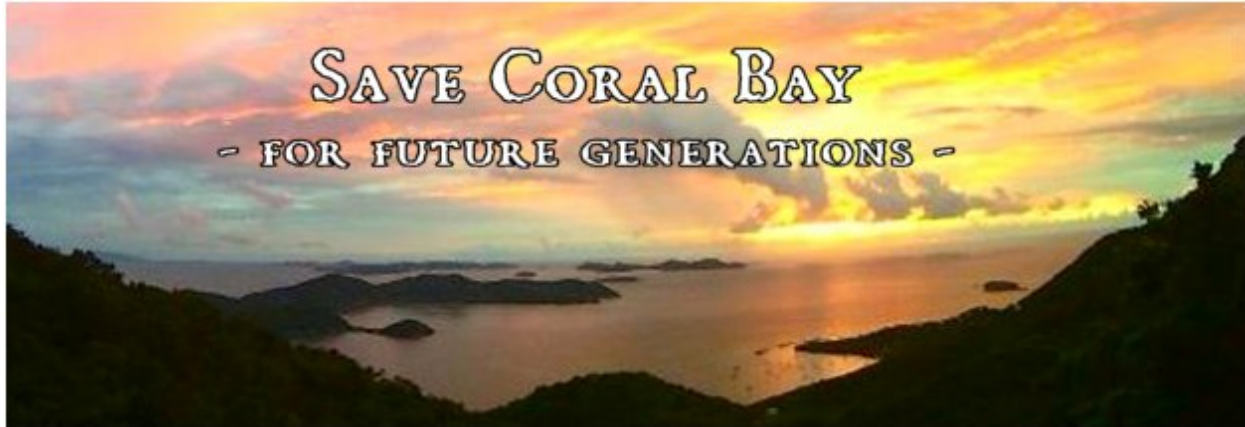




Mr. José A. Cedeño-Maldonado
U.S. Army Corps of Engineers
Fund. Angel Ramos Annex Bldg., Suite 202
F.D. Roosevelt Ave. # 383
San Juan, Puerto Rico 00918

25 January 2016

cc: Mr. Sindulfo Castillo (USACE), Mrs. Kelly Finch (USACE)

re: **Public Notice SAJ-1982-05019(SP-JCM) – Sirius Marina in Coral Bay, St John**

Dear Mr. Cedeño,

I am writing to you on behalf of Save Coral Bay, Inc., a United States Virgin Islands non-profit corporation. Save Coral Bay was formed for the purpose of protecting the lands and waters of Coral Bay, St John, from environmentally damaging commercial development. We are funded through private donations, primarily from homeowners, residents, visitors, and past residents and visitors to Coral Bay. We represent the interests of these donors by soliciting their input and comments on significant matters of community development, and consolidating their concerns regarding possible adverse impacts to their property and quality of life in Coral Bay.

This document, with its attachments and appendices, is a response to the Department of the Army Public Notice SAJ-1982-05019(SP-JCM) for a project known as the "Sirius Marina" located in Coral Bay, St John, USVI. The project, located primarily on lands owned by the Moravian Conference, and on submerged and filled Trust Lands of the Virgin Islands, involves construction of a commercial marina and a resort hotel. Save Coral Bay has received personal comments from almost one thousand individuals who are opposed to the permit requested by T-Rex St John for the Sirius Marina in Coral Bay. We have forwarded those comment letters to you, and have summarized the main concerns in these comments from Save Coral Bay.

Our comments regarding this project cover a broad range of topics, reflecting the broad concerns of the public. In order to provide some focus to our comments we have broken them into a number of specific notes, as follows:

1. First, we have significant concerns about the adequacy of the Public Notice and question whether it properly conforms to the relevant federal regulations. These concerns are detailed in Attachment 1 ("**Permit Application Documents**").
2. Second, we have found a complete lack of any substantive analysis of alternatives, as required under the Clean Water Act for projects of this nature. Lacking this analysis, we have provided a preliminary analysis of alternatives as required under the CWA Section 404(b)1 Guidelines based on our knowledge locations suitable for marine infrastructure on St John and the stated purpose of the project. This analysis is found in Attachment 2 ("**Preliminary Review of CWA Section 404(b)1 Alternatives**").
3. Third, given the broad public opposition to this project, we have summarized a significant number of issues that have been raised by the public and which we believe must be considered during the Public Interest Review pursuant to the National Environmental Policy Act (NEPA). We have organized these questions and concerns according to the main topic areas of the Public Interest Review. This material is found in Attachment 3 ("**Questions and Concerns Relating to Topics in the Public Interest Review**").
4. Given the extraordinarily rich history of Coral Bay in general, and the specific locale of the proposed project in particular, we have highlighted some specific concerns relating to preservation of historic resources in Attachment 4 ("**Historic Resources at Location of Proposed Dredge Disposal Site**").
5. After reviewing the applicant's documents and the Public Notice we found no mention of the history of wetlands fill activities at the site of the applicant's proposed dredge and fill operation. In the context of cumulative impacts we felt it vital to bring this history of degradation of the aquatic environment to your attention, and in particular the cumulative impact of the proposed wetlands filling. This is the topic of Attachment 5 ("**Cumulative Impacts of Proposed Fill of Wetlands and Open Water in Coral Bay Harbor**").
6. Attachment 6 ("**Flood Plain Considerations for Sirius Marina**") deals with a specific topic of significant concern in the low lying areas at the foot of the Carolina Valley. The flood plain in that location is viewed by many people in Coral Bay as an extremely poor choice of location for disposal of large quantities of dredged materials. We have reviewed this concern in Attachment 6.

7. Our final comment note deals with the rights of shoreline property owners to the use of the waters in front of their property. Attachment 7 ("**Littoral Rights**") deals with this important topic.
8. In addition to the comments discussed above, we are submitting graphic materials which were developed in order to help visualize the environmental impacts of the Sirius Resort and Marina project, with an emphasis on the marina component. These graphics and video renderings are on the attached CD-ROM entitled "**Disc 1: Graphic Renderings**").
9. Finally, we are submitting a petition signed by over 4,000 individuals, expressing their opposition to the project proposed by T-Rex St John, and urging the Corps to deny the permit requested by the developer. In addition to the petition we are submitting over 2,000 letters from individuals which were copied to Save Coral Bay. You should already have received most of these comment letters. The petition and comment letters are on the attached CD-ROM entitled "**Disc 2: Petition and Public Comment Letters**").

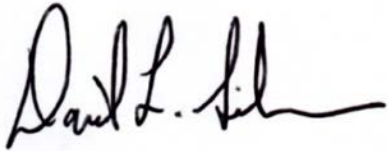
Based on our review of the applicant's documents and the Public Notice, together with the concerns expressed by thousands of individuals, it is the strong opinion of Save Coral Bay, Inc., that:

1. The permit application should be returned to the applicant because it is incomplete and does not meet the requirements of 33 CFR 325.1(d)2 which states "All activities which the applicant plans to undertake which are reasonably related to the same project and for which a DA permit would be required should be included in the same permit application. "
2. The permit requested by the applicant under Section 404 of the Clean Water Act should be denied by the Department of the Army based on the fact that the project does not meet the threshold requirements of Section 404(b)1 since it is not the least environmentally damaging practicable alternative as required by that code section.
3. The permits requested by the applicant should be denied pursuant to NEPA because of substantial adverse impacts to the public interest which are not offset by any demonstrable benefits accruing from the proposal.
4. Due to the lack of detailed information available to the public regarding the project and its likely impacts, as well as the complexity of the project and the fact that it is highly controversial, a Public Hearing is formally requested.

5. Due to the high likelihood that this project would significantly affect the quality of the human environment, an Environmental Impact Statement is required in order to fully understand the nature of those impacts.

Since I am a board member of the Coral Bay Community Council (CBCC), and CBCC has provided extensive support to Save Coral Bay over the past year, I am also submitting these comments for consideration by CBCC to be included in the CBCC comment submission.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David L. Silverman". The signature is fluid and cursive, with a long horizontal stroke at the end.

David L Silverman, President, Save Coral Bay Inc.
9901 Emmaus, Coral Bay, St John, US Virgin Islands 00830
+1340.776.6326
dlsilverman@yahoo.com -or- SaveCoralBay@gmail.com

ATTACHMENT 1: PERMIT APPLICATION DOCUMENTS

CONTENTS

- 1. Sirius Resort and Marina – Comments on Available Documents and Adequacy of Public Notice**
- 2. Appendix A: Environmental Assessment Report, June 2015**
- 3. Appendix B: Responses Submittal, November 2015**
- 4. Appendix C: Sirius Technical Appendices (Sediments, Hydrogeological, EFH, Terrestrial, Archeological, Cultural Resources, Market Analysis)**
- 5. Appendix D: St John Source News Article, "Developers Unveil Plans for Coral Bay Hotel and Marina"**
- 6. Appendix E: Sirius Resort and Marina Conceptual Design, August 2014**
- 7. Appendix F: Sirius Resort and Marina Zoning Change Request, August 2014**

Sirius Resort and Marina – Comments on Available Documents and Adequacy of Public Notice

1. Statutory Requirements for Public Notices

The statutory requirements for information that must be provided in a Department of the Army Public Notice are contained in 33 CFR 325.3 which reads, in part:

General. The public notice is the primary method of advising all interested parties of the proposed activity for which a permit is sought and of soliciting comments and information necessary to evaluate the probable impact on the public interest. The notice must, therefore, include sufficient information to give a clear understanding of the nature and magnitude of the activity to generate meaningful comment.

5. A brief description of the proposed activity, its purpose and intended use, so as to provide sufficient information concerning the nature of the activity to generate meaningful comments, including a description of the type of structures, if any, to be erected on fills or pile or float-supported platforms, and a description of the type, composition, and quantity of materials to be discharged or disposed of in the ocean;

6. A plan and elevation drawing showing the general and specific site location and character of all proposed activities, including the size relationship of the proposed structures to the size of the impacted waterway and depth of water in the area;

We believe that the Public Notice for the Sirius Marina did not, in certain areas, conform to the requirements of this regulation.

2. Insufficient Information Provided in the Public Notice

The Public Notice issued for this project, including its graphic attachments, did not provide sufficient information for meaningful comment on several topics, due to the following factors:

2.1. The construction of the principal marina structures, the docks and finger piers is not clearly identified. It is unclear whether and where floating docks or pile supported docks or other construction techniques are being used. The references in the drawings to cross sections and details were incorrect. The location of the 420 pilings were not identified. The physical and/or functional relationship between the marina docks and the proposed bulkhead was not identified. Without this information the public's ability to make meaningful comments about the marina dock design is very limited.

2.2. The function of the upland structures is not completely identified. In some documents the larger of the two structures is described as a "30 dry slip boat storage garage" and

in other places it is described as a "marine service building". This distinction in structure use is significant in providing meaningful comments and assessing water dependency.

- 2.3. The composition of the dredge material that will be discharged into the wetlands is not described. It is simply described as a certain number of cubic yards of "sea floor material" in the Public Notice, which does not meet the requirement to provide "a description of the type, composition, and quantity of materials to be discharged".
- 2.4. The proposed concrete boat ramp and queuing docks constitute a discharge of fill materials in WOTUS, however it is not identified as such or described as to its type, composition and quantity in the Public Notice.
- 2.5. The text of the Public Notice states that "A wastewater treatment plant, brackish wells with an R/O plant, a cistern, underwater fuel tanks and an emergency generator would also be constructed." However there is no further information in either the Public Notice or the graphic attachments identifying "the specific site location and character of all proposed activities" and, specifically, neither the site location nor character of the R/O plant, the cistern, or the emergency generator is described in the Notice. Without such information it is impossible to make meaningful comments on these components.
- 2.6. The description in the Public Notice of the fuel tank is an "underwater fuel tank". It is unclear if this is a typographical error (underground as opposed to underwater), or if it is accurate. The drawing indicates the fuel tanks are seaward of the current shoreline however it does not indicate their depth ("the relationship of the proposed structure ... to the waterway").
- 2.7. As detailed later, the permit application should not have been deemed complete by the Corps since it did not include all reasonably related activities for which a DA permit will be required. In particular it did not include the directly related hotel and resort complex with their associated reverse osmosis facilities, waste water treatment facilities, storm water management and modifications to an active storm water drainage ghut. Without the inclusion of the upland project components in the Public Notice it is not possible to make meaningful comments about the direct, indirect and cumulative impacts of the entire project.

3. Lack of Clarity on Documents Available for Public Review and Comment

To the best of our knowledge, the most common sequence for applying for a Department of the Army permit in the Virgin Islands is to first go through the Coastal Zone Management review,

and following that to enter the Army Corps process. When done in that sequence the public has available a consistent set of project documentation on which to base review and comments. At a minimum, this sequence would ensure that an Environmental Assessment Report, an Archeological Field Report, a Historic Preservation Office report, as well as other technical analyses are available for review.

The present applicant has chosen to apply for the DA permit prior to completing the VICZM process. As a consequence the level of project documentation available for public review has been extremely limited and in some cases highly contradictory with the Public Notice. This has caused widespread public confusion as to the nature of the project, its scope, its purpose, and its potential impacts.

On December 11, 2015 (the day following publication of the Public Notice), we sent email to the Army Corps Project Manager requesting clarification on which documents should be reviewed by the public. The reply, received on January 7, 2016 (almost one month later), stated:

"Even though additional information and documents were submitted by the applicant and are available to the public through a Freedom of Information Act request, per our Regulations, our process is really designed to request public comments based on the information included in the Public Notice.

If you already have copies available of other documents related to the project, you may provide comments referencing those documents too.

The applicant did change some project components from the initial permit application submittal on June 16, 2015, to the latest information submitted on November 30, 2015.

However, the November 30, 2015 submittal, was mostly limited to updates and did not submit complete revisions for the EAR and supplemental information.

Our Public Notice was prepared based on all the information and updates received by November 30, 2015."

This response has put the public comment process at a disadvantage. We are unable to determine with any certainty exactly which documents accurately describe the project, what has changed since the publication of the documents, and what comments would be meaningful, and what would not be meaningful.

However, based on the guidance received from the Project Manager and on our understanding of the relevant federal regulations, we will primarily focus our comments on the information provided explicitly in the Public Notice and related graphic attachments. In those cases where there are gaps in information, or where the information published by the Corps differs from information received from the applicant either directly or through the Freedom of Information Act (FOIA), we may submit comments based on those other documents, as instructed by the Project Manager, and we will clearly identify the references to those other documents.

Attached hereto as Appendices 1-6 are the most relevant additional documents on which these comments are based. These documents are:

1. Environmental Assessment Report For Sirius Marina, Lease Area "A" – Parcel 10A, Estate Emmaus St. John, USVI, CZM Application, June 2015
2. Sirius Marina - ACE SAJ-1982-05019 (SP-JMS) Responses Submittal.pdf, November 30, 2015
3. Appendix.pdf (Technical Appendices, including Sediments, Hydrogeology, EFH, Terrestrial Habitats, Archeological, Cultural Resources, Market Analysis), various dates.
4. Sirius Resort and Marina Zoning Change Request, August 2014
5. Sirius Resort and Marina Conceptual Design, August 2014

4. Federal Regulations Require Including all Reasonably Related Activities in Same Application

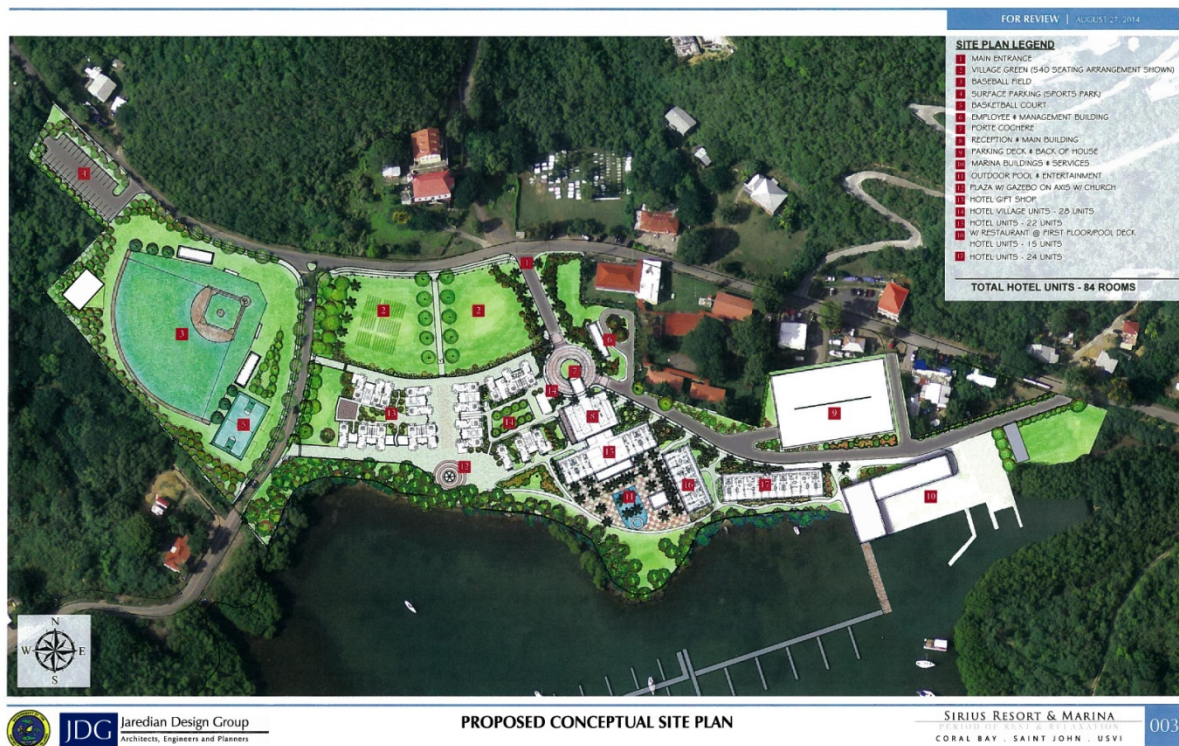
The requirement to include all "reasonably related" activities in a DA permit application in order for the application to be deemed complete is found in 33 CFR 325.1(d)2 which states:

"All activities which the applicant plans to undertake which are reasonably related to the same project and for which a DA permit would be required should be included in the same permit application. District engineers should reject, as incomplete, any permit application which fails to comply with this requirement."

It appears as though this applicant has sought to circumvent the requirements of 33 CFR 325.1 by not including the upland components of the Sirius Resort and Marina project in the current application. The intent of the regulation, according to my understanding, is to ensure that the public is provided with all of the information that is required to have a thorough understanding of the cumulative impact of the entire project.

The evidence that upland components of the project are, indeed, "reasonably related" is extensive and pervasive through all of the additional documents obtained through FOIA and directly from the developer. In fact statements made directly by the applicants to the Coral Bay community, further support this conclusion.

Attached as Appendix X is a news article from St John Source, published on October 18, 2014, reporting on the meeting convened at the Emmaus Moravian Church by the Sirius Development team, to present the Sirius Resort and Marina plans to the Coral Bay community. The title of the article – "Developers Unveil Plans for Coral Bay Hotel and Marina" – and the architect's conceptual drawing shown at the meeting (reproduced below) clearly demonstrate that the proposal was for a Hotel and Marina. In fact in several places the architect is quoted as saying that the plans were dependent upon one another.



No distinction is made between the marina components and the hotel components. No contingent phasing is described. It is described as one integrated project. The complete document containing this illustration is attached hereto as Appendix X.

Furthermore, numerous documents filed by the applicant with the Virgin Islands Department of Planning and Natural Resources (VI DPNR) pursuant to a request for rezoning of a portion of the project parcels, all identify the project as a mixed use resort hotel and marina complex. In their August 2014 "Zoning Change Request" the applicant described the project as shown below:

SIRIUS RESORT AND MARINA – ZONING CHANGE REQUEST

PARCELS 7, REM. 10A, 10A-1, AND 10C ESTATE EMMAUS, No. 2 CORAL BAY QUARTER ST. JOHN, U. S. VIRGIN ISLANDS

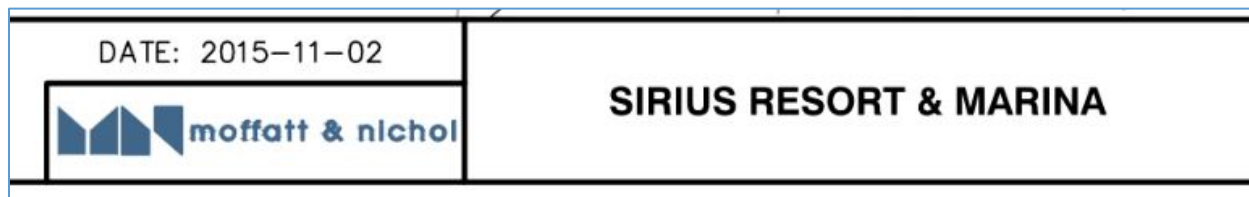
INTRODUCTION

The Moravian Church and T-Rex St. John, LLC (T-Rex), is proposing to construct a Major Project in Coral Bay consisting of: a Wet-slip and Dry storage Marina and related Retail; 89 Hotel/Condominium units; Underground and Above-ground Parking; Pool; Shopping Plaza; Wastewater Treatment Plant; Reverse Osmosis Plant and a new Ball Field with Bleachers. The Proposed Project will be built on Parcels 7, Rem. 10A, 10A-1, and 10C, Estate Emmaus, St. John, United States Virgin Islands.

In his report of January 15, 2015, following a public hearing on December 4, 2014 for the rezoning request, Mr. Stuart Smith (Director, Coastal Zone Planning) wrote "During the Department's public hearing, Mr. John Woods, principal of the Jaredian Design Group, testified that it is the developers' intent to construct an 89-unit hotel/condominium, a wet-slip and dry-dock storage marina, and related retail on the subject parcel." Not only are these components "reasonably related" but they are inextricably tied to one another in this statement and Mr. Wood's presentation. The application for the rezoning (filed by the property owner, the Moravian Church) included the following response to the "Detailed Description of Proposal":

13. Detailed Description of Proposal **Moravian Church and T-Rex, St. John, LLC, is proposing to develop a mixed-use project comprising of 65-unit hotel/condominium resort, 88-slip marina and related retail. Construction will also include passive recreation consisting of "village green," baseball field, tennis and basketball courts for the general public.**

In fact, the connection between the resort component and marina component is even evident, circumstantially, in the drawings included in the Army Corps Public Notice. Every single one of the drawings in the Public Notice graphic attachment include the following block of text at the bottom of the drawing:



These drawings are dated November 2, 2015, and are in the final submission by the applicant prior to publication of the Public Notice.

4.1. The Hotel and Resort Will Likely Require Department of the Army Permits

Based on the information available in documents obtained from the developer, it is our opinion that several features of the Hotel and Resort will require permits from the Army Corps.

The potable water requirements, which could be up to ten times higher for the 89-unit hotel and resort than for the marina (estimated requirements of 20-40,000 gallons per day based on peak occupancy of 3 persons per room, 75 gpd per person) will require multiple wells and brine discharge of tens of thousands of gallons per day depending upon recovery rate.

Additionally the Waste Water Treatment Plant with its associated effluent will very likely exceed the carrying capacity of the upland parcels, and could result in discharges into WOTUS.

The upland project traverses an existing active storm water drainage gully which will need to be channelized and diverted. The project creates tens of thousands of square feet of additional

impervious surfaces, including roadways, paved public areas, and roof tops. All of this impervious surface, in conjunction with the existing overland runoff, will require design and possibly DA permitting.

Based on this information, it is our belief that the permit application for one project component – the marina – should not have been deemed complete and put out for public comment, since a reasonably related activity (the hotel complex) will almost certainly require Army Corps permitting.

4.2. The Developer Has Not Supplied a "Standalone" Economic Analysis of the Marina

If the marina is to be viewed as a standalone project then it must be economically viable on its own account. The evidence provided in documents obtained through FOIA indicate, to the best of our knowledge, that this cannot possibly be true. These documents, analyzed elsewhere, indicate the construction costs (\$15,800,000) plus staff costs (11 employees), plus a reasonable estimate of Trust Land Lease costs, cannot possibly be offset by the revenues from slip fees. This demonstrates that the marina is dependent upon the upland resort component for economic viability.

4.3. The Impacts of the Hotel and Resort Will Be Cumulative With the Marina

As stated previously, we are of the strong opinion that the project components consisting of the Resort Hotel and associated Retail Amenities is not only "reasonably related" to the proposed Marina, but is intimately connected to it, with the two projects dependent upon one another.

Additionally, it is clear that the hotel and resort components will result in impacts that are cumulative with the impacts stemming from the marina. These impacts include:

- Potable water production – reverse osmosis intake and effluent
- Waste water treatment and effluent management
- Storm water management
- Nitrogenous waste production and eutrophication

Since the NEPA review requires looking at "reasonably foreseeable future actions" in the review of cumulative impacts, it is clear that the development of the hotel and resort complex must be included in the scope of the NEPA review for the marina.

