Construction of Savan Gut Section 205 Phase II - Maintenance of infrastructure (e.g. debris basin)

**Table 3. Summary of cumulative effects.**

Natural Setting (Vegetation, Wetlands, Threatened and Endangered, Fish and Wildlife, and EFH)	
<b>Past Actions</b>	Construction of residential and commercial/public infrastructure has decreased the amount of habitat available for use by wildlife and threatened and endangered species potentially in the area.

<b>Present Actions</b>	Present actions focus on improving the already urbanized areas in the Harbor and Central Business District. No effects to the natural setting are expected.
<b>Recommended Plan</b>	Implementation of the Recommended Plan could result in temporary effects to wildlife, and threatened and endangered species during construction due to noise and/or construction activities; however, these impacts are expected to be minor and will cease with the completion of construction. Non-motile species located in the project footprint would be lethally effected due to construction operations. These effects, although lethal, are expected to be minor and temporary as recolonization from adjacent communities will occur almost immediately. The Recommended Plan may affect wetlands, and mitigation may be necessary. The project design minimizes destruction, loss, and/or degradation of wetlands and preserves and enhances the natural and beneficial values of wetlands. If impacts to wetlands require mitigation, a plan will be developed, proposed, and refined during the project's PED phase.
<b>Future Actions</b>	Any Federal and/or state/local projects will be required to follow regulations to maintain and protect threatened and endangered species and their habitats within the area.
<b>Cumulative Effect</b>	Cumulative effects to the natural setting of this area are not anticipated.
<b>Physical Setting (CBRS, Water Quality, HTRW, Air Quality, Noise)</b>	
<b>Past Actions</b>	Ongoing erosion of the streambank, including debris, has likely contributed to the reduction of channel flow and degradation of water quality.
<b>Present Actions</b>	Present actions focus on improving the already urbanized areas in St. Thomas Harbor and the Central Business District. Improvements to utilities in the area would improve water quality by reducing or eliminating waste drainage into the gut.
<b>Recommended Plan</b>	Implementation of the Recommended Plan could result in temporary minor turbidity impacts. Excavation and/or fill operations for project features (e.g. catchment basin, drop structures, channels, recreation areas, etc.) could temporarily increase turbidity within the gut and in downstream waters within St. Thomas Harbor. Construction equipment may release negligible amounts of pollutants, including oils and grease. BMPs will be used to limit the possibility of adverse effects, and detailed pollution and turbidity control plans will be developed during the design phase.
<b>Future Actions</b>	Projects implemented would be required to meet and maintain regulated water quality standards within the area.

<b>Cumulative Effect</b>	Ongoing seasonal weather and storm event effects on water quality are unlikely to be eliminated; however, implementation of the Recommended Plan will reduce risk of flooding. The Corps is committed to ensuring that projects will not result in violations of water quality standards. Cumulative effects to the physical setting of this area are not anticipated.
<b>Socioeconomic Resources (Aesthetic Resources, Recreation Resources, Economic Resources)</b>	
<b>Past Actions</b>	General urbanization of the region has increased the aesthetic, recreation, and economic resources in this area.
<b>Present Actions</b>	Present actions focus on improving the already urbanized areas in the Harbor and Central Business District. Improvements to utilities, traffic flow, and enhancing the waterfront may make the area more desirable to visit.
<b>Recommended Plan</b>	By implementing the Recommended Plan, flood damages in the project area will be reduced which will positively affect socioeconomic resources in this area.
<b>Future Actions</b>	Continued urbanization and projects to increase benefits to the economy (e.g. tourism), recreation, and aesthetics are likely in this region.
<b>Cumulative Effect</b>	Continuation of benefits to socioeconomic resources may be anticipated when considering the cumulative effects of projects in this area.
<b>Cultural Resources</b>	
<b>Past Actions</b>	In August 1981, a cultural resources survey conducted for the Corps identified historic properties within the Savan Gut Phase II Project's Area of potential effect. Construction of residential and commercial/public infrastructure has severely impacted known cultural resources within the area. By changing elements of the historic district, there is the potential that over time, the overall historic character could have changed.
<b>Present Actions</b>	Present actions focus on improving the already urbanized area, which is a NRHP listed historic district. Improvements to infrastructure and public utilities installations would be coordinated with the USVI SHPO to avoid or mitigate for potential adverse effects.
<b>Recommended Plan</b>	The Corps is currently coordinating a Programmatic Agreement with USVI SHPO, NPS, and the ACHP. The Programmatic Agreement will outline the process in which the Corps will consult with the agencies to avoid, minimize, and mitigate adverse effects to historic properties and will be executed prior to the signing of this EA's FONSI.
<b>Future Actions</b>	Any federal and/or state/local projects will be required to follow regulations to avoid, minimize, or mitigate impacts to cultural resources within the area.