David Silverman for Save Coral Bay, Inc.
22 Jan 2016

ATTACHMENT 2: Preliminary Review of CWA Section 404(b)1 Alternatives

CONTENTS

- 1. Preliminary Review of CWA Section 404(b)1 Alternatives**
- 2. Appendix A: "Information for Preparing an Alternatives Analysis Under Section 404",
Version 1.0, prepared by Jacksonville District Regulatory Division, June 2014**

Preliminary Review of CWA Section 404(b)1 Alternatives

1. Introduction

This discussion of alternatives presents information required under the guidelines of the Clean Water Act, Section 404(b)1, for any project involving discharges of dredged or fill materials in waters of the United States. We have organized the discussion into the following sections:

Section 1: This Introduction

Section 2: "Sirius Marina" - Project Description

A description of the project and its components, based on information provided in the Army Corps Public Notice and other available documents

Section 3: Regulatory Setting

A brief overview of the relevant federal statutes and regulations governing the issuance of Department of the Army (DA) permits required for this project

Section 4: The Applicant's Existing Alternatives Analysis

Review of the limited information provided by the applicant on alternative

Section 5: Impacts of the Preferred Alternative on Aquatic Resources

Discussion of the project, as proposed by the applicant, and its impacts on aquatic resources and function

Section 6: Project Need and Purpose

A discussion of the "project need" and "basic purpose" and "overall purpose" which guide many aspects of the alternatives analysis

Section 7: Identification of Reasonable and Practicable Alternatives

Review of reasonable alternatives in light of overall project purpose, and narrowing down to a set of practicable alternatives

Section 8: Analysis of Practicable Alternatives – Environmental Impacts

The practicable alternatives, including Preferred Alternative, Offsite Alternatives, Onsite Alternatives, and No-Action alternatives are reviewed for the impacts to aquatic resources associated with each.

Section 9: Identification of Least Environmentally Damaging Practicable Alternative

Based on the foregoing analysis of practicability and environmental impact, identification of candidate alternatives for LEDPA.

Section 10: Conclusions

2. "Sirius Marina" – Project Description

The description of the proposed project differs between the Department of the Army Permit Application (June 2015), the applicant's Environmental Assessment Report (June 2015), and the Army Corps Public Notice (December 10, 2015). For the purpose of this analysis we will assume the project description contained in the Public Notice is correct and complete.

With that assumption, listed below are the components of the project proposed to be built pursuant to the DA permit application:

- 92-slip marina consisting of precast concrete decking panels of variable widths, supported by approximately 420 concrete piles;
- a steel sheet-pile bulkhead and concrete apron filling and extending the shoreline seaward;
- a concrete boat ramp at the eastern end of the fill area;
- a dredged boat basin seaward of the boat ramp;
- two queuing docks extending seaward at each side of the boat ramp;
- a boat lift;
- sewage pump-out facilities;
- fuel facilities including "underwater fuel tanks";
- a boat service yard;
- accommodations for transient boaters and dinghies;
- a dock master building with associated retail and provisioning;
- a parking area;
- a wastewater treatment plant;
- brackish wells with an R/O plant;
- a cistern;
- an emergency generator.

Several components of this project clearly involve discharge of dredge or fill materials in waters of the United States. These include, the boat ramp, the bulkhead, the concrete apron, the queuing docks, the boat basin and the dock pilings. Additional project components whose construction might constitute discharge of fill include the R/O discharge, the cistern, the waste water treatment plant, and the "underwater" fuel tanks (this may be a typographical error in the Public Notice).

3. Regulatory Setting

Note: The material in this section was excerpted from "Department of the Army File Number: SPL-2009-00971-MBS" and the Standard Operating Procedures for the Regulatory Program.

Any activity requiring an Individual Permit pursuant to Section 404 of the Clean Water Act (CWA) must undergo an analysis of alternatives in order to identify the Least Environmentally Damaging Practicable Alternative ("LEDPA") pursuant to the requirement of the guidelines established by the United States Environmental Protection Agency (EPA), known as the Section 404(b)(1) Guidelines (the "Guidelines"). The Section 404(b)(1) Guidelines prohibit discharges of dredged or fill material into waters of the U.S. ("WOTUS") if there is a "practicable alternative to the proposed discharge that would have less impact on the aquatic ecosystem, provided that the alternative does not have other significant environmental consequences" [40 C.F.R. § 230.10(a)]. An alternative is practicable "if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose" [40 C.F.R. §§ 230.10(a) and 230.3(q)]. "If it is otherwise a practicable alternative, an area not presently owned by an Applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered" [40 C.F.R. § 230.10(a)(2)].

If the proposed activity would involve a discharge into a special aquatic site such as a wetland, the Section 404(b)(1) Guidelines distinguish between those projects that are water dependent and those that are not. A water dependent project is one that requires access to or proximity to or siting within a special aquatic site to achieve its basic purpose. A non-water dependent project is one that does not require access to or proximity to or siting within a special aquatic site to achieve its basic purpose, such as a housing development or retail store.

The Section 404(b)(1) Guidelines establishes a double rebuttable presumption for non-water dependent projects that propose a discharge of fill into a special aquatic site, such as wetlands.

First, it is presumed that there are practicable alternatives to non-water dependent projects, "unless clearly demonstrated otherwise." [40 C.F.R. § 230.10(a)(3).] Second, "where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise." [Id.] The thrust of the Guidelines is that Applicants should design proposed projects to meet the overall project purpose while avoiding and minimizing impacts to aquatic environments. This approach is emphasized in a Memorandum of Agreement between the EPA and the Corps Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines (1990) ("MOA") as modified by the Corps and EPA Final Mitigation Rule (33 CFR Parts 325 and 332 and 40 CFR Part 230). The MOA articulates the Guidelines "sequencing" protocol as first, avoiding impacts; second, minimizing impacts; and third, providing practicable compensatory mitigation for unavoidable impacts and no overall net loss of functions and services.

In addition to requiring the identification of the LEDPA, the Section 404(b)(1) Guidelines mandate that no discharge of dredged or fill material shall be permitted if it causes or contributes to violations of any applicable State water quality standard, 40 C.F.R. 230.10(b)(1), violates any applicable toxic effluent standard or prohibition, 40 C.F.R. § 230.10(b)(2), jeopardizes the continued existence of any endangered or threatened species (or destroy or adversely modify critical habitat),

Preliminary Review of CWA Section 404(b)1 Alternatives and Identification of LEDPA

40 C.F.R. § 230.10(b)(3), or causes or contributes to significant degradation of waters of the U.S., 40 C.F.R. § 230.10(c).

4. The Applicant's Existing Alternatives Analysis

We have reviewed the USACE Public Notice, the applicant's Environmental Assessment Report ("EAR", dated June 2015), and other documents written by the applicant and obtained through FOIA in order to ascertain what alternatives analysis has been performed, what criteria were utilized, and what alternative was identified as the LEDPA.

There is no information in the Public Notice regarding alternatives or LEDPA other than a statement that the application will be evaluated under the EPA 404(b) guidelines.

The EAR written by the applicant includes a "Section 9: Alternatives to Proposed Action" which, because of its brevity (less than one page) is copied in its entirety below:

Section 9.00 Alternatives to Proposed Action

In reviewing available land for a Marina, zoning is a major obstacle. A portion of Parcel 10A is zoned W-2 Waterfront Industrial and is the only area in Coral Bay to allow for Boat storage and repairs. Other than VI Government lands, there are no other parcels on St. John zoned W-2.

With over two-thirds of St. John designated as a National park, there is very little land suitable for a Marina that affords the protection that the Sirius Marina has.

Leaving the property in its present condition is not a viable alternative. The decrepit and environmentally unsound present operation is not viable. There are un-permitted docks on the property and no control of activities.

Within Coral Bay, the proposed location is the best area as it is well protected from waves and wind. A larger Marina would interfere with the proposed St. John marina and disturb more marine bottom.

Throughout the many studies and analyses that have been done in developing this plan, a common theme has been the interdependency of the elements. The land-side and marina each supports the other and would not be feasible otherwise.

A smaller Marina and support facilities would not be financially feasible.

A larger marina that would allow for mega-yachts would have a greater impact on the Coral Bay Infrastructure and possibly require extensive dredging and greater impact on the marine environment.

Several observations should be immediately clear:

1. The applicant has not performed an alternatives analysis, as required by the 404(b)1 Guidelines because no alternative sites were identified or analyzed.
2. The "no-action" alternative, although briefly mentioned, was not objectively analyzed.
3. The claims of interdependency of the upland components with the marina, although asserted, is not supported by any evidence.
4. The claim that modifications to size are not financially feasible is not supported by any evidence – it is simply asserted.
5. This extremely brief "Alternatives to Proposed Action" does not meet any of the criteria or standards required for a 404(b)1 analysis under the applicable Guidelines.

Preliminary Review of CWA Section 404(b)1 Alternatives and Identification of LEDPA

For these reasons we have undertaken the task of drafting a preliminary Section 404(b)1 Alternatives Analysis, which will ultimately be required of the applicant and/or the Corps pursuant to the Guidelines. The authors of this material are not professionals in wetlands regulation, or Section 404 permitting, however the information contained herein is based on local knowledge of the sites discussed, and experience in reviewing similar projects on St John and elsewhere. We formally request and expect that a complete Section 404(b)1 Analysis, as required by the EPA Guidelines, be completed by competent professionals and made available for public review and comment prior to any decision on the issuance of permits for this project.

5. Impacts of the Proposed Project on Aquatic Resources and Aquatic Functions

Based on the project description within the Public Notice, on the graphic attachments to the Public Notice, and on documents obtained directly from the applicant, we have analyzed the likely impacts of the project on aquatic resources and aquatic functions. This impact assessment is necessary so that the environmental damage of the proposed alternative (both before and after avoidance, minimization and mitigation) can be compared with the likely damage of other alternatives, which is required in order to determine the Least Environmentally Damaging Practicable Alternative (LEDPA).

5.1. Dredging – Impacts to Mangrove Habitat

The illustration below depicts the limits of dredging as described by the applicant in the Public Notice:

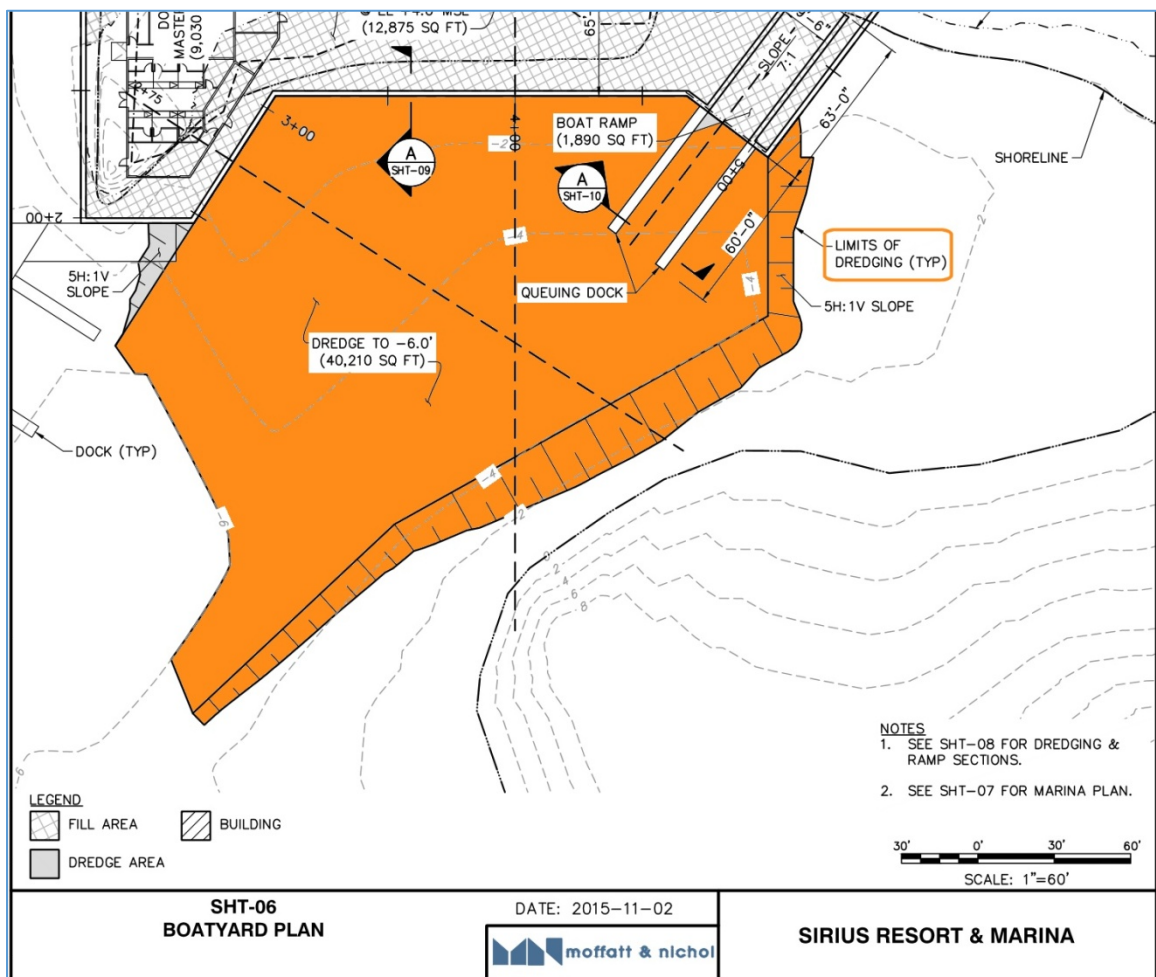


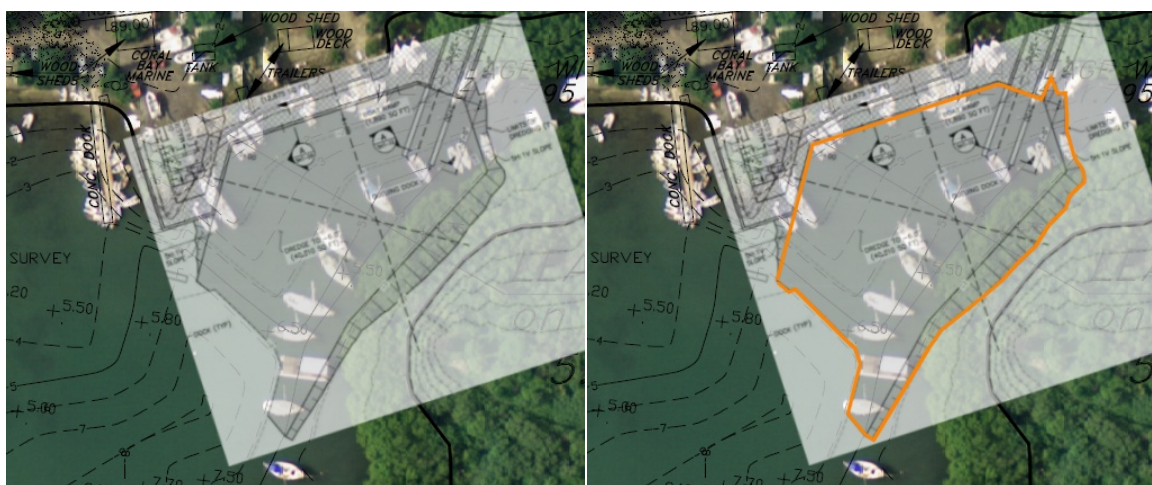
Figure 1: Limits of Proposed Dredging

The next illustration is the 2014 Bathymetric Survey performed by the applicant and used as the base depth data for the dredge illustration above. In this image the shoreline is drawn as a solid black line, and the mangroves extend seaward of the shoreline along the southern and part of the northern edge of the "creek". Note that the fringing mangroves extend up to 60' from the shoreline in places.



Figure 2: Bathymetric Survey of Dredge Site

The next two illustrations first overlay the dredge plan with the bathymetric (aerial) plan above and then highlights the dredge zone as an orange outlined region.



In the final illustration, the outline of the dredge zone is clearly shown to overlap the mangroves by as much as 35 feet. Furthermore, it is unclear what impact the dredging might have on the subsurface root systems of the mangroves along Usher Cay. The yellow ellipse highlights the region of probable mangrove impact from the proposed dredging operation:

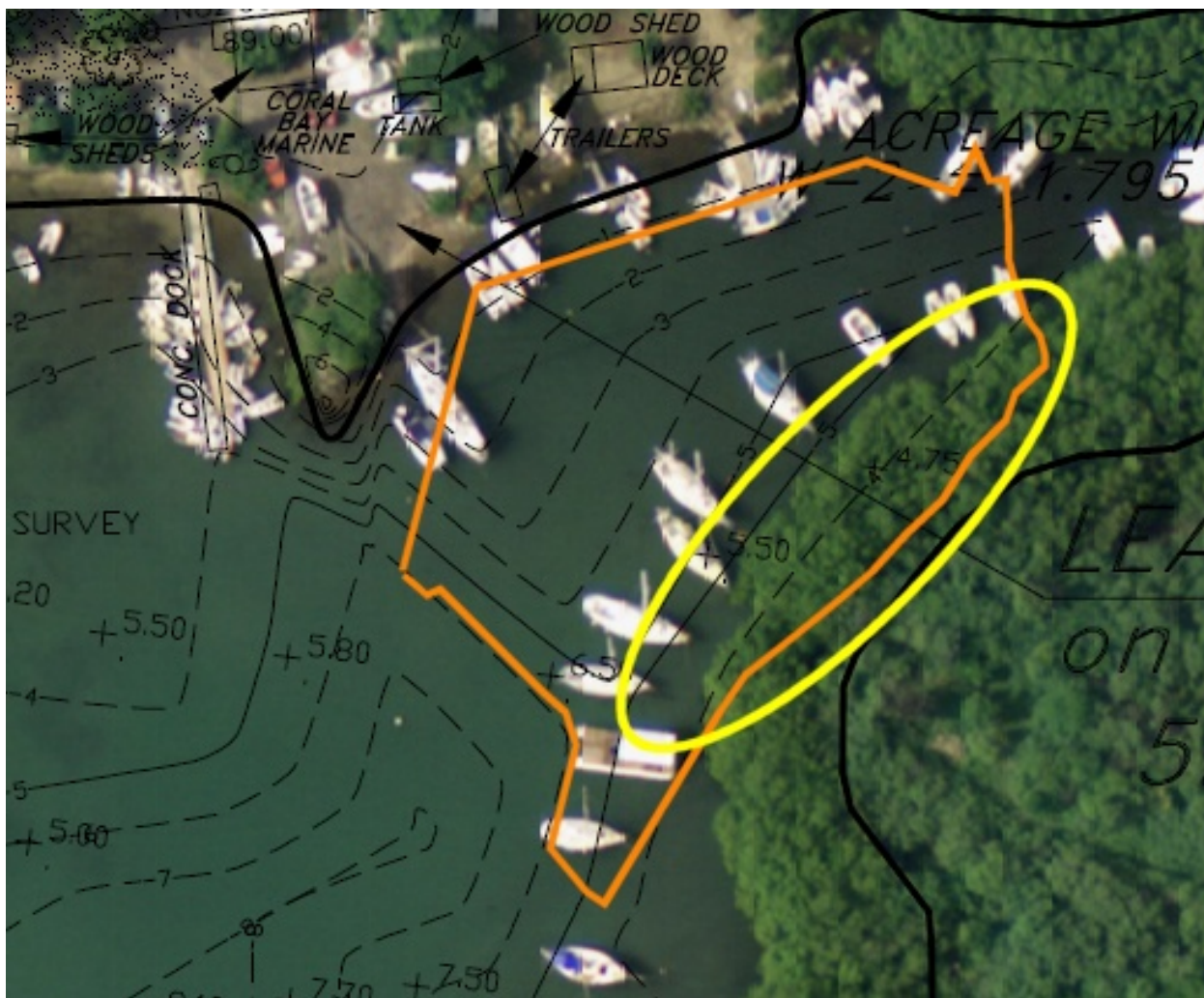


Figure 3: Impact of Proposed Dredging on Mangrove Habitat

5.1.1. Impact of Dredging on Mangroves

The applicant has not identified any impacts on mangroves from the planned dredging. This is either due to use of the wrong habitat maps, or possibly an oversight on their part, however as illustrated above the dredging will impact a significant area (approximately 10,000 square feet) of dense, mature mangroves.

5.1.2. Impact of Dredging on Mangrove Bird Habitat

The impacted mangroves identified above are a known roosting area for shorebirds. The proximity to multiple habitats (salt pond, shallow water, open water), the relatively protected location (as witnessed by the dense mangrove stands), and the lack of significant human development landward of that location, all contribute to its value as habitat for birds. Many species, including brown pelicans, various herons and egrets, other shorebirds and migratory species are often seen in this area. In fact, this is one of the locations which has been used by the St John Audubon Society for the annual bird count on St John.

In the January 9, 2016 edition of the Virgin Islands Daily News, National Park Ranger Laurel Brannick spoke about the bird habitat at this location. Here is an excerpt of the Daily News article:

Brannick said gray kingbirds and Scaley-naped Pigeons, along with egrets, herons and warblers, were some of the species she personally observed from the Coral Bay Dock at sunrise.

"I know there is a lot of concern about Coral Bay with the marina plans. About 600 birds come out of the mangroves there each morning. It is a sight to see. When daylight starts, you hear them and then they rise up," Brannick said, "So I hope that is all considered when planning for how to use that area."

One of the most memorable sightings was a colorful Prothonotary Warbler - formerly called the Golden Swamp warbler - which Brannick observed during the week of the count, she said.

"It is bright yellow with some blue on its wings," Brannick said. "It is stunning."

Brannick said she did not see the bird on the actual day of the count, but she is able to say it lived in the area because she had seen it another day that week.

Many migratory birds also seek shelter in the National Park, as it provides a habitat that is free from development, feral cats and other threats, according to Brannick.

"We had a few colorful warblers that may come from as far away as Canada, and it is nice to know that they find a safe place to winter in Virgin Islands National Park," Brannick said.

The combination of the dredging of the shallow wetland, the filling of shoreline habitat, the night time light pollution from a marina, air pollution from diesel exhaust, sound pollution from outboard motors, and the removal of mangrove habitat all present a clear threat to this important bird habitat.

5.2. Dredging – Impacts on Benthic Habitat (Submerged Aquatic Vegetation)

The impact of dredging on benthic habitat, specifically Submerged Aquatic Vegetation ("SAV") will be throughout the entire dredge zone. The applicant has supplied a benthic survey of sea grasses which is included in the Public Notice and reproduced below with the limits of the survey zone highlighted in bright green. The caption indicates that the survey was for sea grasses only, and did not include other SAV such as macroalgae.

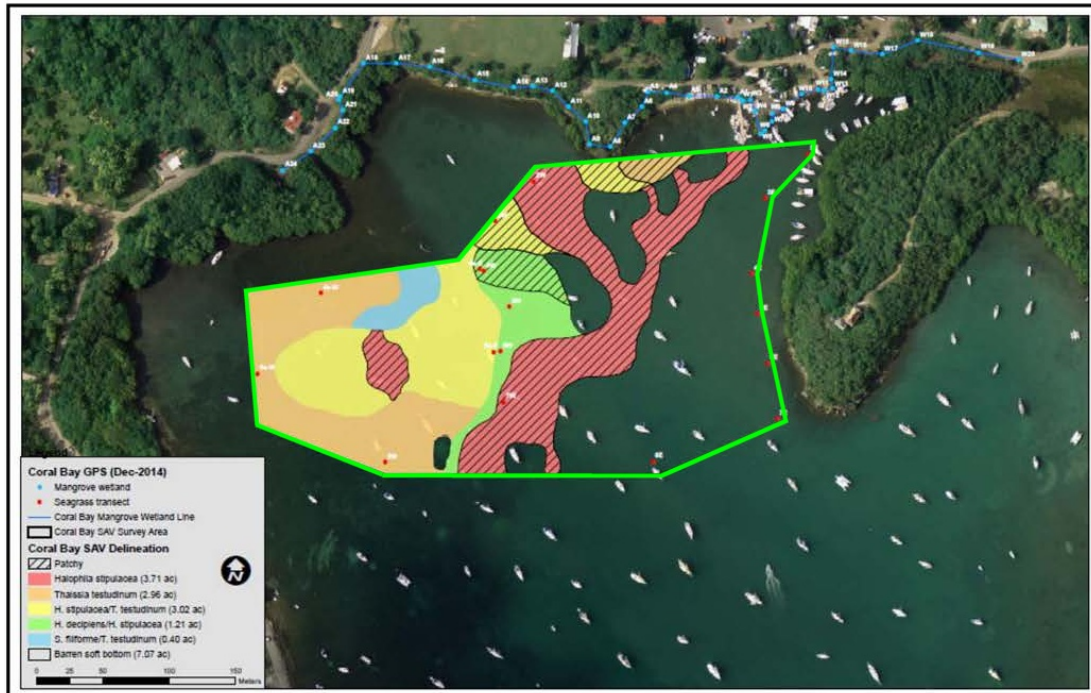


Figure 4: Limits of Coral Bay SAV Delineation

We have superimposed the limits of dredging on this map using an orange line to enclose the dredge zone. It is apparent that the applicant's survey of submerged aquatic vegetation (the illustration is entitled "Coral Bay SAV Delineation") only covered a very small portion of the proposed dredging zone.

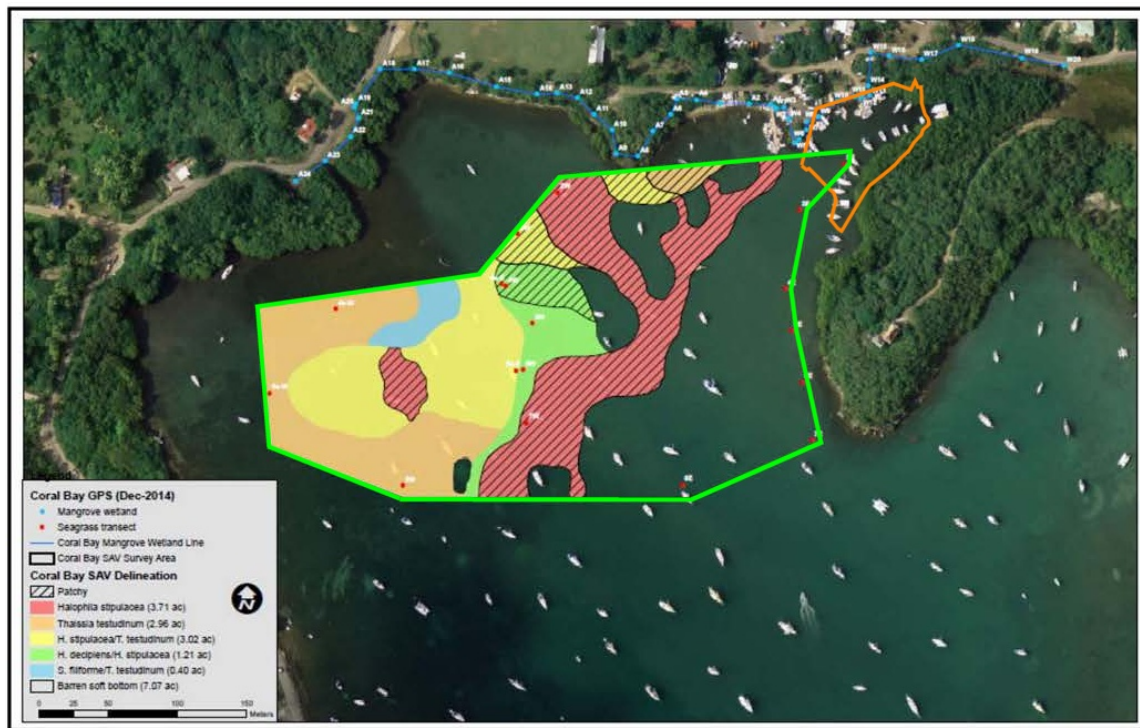


Figure 5: SAV Delineation and Dredge Boundary

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On January 16, 2016, I visited the shoreline at the northern boundary of the proposed dredge zone and photographed submerged aquatic vegetation in the shallow water. The photographs and their approximate location(as a yellow "X") are shown in the following illustrations.



Figure 6: Location of SAV Photographs Within Dredge Site

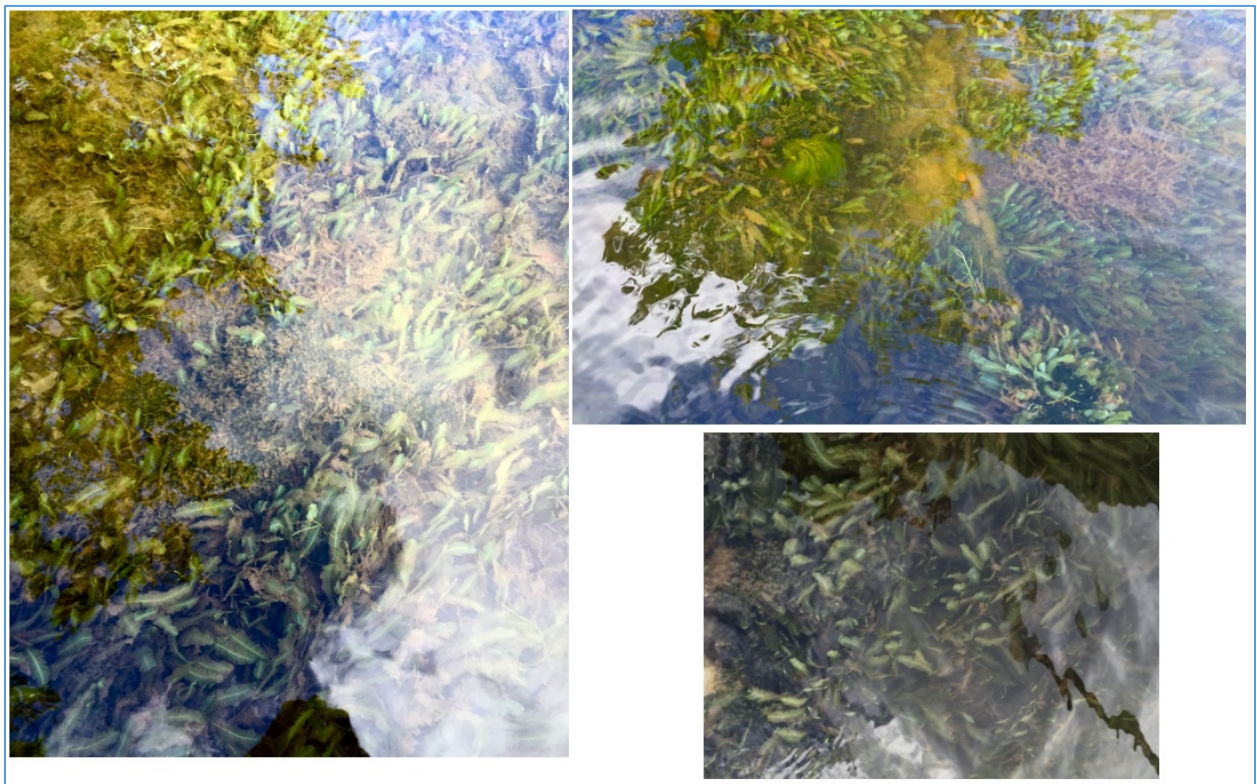


Figure 7: SAV Located Within Dredge Site (at Yellow X Locations)

I also observed a number of crabs, fish and anemone from the shoreline within the dredge and fill zones. It should be clear that without a survey of the benthic habitat that includes the entire dredging zone, the impact of dredging on the benthic environment cannot be properly assessed.

A reasonable assumption is that the dredging of the roughly 1 acre of seabed will eliminate 1 acre of mixed SAV consisting primarily of macro algae of unknown density (0-100% coverage).

It should be noted that the applicant has stated that the proposed dredging will have no impact on mangroves or benthic habitat. The Public Notice states (presumably based on information supplied by the applicant) that "3,890 cubic yards of sea floor material would be dredged from an area of 40,210 ft² of barren soft bottom habitat". It is our opinion that the dredged area includes significant SAV and mangroves.

5.3. Bulkheads

The applicants proposes installing approximately (800') of steel sheet-pile bulkhead (shown in red below) and then back-filling the bulkhead with dredge spoil and extending the shoreline seaward (filled land in yellow). The new filled land and contiguous previously filled land will then be capped with a concrete apron approximately 50,200 square feet in area (shown in grey). These components are illustrated below:



The installation of the bulkheads, per se, will have only minimal direct impacts on aquatic function, since they will either be installed adjacent to a dredged area, within previously filled land, or within a mangrove wetland. The principal impact of the bulkhead stems from the filling operation inside the bulkhead, which will be discussed later.

However there are very significant indirect impacts on aquatic function and resources stemming from the bulkhead section to the east of the new boat ramp and the piers on either side of the boat ramp. The applicant provided the following illustration in their August 2014 Rezoning Request to VIDPNR. The illustration is entitled "PLANT COMMUNITY MAP OF PARCEL REM. 10A, AND 10A-1 ESTATE EMMAUS, CORAL BAY, ST. JOHN" and it delineates upland vegetation zones. The zone outlined in yellow is labeled "MC" and the legend defines MC as a "Mangrove tidal channel".

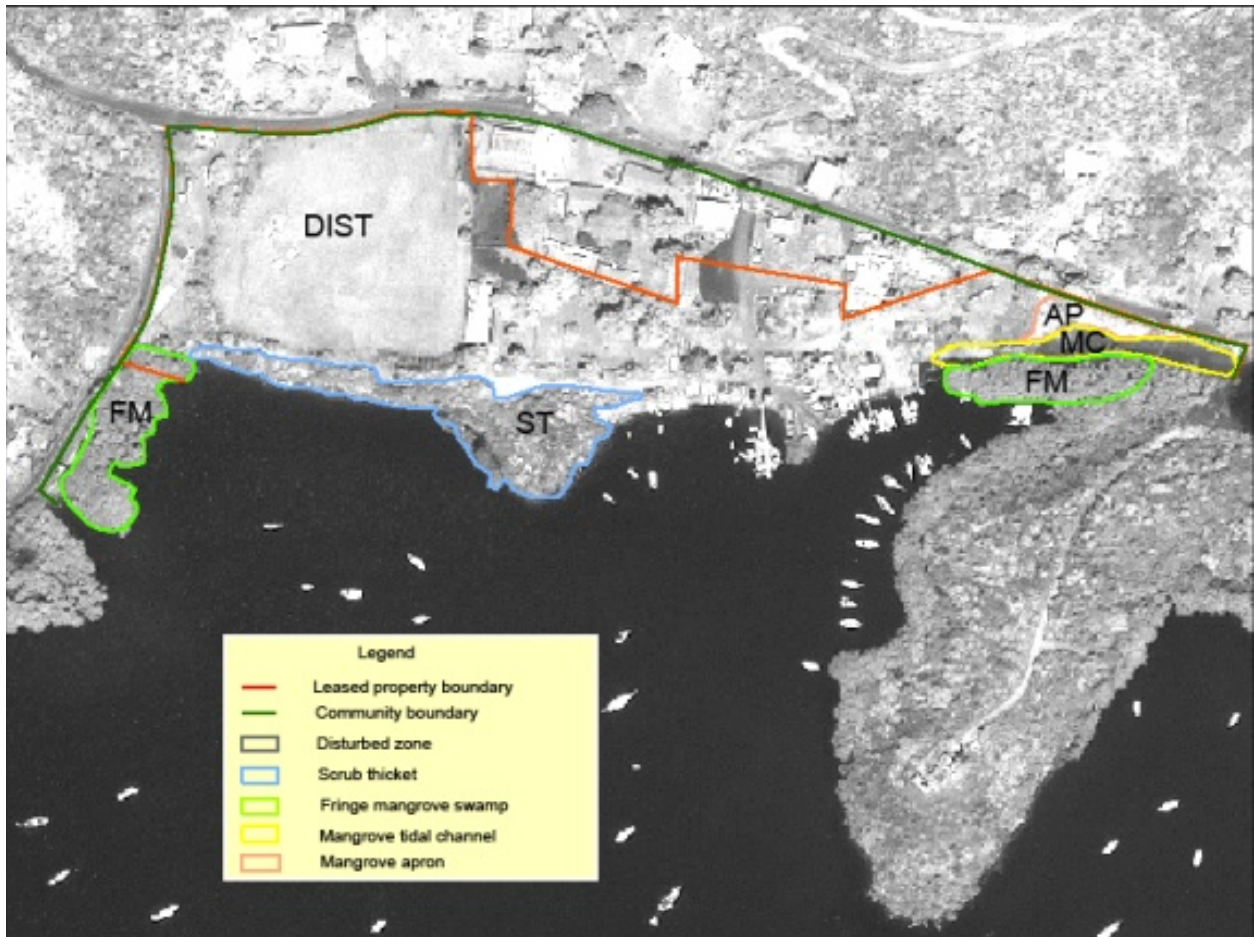


Figure 8: Upland Plant Community Delineation

We have expanded the Mangrove Tidal Channel section of the illustration above and overlaid on it the location of the proposed bulkheads. This is shown below:



Figure 9: Location of Bulkheads in Mangrove Tidal Channel

It is immediately apparent that the proposed bulkhead which extends above the mean high water line, runs completely across the Mangrove Tidal Channel depicted in the survey. By so doing it will prevent the exchange of sea water from the creek (Coral Bay) into and out of the adjacent salt pond. The aerial photograph below illustrates the salt pond, the channel, and the proposed bulkhead section.



Figure 10: Salt Pond, Mangrove Tidal Channel and Bulkheads

The location of this channel, which provides the primary water exchange mechanism between the salt pond and the bay, was confirmed by me on visual inspection of the site on January 17, 2016. Additionally, I have spoken with the owners of Usher Cay who confirm that they frequently observe water on the road at the specific location indicated by the channel, and there is evidence of a stone bridge or culvert that has since fallen down at that location.

I presented this information to the scientist who performed the terrestrial survey illustrated in the photographs above, and who identified the location of the mangrove tidal channel. I showed him the illustration with the bulkhead located on his plant community photograph and asked what impact it would have on the salt pond. His response was:

"From the ecological perspective, the channel is integral to the pond itself.. These ponds are quite dynamic in their hydrology, and thus their ecology. Cutting the tidally based, surface exchange between the sea and the pond will critically alter pond ecology. As the seasons pass, wet season surface/subsurface freshwater inputs from the surrounding catchment lowers salinity and brings forth a distinctive biota, which is then modified by tidally influenced seawater flows through the channel. With the approaching dry season, salinities skyrocket and a very different suite of organisms colonize the pond. At higher trophic levels are the rotations in waterfowl species that feed whenever the pond is not bone-dry. There does appear to be an overland route of seawater during severe storms (perhaps hurricane surges) over the berm south of the pond separating it from the Ushers Key - Fortsberg inlet.. But these inputs would be so rare as to hold little influence on pond biota.

A vital element in the ecological discussion is underground flows, particularly from the sea to the pond, if any exist. Such questions can only be addressed by expensive hydrological investigations. My sense of it is that subsurface flow to and from the sea is not that significant, though the channel itself likely uses limited subsurface flow at the neck of the Ushers Key (now Peninsula), due to filling for road construction."

- private correspondence with Dr. Gary Ray, January 2016

From this, we conclude that there is a substantial risk that the indirect impact of the proposed bulkhead would be to isolate an aquatic feature (the salt pond) resulting in isolation of WOTUS. This indirect impact, if verified, would require mitigation under the Section 404(b)1.

At this point in time we conclude that there is a high likelihood that the proposed bulkhead will isolate the adjacent salt pond (2.3 acres) resulting in loss of this aquatic feature and its wetland functions.

5.4. Filling

The applicant proposes to utilize the dredged material to backfill the bulkhead, which is located seaward of the present shoreline as well as in mangrove wetlands. Following the fill operation, the area will be paved with a concrete apron. The impact of the filling and paving on aquatic resources will be (a) elimination of mangrove wetlands, and (b) elimination of open waters of the United States.

5.4.1. Filling of Mangrove Habitat and Wetlands

The applicant estimates the filling of mangrove wetlands will encompass an area of 0.1465 acres of direct impact. We believe in addition to the direct impacts, the secondary effect of the filled bulkhead may reduce water circulation to mangroves beyond the bulkhead, particularly in the mangrove tidal channel. This will require further scientific review and analysis. For the purpose of this report we will assume the minimum impact to mangrove wetlands from the fill operation is 0.1485 acres.

It should also be pointed out that the shoreline beneath the fill zone has hundreds of mangrove propagules along almost the entire shoreline. The loss of this future mangrove habitat has not been quantified. The photograph below was taken along the northern shoreline of the creek, in an area proposed for filling and capping with concrete:



Figure 11: Mangrove Propagules in Fill Area

5.4.2. Filling of open water

In addition to the filling of mangrove habitat as described above, the applicant proposes to locate the bulkhead seaward of the current shoreline, backfill with dredge material, and cap with concrete, thereby creating new fast land where there previously was open water.

The area of open water lost through this operation is shown in the illustration below. It amounts to 14,923 sq ft (0.34 acre) and its future use will apparently be for boat parking and access to the service buildings.



5.5. Dredge Disposal in Possible Wetlands

The Public Notice text and graphic attachments identify a dredge disposal area on Parcel 2, Estate Emmaus, located to the west of the marina site:

"The remaining dredged material would be disposed of and spread out to a height of two feet over an upland area of 44,600 ft², located to the west of the marina, just southwest of the intersection of Hwys. 10 and 17. Mechanical (crane/bucket, clam or backhoe) dredging equipment on a barge would be used to remove the material from the dredge area. The dredged material would be dewatered on the dredge barge, allowing excess water to return to the harbor, prior to its transport via trucks to the final disposal site."

This location is shown in the map below:

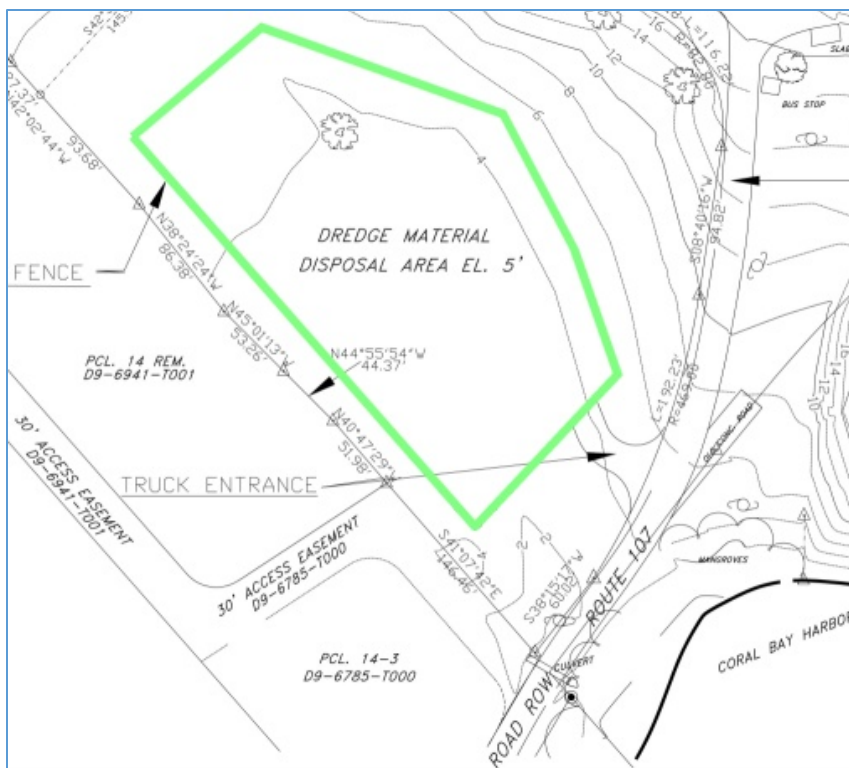
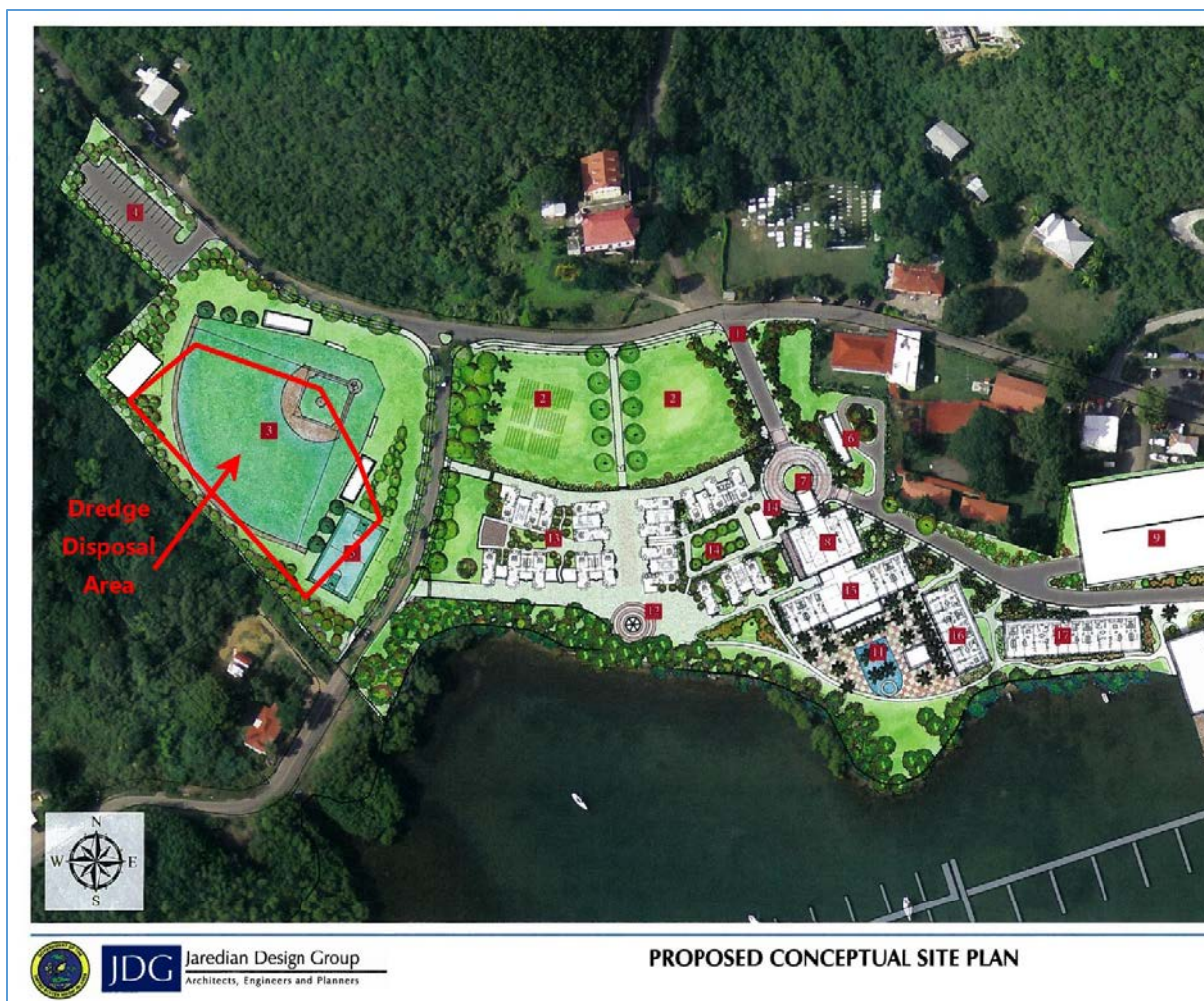


Figure 12: Topographic Map of Dredge Disposal Area

Although not stated in the Public Notice, multiple other documents obtained from the applicant indicate the intent to utilize the dredge disposal area as a public playground, to compensate for the loss of the existing playground when the hotel and resort are constructed. This is illustrated in the drawing below, with the dredge disposal area superimposed on the "new playground":



Having located the disposal site, we now discuss whether this disposal of dredge material might have any impacts on aquatic resources or functions and if so, whether they have been properly identified by the applicant and/or the Corps.

5.5.1. Soil Conditions and Habitat in Dredge Disposal Site

I have personally visited the periphery of the proposed dredge disposal site on numerous occasions, during multiple seasons of the year. I have witnessed frequent flooding events, particularly following periods of heavy rainfall and concentrated on the southeastern portion of the parcel.

There appears to be a significant drainage gully running through portions of this disposal site, based on observed flood patterns over the past ten years. The portion of the public road to the west of the parcel and in front of the "Pickles Restaurant" just south of the parcel are known to have significant flood waters on them following heavy rains.

In addition to the natural drainage through this area, it receives additional rain runoff from the road culverts on Route 10 which transfer water from the road into the valley, eventually reaching this low point in the terrain.

We have researched the reported soil types and water features on this parcel, and have found that the soil type is identified as "Solitude A, frequently flooded" which is consistent with our observations. The USDA soil map for this parcel also indicates a drainage ghut passing through the disposal site, which is also consistent with our observations. The illustration below is taken from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey maps of St John, Western St John, Sheet Number 8.

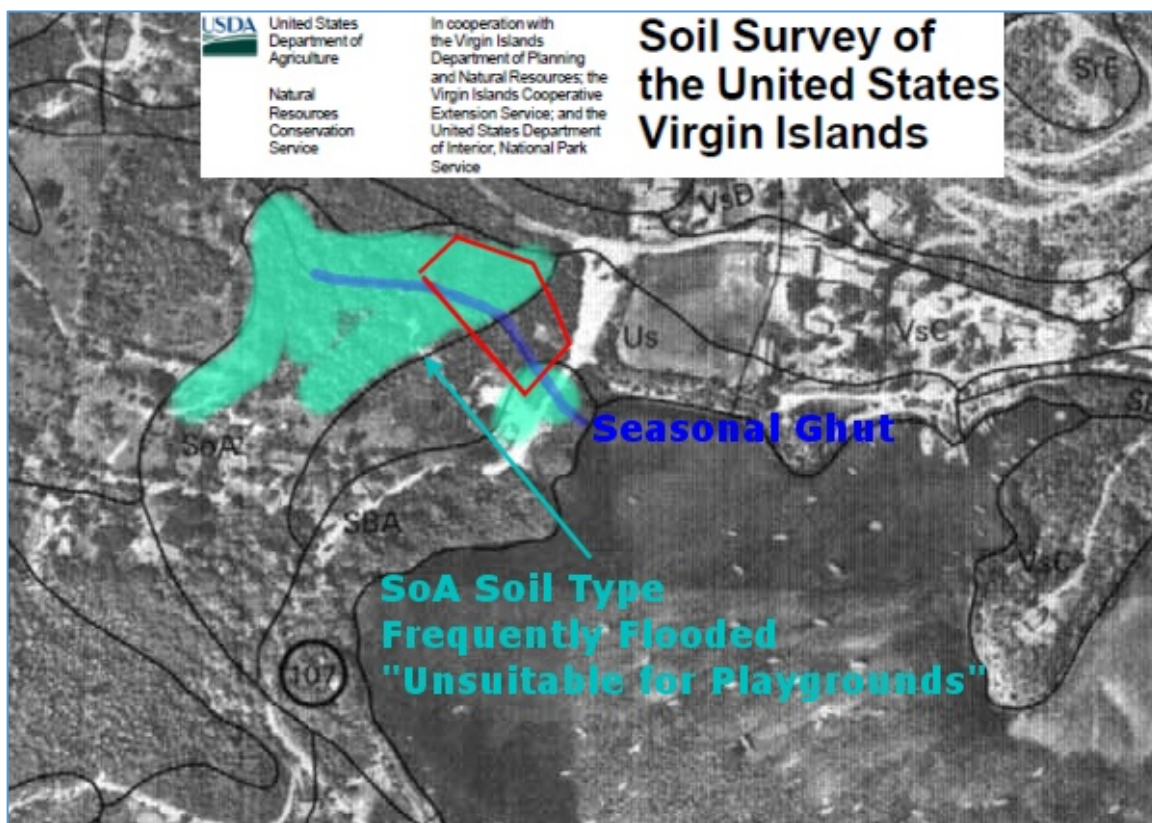


Figure 13: Soil Type and Drainage Ghut in Dredge Disposal Area

The description of the "SoA" soil type states that it is subject to frequent periods of brief flooding during the months of April through December, to depths of 1.0 to 2.5 feet. It is a gravelly fine sandy loam, found on 0 to 2 percent slopes, frequently flooded. It is specifically identified as unsuitable for recreational uses, including playgrounds.