<b>Cumulative Effect</b>	No cumulative effects are anticipated.
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## **5 PUBLIC AND AGENCY COORDINATION**

A Notice of Availability for this EA and Proposed FONSI will be coordinated with pertinent agencies and interested stakeholders for a 60-day review and comment period. The project will be in compliance with the NEPA of 1969, as amended, 42 U.S.C. 4321, *et seq.* Public Law 91-190.

### **5.1 COMMENTS RECEIVED AND CORPS' RESPONSES**

Comments received during the 30-day agency review and public comment period will be addressed in the final EA. **Appendix E (Public and Agency Project Comments)** will include a list of the comments received and the Corps' responses.

## 6 ENVIRONMENTAL COMMITMENTS AND COMPLIANCE

The Corps will comply with all terms and conditions of agency consultations and/or permits. The Corps and its contractors also commit to avoiding and minimizing for adverse effects during construction activities by including the commitments in **Table 4** in the contract specifications:

**Table 4. Corps' environmental commitments.**

Environmental Commitment	Corps' Commitment
Protection of Fish and Wildlife Resources	Construction activities will be kept under surveillance, management, and control to minimize interference with, disturbance of, and damage to fish and wildlife. Prior to the start of construction, the Contractor will submit their Environmental Protection Plan (EPP) that will include protective measures for species that require specific attention.
Endangered and Threatened Species Protection	Adverse effects to endangered and threatened species will be avoided and/or minimized. USFWS and VIDFW standard protection measures will be implemented to protect any Virgin Islands tree boas that may occur in the area. Endangered and threatened species protection criteria will be included in the Contractor's EPP.
Water Quality	Implementation of design and procedural controls will prevent oil, fuel, or other hazardous substances from entering the air or water and reduce turbidity impacts. All fill, wastes, and refuse generated by project construction will be removed and properly disposed. Contractors will implement a spill contingency plan for hazardous, toxic, or petroleum material. If a WQC certification is required, conditions imposed by the WQC will be implemented in order to minimize adverse impacts to water quality.
Cultural Resources	Pursuant to 54 U.S.C. 306108 § 800.14, the Corps is conducting a phased identification and evaluation of historic properties. The Corps is currently coordinating a Programmatic Agreement with USVI SHPO, NPS, and the ACHP. The Programmatic Agreement will outline the process in which the Corps will consult with the agencies to avoid, minimize, and mitigate adverse effects to historic properties and will be executed prior to the signing of this EA's FONSI. In addition, an unexpected cultural resources finds clause will be included in the project specifications. In the event of an archaeological resource discovery, work in the area will be suspended at the site until compliance with all Federal and state regulations is successfully completed and Corps staff members provide further directive.

Protection of Migratory Birds	Standard migratory bird protection protocols will be incorporated into the project plans and specifications. The contractor will be required to abide by those protocols and all monitoring timeframes as specified by all applicable licenses and permits.
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This EA has been prepared pursuant to NEPA and its implementing regulations. The status of the proposed project's compliance with environmental acts and E.O. are provided in **Table 5**:

**Table 5. Proposed project's environmental act and E.O. compliance status.**

Environmental Act or E.O.	Project Compliance Status
National Environmental Policy Act of 1969 (42 U.S.C. §4321 <i>et seq.</i> )	This EA has been prepared pursuant to NEPA and its implementing regulations. A Notice of Availability for the EA and Proposed FONSI will be coordinated with pertinent agencies and interested stakeholders for a 60-day review and comment period. In order to meet current Federal, state, and local laws, regulations, and policy, as well as Corps standards and guidelines, the 1982 Recommended Plan will be reviewed and potentially modified during the PED phase. If changes to the project result in effects that have not been previously evaluated, then pursuant to NEPA, the Corps will prepare a separate NEPA document to address the changes and evaluate the associated effects. The project complies with this Act.
Endangered Species Act of 1973 (16 U.S.C. §1531 <i>et seq.</i> )	The project was coordinated with NMFS and USFWS through the 1982 EA and will be coordinated again during the public review of this NEPA document. The Corps has determined that the project may affect, but not likely to adversely affect the Virgin Islands tree boa and will have no effect on any species listed under the purview of NMFS. Coordination with the agencies to address project changes is ongoing. Pertinent correspondence is found in Appendix A. The project will comply with this Act prior to the signing of this EA's FONSI.

Environmental Act or E.O.	Project Compliance Status
Fish and Wildlife Coordination Act of 1958 (16 U.S.C. §661 <i>et seq.</i> )	The USFWS prepared a Coordination Act Report (CAR) for the project in 1980. The 1980 CAR did not identify any endangered or threatened species or effects to critical habitat. The project was also coordinated with USFWS through the 1982 EA with a no-effect determination for any federally listed endangered or threatened species. A Memorandum for the Record, found in Appendix A (Project Correspondence), will be signed by USFWS and the Corps to document an agreement between the agencies to use the NEPA review and endangered species act consultation processes to complete coordination responsibilities under the Fish and Wildlife Coordination Act. Funds may be sent to the USFWS during the PED phase to provide support during design refinements. The project will comply with this Act prior to the signing of this EA's FONSI.
National Historic Preservation Act of 1966 ( <i>Inter Alia</i> )	The Corps has initiated consultation for the Recommended Plan with the USVI SHPO pursuant to Section 106 of the NHPA of 1966, as amended, and consideration given under NEPA. The Corps is currently coordinating a Programmatic Agreement with USVI SHPO, NPS, and the ACHP. The Programmatic Agreement will outline the process in which the Corps will consult with the agencies to avoid, minimize, and mitigate adverse effects to historic properties and will be executed prior to the signing of this EA's FONSI.
Clean Water Act of 1972, Section 401 and Section 404(B) (33 U.S.C. §1341 <i>et seq.</i> and 33 U.S.C. §1344(b) <i>et seq.</i> )	The 1982 EA included a Section 404(b)(1) Guidelines Evaluation. The project was determined to be consistent with the program. The project will comply with the Clean Water Act and USVI territory standards in effect for the Clean Water Act.
Clean Air Act of 1972 (42 U.S.C. §7401 <i>et seq.</i> )	No air quality permits are required for this project. Because the project is located within an attainment area, USEPA General Conformity Rule to implement Section 176(c) of the Clean Air Act does not apply and a conformity determination is not required.
Coastal Zone Management Act of 1972 (16 U.S.C. §1451 <i>et seq.</i> )	A Federal Consistency Determination will be submitted to the Department of Planning and Natural Resources for the USVI's review and concurrence. The project will comply with this Act prior to the signing of this EA's FONSI.
Farmland Protection Policy Act of 1981 (7 U.S.C. §4201 <i>et seq.</i> )	No prime or unique farmland will be affected by implementation of this project. This Act is not applicable.
Wild and Scenic River Act of 1968 (16 U.S.C. §1271 <i>et seq.</i> )	This project will not affect any designated wild and scenic river reaches. This Act is not applicable.
Marine Mammal Protection Act of 1972 (16 U.S.C. §1361 <i>et seq.</i> )	No marine mammals will be affected by this project. This Act is not applicable.

Environmental Act or E.O.	Project Compliance Status
Estuary Protection Act of 1968 (16 U.S.C. §§1221-26)	No estuaries will be affected by this project. This Act is not applicable.
Federal Water Project Recreation Act (16 U.S.C. §460(L)(12)-460(L)(21) <i>et seq.</i> )	Recreational resources and opportunities are discussed in Section 4 of this report. The project complies with this Act.
Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended (16 U.S.C. §1801 <i>et seq.</i> )	The project was coordinated with NMFS through the 1982 EA. The proposed work occurs inland and would not affect EFH under the jurisdiction of NMFS. The project complies with this Act.
Submerged Lands Act of 1953 (43 U.S.C. § 1301 <i>et seq.</i> )	No submerged navigable lands will be affected by implementation of the Recommended Plan. This Act is not applicable.
Coastal Barrier Resources Act and Coastal Barrier Improvement Act of 1990 (16 U.S.C. §3501 <i>et seq.</i> )	No CBRS units are located in or near the project area. This Act is not applicable.
Rivers and Harbors Act of 1899, Section 10 (33 U.S.C. §403 <i>et seq.</i> )	The proposed work will not obstruct navigable waters of the U.S. The project complies with this Act.
Anadromous Fish Conservation Act (16 U.S.C. §§757A-757G)	The project will have no effect on anadromous fish species. The project complies with this Act.
Migratory Bird Treaty Act (16 U.S.C. §§703-712) and Migratory Bird Conservation Act (16 U.S.C. §§715-715D, 715E, 715F-715R)	The project plans and specifications will include migratory bird protection measures for construction activities. If nesting activities occur within the construction area, appropriate buffers will be placed around nests to ensure their protection. The project was coordinated with USFWS and complies with these Acts.
Marine Protection, Research, and Sanctuaries Act (16 U.S.C. §1431 <i>et seq.</i> AND 33 U.S.C. §1401 <i>et seq.</i> )	Ocean disposal is not a component of this project. This Act is not applicable.
Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. §4601 <i>et seq.</i> )	The NFS will be responsible for acquiring any real estate interests for the project. The Corps will work with the NFS to ensure compliance with this Act. The project will comply with this Act.
E.O. 11988, Flood Plain Management	The Corps concludes that the proposed project will not result in harm to people, property, and floodplain values, will not induce development in the floodplain, and the project is in the public interest. The project will result in a reduction of flood damages. The project complies with this Order.