The USDA statement regarding uses of this soil type is as follows:

"This map unit is used mainly as wildlife habitat.

This map unit is unsuited to cultivated crops. The wetness, frequent flooding, and slight to strong salinity are severe limitations.

This map unit is unsuited to pasture and hay. The flooding and salinity are severe limitations. The range site condition of this map unit is poor because less than 25

percent, by weight, of the present vegetation consists of the same species as the original or potential vegetation.

*This map unit is unsuited to most urban uses. The flooding and wetness are severe limitations. **This map unit is unsuited for recreational uses.** The flooding and wetness are severe limitations.*

*This map unit is unsuited to use as freshwater wetland wildlife habitat. Salinity is a severe limitation. **This map unit is suited to use as marine wetland wildlife habitat.** The depth to water is a management concern."*

Based on these personal observations, coupled with the soil type identification on the USDA NRCS soil map, we conclude that the disposal of dredge material at the location selected by the applicant might constitute a discharge of dredge materials on a wetland, a Special Aquatic Site. Without further confirmation based on scientific field surveys of the flora, fauna, and soil conditions at the site, including a formal wetlands delineation, it appears appropriate to presume, until proven otherwise, that this disposal site is a wetland habitat and therefore the dredge disposal operation is resulting in an additional impact to wetlands of 44,600 sq ft, or 1.1 acres.

5.6. Boat Ramp (Fill)

The applicant proposes construction of a new boat ramp, at the extreme eastern end of the dredge site with two "queuing docks" located on either side of the ramp. It does not appear that either the applicant nor the Corps has computed the volume of the concrete fill that will be deposited in the creek for the construction of this component. All such concrete would constitute fill material in WOTUS and must be considered as a component of the aquatic impacts of the applicant's proposal.

The in-water dimension of the boat ramp, based on the applicant's drawings, appears to be approximately 20' wide by 60' long, or 1200 sq ft. The construction details for the boat ramp have not been specified, so assuming a typical concrete slab thickness of 8" the volume of the boat ramp is 800 ft³ or roughly 30 cubic yards of concrete "fill material".

The two "queuing docks" appear to be roughly 4' wide by 60' long and extend from the bottom of the boat basin (-6') to 5' above the water surface. Taking the portion of the queuing docks below sea level only, this accounts for approximately 106 cubic yards (2 docks x 4' wide x 60' long x 6' high) of concrete fill material in WOTUS.

It was apparently an inadvertent omission not to include this element of discharge of fill material from the Public Notice.

5.7. Shading Impacts from Marina Structures – Pilings

The Public Notice states that the construction of the in-water marina will involve placement of 420 pilings, however the location of these pilings is not disclosed. We have been unable to find any information on the location or spacing of the pilings other than the drawings in the PN graphic attachment, which lack the dimensions necessary to understand the placement of the pilings.

The direct impact of the pilings – stemming from displacement of sea grasses within their footprint – is claimed to be 0.024 acre. We have no basis to independently verify that statement because we do not know the location of the pilings and so we will assume this figure is accurate.

5.8. Shading Impacts from Marina Structures – Floating Docks

Environmental guidelines for docks and piers constructed over sea grasses typically require a minimum elevation (4' – 5') and a grated decking material, in order to minimize shadows and allow sunlight to reach the vegetation below.

The applicant appears to be proposing use of a floating precast concrete dock for the majority of the in-water dock construction. With the exception of the elevated main pier, all of the secondary piers and finger piers are floating, solid surfaces.

The Public Notice states that 0.415 acres of sea grass will be impacted by shading from the dock structures. Given the fact that the dock structures are not permeable to sunlight, and given the elongation of shadows during many hours of the day, this figure appears to be an estimate of the minimum impact, not the expected impact.

Nonetheless, for the purpose of estimating impacts, we will assume that 0.415 acres of sea grass are directly impacted by shading from dock structures.

5.9. Boat Shading

The Public Notice, based on information supplied by the applicant, states that 0.797 acre of sea grasses will be impacted from boat shading. Again, we reiterate our concern that elongation of shadows could result in a significantly larger shadow than the exact footprint of a boat.

Taking the total sea grass impact (1.236 acres) as reported in the Public Notice, and dividing by the number of vessels served (92) yields a sea grass impact of 585 sq ft of sea grass impact per boat. When we discuss avoidance, minimization and mitigation, this figure will be compared with the average sea grass impact per boat from alternative designs, including moorings. The per boat impact on sea grasses stemming from the marina is equivalent to a mooring scar 28' in diameter per mooring, which vastly exceeds the actual impact of a mooring.

5.10. Summary – Impacts to Aquatic Resources and Functions from Proposed Alternative

The table below summarizes the impacts to aquatic resources and functions which have been discussed in the preceding section.

Source of Impact	Type of Impact	Area or Volume Impacted
Dredging	Mangrove Habitat	0.23 ac
Dredging	Submerged Aquatic Vegetation, unknown composition	0.92 ac
Bulkheads	Isolating salt pond, WOTUS	2.3 ac
Fill Operations	Fill of mangrove wetlands, WOTUS	0.15 ac
Fill Operations	Fill of open water, WOTUS	580 cubic yards fill 0.34 ac filled
Dredge Spoil Disposal	Discharge into Wetlands parcel	1.0 ac
Boat Ramp	Discharge of Fill in WOTUS	136 cubic yards fill
Marina Dock Shading + Pilings	Sea Grasses	0.44 ac
Boat Shading	Sea Grasses	0.80 ac
TOTAL IMPACTS		6.18 acres

6. Project Need and Purpose

We now move on to two key concepts which guide the selection of potential alternatives under the 404(b)1 Guidelines. These concepts are the "Basic Purpose" of the project (which is used to determine "water dependency") and the "Overall Purpose" (which governs the selection of potential alternative sites).

The following excerpt from the manual entitled "Army Corps of Engineers Standard Operating Procedures for the Regulatory Program" defines the "Basic Purpose" and "Overall Purpose" and offers some specific examples for guidance:

*The **basic purpose** of the project must be known to determine if a given project is "water dependent." For example, the purpose of a residential development is to provide housing for people. Houses do not have to be located in a special aquatic site to fulfill the basic purpose of the project, i.e., providing shelter. Therefore, a residential development is not water dependent. If a project is not water dependent, alternatives, which do not involve impacts to waters of the United States are presumed to be available to the applicant (40 CFR 320.10(a)(3)). **Examples of water dependent projects include, but are not limited to, dams, marinas, mooring facilities, and docks. The basic purpose of these projects is to provide access to the water.** Although the basic purpose of a project may be water dependent, a vigorous evaluation of alternatives under National Environmental Policy Act (NEPA) and the Guidelines will often be necessary due to expected impacts to the aquatic environment (e.g., a marina that involves substantial impacts to or the loss of marsh or sea grass bed).*

*The **overall project purpose** is more specific to the applicant's project than the basic project purpose. The overall project purpose is used for evaluating practicable alternatives under the Section 404(b)(1) Guidelines. **The overall project purpose must be specific enough to define the applicant's needs, but not so restrictive as to preclude all discussion of alternatives.** Defining the overall project purpose is the responsibility of the Corps, however, the applicant's needs must be considered in the context of the desired geographic area of the development, and the type of project being proposed.*

6.1. Basic Purpose

The Public Notice defines the "Basic Purpose" of the Sirius project as "Offshore Marina". We believe that, depending on the definition of "marina", this Basic Purpose may be too narrow.

The "Basic Purpose" in the Public Notice should be a statement of the need that is being addressed by the proposed activity. The "Overall Purpose" should describe how that need is being addressed.

In the case of the Sirius Marina, the application states that the Purpose is "to provide boating services ". This purpose could be addressed in any of several ways, and a wet-slip marina is only one of the ways. For example, another way to address this need might be a well managed mooring field with improved public docks (which may be a form of marina) or a dry-stack boat garage plus lifts.

By narrowing the statement of Basic Purpose to "Offshore Marina" the Corps has potentially limited the scope of alternatives, which is contrary to the objectives of NEPA. The list of

alternatives from which the LEDPA is selected is created after the basic purpose of the project is identified because only alternatives that meet the project's basic purpose need be considered.

Based on the foregoing, we believe that the correct statement of Basic Purpose should be **"recreational boating access."**

6.2. Overall Purpose

The Overall Purpose should describe, in general terms, the manner by which the need (Basic Purpose) is proposed to be met. The Corps has stated the Overall Purpose of this permit application as "Construct a private commercial offshore marina with ancillary facilities in adjacent uplands in St. John, USVI." We feel that this statement of overall purpose may impose excessive limits on the range of alternatives, and is directed too specifically at the goals of the applicant. Unless the "ancillary facilities" are ones that are crucial for recreational boating access (in which case they should be explicitly defined), then they do not belong in the statement of Overall Purpose. "Overall project purpose does not include secondary project purposes, site-specific secondary requirements, project amenities, desired size requirements, or desired return on an investment."

We believe that the correct statement of Overall Purpose should be **"The overall project purpose is to improve recreational boating access to St John."** In the 404(b)1 Alternatives Analysis we will use this statement of Overall Purpose to filter the set of possible alternatives.

6.3. Water Dependency and Special Aquatic Sites

Regardless of the accepted Basic Purpose – "offshore marina" or "recreational boating access" – it clear that at least some components of the project require access to water, although it is not at all clear that they need to be sited in a special aquatic site. The definition of "water dependency" stems from its use in the Clean Water Act:

*Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in subpart E) **does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose** (i.e., is not "water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. (40 CFR 230.10 - Restrictions on discharge)*

It should be clear that although an "Offshore Marina" requires access to the water, it does NOT require access or proximity to or siting within a mangrove wetland (a special aquatic site) or a vegetated shallow (a special aquatic site). The requirement of 40CFR230.10 is very clear – and we have parsed it below in the context of the proposed project:

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Requirement of 40 CFR 230.10	Applicability to Sirius project
"Where the activity associated with a discharge"	The Sirius marina is associated with a discharge of dredge material.
"which is proposed for a special aquatic site"	The discharge is proposed, in part, for a mangrove wetland.
"does not require access or proximity to or siting within the special aquatic site in question"	The activity can be distanced sufficiently from the mangrove wetland so that it does not require access, proximity to or siting within the wetland.
"to fulfill its basic purpose"	The basic purpose is an offshore marina and this purpose does not require siting in a wetland.
"practicable alternatives that do not involve special aquatic sites are presumed to be available."	THEREFORE the rebuttable presumption applies.

It is therefore our understanding and belief that, based on the requirements of 40CFR230.10 and the description of the project purpose, the applicant will be required to rebut the presumption that practicable alternatives exist if the applicant chooses to pursue their preferred alternative, which involves discharging dredge material in a special aquatic site.

Of course, regardless of how the Corps elects to interpret this requirement of the Clean Water Act, every project involving discharges of dredge or fill material in Waters of the US require that they be the least environmentally practicable alternative in order to receive a Section 404 permit.

7. Identification of Alternatives

Army Corps guidelines for alternatives analysis require, at a minimum, evaluation of four types of alternatives:

- Applicant's Preferred Alternative
- No-Action Alternative(s)
- Offsite Alternative Locations
- Onsite Alternatives

We will look at each of these in turn with several examples where appropriate.

7.1. Criteria for Alternatives Evaluation

The selection of alternative sites is based on a determination as to whether they are (a) practicable, and (b) meet the project overall purpose. Although we do not agree with the Corps' statement of Overall Purpose ("Construct a private commercial offshore marina with ancillary facilities in adjacent uplands in St. John, USVI.") , and we believe the Overall Purpose should be "improve recreational boating access to St John" for the purpose of this analysis we will use the Overall Purpose as stated by the Corps in the Public Notice.

The definition of "practicable" in the context of a 404(b)1 alternatives analysis means that the alternative is "available, and capable of being done after taking into consideration cost, existing technology, and/or logistics in light of the overall project purpose." (40 CFR 230.3(q))

Due to the significant amount of coastline that is within the Virgin Islands National Park and Coral Reef National Monument boundaries, we can apply an initial filter and limit the alternatives to those sites that are outside park boundaries. As shown below, this limits the alternatives to three broad regions: East End, Coral Bay, and Cruz Bay.



Figure 14: Regions of St John for Alternative Selection

Within these three broad regions, we can readily dismiss the "East End Area" due to its extreme isolation, distance from all amenities, inadequate road access and lack of adequate public safety (police, fire, medical) services. This leaves the "Coral Bay Area" and the "Cruz Bay Area" as potential candidates for alternative site analysis.

7.2. Potentially Available Sites

After applying initial filters for reasonable alternatives based on a high level view of the potential suitability of the site for fulfilling the project purpose, we have arrived at a list of alternatives to be further analyzed for practicability.

Listed below are the reasonable alternatives which will be considered in this analysis:

7.2.1. Applicant's Preferred Alternative

- Preferred Alternative - located at the northern shore of Coral Bay harbor

7.2.2. Offsite Alternatives

- Alternative 1: West Coral Bay – located on the western shore of Coral Bay harbor
- Alternative 2: Johnson's Bay – located on Johnson's Bay in greater Coral Bay
- Alternative 3: Great Cruz Bay – located in Great Cruz Bay in the vicinity of the Westin Resort
- Alternative 4: Enighed Pond – located in Enighed Pond in the vicinity of the car barge port
- Alternative 5: Cruz Bay Creek – located in Cruz Bay in the vicinity of the National Park dock

7.2.3. On-Site Alternatives

- On-Site Alternative 1 – modifications to preferred site plan to avoid all impacts to wetlands
- On-Site Alternative 2 – modifications to preferred site plan to reduce use of fixed dock structures and reduce impacts to sea grass

7.2.4. No-Action Alternatives

- No-Action Alternative 1 – an alternative involving moorings and day use dock that does not involve discharge of fill materials in WOTUS
- No-Action Alternative 2 – maintaining the status quo

The locations of each of these reasonable Off-Site Alternatives are shown in the map of St John, below. The "Preferred Alternative" is shown as "PA" and the Offsite Alternatives are numbered 1 – 5.

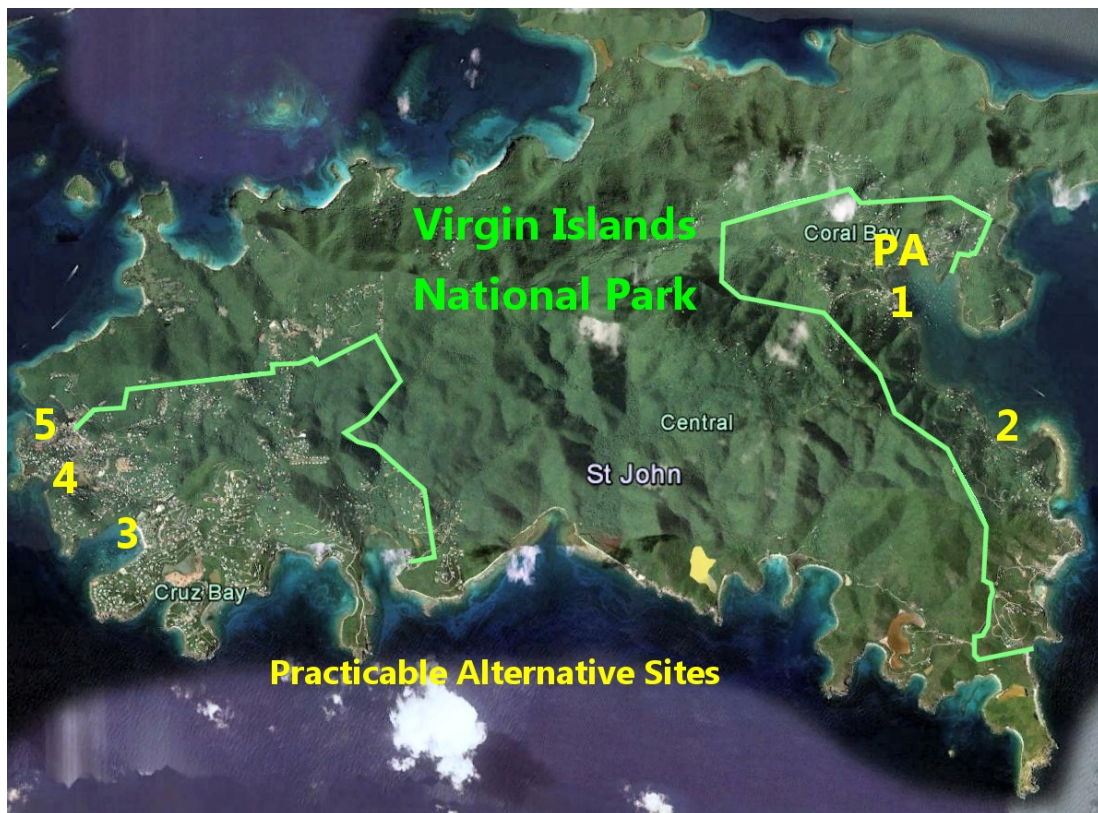


Figure 15: Location of Reasonable Alternative Sites

We have adopted the "Alternatives Comparison Matrix for Practicability" which is illustrated in the document entitled "Information for Preparing an Alternatives Analysis Under Section 404, Version 1.0, June 2014" and prepared by the Army Corps Jacksonville District Regulatory Division (http://www.swf.usace.army.mil/Portals/47/docs/regulatory/Handouts/Preparing_An_Alternatives%20Analysis.FINAL.pdf).

The summary conclusions based on that matrix are shown on the chart on the following page.

Alternatives Comparison Matrix for Practicability

Category	Practicability Factor	Applicant's Preferred Alternative	Alternative 1 West Coral Bay	Alternative 2 Johnsons Bay	Alternative 3 Great Cruz Bay	Alternative 4 Enighed Pond	Alternative 5 Cruz Bay Creek
Availability	Existing zoning appropriate or potential for zoning change?	YES	YES	YES	YES	YES	YES
	Available for acquisition?	YES	NO	Not presently	Unknown Possible partnership with Westin	YES	YES
Cost	Reasonable acquisition costs?	YES	N/A	N/A	N/A	YES	YES
	Costs feasible for mitigating impacts to historic and cultural resources found onsite?	YES	YES	YES	YES	YES	YES
	Other costs Feasible?	YES	YES	YES	YES	YES	YES
Existing Technology	Topography and other site conditions feasible for construction of project?	dredging required	Severe weather exposure	Undesirable Exposure	YES	YES	YES
Logistics	Sufficient parcel size?	YES	YES	YES	N/A	YES	YES
	Availability of utilities?	Potable water unavailable	Potable water unavailable	N/A	N/A	YES	YES
	Availability of access?	YES	YES	N/A	N/A	YES	YES
Practicable?		YES	NO	MAYBE¹	MAYBE	YES	YES

¹ The two alternatives labeled "MAYBE" are so identified because they could potentially become practicable alternatives if the availability of land were to change. In the case of Great Cruz Bay a joint venture with the Westin Resort is also an attractive possibility. However neither of these are further evaluated for practicability because the requisite parcels are not presently available.

7.3. Practicable Alternative Sites Discussion

The table on the preceding page summarizes practicability considerations for five alternative sites and concludes that two of the alternatives are practicable alternatives and need to be further evaluated, together with the Applicant's Preferred Alternative, On-Site Alternatives, and No-Action Alternative(s) in order to identify the Least Environmentally Damaging Practicable Alternative (the LEDPA).

In the remainder of this section we will discuss the considerations which gave rise to the conclusions summarized in the practicability matrix.

7.3.1. Applicant's Preferred Alternative

Although the site selected by the applicant involves multiple environmental issues, including shallow water, vegetated bottom, and mangrove wetlands, since it is the applicant's "Preferred Alternative" it must be included within the list of "Practicable Alternatives" and compared with the other alternatives with respect to environmental impacts.

7.3.2. Alternative Site 1 – West Coral Bay

The "West Coral Bay" site is the location of the proposed "Summer's End Group" marina. Although we believe this site is totally unsuited for a marina, we have included it in this analysis since it is a location under consideration by another developer.

Since some of the parcels required for a marina at this location are tied up with the Summer's End Group project, they are shown as NOT available for acquisition in the matrix. As a consequence the acquisition costs are not relevant.

The topography and site conditions here are unsuited for marina operations due to the severe weather exposure and dense sea grass beds.

As a consequence of these considerations, the West Coral Bay location is not considered any further in the alternatives analysis. An aerial view of the West Coral Bay site is shown below:



7.3.3. Alternative Site 2 – Johnsons Bay

The "Johnsons Bay" site is a small mooring area on the west shore of Coral Bay, currently utilized by approximately 20 boats on moorings.

The largest undeveloped parcel has extensive mangrove wetlands and would not be suitable for development. Two other parcels, each approximately 1.75 acres are undeveloped, however they are not currently available for purchase or lease. As a result their availability and costs are shown as unknown.

The site is partially protected from the open seas, leaving a relatively small area that could be considered for a marina. As a consequence the exposure is somewhat undesirable and the water parcel size may be inadequate.

For these reasons, the Johnsons Bay location is not considered any further in the alternatives analysis. The site is shown below:



Figure 16: Johnsons Bay Alternative Site

7.3.4. Alternative Site 3 – Great Cruz Bay

The alternative location in Great Cruz Bay appears to be well situated in terms of site conditions (sandy bottom, no wetlands) and logistics (excellent access to infrastructure, roads). There are several undeveloped large parcels on the shoreline with sufficient acreage to support the requisite upland facilities.

However it is unclear whether any of the land that would be required is available for purchase², and if so whether the acquisition price would be economically feasible for the overall purpose of the project. **For this reason the Alternative Site 3 – Great Cruz Bay – has been deemed not practicable in this analysis.** The site is shown below for reference.

² There might be potential for a joint venture with the Westin Resort to build a commercial marina offshore of their extensive land holdings. This has not been explored further due to lack of information on commercial feasibility. It should be considered, however, as part of a formal alternatives analysis.



Figure 17: Great Cruz Bay Site

7.3.5. Alternative Site 4 – Enighed Pond

The Enighed Pond site (Alternative Site 4) is well situated for logistics and infrastructure, being within the municipality of Cruz Bay. The land and water has been heavily disturbed as a result of having been dredged and filled in the construction of the Enighed Pond car barge terminal.

The shoreline is owned by the Virgin Islands Port Authority, and they have, in the past, entered into economically viable lease agreements for properties elsewhere in the Virgin Islands to be used for private marine infrastructure. In fact, the current project proponents – T-Rex St John – in a prior incarnation of their project, were lessees of land owned by the Port Authority.

This alternative is available and logistically and technically practicable, so it has been included in the review of Practicable Alternative Sites.

7.3.6. Alternative Site 5 – Cruz Bay Creek

With similar ownership and availability considerations as the prior alternative, the site in Cruz Bay Creek is under the control of the Virgin Islands Port Authority and could become available under attractive economic terms. The location is excellent with access to infrastructure nearby.

There might be size issues to overcome, since the water is not used very efficiently at the moment. An ill-planned assortment of uses compete for space in the "creek" but there is sufficient space overall to accommodate a marina meeting the overall purposes of the project.

Since this alternative is available and logistically and technically practicable, it has been included in the review of Practicable Alternative Sites.

8. Analysis of Practicable Alternatives – Environmental Impact Factors

The "practicable alternatives", consisting of the applicant's preferred alternative, two off-site alternatives identified above, on-site alternatives, and the no-action alternatives, are now evaluated for impacts on aquatic resources and aquatic functions.

Since more is known about the preferred alternative than the other alternatives, the comparison must be done at a relatively high level at this moment in time. It is anticipated that a final Section 404(b)1 Alternatives Analysis would delve into more detail and provide the same level of analysis of each of the practicable alternatives. However, even at the high level, some useful conclusions can be drawn about the project and its suitability for a Section 404 permit.

The factors that will be considered are:

- The need for dredging of vegetated sea bottom.
- The direct and indirect impact on wetlands.
- Disposal sites for any dredge or fill materials
- Presence of, and impacts to listed species and/or their critical habitat.

To the extent possible these impacts will be quantified for objective comparison.

8.1. Applicant's Preferred Alternative

The environmental impacts of the Sirius Marina project, as proposed by the applicant (the "Applicant's Preferred Alternative") have already been discussed. These impacts are briefly summarized and then quantified below.

Because the applicant has situated fixed marina docks over vegetated bottoms (sea grass) the marina will cause impacts to sea grass from dock and boat shading.

Because the Preferred Alternative locates a boat ramp in shallow water, the project requires dredging of a vegetated bottom and impact to fringing mangroves.

Because the applicant has chosen to construct an extensive bulkhead seaward of the shoreline in order to provide access to upland buildings, the Preferred Alternative involves discharge of dredge material in a mangrove wetland and in open waters.

Because the primary dredge disposal site appears to be a wetland, the Preferred Alternative impacts this feature.

Finally, because the bulkhead structure will isolate an adjacent salt pond from its primary water exchange with Coral Bay, the Preferred Alternative also impacts this wetland feature.

The vicinity is a known habitat for endangered sea turtles and marine mammals are frequently observed in the general vicinity.