<b>Environmental Act or E.O.</b>	<b>Project Compliance Status</b>
E.O. 11990, Protection of Wetlands	Project completion may affect wetlands and mitigation may be necessary. The project complies with this Order by minimizing the destruction, loss, and/or degradation of wetlands and preserve and enhance the natural and beneficial values of wetlands. If impacts to wetlands require mitigation, a plan will be developed, proposed, and refined during the project's PED phase.
E.O. 12898, Environmental Justice	Detailed analysis of the project's environmental justice status is found in Appendix B (Environmental Justice Analysis). The project will result in temporary impacts related to noise, air quality, water quality, and use of the project staging area during construction of the project. These effects are minor and would cease with construction completion. The project will result in long-term positive effects to the Savan Gut project area that will include the entire length through the downtown and urban areas of Charlotte Amalie. Benefits of the project include the reduction of existing and future flood damages to the Jane E. Tuitt Elementary School and the affected central business district of Charlotte Amalie. The project complies with this Order. This project will not cause any disproportionate and adverse effects to minority or low income populations. The project complies with this Order.
E.O. 13045, Protection of Children from Environmental Health Risks and Safety Risks	Flooding and flood damages increase the potential for environmental health or safety risks for children attending the Jane E. Tuitt Elementary School. The proposed action will reduce these risks to children. The project complies with this Order.
E.O. 13089, Coral Reef Protection	No corals or hardbottom habitat exists within the project area. The project complies with this Order.
E.O. 13112, Invasive Species	The Recommended Plan will not introduce or promote the introduction of non-species to the region. Planting of native species will result in a decrease of habitat availability for invasive/exotic species. The project complies with this Order.

Environmental Act or E.O.	Project Compliance Status
E.O. 13186, Responsibilities of Federal Agencies to Protect Migratory Birds	This E.O. requires, among other things, a Memorandum of Understanding (MOU) between the Corps and USFWS concerning migratory birds. Neither the Department of Defense MOU nor the Corps' Draft MOU clearly address migratory birds on lands not owned or controlled by the Corps. For many Corps' civil works projects, the real estate interests are provided by the non-Federal Sponsor. Control and ownership of the Project lands remain with a non-Federal interest. Measures to avoid the destruction of migratory birds and their eggs or hatchlings are described in Section 4 of this EA and are incorporated by reference. The Corps will include standard migratory bird protection requirements in the Project plans and specifications and will require the contractor to abide by those requirements. The Project complies with this Order.

## 7 LIST OF PREPARERS

Name	Organization	Expertise	Role in Preparation
Kristen Donofrio, Biologist	Corps	NEPA/Biologist	Primary Author
Richard Butler, Water Quality Specialist	Corps	Water Quality	Contributing Author
Marc Tiemann, Senior Archeologist	Corps	Cultural and Native American Resources	Contributing Author
George Ebai Economist	Corps	Socioeconomics	Contributing Author
Terri Jordan-Sellers, Senior Biologist	Corps	NEPA/Senior Biologist	Document Reviewer
Mike Hollingsworth, Senior Water Quality Specialist	Corps	Water Quality	Document Reviewer
Meredith Moreno, Senior Archeologist	Corps	Cultural and Native American Resources	Document Reviewer
Kevin Wittmann, Deputy Chief of Planning Jacksonville District/Chief of Economics South Atlantic Region	Corps	Socioeconomics	Document Reviewer
Jason Spinning, Coastal Section Chief	Corps	Supervisory Biologist	Document Reviewer
Dr. Gina Paduano-Ralph, Environmental Branch Chief	Corps	Supervisory Biologist	Document Reviewer
Rebecca Onchaga, Tech Writer/Editor	Corps	Technical Editor	Technical Edits

## 8 ACRONYM LIST

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
BBA	Bipartisan Budget Act of 2018
BMPs	Best Management Practices
C.F.R.	Code of Federal Regulations
CAP	Continuing Authorities Program
CBRS	Coastal Barrier Resource System
CEQ	Council on Environmental Quality
Corps	U.S. Army Corps of Engineers
DPR	Detailed Project Report
E.O.	Executive Order
EA	Environmental Assessment
EFH	Essential Fish Habitat
EJ	Environmental Justice
EPP	Environmental Protection Plan
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GDP	Gross Domestic Product
HABS/HAE R	Historic American Buildings Survey/Historic American Engineering Record
HTRW	Hazardous, Toxic, and Radioactive Waste
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFS	Non-Federal Sponsor
NMFS	National Marine Fisheries Service
NPS	National Park Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PED	Preconstruction Engineering and Design
U.S.	United States
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USVI	U.S. Virgin Islands

## 9 REFERENCES

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