These impacts are summarized below in terms of the number of acres impacted:

Source of Impact	Type of Impact	Area Impacted
Dredging	Mangrove Habitat	0.23 acre
Dredging	Submerged Aquatic Vegetation, unknown composition	0.92 acre
Bulkheads	Isolating a salt pond, WOTUS	2.3 acre
Fill Operations	Fill of mangrove wetlands, WOTUS	0.15 acre
Fill Operations	Fill of open water, WOTUS	580 cubic yards fill 0.34 acre filled
Dredge Spoil Disposal	Discharge into Wetlands parcel	1.0 acre
Boat Ramp	Discharge of Fill in WOTUS	136 cubic yards fill
Marina Dock Shading + Pilings	Sea Grasses	0.44 acre
Boat Shading	Sea Grasses	0.80 acre
TOTAL IMPACTS		6.18 acres

Due to lack of sufficient information for analysis, we cannot comment on whether the proposed means of obtaining potable water – utilizing brackish wells plus reverse osmosis – will result in impacts to aquatic resources. The applicant has not disclosed how the brine waste water will be disposed of from this process.

Due to lack of information on the size and operation of the Waste Water Treatment Plant, it is impossible to assess whether the effluent from that facility will result in impacts to WOTUS.

These factors, if they result in impacts, must be factored into the Alternatives Analysis.

8.2. Onsite Alternative 1

As can be seen from the preceding discussion, the most significant impacts to aquatic resources in the Preferred Alternative are a consequence of the construction of the bulkhead with the dredging and filling associated with it. These impacts can almost all be avoided entirely through a minor reconfiguration of the project components, as illustrated in this section.

The two drawings below show the applicant's preferred configuration, on the left, and a modified configuration, on the right. The modification arises from utilizing an existing boat ramp (rather than constructing a new one in the shallowest part of the creek), and slightly rotating the marina dock structure so that the entrance to the main pier is east of the historic town dock.

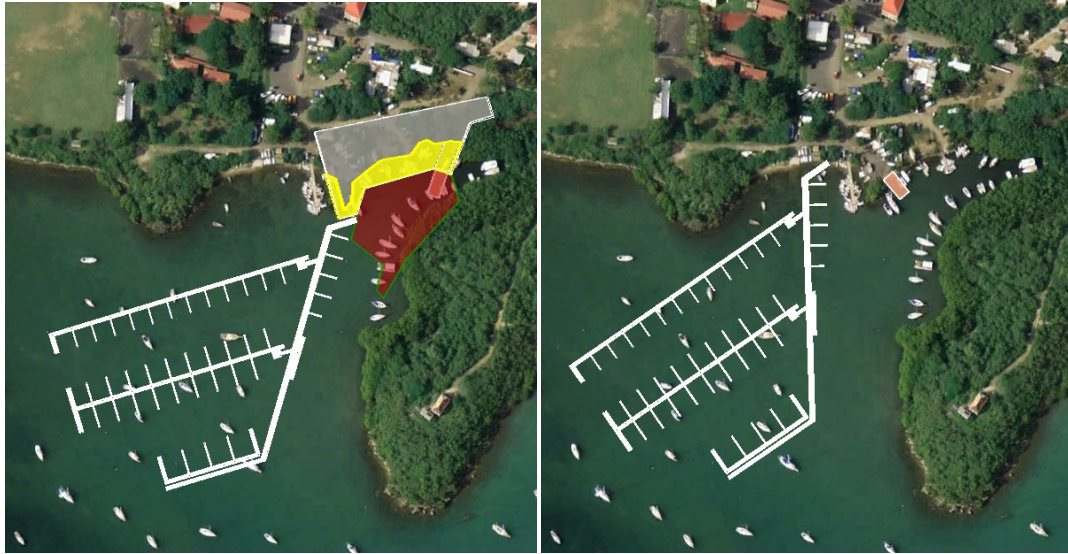


Figure 18: On-Site Alternative 1

The most critical region of impacts – the creek and surrounding mangrove wetlands, is shown in greater detail below and it should be apparent that by moving the boat ramp and the dock structures the environmental impacts are dramatically less since there is no dredging, no construction of a bulkhead, no filling of wetlands or open waters, no isolation of the salt pond, and no need to dispose of dredge materials in another wetland. The impacts to sea grasses from the marina and boat shading will be approximately the same since the dimensions have not changed. The upland amenities (parking, marina office, retail services, and marine services) can be located elsewhere on the upland parcel.



Figure 19: On-Site Alternative 1 Detail

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The impacts to aquatic resources stemming from this On-Site Alternative 1 are summarized in the table below:

Source of Impact	Type of Impact	Preferred Alternative Impacts	Impacts of On-Site Alternative 1
Dredging	Mangrove Habitat	0.23 acre	0 (no dredging)
Dredging	Submerged Aquatic Vegetation, unknown composition	0.92 acre	0 (no dredging)
Bulkheads	Isolating a salt pond, WOTUS	2.3 acre	0 (no bulkheads)
Fill Operations	Fill of mangrove wetlands, WOTUS	0.15 acre	0 (no filling)
Fill Operations	Fill of open water, WOTUS	580 cubic yards fill 0.34 acre filled	0 (no filling)
Dredge Spoil Disposal	Discharge into Wetlands parcel	1.0 acre	0 (no dredge disposal)
Boat Ramp	Discharge of Fill in WOTUS	136 cubic yards fill	136 cubic yards fill (same design)
Marina Dock Shading + Pilings	Sea Grasses	0.44 acre	0.44 acre
Boat Shading	Sea Grasses	0.80 acre	0.80 acre
TOTAL IMPACTS		6.18 acres	1.24 acre

8.3. Onsite Alternative 2: Moorings-based Marina and Improved Dock

The second Onsite Alternative involves the following components:

- A new and extended dock for daytime use - construct a dock that reaches sufficiently deep water to allow motorboats and sailboats to come alongside for passenger pickup and delivery.
- Water and pumpout – provide fresh water and pumpout services at the new dock
- A refurbished boat ramp – refurbish the existing boat ramp with pavement and piers for a travel lift.
- A managed private mooring field – install an appropriate number (20-40) of moorings to be used exclusively by transient boaters
- A dinghy pick-up/drop-off service – provide an on-call service to transport people to/from their moored vessels and the dock.

Even without analysis it should be clear that this alternative will eliminate all but *de minimus* impacts to the aquatic environment, while still providing enhanced access for recreational boaters.

In terms of the statement of "Overall Project Purpose" it should be noted that the term "marina" includes boating facilities based exclusively on moorings. The dictionary defines "marina" as "a specially designed harbor with moorings for pleasure craft and small boats." Based on that definition and the extensive use of mooring balls throughout St John, an onsite

alternative consisting of managed moorings plus dock-based services fulfills the Overall Purpose of the project as defined by the Corps in the Public Notice ("Construct a private commercial offshore marina with ancillary facilities in adjacent uplands in St. John, USVI").

A representative configuration for this Onsite Alternative is shown below. The T-Dock is approximately 250' long with an area of approximately 6,000 sf (0.15 acre). The mooring circles are 120' diameter, which is illustrated for conceptual purposes only, and might accommodate an average 35' vessel. Although this configuration does not reach the 92 slip capacity of the applicants preferred alternative, no rationale or justification has been offered to explain why such a large slip capacity is required.

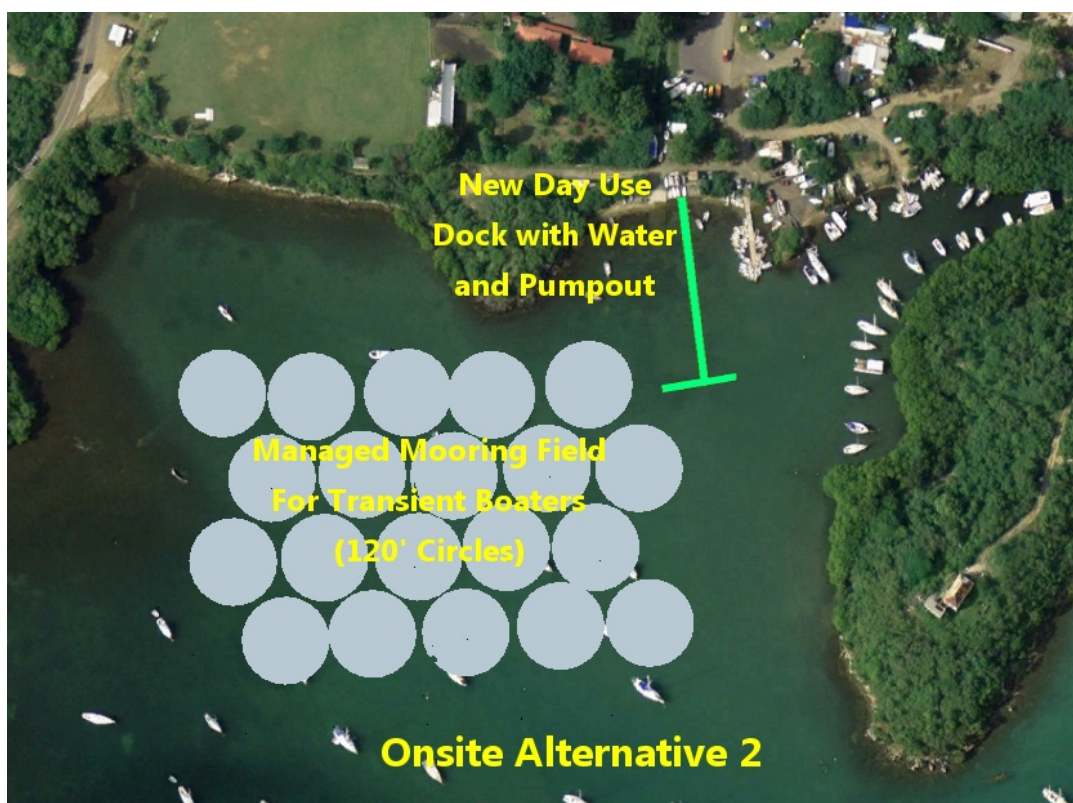


Figure 20: Onsite Alternative 2 Using Moorings and Day Dock

The aquatic impacts of this On-Site Alternative are shown below:

Source of Impact	Type of Impact	Preferred Alternative Impacts	Impacts of On-Site Alternative 2
Dredging	Mangrove Habitat	0.23 acre	0 (no dredging)
Dredging	Submerged Aquatic Vegetation, unknown composition	0.92 acre	0 (no dredging)
Bulkheads	Isolating a salt pond, WOTUS	2.3 acre	0 (no bulkheads)
Fill Operations	Fill of mangrove wetlands, WOTUS	0.15 acre	0 (no filling)
Fill Operations	Fill of open water, WOTUS	580 cubic yards fill 0.34 acre filled	0 (no filling)

Dredge Spoil Disposal	Discharge into Wetlands parcel	1.0 acre	0 (no dredge disposal)
Boat Ramp	Discharge of Fill in WOTUS	136 cubic yards fill	136 cubic yards fill (same design)
Marina Dock Shading + Pilings	Sea Grasses	0.44 acre	0.15 acre (est.)
Boat Shading	Sea Grasses	0.80 acre	0 acre (moorings)
TOTAL IMPACTS		6.18 acres	0.15 acre

8.4. Offsite Alternative 4: Enighed Pond

The viability of an alternative location in Enighed Pond is reinforced by the fact that there is currently an active proposal to develop a marina in precisely that location. The proponent and the project have received wide publicity in local media, and so this is a real proposal and not simply a theoretical one.

An overview of the proposed marina in Enighed Pond is shown below. This was provided by the marina proponent and illustrates how the marina will fit into the existing commercial maritime uses of Enighed Pond as a car barge depot for transits to and from St Thomas.

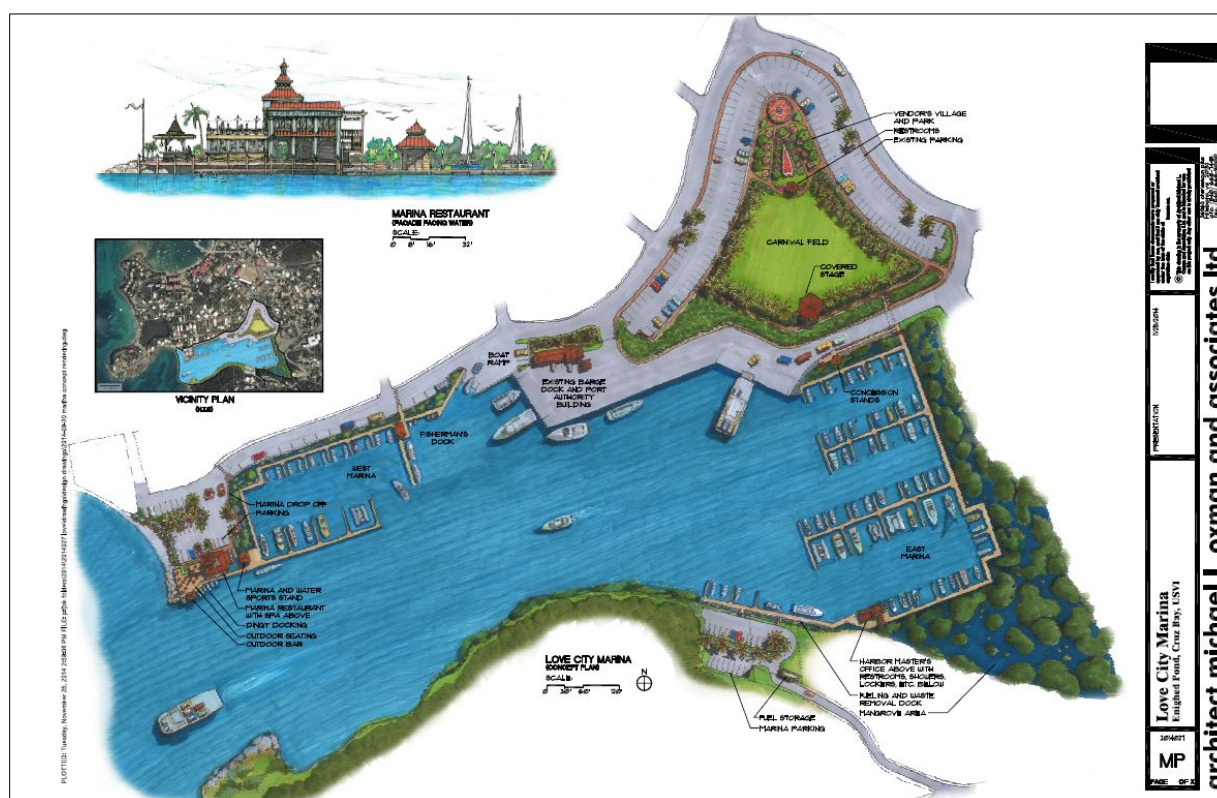


Figure 21: Offsite Alternative 4 - Artist Rendering

The entire site of Enighed Pond is highly disturbed – it was originally an enclosed salt pond but was opened to the sea and extensively dredged to provide facilities for commercial car barge service. The original plans included a marina, although this was never built. A portion of the currently proposed marina is shown as built in an existing mangrove wetland, however this was not a naturally occurring mangrove – it was constructed as part of the overall Enighed Pond terminal project approval as a component of compensatory mitigation.

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There are a number of highly attractive aspects to this alternative. First, all necessary infrastructure – potable water, sewage treatment, electric power – is readily available in close proximity to the site. Second, ample parking exists in the parking area surrounding the "Carnival Field". Third, the marina is within walking distance from the commercial amenities of Cruz Bay – restaurants, shops, entertainment. And finally, the existing Customs facility of Cruz Bay is within walking distance.

The impacts to aquatic resources from this Off-Site Alternative are minimized due to the fact that the entire aquatic environment was heavily disturbed by blasting a channel, dredging, and construction of bulkheads. The sketch proposal does disturb approximately one acre of immature mangroves which would require mitigation.

Source of Impact	Type of Impact	Impact of Offsite Alternative 4
Marina Construction	Mangrove Habitat	1.0 acre
Bulkheads for new marina	Same as above	n/a
Dredging in front of bulkheads	Minimal – previously dredged and filled	n/a
Marina Dock Shading + Pilings	Minimal – barren seabed	n/a
Boat Shading	Minimal – barren seabed	n/a
TOTAL IMPACTS		1.0 acres

8.5. Offsite Alternative 5: Cruz Bay Creek

The body of water just north of the main Cruz Bay harbor, and separated from it by a promontory known as the Battery, is locally called "Cruz Bay Creek." This location has been utilized for maritime services for many years, however its use has not been optimized. The photograph below illustrates the relationship between Cruz Bay Creek and Cruz Bay harbor proper:



Figure 22: Cruz Bay Creek Vicinity

If the existing uses of Cruz Bay Creek were reorganized, a commercial marina accommodating a wide range of vessel types could be implemented, in a number of configurations. Slips for boats from 30' up to 150' could be provided, as illustrated in the conceptual sketch below:

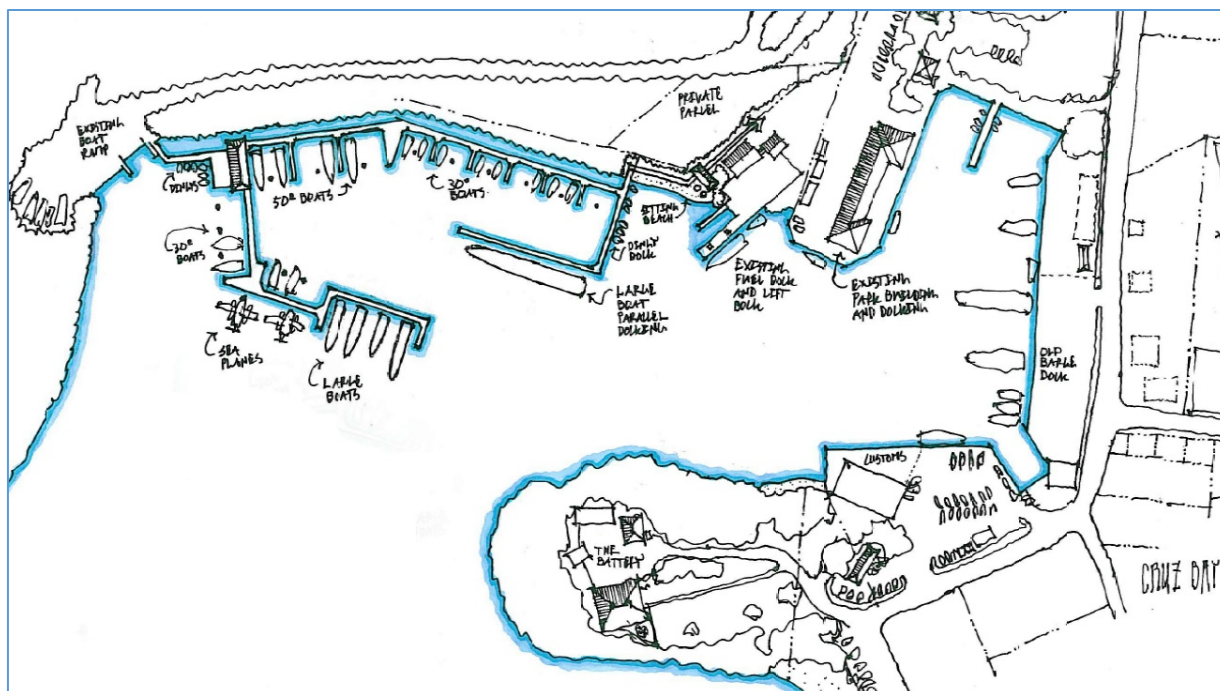


Figure 23: Cruz Bay Creek Alternative Conceptual Sketch

In terms of environmental impacts, and particularly impacts to special aquatic sites, this alternative has only very minimal impacts. The entire area of Cruz Bay Creek has been heavily utilized for marine traffic for many years, and the construction of a commercial marina in this location would not cause any further material impacts.

All requisite commercial amenities – fuel, power, water, sewage treatment – are readily available, as is ample parking and transportation. This site is in closest proximity to the National Park facilities, which would make it highly attractive to transient visitors.

The amount of slip space available after reorganizing this maritime area is unclear, and it may not meet the expectations of the applicant.

The wetland impacts of this alternative appear to be nil, since it is built entirely within a highly disturbed environment.

Source of Impact	Type of Impact	Impact of Offsite Alternative 5
Bulkheads for new marina	Same as above	n/a
Dredging in front of bulkheads	Minimal – previously dredged and filled	n/a
Marina Dock Shading + Pilings	Minimal – barren seabed	n/a
Boat Shading	Minimal – barren seabed	n/a
TOTAL IMPACTS		0

8.6. No-Action Alternative 1: Day Use Dock Plus Moorings

The Jacksonville District Regulatory Division provides the following description of No-Action Alternatives and how they are used in a Section 404(b)1 Alternatives Analysis:

The "No-Action" alternative comprises one or more alternatives that would not involve a discharge of dredged or fill material into WOTUS, which could involve reconfiguring the project to avoid all wetlands on the site, siting the project entirely in uplands offsite, or no-action, i.e. not implementing the project. Although the "No-Action" alternative might not seem reasonable initially, it must always be included in the analysis. The no-action alternative can serve several purposes. First, it may be a reasonable alternative, especially for situations where the impacts are great and the need is relatively minor. Second, it can serve as a benchmark, enabling decision makers to compare the magnitude of the environmental effects of the action alternatives.)

The Overall Project Purpose, stated in the Public Notice, is "Construct a private commercial offshore marina with ancillary facilities in adjacent uplands in St. John, USVI." As we stated earlier we believe that, depending on the definition of "marina," this may be an overly restrictive statement of overall purpose. We prefer to state the overall purpose as **"The overall project purpose is to improve recreational boating access to St John."** The reason for this distinction will become clear in the discussion of this No-Action Alternative.

First, it is important to understand that a marina constructed of fixed docks is only one of several ways to improve recreational boating access. Alternatives such as moorings and docks are widely used in places where fixed marina structures are inappropriate. We believe that is the case in Coral Bay due to the extensive vegetated sea bed with algal plains and sea grass meadows throughout most of the project site.

Looking **solely** at the impacts to sea grasses from boat shading and fixed marina structures we compute that the impact to the vegetated seabed amounts to 585 square feet per vessel (average over 92 vessels). This area is equivalent to a circle with a diameter of 27 feet.

1.236	acres of seagrasses impacted from pilings, dock shading, vessel shading
53,840	sq ft of seagrass impacts
92	total vessels served
585	sq ft seagrass impact per vessel
27	ft diameter circle

Figure 24: Computation of Sea Grass Impact Per Vessel

What this means is that the Preferred Alternative results in a net INCREASE in sea grass impacts compared to correct mooring practices for the same number of vessels. Even under present Coral Bay conditions, there are very few boats creating mooring scars, and those scars that do exist are typically less than 15' in diameter. The 2006 aerial image, below, shows the diameter of several of the prominent mooring scars in 2006, many of which no longer exist. Only one of the barren patches was over 27' in diameter.

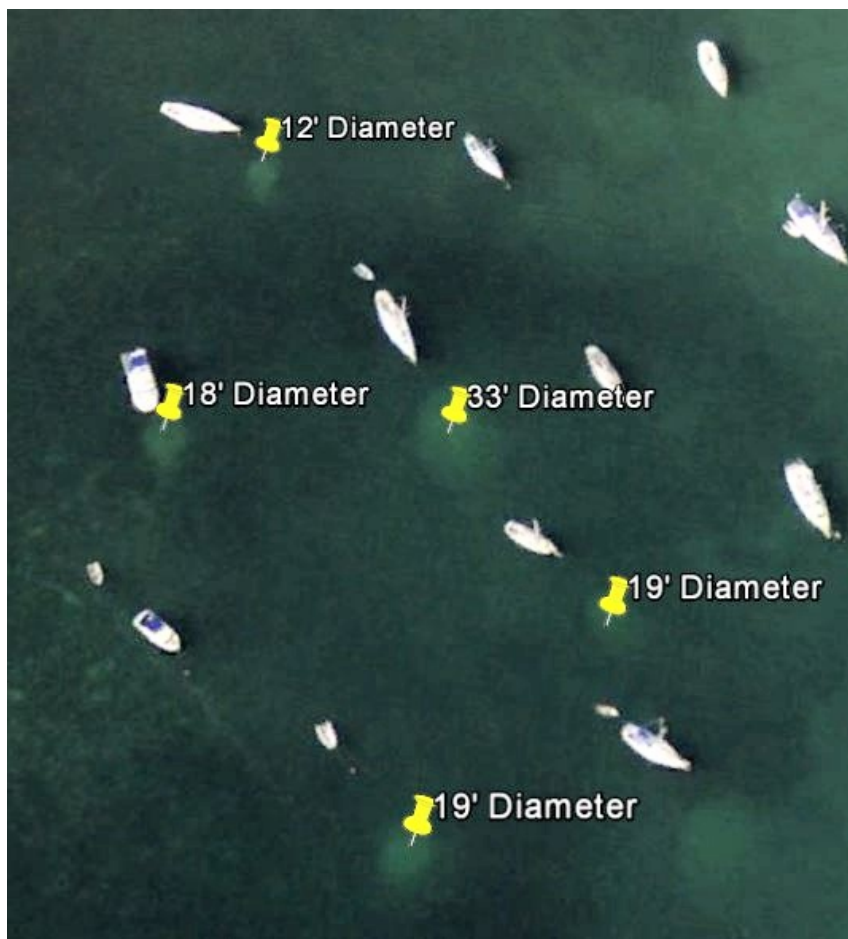


Figure 25: Mooring Scar Diameters (2006 Aerial)

A properly designed mooring has no impact whatsoever on submerged aquatic vegetation. By avoiding use of chains or other lines dragging the bottom, the sea grasses can grow up to and around the entire mooring site. This is one of the reasons why moorings are used exclusively within the boundaries of the Virgin Island National Park.

"No-Action Alternative 1" is consists of the following actions, none of which involve discharge of dredge or fill materials in WOTUS and therefore should not require DA permits:

- Construct a managed mooring field for transient boaters with 20-40 moorings dedicated to providing access for vessels visiting for less than 2 weeks duration (i.e. no permanent or long term use).
- Improve management of the historic town dock (the "dinghy dock") to ensure that transient boaters can be picked up and dropped off by dinghy.
- Possibly investigate and construct minor floating extensions to the dock for seasonal use, designed in such a way as to avoid all impacts to benthic habitat.
- Provide launch pick service for transient boats on moorings to transport passengers to and from their vessels.
- Provide other shoreline amenities requested by transient boaters and not requiring any DA permitting.

Although this may seem overly simplistic, it is probably the most sensible way to improve recreational boating access to St John without taking any action requiring a Section 10 or Section 404 permit.

8.7. No-Action Alternative 2: Status Quo

If literally nothing is done to provide additional marine infrastructure, it does not mean that boaters cannot visit St John. Maintaining the status quo does not result in an impediment for yachts to visit St John. The reality is that motor yachts and mega yachts do visit St John, in good numbers, during the prime Caribbean yachting season. These yachts typically either pick up one of the roughly 210 National Park mooring balls (for yachts of up to 100 feet), or anchor offshore in designated areas. The charter guests on the mega yachts rarely come ashore in their tenders and dinghies, since they have purchased “all inclusive” vacations focusing on the amenities and catered food of the yacht, enjoyed in the pristine surroundings of the national park and a new bay – a new view – each day. If they do wish to visit the National Park beaches, or go shopping and explore land, there are designated dinghy channels on many beaches for this purpose, near parking areas where they can hire taxis.

The mooring system of the Virgin Islands National Park is shown below and can be found here - <http://www.nps.gov/viis/planyourvisit/upload/MooringGuide.pdf> :

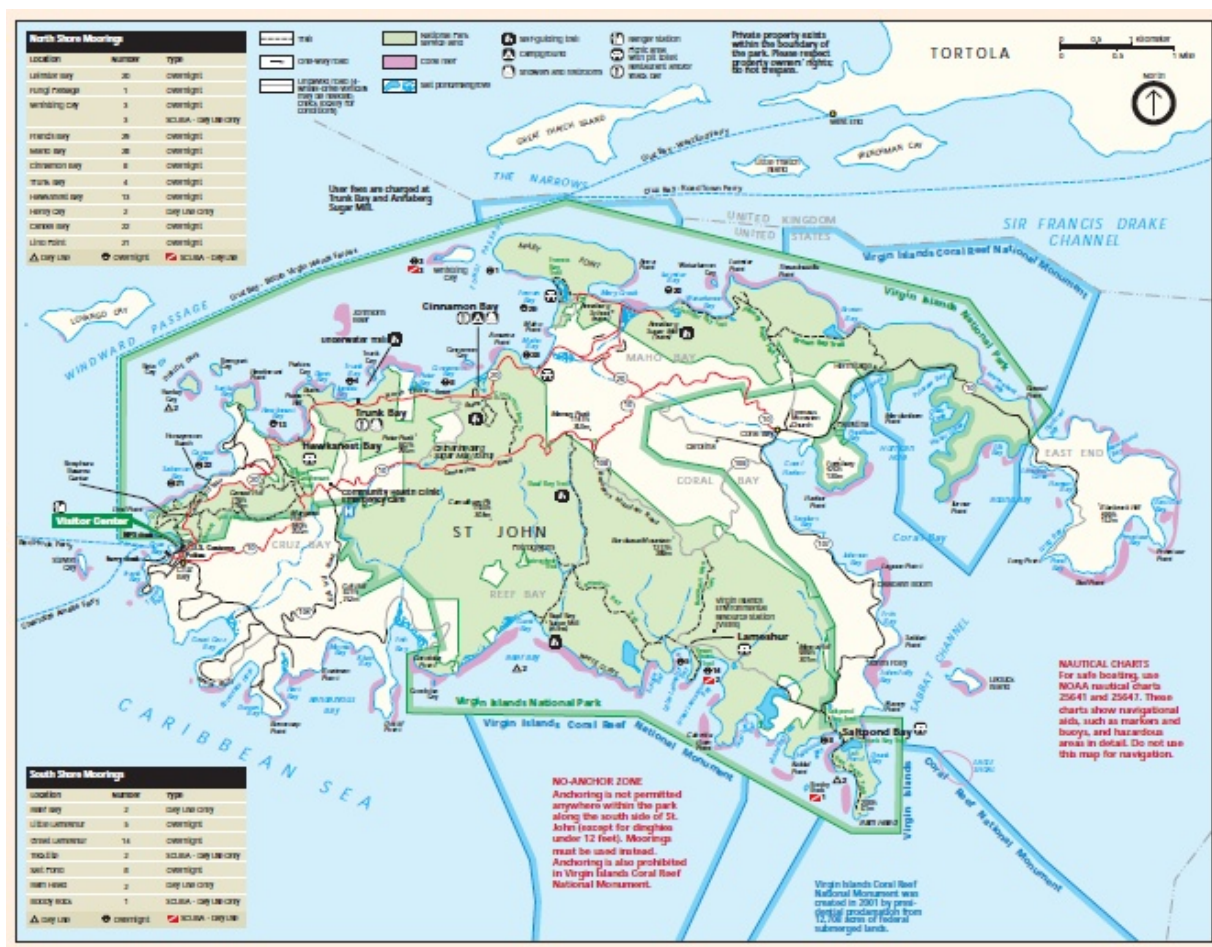


Figure 26: Virgin Islands National Park Mooring System

9. Identification of Least Environmentally Damaging Practicable Alternative

Having identified the Practicable Alternatives and assessed the impacts on aquatic resources stemming from each alternative, including the Preferred Alternative, Off-Site Alternatives, On-Site Alternatives, and No-Action Alternatives, we are now in a position to rank these alternatives and identify the Least Environmentally Damaging Practicable Alternative (the LEDPA).

To do this we will utilize the ranking matrix illustrated in the document previously cited: "Information for Preparing an Alternatives Analysis Under Section 404, June 2014" issued by the Jacksonville District Regulatory Division. The matrix is shown on the following page.

If sufficient data had been available on each of the alternatives, then a single LEDPA could be identified from the collection of alternatives. However, due to time and information constraints, we have only been able to approximate the impacts from the alternative sites.

The approximation is adequate, however, to conclude that **the applicant's Preferred Alternative is clearly NOT the Least Environmentally Practicable Alternative which still meets the project's Overall Purpose.**

10. Conclusions

On this basis of this analysis of alternatives demonstrating that there are less environmentally damaging practicable alternatives to the applicant's proposal, and according to 40 CFR 230.10 which states, in part, that "**no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences**" the discharge of dredged material proposed by T-Rex St John for the Sirius Marina in Coral Bay cannot be permitted. The table on the following page summarizes these findings.

Furthermore, since the applicant proposes to discharge dredged material into a Special Aquatic Site (a mangrove wetland), and has not demonstrated that the activity associated with the discharge requires "access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose" then "**practicable alternatives that do not involve special aquatic sites are presumed to be available.**"

We conclude that the Section 404 Permit requested by the applicant T-Rex St John for the Sirius Marina pursuant to the Clean Water Act, must be denied.

Environmental Factors	Preferred Alternative	Offsite Alternative Enighed Pond	Offsite Alternative Cruz Bay Creek	Onsite Alternative 1 Relocate Docks and Use Existing Ramp	Onsite Alternative 2 Moorings and New Dock
Wetland Impacts (acres)	6.18 acre	1.0 acre	Minimal	1.24 acre	0.15 acre
Loss in Wetland Function	3.3 acre (salt pond plus disposal area)	1.0 acre	None	None	None
Impacts to Federally Listed Threatened or Endangered Species	Sea turtle habitat Sonic impacts to marine mammals	None	None	Sea turtle habitat Sonic impacts to marine mammals	Sea turtle habitat
LEDPA	NO	Possible	Possible	Possible	Possible

David Silverman, President, Save Coral Bay, Inc.
22 January 2016

Appendix A

"Information for Preparing an Alternatives Analysis Under Section 404"

Version 1.0

Jacksonville District Regulatory Division, June 2014

Information for Preparing an Alternatives Analysis Under Section 404

June 2014

In its evaluation of permit applications to discharge dredged or fill material into waters of the U.S. (WOTUS), including wetlands, the U.S. Army Corps of Engineers (Corps) is required to analyze alternatives to the proposed project that could achieve its purpose and need. The Corps conducts this analysis pursuant to two main requirements - the 404(b)(1) Guidelines (Guidelines)ⁱ and the National Environmental Policy Act (NEPA)ⁱⁱ. The Corps must evaluate alternatives that accomplish the overall project purpose, and that are reasonable and practicable. A permit cannot be issued if a practicable alternative exists that would have less adverse impact on the aquatic ecosystem, provided that alternative does not have other significant adverse environmental impacts.

The Guidelines include two rebuttable presumptions. The first presumption states that if a project does not need to be in a special aquatic site, such as a wetland, to meet its basic purpose (i.e., the project is not "water-dependent"), it is presumed that alternatives that do not affect special aquatic sites are available. The second presumption states that if a project involves a discharge of dredged or fill material into a special aquatic site, a practicable alternative located in uplands is presumed to have less adverse impact on the aquatic ecosystem. **It is the applicant's responsibility to clearly demonstrate to the Corps that both of these presumptions have been rebutted in order to pass the alternatives portion of the Guidelines.** This document will assist a permit applicant in formatting this information into an "Alternatives Analysis" that includes the key items that must be addressed. The level of detail in an alternatives analysis should be commensurate with the scale of the adverse environmental effects of the project. Analysis of projects proposing greater adverse environmental effects should be more detailed and explore a wider range of alternatives than projects proposing lesser effects.

Below are suggested steps to follow in providing the necessary information for the Corps to consider in the alternatives analysis:

Step 1: Define Purpose and Need

At the beginning of an alternatives analysis, the applicant should clearly state the overall project purpose and need (examples are below). Significant thought should be applied when developing the project purpose as it will drive much of the alternatives analysis. The overall project purpose must be specific enough to define a permit applicant's needs, but not so restrictive to preclude other alternatives. It should also not be too wide-ranging without consideration for the applicant's real needs, as the geographic boundaries in the purpose define the scope of the analysis. For example:

- a. *To develop a 225-lot single-family residential development at the southeast intersection of Interstate 10 and Toledo Blade Boulevard.*

This example is too restrictive because there are no alternative sites to consider. It also unnecessarily details the exact number of lots, which can reduce the number of reasonable or practicable alternatives.

- b. *To develop a residential development in Northwest Florida.*

This example is too wide in scope if the applicant is actually focusing on a certain portion of a certain city or county to locate the project. This would also create an unmanageable number of alternatives.

- c. *To develop a single-family residential subdivision near Interstate 10 in Crestview, Florida, to meet local demand for this type of housing.*

This is an appropriate overall project purpose as it narrows the geographic scope to a reasonable and manageable size. It clearly defines what the project involves (single-family residences rather than “housing” that could also mean townhouses or apartments), the actual target market area (near Interstate 10 in Crestview), and the need for the project (local demand).

The applicant’s proposed overall project purpose will be carefully considered, but if the Corps cannot concur with it as submitted, the Corps is required to modify it. Once the Corps has placed the project on public notice, the applicant must use the overall project purpose as stated in that public notice or the overall project purpose as provided back to the applicant if the Corps has modified their original project purpose. If the applicant has already performed an alternative analysis using a project purpose the Corps cannot concur with, (e.g., it is too restrictive or too broad in geographic scope), the analysis may need to be revised to accurately include reasonable and practicable alternatives.

Additional information about the proposed overall project purpose should also be provided, including details about the relevant market conditions and area, location, history, and other factors that influence or constrain the intended nature, size, level of quality, price class, or other characteristics of the project. Information that further describes why particular geographic boundaries were chosen also will assist the Corps in its review.

Step 2: Identify Alternatives

The applicant must list and briefly describe alternatives that could meet the overall project purpose. This list, at a minimum, must include the information noted below.

- a. the applicant's preferred alternative (the project proposed in the permit application)
- b. alternatives that would involve no discharges of dredged or fill material into WOTUS (The "No-Action" alternative comprises one or more alternatives that would not involve a discharge of dredged or fill material into WOTUS, which could involve reconfiguring the project to avoid all wetlands on the site, siting the project entirely in uplands offsite, or no-action, i.e. not implementing the project. Although the "No-Action" alternative might not seem reasonable initially, it must always be included in the analysis. The no-action alternative can serve several purposes. First, it may be a reasonable alternative, especially for situations where the impacts are great and the need is relatively minor. Second, it can serve as a benchmark, enabling decision makers to compare the magnitude of the environmental effects of the action alternatives.)
- c. alternative offsite locations, including those that might involve less adverse impact to WOTUS
- d. onsite alternatives that would involve less adverse impact to WOTUS (These include modifications to the alignments, site layouts, or design options in the physical layout and operation of the project to reduce the amount of impacts to WOTUS.)
- e. alternatives that would involve greater adverse impact to WOTUS but avoid or minimize other significant adverse environmental consequences including offsite and onsite options (Alternatives that meet these criteria are uncommon.)

Alternatives that are clearly unreasonable should be identified and eliminated (not evaluated further). For example, alternative sites that are far too small to accommodate the project or that lie outside the geographic boundaries identified in the overall project purpose can be eliminated. This step of the analysis is not intended to rule out alternatives that are "unreasonable" according to the applicant, but those that would be considered "unreasonable" to an objective third-party. The Corps will verify that the criteria used for screening alternatives are objective and not so restrictive that they eliminate actual reasonable alternatives. The applicant must list the alternatives that were initially considered then eliminated from further study because the applicant feels they failed to pass this first round of screening. The Corps will review this list and determine if elimination of these alternatives is appropriate.

The maximum number of reasonable alternatives to study further will vary and depends on the nature and scope of the proposed project; however, there typically should be multiple alternatives to consider. The number of alternatives listed should be greater for

projects involving greater impacts. This is the preliminary list of reasonable alternatives; alternatives that are not practicable will be eliminated from further consideration in the later stages of the analysis.

In many instances, there will be alternatives determined to be both unreasonable and impracticable, as these terms can be nearly synonymous when used in these analyses. Regardless of whether the applicant identifies an alternative as unreasonable or as impracticable, it is imperative the applicant describe, in the context of the overall project purpose and need for the project, why each alternative should be eliminated from further analysis. The Corps must be able to independently review and verify this information and each step in the applicant's alternative analysis.

Step 3: Describe and Analyze Alternatives for Practicability

This step also addresses onsite and offsite alternatives and determines which are practicable and which are not. Practicable is defined here as meaning the alternative is available, is able to achieve the overall project purpose, and is feasible considering cost, existing technology, and/or logistics in light of the overall project purpose.

Alternatives should be clearly listed and numbered for ease of reference and comparison. *At a minimum*, the following information for each alternative site examined should be provided:

1. General site information:

- a. specific parcel information including, but not limited to; parcel ID numbers, aerial photos, location maps , FLUCCS codes and GPS coordinates;
- b. presence, quantity and quality of wetlands or other WOTUS;
- c. County/City zoning designation;
- d. the presence of any federally-listed threatened or endangered species or their critical habitat, and/or the presence of any historical properties or resources; and,
- e. site infrastructure (Will the site require new access roads/infrastructure? What are the potential impacts associated with these improvements?).

2. The practicability of each alternative:

- a. Practicability: alternatives that are practicable are those that are available and capable of being done by the applicant after considering the following (in light of the project purpose):
 - Cost (For example, the costs associated with various infrastructure components such as roadways or utilities, including upgrades to existing infrastructure components or the need to establish new infrastructure components, may affect the viability of a particular alternative. A location far from all existing infrastructure (roads, water,

sewer, and/or electricity) might not be practicable considering the costs associated with upgrading/establishing the infrastructure necessary to use that site. However, just because one alternative costs more than another, this does not mean that the more expensive alternative is entirely impracticable. Cost is analyzed in the context of the overall cost of the project and whether it is unreasonably expensive or exorbitant. In addition, cost is an objective, industry-neutral inquiry that does not consider an individual applicant's financial standing. The data used for any cost or financial feasibility analysis must be current with respect to the time of the alternatives analysis.);

- Existing Technology (The alternatives examined should consider the limitations of existing technology yet incorporate the most efficient/least-impacting construction methods currently available. For example, alternatives to mining limestone or other minerals may not be practicable considering a lack of technology to allow replacement of that mineral resource in the mass-production of concrete; however, engineered retaining walls can be incorporated into an alternative that substantially minimizes wetland impacts by eliminating fill slopes.); and,
 - Logistics (The alternatives examined may incorporate an examination of various logistics associated with the project, i.e., placement of facilities within a required distance, utilization of existing storage or staging areas, and/or safety concerns. Examples of alternatives that may not be practicable considering logistics are a land-locked parcel that cannot be accessed by public roads or a site that is too small to meet the overall project purpose.
- b. Availability: The Guidelines state that if it is otherwise a practicable alternative, an area not presently owned by the applicant that could reasonably be obtained, utilized, expanded, or managed in order to fulfill the overall purpose of the proposed activity can still be considered a practicable alternative. In other words, if an applicant does not own an alternative parcel, that does not rule that parcel out as a practicable alternative. **The applicant should consider and anticipate alternatives available during the timeframe that the Corps conducts its alternatives analysis.** An evaluation of availability for purchase and projected cost of such a purchase may be incorporated into this discussion.
- c. Other information: any other information that conveys the practicability of the alternatives reviewed in consideration of the overall project purpose should be included.

An alternatives comparison matrix (example on next page) is an effective way to present and compare the main parameters that were considered during the evaluation.

To allow for an objective evaluation, the comparison of the plan(s) for the proposed and alternative sites should be framed for “yes” or “no” answers. A narrative should accompany the matrix defining the practicability factors chosen and further explaining any “no” answers with objective and verifiable data. Practicability of the “no-action” alternative also must be addressed in this narrative and, if applicable, also included in the matrix. The information should explain the consequences on the applicant and the public if the project is not implemented. Any remaining alternatives that are found to be practicable will move on to the next and final step.

If an alternative can be easily documented to be a more environmentally damaging alternative and this can be clearly described within the narrative and matrix, then this step and the following step can be combined. This will save the applicant time and expense; however, it is only appropriate for alternatives where this distinction is clear.

Example Alternative Comparison Matrix for Practicability

Category	Practicability Factor	Alternative 1 Applicant's Preferred Alternative	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Availability	Existing Zoning Appropriate or Potential for Zoning Change?	YES Zoned for this project type	YES Zoned for this project type	YES Zoned for this project type	YES Zoned for agriculture but County has expressed support for the project	YES Zoned for this project type
	Available for Acquisition?	YES Applicant owns the parcel	YES	YES	YES	YES
Cost	Reasonable Acquisition Costs?	YES Applicant owns the parcel	YES	YES	YES	NO Seller will only sell all 350 acres without subdividing
	Costs feasible for mitigating impacts to historic and cultural resources found onsite?	YES No historic or cultural resources found onsite	YES No historic or cultural resources found onsite	YES No historic or cultural resources found onsite	NO If impacts to historic resources onsite allowed, costs to mitigate those impacts will increase project costs from \$xxxx to \$xxxx	YES No historical or cultural resources found onsite

	Other Costs Feasible?	YES	YES Additional costs for extensive retaining walls	YES	NO Costs to connect to utilities will increase project costs from \$xxxx to \$xxxx	NO Extensive use of retaining walls, and construction of two bridges increase project costs from \$xxxx to \$xxxx
Existing Technology	Topography and other Site Conditions Feasible for Construction of Project?	YES	YES With extensive use of engineered retaining walls and drainage systems	YES	YES	YES With extensive use of retaining walls, and bridges over Clear Creek
Logistics	Sufficient Parcel Size?	YES 40 acres	YES 48 acres	NO 21 acres	NO 17 acres	YES 350 acres
	Availability of Utilities?	YES	YES	YES	NO 6 miles to existing water, sewer and power	YES
	Availability for Access?	YES County right-of-way on east property boundary	YES County right-of-way to northwest property corner	NO Landlocked by private parcels and request for an easement was denied	NO Landlocked by private parcels and request for an easement was denied	YES County right-of-way to west side of property

Step 4: Identify the Least Environmentally Damaging Practicable Alternative

1. The Guidelines require that the Least Environmentally Damaging Practicable Alternative (LEDPA) be selected. Therefore, using the same numbering system from the step above, identify the environmental impacts for each remaining practicable alternate site. For each remaining site:
 - a. describe the impacts (beneficial or adverse) to the aquatic ecosystem associated with each of the remaining alternatives
 - b. describe the overall (beneficial or adverse) environmental impacts associated with each of the remaining alternatives
 - c. be specific and quantitative in the identification of impacts (Rather than "Alternative A would result in a large impact to low quality wetlands and ditches that are sparsely vegetated and impact some wildlife." use "Alternative A would result in the discharge of fill material over 2.1 acres of fire-suppressed wet pine flatwoods wetland and 1.2 acres of wet ditches that contain scattered emergent wetland vegetation. Using the Uniform Mitigation Assessment Method, the function and value of the flatwoods wetland and ditch system have been calculated at 0.6 and 0.2,

respectively. Work affecting 0.7-acre of potential flatwoods salamander habitat would also result from siting the project at this location."

2. If multiple practicable alternatives remain, and/or many environmental/relevant factors are involved, another matrix that contains only environmental/relevant parameters (e.g., wetland functional units, listed species, high value upland habitat, historic properties) can be used to assist in illustrating the proposed LEDPA. Emphasis should be placed on impacts to the aquatic environment through functional unit loss of wetlands or other WOTUS that would be affected or eliminated by each alternative. An example matrix is below.

Example Environmental Factor Matrix

Environmental Factors	Alternative 1 Applicant's Preferred Alternative	Alternative 2
Wetland Impacts (Acres)	2.0	6.0
Loss in Wetland Function (UMAM Functional Units)	1.4	3.9
Impacts to Federally Listed Threatened or Endangered Species	No	No
LEDPA	Yes	No

3. Conclude the alternatives analysis with a description of the alternative proposed to be the LEDPA, reiterating the rationale for this determination.

ⁱ The 404(b)(1) Guidelines (Guidelines) are associated with the Clean Water Act of 1972, and are found in the Federal Register under 40 CFR Part 230

ⁱⁱ The Corps' Implementation Procedures for the National Environmental Policy Act (NEPA) of 1969 are found in the Federal Register under 33 CFR Part 325, Appendix B

ATTACHMENT 3: Questions and Concerns Relating to Topics in the Public Interest Review

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- 1. Public Interest Review – Public Comments and Concerns**

Public Interest Review – Public Comments and Concerns

1. Introduction

Although the time period for public comment has been significantly curtailed due to the end of year holidays, and the information available for review has been extremely limited and self-contradictory, the project proposed by T-Rex St John (Sirius Marina) has nonetheless generated significant levels of comment and concern.

Many people have posed questions that they believe should have been answered by the applicant prior to applying for Army Corps permits. Our "normal" review cycle for projects of this sort first passes through our local Coastal Zone Management process, thereby ensuring a consistent set of detailed documentation will be available for review. In this case, however, the applicants have applied for the Department of the Army permits prior to entering the VICZM public review process.

This comment note consists of two parts:

- First, we have compiled a list of questions that people have asked in public forums, private conversation, and in their submitted letters. This list is organized generally by topic and we believe each of the questions on the list needs to be fully answered, and the answers support by scientifically sound data, in order to fully assess the probable impacts of the proposed project.
- Second, we have summarized the key public concerns within the context of the statutory requirements for the Army Corps "Public Interest Review". We have included the full text of the statute and interspersed our summary of public concerns within the provisions of the regulation.

Our strong conclusion, based on the data presently available to the public as presented in the Army Corps Public Notice, documents authored by the applicant and their agent and received through the Freedom of Information Act (FOIA), and documents provided directly to the public by the applicant, is that this project does not meet the standards required to prove a benefit to the public interest and therefore the permits sought by the applicant should be denied.

2. Questions Raised by the Public

Listed below, in outline form by topic, are the questions which have arisen in discussions with members of the resident community, the boating community, and our visitors and part-time residents.

1) GENERAL CONCERNS

a) Permit Application Documents

- i) Only very rudimentary information was provided in the USACE application – no EAR, no Archeological study, no economic analysis. Although Sirius has provided some of this information to the Corps (we know this through FOIA), the Corps has not published it for public comment.

- ii) The drawings are incomplete and inconsistent: in some places a precast floating concrete dock is depicted, in others a fixed dock is shown. The location of pilings is not shown. Building elevations are not shown.
 - iii) The drawings do not align with each other or with other aerial maps of the region. The project location drawing does not encompass the actual project.
- b) Upland project components
 - i) The application does not include any mention of the planned hotel and retail complex. Even though this may be outside USACE jurisdictional boundaries, the impacts on the marina design, water quality, runoff and potable water/waste water management are highly significant.
 - ii) The upland components which are depicted (gravel parking area, marina management, boat garage, bulkheads and concrete apron) are not accompanied by any detail required to analyze their impacts.
 - (1) No rain runoff computations for impervious and semi pervious areas.
 - (2) No description of rain water catchment – cisterns, etc.
 - (3) No information on the Waste Water Treatment Plant.
- c) Project boundaries
 - i) A significant portion (approx 0.5 acre) of the "upland" land area is actually filled wetlands, filled illegally during 1973-74. There are many contemporaneous news articles and aerial photographs depicting the original shoreline and describing the legal action against the fill operation. This land is not owned by any private entity (including the Moravian Church) – it is Trust Land of the USVI.
 - ii) The project area impacts significantly on the littoral rights of adjacent land owners, specifically the owners of Usher Cay and Pickles restaurant.
 - iii) The boundary lines depicted in the drawings for natural features (shoreline, extent of mangroves) do not match aerial photographs.

2) INFRASTRUCTURE CONCERNS

- a) Potable (Fresh) Water
 - i) The public notice only provides a single sentence dealing with water requirements ("A wastewater treatment plant, brackish wells with an R/O plant, a cistern, underwater fuel tanks and an emergency generator would also be constructed.").
 - ii) The EA received through FOIA contains a 2-page "Preliminary Hydrogeologic Summary" that does not appear to have been conducted with any field testing. The preliminary report only concludes that there is a potential for wells to provide adequate supplies of brackish water for reverse osmosis purification. There are caveats having to do with location, recharge capacity, infiltration of sea water and geological formations.
 - iii) This is insufficient information to conclude that a well field would provide sufficient water for the marina, much less for the hotel and retail complex.
 - iv) There is no description of the proposed R/O system. There is no description of the method or location of disposal of the R/O brine. There is no structure shown for water storage.

- v) A combined calculation of potable water needs and supply methods (based on actual field data) for the marina and hotel complex must be provided for review and comment.

b) Waste Water Treatment

- i) The drawings depict a WWTP located 50' from Mean High Water and at an elevation of 4' above sea level. There is no description of how effluent will be pumped uphill or how the plant will function during power outages.
- ii) There is no quantitative data provided on the capacity requirements for the WWTP (no data in the PN), and no data on the W/W requirements of the hotel complex. Is a separate WWTP planned for the hotel? A combined calculation must be provided.
- iii) The EA describes a need for 0.63 acres (27,500 sf) of landscape to consume 1" per week of waste water effluent (marina only). However the drawings do not show any landscaped area in the marina site (concrete apron and gravel parking lot).

c) Marina Fuel Supply

- i) The drawings depict two "Underground Fuel Storage Tanks". These tanks are located seaward of the current shoreline. No information has been provided in the PN to describe how this will be safely engineered to prevent catastrophic water pollution if a tank should fail.
- ii) The marina fuel is apparently dispensed from a floating fuel dock. How will the fuel line connection to the floating fuel dock be secured to ensure it will not fail during high wind/wave/tide turbulent conditions?
- iii) Will fuel be delivered by barge? Where is the fuel barge dock ?
- iv) The fuel dock is located in an area of extremely low water circulation, exacerbated by the dock structures and wave attenuators. It is also adjacent to healthy mangroves. Why was this location selected?

d) Site Access During Construction

- i) Public Roadways – how will our fragile roads be protected from the impact of heavy equipment?
- ii) Barge Access – How will concrete barges access the site before the site is complete?

e) Solid Waste Disposal

- i) How will the additional solid waste be managed, given the overburdened state of our current solid waste management system?

3) MARINA DESIGN AND CONSTRUCTION

a) Marina Dock Design

- i) Although the drawings are not all consistent, it appears as though the majority of the marina is constructed from precast concrete floating sections. The size, design, and method of securing these sections (pilings) is not clearly shown.
- ii) There is no data provided to indicate how floating concrete docks will perform under the wind, wave and tide conditions of Coral Bay Harbor.

- iii) There are no drawings illustrating the location of the 420 pilings described in the Public Notice.
- iv) There are no geological studies done of the seabed to verify the depth of sediments, or depth to bedrock. This is critical to evaluate the feasibility of both the piling installation as well as the planned dredging. Local knowledge indicates that depth to hard bedrock is very shallow in the vicinity of the dredge site.
- v) The noise impacts from pile driving will be extremely disruptive to tourists and residents of Coral Bay. The hillsides act as a natural amphitheater and sound reverberates.
- vi) The floating dock sections are opaque to sunlight (as opposed to elevated gratings). This is contrary to dock guidelines for construction over sea grass.
- vii) The double-wide slips (accommodating two vessels each), in conjunction with floating finger piers, may not be safe for boats or boaters.
- viii) Site specific wind and wave data should be provided.

b) Marina Construction – Dredging

- i) The PN and drawings describe and depict a dredge area of approximately one acre (40,210 sf). Approximately 3,890 cubic yards of material are proposed to be removed to create a basin at a depth of -6 feet. This volume is equivalent to approximately 400 truck loads of sediments. The proposed primary disposal site is on the south west corner of the "triangle", adjacent to the Pickles restaurant.
- ii) The limits of the benthic survey do not apparently extend into the dredge area. On the benthic survey maps this area is not coded with any indication of the bottom conditions.
- iii) The dredge area appears to significantly overlap the mangroves on Usher Cay and will most likely disrupt their root systems.
- iv) There has been no data supplied to evidence the feasibility of dredging to -6 feet. Anecdotally it has been said that bedrock is very close to the seabed in parts of this area.
- v) The proposed disposal site appears to be a wetland, based on the soil type (Solitude A, frequently flooded), the elevation (2-4' above sea level), and the presence of a ghut in this parcel. This disposal would therefore constitute filling of wetlands.
- vi) The proposed disposal site would create unhealthful and unsanitary conditions for the adjacent property owner and business establishment (a restaurant and art complex).
- vii) The effect of leaching of salts from the dredge spoil has not been discussed.

c) Bulkheads and Concrete Apron

- i) The Public Notice and drawings describe construction of approximately 800 linear feet of bulkheads at an elevation of 4' above sea level, and seaward of the current shoreline in some areas.
- ii) The bulkheads would be backfilled with some dredge material to create new fast land. The entire surface landward of the bulkheads would be paved with a concrete apron.
- iii) The environmental impacts of the bulkheads and paving have not been discussed. Storm water runoff from the concrete apron (approximately 1 acre, inclusive of buildings) has not been quantified or addressed. No catchment or cisterns are depicted.
- iv) The potential for the bulkhead and dredging to impact sea water exchange with the adjacent salt pond has not been addressed.

d) Construction – General Concerns

- i) The timetable forecast by for start-to-finish of the project seems entirely unrealistic based on experience with large projects in Coral Bay.
- ii) Construction equipment traversing the roadways will cause major damage. Delivery of construction equipment by barge will be impossible due to depth of water.

4) ENVIRONMENTAL CONCERNS

a) Natural Environment

- i) The impacts on documented shark habitat have not been discussed.
- ii) The impacts on commercially valuable species (whelk, lobster, conch, etc.) have not been discussed.
- iii) The sonic impacts on marine reptiles (turtles) and marine mammals (whales and dolphin) has not been discussed.
- iv) The dredge area is directly adjacent to a known and frequently studied bird habitat (site of frequent Audubon bird studies). The impact on avian habitat has not been discussed.
- v) The extent of mangrove removal appears to be greater than what is stated in the PN.

b) Economic Questions

- i) The PN does not supply sufficient information to evaluate the economic viability of the project. Will the marina be economically viable on a standalone basis, or does it depend upon the proposed hotel and resort complex for economic viability?
- ii) How will the construction and operation of the marina impact existing businesses and ecotourism in Coral Bay? This has not been addressed.
- iii) What is the justification and rationale for a 92-slip marina and 30-40 slip "dry stack" boat garage? Would a smaller facility meet the needs of the public better?

c) Historic Resources

- i) The dinghy dock is an historically significant structure, in continuous use since the 19th century. The project will demolish and remove this structure. This should not be permitted.
- ii) The adequacy of the archeological studies done in the water and on the land are dubious, given the rich history of the area and the apparent lack of findings.

5) OTHER CONCERNS

- a) Earthquake hazard – the stability of the newly filled land behind the bulkheads has not been addressed. The dredged sediments may be fine grained materials which could liquefy in a moderate earthquake. Can a 3-storey boat garage be safely built within a few feet of this fill area?
- b) Tsunami hazard - the marina is in a tsunami hazard zone
- c) Social Impacts – the Kids and the Sea (KATS) program may be severely disrupted by this project.
- d) Social Impacts – the removal of the municipal dinghy dock during construction, without assurances that an alternative will be provided, will create severe hardship on existing boaters and charter operations.
- e) Emergency Services – what are the fire suppression procedures for a land-based fire in the "boat garage"? same question in the marina.

- f) Hazardous Materials – will boat maintenance operations be conducted on shore? Will this result in the creation of hazardous materials?
- g) Proximity to Restaurant – are there health or safety concerns given the proximity of a major Coral Bay eatery less than 200' from the waste water treatment plant, fuel storage tanks, and boat garage?
- h) Relocation of Navigational Channel – the project proposes relocation of the existing navigational channel. Has this been reviewed by appropriate interested parties? If the dredging is not feasible will there be a viable navigation channel to shore ?

6) CULTURAL HERITAGE

- a) What is the impact of the proposed marina on property taxes in Coral Bay given the oppressive property tax assessments on St. John?
- b) Is the marina going to create a space that reinforces schemas of racial and ethnic difference? Will it be an actual or de facto "gated community"?
- c) What's the cultural impact? What systems of knowledge and ways of being human are lost to predatory capitalism when our coastal areas are continuously converted into playgrounds for predominantly wealthy, non-local, typically white people?

3. Comments and Concerns Relating to the Statutory Public Interest Review Under NEPA

We have structured these comments in the following way. First, we have copied the verbatim text of 33 CFR 320.4 - General policies for evaluating permit applications, and reproduced it below (in *italicized font*). Following those sections for which there were significant public concerns we have inserted a block of text, enclosed in a box, indented and in **yellow highlighted bold type** (to clearly offset it from the text of the regulation), summarizing the public concern. In some places we have made references to other documents included in these comments.

§ 320.4 General policies for evaluating permit applications.

The following policies shall be applicable to the review of all applications for DA permits. Additional policies specifically applicable to certain types of activities are identified in 33 CFR parts 321 through 324.

(a) Public Interest Review.

(1) The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest.

The decision to issue a permit must consider the impacts of the activity (construction) as well as its ongoing use. In the case of the Sirius Marina the ongoing use is a major concern relating to the continuous impact of boat traffic, pollutants, and human impact on National Park resources.

Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under

The criteria for balancing factors is "reasonably expected" benefits versus "reasonably foreseeable detriments." The applicant has provided no evidence whatsoever that would lead one to reasonably expect benefits from the proposal. No economic benefit has been demonstrated and in fact the public has demonstrated a reasonable expectation of economic loss. No environmental benefit has been demonstrated and extensive comments have demonstrated foreseeable detriments to the environment. The "balance" of this proposal clearly does not demonstrate balancing detriments with benefits.

which it will be allowed to occur, are therefore determined by the outcome of this general balancing process. That decision should reflect the national concern for both protection and utilization of important resources. All factors which may be relevant to the proposal must be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. For activities involving 404

Each of the factors listed in the preceding language will be addressed later in this analysis.

discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding

As clearly identified in our comments, the permit requested by the applicant does not comply with the EPA's 404(b)(1) guidelines since it involves discharge of dredge materials in wetlands and other waters of the US and is not the least environmentally damaging practicable alternative, as required by the guidelines. Pursuant to the language above, the permit must be denied.

sentence and any other applicable guidelines and criteria (see §§ 320.2 and 320.3), a permit will be granted unless the district engineer determines that it would be contrary to the public interest.

(2) The following general criteria will be considered in the evaluation of every application:

(i) The relative extent of the public and private need for the proposed structure or work:

The public has clearly stated, in the form of thousands of individual and group comment letters and petitions, that the project does not meet a public need and in fact will destroy the qualities of Coral Bay that are valued by residents and visitors.

(ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and

We have provided detailed analysis of alternative locations and methods which will achieve the purpose of the project. These alternatives help to resolve conflicts between the public interest and the private developer's interest.

(iii) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.

This is a critical concern of hundreds of comments: that the impacts on the natural environment through dredging, filling, and habitat destruction are permanent and cannot be undone. The benefits, if any, are transient and accrue only to the developers and not to the community or the environment.

(3) The specific weight of each factor is determined by its importance and relevance to the particular proposal. Accordingly, how important a factor is and how much consideration it deserves will vary with each proposal. A specific factor may be given great weight on one proposal, while it may not be present or as important on another. However, full consideration and appropriate weight will be given to all comments, including those of federal, state, and local agencies, and other experts on matters within their expertise.

We believe that the weight of each factor should reflect not only the relevance to the proposal, but also the importance attributed to it by public comments. Many people who have commented are experts in specific subject areas relevant to this proposal, including habitat, history, navigation and cultural concerns.

(b) Effect on wetlands.

(1) Most wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest. For projects to be undertaken or partially or entirely funded by a federal, state, or local agency, additional requirements on wetlands considerations are stated in Executive Order 11990, dated 24 May 1977.

(2) Wetlands considered to perform functions important to the public interest include:

(i) Wetlands which serve significant natural biological functions, including food chain production, general habitat and nesting, spawning, rearing and resting sites for aquatic or land species;

The mangrove wetlands directly and indirectly impacted by this proposal serve significant biological functions, in particular for habitat, nesting, spawning and rearing. The special considerations relating to the shark habitat have been well documented. The bird habitat has been documented. Mangroves, in general, are a highly productive wetland environment.

(ii) Wetlands set aside for study of the aquatic environment or as sanctuaries or refuges;

(iii) Wetlands the destruction or alteration of which would affect detrimentally natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics;

We have demonstrated that the bulkheads placed in the mangrove wetland will directly impact the natural drainage, flushing and salinity of the adjacent salt pond.

(iv) Wetlands which are significant in shielding other areas from wave action, erosion, or storm damage. Such wetlands are often associated with barrier beaches, islands, reefs and bars;

(v) Wetlands which serve as valuable storage areas for storm and flood waters;

(vi) Wetlands which are ground water discharge areas that maintain minimum baseflows important to aquatic resources and those which are prime natural recharge areas;

(vii) Wetlands which serve significant water purification functions; and

(viii) Wetlands which are unique in nature or scarce in quantity to the region or local area.

The unique character of the Coral Bay mangroves which combine a sheltered location with access to open seas is perhaps one of the reasons they are a special pupping ground for live birth sharks. According to the expert (Skomal) this may be unique in the region.

(3) Although a particular alteration of a wetland may constitute a minor change, the cumulative effect of numerous piecemeal changes can result in a major impairment of wetland resources. Thus, the particular wetland site for which an application is made will be evaluated with the recognition that it may be part of a complete and interrelated wetland area. In addition, the district engineer may undertake, where appropriate, reviews of particular wetland areas in consultation with the Regional Director of the U. S. Fish and Wildlife Service, the Regional Director of the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration, the Regional Administrator of the Environmental Protection Agency, the local representative of the Soil Conservation Service of the Department of Agriculture, and the head of the appropriate state agency to assess the cumulative effect of activities in such areas.

The cumulative effect on this mangrove wetland is a matter of critical importance. We have provided aerial photographs and survey data from the mid 1940's through the present day to document the filling of this portion of Coral Bay over the years. Significant portions of the original water and mangroves have been lost in this most protected corner of Coral Bay. The proposed incremental dredge, fill and bulkhead operation, on top of what has already taken place, would quite possibly result in the complete loss of the creek mangrove ecosystem. This cumulative effect must be considered fully.

(4) No permit will be granted which involves the alteration of wetlands identified as important by paragraph (b)(2) of this section or because of provisions of paragraph (b)(3), of this section unless the district engineer concludes, on the basis of the analysis required in paragraph (a) of this section, that the benefits of the proposed alteration outweigh the damage to the wetlands resource. In evaluating whether a particular discharge activity should be permitted, the district engineer shall apply the section 404(b)(1) guidelines (40 CFR part 230.10(a) (1), (2), (3)).

We have extensively documented the fact that the discharge activity associated with this permit may not be permitted under section 404(b)(1) guidelines. This is of particular concern given the importance of this particular mangrove wetland under paragraph (b)(2) and (b)(3) above.

(5) In addition to the policies expressed in this subpart, the Congressional policy expressed in the Estuary Protection Act, Pub. L. 90-454, and state regulatory laws or programs for classification and protection of wetlands will be considered.

(c) Fish and wildlife. In accordance with the Fish and Wildlife Coordination Act (paragraph 320.3(e) of this section) district engineers will consult with the Regional Director, U.S. Fish and Wildlife Service, the

Regional Director, National Marine Fisheries Service, and the head of the agency responsible for fish and wildlife for the state in which work is to be performed, with a view to the conservation of wildlife resources by prevention of their direct and indirect loss and damage due to the activity proposed in a permit application. The Army will give full consideration to the views of those agencies on fish and wildlife matters in deciding on the issuance, denial, or conditioning of individual or general permits.

(d) Water quality. Applications for permits for activities which may adversely affect the quality of waters of the United States will be evaluated for compliance with applicable effluent limitations and water quality standards, during the construction and subsequent operation of the proposed activity. The evaluation should include the consideration of both point and non-point sources of pollution. It should be noted, however, that the Clean Water Act assigns responsibility for control of non-point sources of pollution to the states. Certification of compliance with applicable effluent limitations and water quality standards required under provisions of section 401 of the Clean Water Act will be considered conclusive with respect to water quality considerations unless the Regional Administrator, Environmental Protection Agency (EPA), advises of other water quality aspects to be taken into consideration.

We are extremely concerned about the impacts of this proposal, both direct and cumulative, on non point-source pollution, specifically storm water runoff containing upland contaminants. The proposal to build a 1 acre concrete apron directly on the shoreline, a semi-permeable parking lot, and new roadways, in an area already impacted by sheet runoff, needs thorough review following an engineering proposal. The applicants have not even addressed the topic in their application.

(e) Historic, cultural, scenic, and recreational values. Applications for DA permits may involve areas which possess recognized historic, cultural, scenic, conservation, recreational or similar values. Full evaluation of the general public interest requires that due consideration be given to the effect which the proposed structure or activity may have on values such as those associated with wild and scenic rivers, historic properties and National Landmarks, National Rivers, National Wilderness Areas, National Seashores, National Recreation Areas, National Lakeshores, National Parks, National Monuments, estuarine and marine sanctuaries, archeological resources, including Indian religious or cultural sites, and such other areas as may be established under federal or state law for similar and related purposes. Recognition of those values is often reflected by state, regional, or local land use classifications, or by similar federal controls or policies. Action on permit applications should, insofar as possible, be consistent with, and avoid significant adverse effects on the values or purposes for which those classifications, controls, or policies were established.

This is perhaps the topic most widely commented upon by the public – the direct and indirect impacts which the proposed marina will have on the Virgin Islands National Park and on historic resources in Coral Bay. The National Parks Conservation Association, the Friends of the VI National Park, and thousands of petition signers have expressed these concerns. We have documented direct impacts on historic structures (including the historic town dock and the home on Usher Cay). We have submitted a petition with over 3500 names specifically objecting to impacts on the National Park. We believe that this concern, alone, should be sufficient to deny a permit under public interest review criteria established by the National Environmental Policy Act.

(f) Effects on limits of the territorial sea. Structures or work affecting coastal waters may modify the coast line or base line from which the territorial sea is measured for purposes of the Submerged Lands Act and international law. Generally, the coast line or base line is the line of ordinary low water on the mainland; however, there are exceptions where there are islands or lowtide elevations offshore (the Submerged Lands Act, 43 U.S.C. 1301(a) and United States v. California, 381 U.S.C. 139 (1965), 382 U.S. 448 (1966)). Applications for structures or work affecting coastal waters will therefore be reviewed specifically to determine whether the coast line or base line might be altered. If it is determined that such a change might occur, coordination with the Attorney General and the Solicitor of the Department of the Interior is required before final action is taken. The district engineer will submit a description of the proposed work and a copy of the plans to the Solicitor, Department of the Interior, Washington, DC 20240, and request his comments concerning the effects of the proposed work on the outer continental rights of the United States. These comments will be included in the administrative record of the application. After completion of standard processing procedures, the record will be forwarded to the Chief of Engineers. The decision on the application will be made by the Secretary of the Army after coordination with the Attorney General.

(g) Consideration of property ownership. Authorization of work or structures by DA does not convey a property right, nor authorize any injury to property or invasion of other rights.

The impact of this project on property rights of adjacent land owners is a major concern of the public. We have reviewed the littoral rights of these individuals and believe this project, if permitted to be built, would severely impair their rights to use the waters offshore of their land. Absent any legal analysis or rational explanation for the location of the proposed marina, or how it is consistent with common law policy on littoral rights, it would be contrary to the public interest to condone such use. It should be noted that the land owner of this project – the Moravian Conference – formally objected to the infringement of their littoral rights when the project of the Summer's End Group was proposed. However they are now proposing to do the same thing they objected to – they are disregarding the littoral rights of their neighbors.

(1) An inherent aspect of property ownership is a right to reasonable private use. However, this right is subject to the rights and interests of the public in the navigable and other waters of the United States, including the federal navigation servitude and federal regulation for environmental protection.

(2) Because a landowner has the general right to protect property from erosion, applications to erect protective structures will usually receive favorable consideration. However, if the protective structure may cause damage to the property of others, adversely affect public health and safety, adversely impact floodplain or wetland values, or otherwise appears contrary to the public interest, the district engineer will so advise the applicant and inform him of possible alternative methods of protecting his property. Such advice will be given in terms of general guidance only so as not to compete with private engineering firms nor require undue use of government resources.

(3) A riparian landowner's general right of access to navigable waters of the United States is subject to the similar rights of access held by nearby riparian landowners and to the general public's right of navigation on the water surface. In the case of proposals which create undue interference with access to, or use of, navigable waters, the authorization will generally be denied.

We have commented on the littoral rights (riparian rights) of adjacent landowners. This proposal creates a severe impediment to the use of the northern shoreline of Usher Cay. The proposal should be denied pursuant to the language above.

(4) Where it is found that the work for which a permit is desired is in navigable waters of the United States (see 33 CFR part 329) and may interfere with an authorized federal project, the applicant should be apprised in writing of the fact and of the possibility that a federal project which may be constructed in the vicinity of the proposed work might necessitate its removal or reconstruction. The applicant should also be informed that the United States will in no case be liable for any damage or injury to the structures or work authorized by Sections 9 or 10 of the Rivers and Harbors Act of 1899 or by section 404 of the Clean Water Act which may be caused by, or result from, future operations undertaken by the Government for the conservation or improvement of navigation or for other purposes, and no claims or right to compensation will accrue from any such damage.

(5) Proposed activities in the area of a federal project which exists or is under construction will be evaluated to insure that they are compatible with the purposes of the project.

(6) A DA permit does not convey any property rights, either in real estate or material, or any exclusive privileges. Furthermore, a DA permit does not authorize any injury to property or invasion of rights or any infringement of Federal, state or local laws or regulations. The applicant's signature on an application is an affirmation that the applicant possesses or will possess the requisite property interest to undertake the activity proposed in the application. The district engineer will not enter into disputes but will remind the applicant of the above. The dispute over property ownership will not be a factor in the Corps public interest decision.

A portion of the land that the applicant proposes to use for this project is filled land, created in 1971 through illegal filling of wetlands. We have provided extensive documentation of this fact and identified the extent of the filled lands. Filled lands are not privately owned in the Virgin Islands – they are "Trust Lands" and the use of Trust Lands can only be secured through a lease agreement with the Virgin Islands. Although we recognize that the Corps does "not enter into disputes" and disputes are not a factor in the public interest decision, we do believe that the provision of (g)(6) above requires the district engineer to "remind the applicant" of the fact that their proposal involves use of filled lands not owned by the Moravian Conference.

(h) Activities affecting coastal zones. Applications for DA permits for activities affecting the coastal zones of those states having a coastal zone management program approved by the Secretary of Commerce will be evaluated with respect to compliance with that program. No permit will be issued to a non-federal applicant until certification has been provided that the proposed activity complies with the coastal zone management program and the appropriate state agency has concurred with the certification or has waived its right to do so. However, a permit may be issued to a non-federal applicant if the Secretary of Commerce, on his own initiative or upon appeal by the applicant, finds that the proposed activity is consistent with the objectives of the Coastal Zone Management Act of 1972 or is otherwise necessary in the interest of national security. Federal agency and Indian tribe applicants for DA permits are responsible for complying with the Coastal Zone Management Act's directives for assuring

that their activities directly affecting the coastal zone are consistent, to the maximum extent practicable, with approved state coastal zone management programs.

As stated in our comments, we were surprised that this applicant chose to apply for a DA permit prior to receiving any form of local Coastal Zone Management authorization. We understand that VICZM has not accepted the application as complete. Lack of a local hearing has put the public at a disadvantage due to the scarcity of documentation for this project. We respectfully request that a Public Hearing be scheduled by the Corps as soon as sufficient documentation is available to make substantive and meaningful comments on the application.

(i) Activities in marine sanctuaries. Applications for DA authorization for activities in a marine sanctuary established by the Secretary of Commerce under authority of section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, will be evaluated for impact on the marine sanctuary. No permit will be issued until the applicant provides a certification from the Secretary of Commerce that the proposed activity is consistent with the purposes of Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, and can be carried out within the regulations promulgated by the Secretary of Commerce to control activities within the marine sanctuary.

(j) Other Federal, state, or local requirements.

(1) Processing of an application for a DA permit normally will proceed concurrently with the processing of other required Federal, state, and/or local authorizations or certifications. Final action on the DA permit will normally not be delayed pending action by another Federal, state or local agency (See 33 CFR 325.2 (d)(4)). However, where the required Federal, state and/or local authorization and/or certification has been denied for activities which also require a Department of the Army permit before final action has been taken on the Army permit application, the district engineer will, after considering the likelihood of subsequent approval of the other authorization and/or certification and the time and effort remaining to complete processing the Army permit application, either immediately deny the Army permit without prejudice or continue processing the application to a conclusion. If the district engineer continues processing the application, he will conclude by either denying the permit as contrary to the public interest, or denying it without prejudice indicating that except for the other Federal, state or local denial the Army permit could, under appropriate conditions, be issued. Denial without prejudice means that there is no prejudice to the right of the applicant to reinstate processing of the Army permit application if subsequent approval is received from the appropriate Federal, state and/or local agency on a previously denied authorization and/or certification. Even if official certification and/or authorization is not required by state or federal law, but a state, regional, or local agency having jurisdiction or interest over the particular activity comments on the application, due consideration shall be given to those official views as a reflection of local factors of the public interest.

(2) The primary responsibility for determining zoning and land use matters rests with state, local and tribal governments. The district engineer will normally accept decisions by such governments on those matters unless there are significant issues of overriding national importance. Such issues would include but are not necessarily limited to national security, navigation, national economic development, water quality, preservation of special aquatic areas, including wetlands, with significant interstate importance, and national energy needs. Whether a factor has overriding importance will depend on the degree of impact in an individual case.

The United States Environmental Protection Agency (EPA) has stated that Coral Bay is an "Aquatic Resource of National Importance." This determination was made in the EPA comments to the proposed "Summer's End Group Marina" in Coral Bay. The Sirius Marina project is not only located within an Aquatic Resource of National Importance, but it also proposes to destroy and/or impair the aquatic function of multiple acres of wetlands, as well as remove environmentally significant mangroves. So, although the upland parcel may be zoned for marina use, we believe that it is not in the public interest to utilize this particular parcel in the manner requested by the applicant, involving destruction of nationally important wetlands.

(3) A proposed activity may result in conflicting comments from several agencies within the same state. Where a state has not designated a single responsible coordinating agency, district engineers will ask the Governor to express his views or to designate one state agency to represent the official state position in the particular case.

(4) In the absence of overriding national factors of the public interest that may be revealed during the evaluation of the permit application, a permit will generally be issued following receipt of a favorable state determination provided the concerns, policies, goals, and requirements as expressed in 33 CFR parts 320-324, and the applicable statutes have been considered and followed: e.g., the National Environmental Policy Act; the Fish and Wildlife Coordination Act; the Historical and Archeological Preservation Act; the National Historic Preservation Act; the Endangered Species Act; the Coastal Zone Management Act; the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the Clean Water Act, the Archeological Resources Act, and the American Indian Religious Freedom Act. Similarly, a permit will generally be issued for Federal and Federally-authorized activities; another federal agency's determination to proceed is entitled to substantial consideration in the Corps' public interest review.

In the United States Virgin Islands the territorial resources required for a thorough review of public interest according to the criteria and statutes cited above, are generally not available. In countless cases the territorial authorities have "passed the buck" to the federal authorities to perform these types of thorough review. In this case, where resources of national importance are at stake, we frankly do not believe that the territorial agencies have the staff, the training, or the resources to conduct the requisite level of review.

(5) Where general permits to avoid duplication are not practical, district engineers shall develop joint procedures with those local, state, and other Federal agencies having ongoing permit programs for activities also regulated by the Department of the Army. In such cases, applications for DA permits may be processed jointly with the state or other federal applications to an independent conclusion and decision by the district engineer and the appropriate Federal or state agency. (See 33 CFR 325.2(e).)

(6) The district engineer shall develop operating procedures for establishing official communications with Indian Tribes within the district. The procedures shall provide for appointment of a tribal representative who will receive all pertinent public notices, and respond to such notices with the official tribal position on the proposed activity. This procedure shall apply only to those tribes which accept this option. Any adopted operating procedures shall be distributed by public notice to inform the tribes of this option.

(k) Safety of impoundment structures. To insure that all impoundment structures are designed for safety, non-Federal applicants may be required to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons and, in appropriate cases, that the design has been independently reviewed (and modified as the review would indicate) by similarly qualified persons.

We are concerned that the placement of over 3,000 cubic yards of dredge spoils in a low-lying wetland could create an inadvertent impoundment and become unstable under heavy rain conditions. The proposed discharge site is located on top of a mapped drainage ghut. Any dislocation of the disposed dredge materials could directly and catastrophically impact Coral Bay harbor.

(l) Floodplain management.

(1) Floodplains possess significant natural values and carry out numerous functions important to the public interest. These include:

(i) Water resources values (natural moderation of floods, water quality maintenance, and groundwater recharge);

(ii) Living resource values (fish, wildlife, and plant resources);

(iii) Cultural resource values (open space, natural beauty, scientific study, outdoor education, and recreation); and

(iv) Cultivated resource values (agriculture, aquaculture, and forestry).

There are multiple floodplains which will be impacted both directly and indirectly by this proposal. These include the salt pond just east of the project site, and the proposed dredge disposal area. Our comments about use of, and impacts to these resources are discussed below.

(2) Although a particular alteration to a floodplain may constitute a minor change, the cumulative impact of such changes may result in a significant degradation of floodplain values and functions and in increased potential for harm to upstream and downstream activities. In accordance with the requirements of Executive Order 11988, district engineers, as part of their public interest review, should avoid to the extent practicable, long and short term significant adverse impacts associated with the occupancy and modification of floodplains, as well as the direct and indirect support of floodplain development whenever there is a practicable alternative. For those activities which in the public interest must occur in or impact upon floodplains, the district engineer shall ensure, to the maximum extent practicable, that the impacts of potential flooding on human health, safety, and welfare are minimized, the risks of flood losses are minimized, and, whenever practicable the natural and beneficial values served by floodplains are restored and preserved.

The entire project is located within the floodplain as delineated on the FEMA floodplain maps. The impacts of the project are both direct (e.g. emplacement of dredge spoils) and indirect (isolating water exchange with a salt pond in a flood plain). The District Engineer should, as

required in this section, avoid to the extent practicable occupancy and modification of floodplains. We have identified practicable alternatives which achieve this goal.

(3) In accordance with Executive Order 11988, the district engineer should avoid authorizing floodplain developments whenever practicable alternatives exist outside the floodplain. If there are no such practicable alternatives, the district engineer shall consider, as a means of mitigation, alternatives within the floodplain which will lessen any significant adverse impact to the floodplain.

The entire project is within the floodplain as delineated on the FEMA floodplain maps. There is no evidence that the applicant has considered this in their designs. Disposing dredge material in a floodplain, as proposed by the applicant, cannot be permitted. Any flood event on the disposal parcel will wash vast quantities of the fine material directly into the waters of Coral Bay. We have documented our concerns regarding floodplains elsewhere in these comments.

(m) Water supply and conservation. Water is an essential resource, basic to human survival, economic growth, and the natural environment. Water conservation requires the efficient use of water resources in all actions which involve the significant use of water or that significantly affect the availability of water for alternative uses including opportunities to reduce demand and improve efficiency in order to minimize new supply requirements. Actions affecting water quantities are subject to Congressional policy as stated in section 101(g) of the Clean Water Act which provides that the authority of states to allocate water quantities shall not be superseded, abrogated, or otherwise impaired.

The applicant proposes to drill wells on the property and extract brackish water which will then be purified using a Reverse Osmosis (R/O) system. The hydrogeologist consultant for the project cautioned that the success of this water supply method would be contingent upon (a) locating suitably productive wells, (b) adequate recharge from rain in the upland watershed, (c) avoidance of infiltration of seawater due to depletion of the aquifer, and (d) finding an acceptable means to dispose of the briny effluent. We are concerned about this entire topic but particularly, in the context of a public interest review, with the potential that our meager underground water sources might become impaired by infiltration of sea water. This could impact agriculture, health of native vegetation, and having other unforeseen consequences.

(n) Energy conservation and development. Energy conservation and development are major national objectives. District engineers will give high priority to the processing of permit actions involving energy projects.

(o) Navigation.

(1) Section 11 of the Rivers and Harbors Act of 1899 authorized establishment of harbor lines shoreward of which no individual permits were required. Because harbor lines were established on the basis of navigation impacts only, the Corps of Engineers published a regulation on 27 May 1970 (33 CFR 209.150) which declared that permits would thereafter be required for activities shoreward of the harbor lines. Review of applications would be based on a full public interest evaluation and harbor lines would serve as guidance for assessing navigation impacts. Accordingly, activities constructed shoreward of harbor lines prior to 27 May 1970 do not require specific authorization.

- (2) *The policy of considering harbor lines as guidance for assessing impacts on navigation continues.*
- (3) *Protection of navigation in all navigable waters of the United States continues to be a primary concern of the federal government.*

The rerouting of the established navigation channel to place it closer to the shoreline of Usher Cay runs a risk of degrading the navigability of Coral Bay over a period of time. The marina structures will impede circulation of an already poorly flushed region, resulting in deposition of silt over time. Maintenance dredging in such close quarters may prove difficult, or not suitable for permitting. An alternative design which relies more on moorings and less on pilings and fixed marina structures, as suggested in our alternatives comments, would be more protective of navigation in Coral Bay.

(4) *District engineers should protect navigational and anchorage interests in connection with the NPDES program by recommending to EPA or to the state, if the program has been delegated, that a permit be denied unless appropriate conditions can be included to avoid any substantial impairment of navigation and anchorage.*

(p) *Environmental benefits. Some activities that require Department of the Army permits result in beneficial effects to the quality of the environment. The district engineer will weigh these benefits as well as environmental detriments along with other factors of the public interest.*

There are no net environmental benefits stemming from this project.

(q) *Economics. When private enterprise makes application for a permit, it will generally be assumed that appropriate economic evaluations have been completed, the proposal is economically viable, and is needed in the market place. However, the district engineer in appropriate cases, may make an independent review of the need for the project from the perspective of the overall public interest. The economic benefits of many projects are important to the local community and contribute to needed improvements in the local economic base, affecting such factors as employment, tax revenues, community cohesion, community services, and property values. Many projects also contribute to the National Economic Development (NED), (i.e., the increase in the net value of the national output of goods and services).*

In the case of the Sirius Marina, the private developer has offered no information whatsoever to demonstrate that proposal is economically viable. In fact, we have analyzed the scarce information available on construction costs and operating costs, and the marketing forecast on occupancy, slip rental revenue and ancillary revenues, and concluded that the project is overwhelmingly not economically feasible. Even with the most optimistic occupancy and revenue estimates, it barely covers the amortization of construction costs and falls far short of covering total operating costs. We have supplied the analysis of the applicant's data to demonstrate this point. Moreover, the claimed job creation is at a very low number of low paying positions. The increased burden in infrastructure costs to the territory from supporting this operation in such a remote location (the electrical power grid, fire services, police, public health, sanitation) will not be offset by any anticipated tax revenues. In short, the project makes no economic sense based on the data supplied by the applicant. We believe this is a

prime example of an appropriate case where the district engineer should make an independent review of the need for the project, as suggested in the language above.

(r) Mitigation.

(1) Mitigation is an important aspect of the review and balancing process on many Department of the Army permit applications. Consideration of mitigation will occur throughout the permit application review process and includes avoiding, minimizing, rectifying, reducing, or compensating for resource losses. Losses will be avoided to the extent practicable. Compensation may occur on-site or at an off-site location. Mitigation requirements generally fall into three categories.

(i) Project modifications to minimize adverse project impacts should be discussed with the applicant at pre-application meetings and during application processing. As a result of these discussions and as the district engineer's evaluation proceeds, the district engineer may require minor project modifications. Minor project modifications are those that are considered feasible (cost, constructability, etc.) to the applicant and that, if adopted, will result in a project that generally meets the applicant's purpose and need. Such modifications can include reductions in scope and size; changes in construction methods, materials or timing; and operation and maintenance practices or other similar modifications that reflect a sensitivity to environmental quality within the context of the work proposed. For example, erosion control features could be required on a fill project to reduce sedimentation impacts or a pier could be reoriented to minimize navigational problems even though those projects may satisfy all legal requirements (paragraph (r)(1)(ii) of this section) and the public interest review test (paragraph (r)(1)(iii) of this section) without such modifications.

(ii) Further mitigation measures may be required to satisfy legal requirements. For Section 404 applications, mitigation shall be required to ensure that the project complies with the 404(b)(1) Guidelines. Some mitigation measures are enumerated at 40 CFR 230.70 through 40 CFR 230.77 (Subpart H of the 404(b)(1) Guidelines).

(iii) Mitigation measures in addition to those under paragraphs (r)(1) (i) and (ii) of this section may be required as a result of the public interest review process. (See 33 CFR 325.4(a).) Mitigation should be developed and incorporated within the public interest review process to the extent that the mitigation is found by the district engineer to be reasonable and justified. Only those measures required to ensure that the project is not contrary to the public interest may be required under this subparagraph.

(2) All compensatory mitigation will be for significant resource losses which are specifically identifiable, reasonably likely to occur, and of importance to the human or aquatic environment. Also, all mitigation will be directly related to the impacts of the proposal, appropriate to the scope and degree of those impacts, and reasonably enforceable. District engineers will require all forms of mitigation, including compensatory mitigation, only as provided in paragraphs (r)(1) (i) through (iii) of this section. Additional mitigation may be added at the applicants' request.

We wish to reserve the right to comment on mitigation once the full environmental and resource impacts of the proposal are fully understood. At the moment we have insufficient information to assess the adequacy of the proposed mitigation.

**ATTACHMENT 4: Historic Resources at Location of Proposed Dredge
Disposal Site**

Historic Resources at Location of Proposed Dredge Disposal Site

The image below is an 1833 painting by Frederik von Scholten of the "Carolina Plantation and Coral Harbor." The large buildings on the right are the main structures of the Emmaus Moravian Church (Church and Manse). The road heading into the valley is the road we know today as "King Hill Road." These features are still very apparent today on the landscape of Coral Bay.

What is less apparent today is the collection of small habitations just to the left of the church and slightly downhill from it. Some of these structures continued to stand through the latter part of the 20th century, as can be seen in the next photograph, from 1958.



Figure 1: 1833 Painting - von Scholten

The photograph below was taken a few years after the construction of Centerline Road into Coral Bay. The year is 1958 and a collection of small buildings to the left of the church and close to the road are apparent. This collection of buildings was studied by historical archeologist Dr. Margaret Wood, in 2012. Although the major hurricanes of the late 20th century had leveled most of the structures, she identified the building foundations and their function, as can be seen in the following drawing excerpted from her article " Mapping the Complexities of Race on the Landscape of the Colonial Caribbean, United States Virgin Islands, 1770–1917 (Historical Archaeology, 2012, 46(4):112–134).



Dr. Wood identified the ruins of a slave village, an old kitchen, and an early 19th century school. The structures corresponding to the slave village are less than 30 meters from Centerline Road.

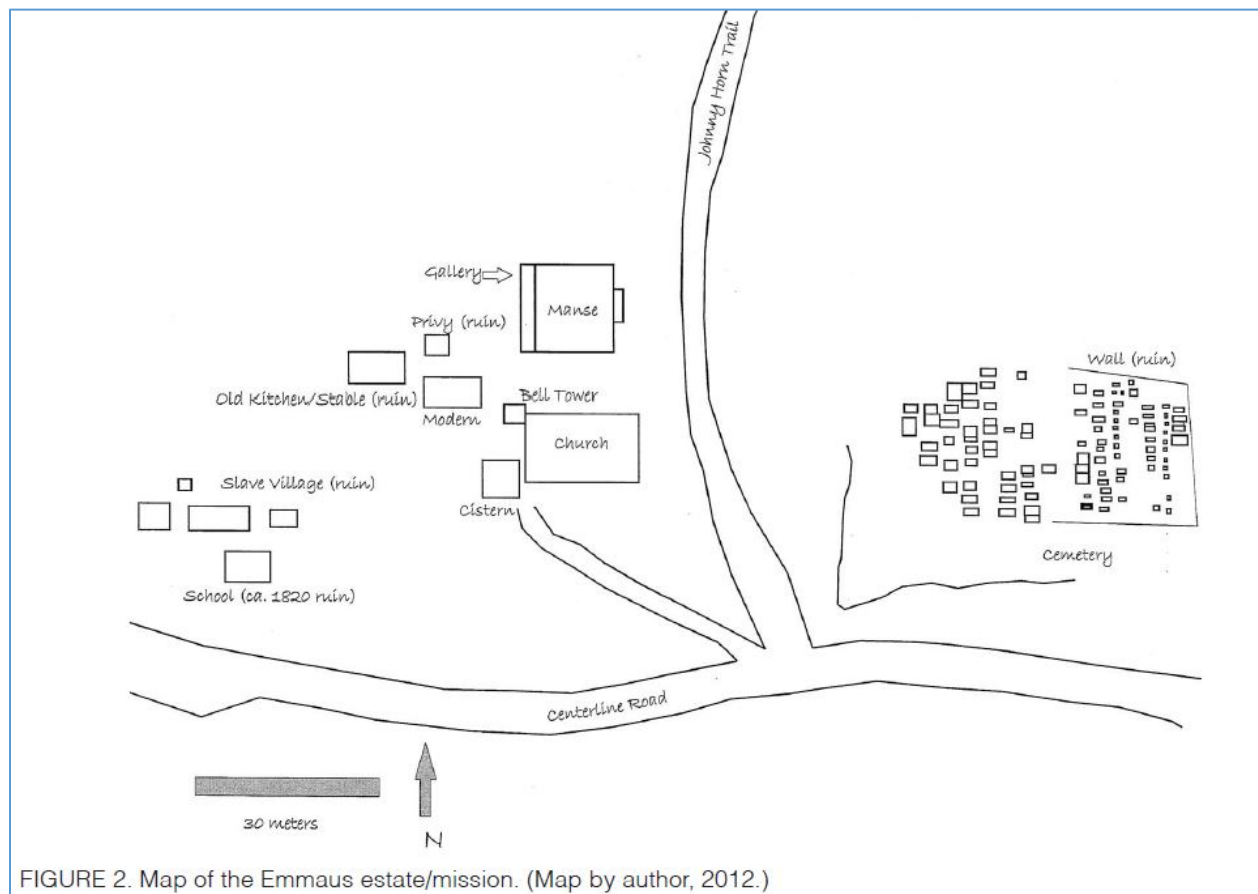


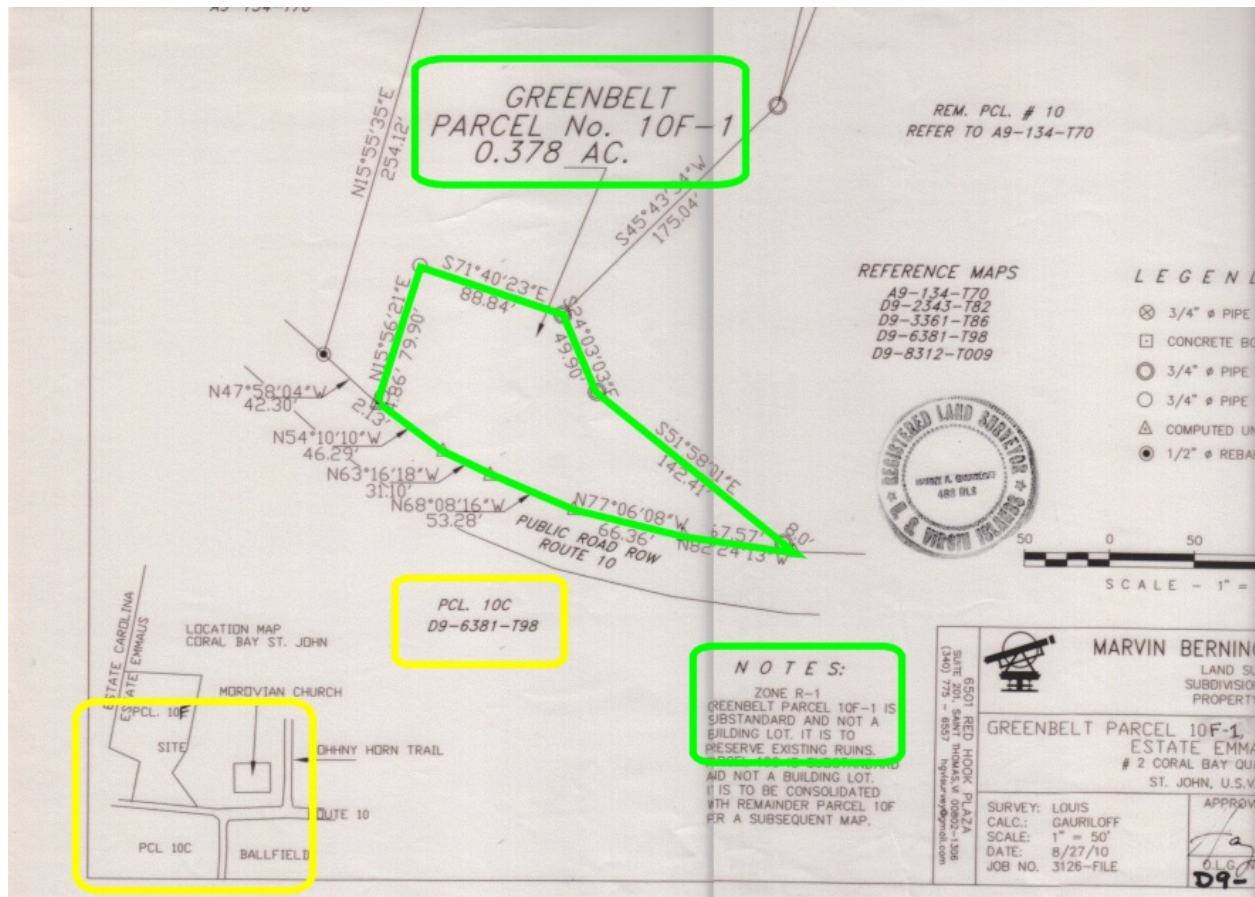
FIGURE 2. Map of the Emmaus estate/mission. (Map by author, 2012.)

Figure 2: Map of Ruins at Emmaus Church

Dr. Wood wrote " Like other plantation residential complexes, housing for the enslaved at Emmaus ... was placed at a lower elevation but contiguous to the main house (Hall 1992:76). At Emmaus the slave village consisted of at least four structures and was located west of the mission house and church (Figure 2). The foundations of these structures were documented archaeologically, and a watercolor painting of the area shows a slave village in this location at least as far back as 1833. The remains consist of rubble-stone foundations built on terraced platforms with retaining walls. Only two of the foundations were complete enough to determine the dimensions of the structures; one measured 20 × 20 ft. and the other 40 × 20 ft. In the mid-19th century Emmaus was home to 48 enslaved people who must have lived in these four structures and shared the nearby kitchen/oven."

Notably, Dr. Wood references the von Scholten painting illustrated earlier.

The significance of these historical ruins was recognized in 2010 when the Virgin Islands Housing Finance Authority (HFA) purchased a five acre parcel of land from the Moravian Conference including the site of these ruins. The filed map for that purchase cordoned off a "Greenbelt" enclosing the historic ruins, to ensure it would be protected from development. A portion of that filed map, with the historic area and notation circled in green is shown below (the note states "Greenbelt parcel of 10F-1 is substandard and not a building lot. It is to preserve existing ruins.")

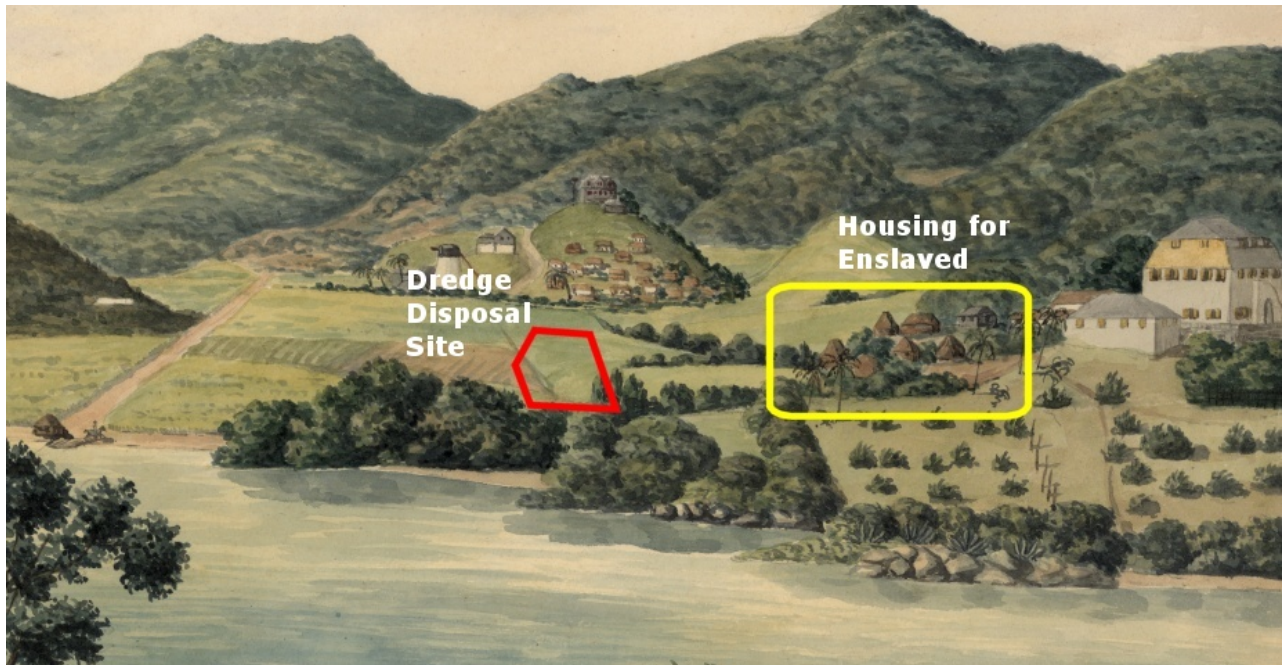


This map also indicates that the parcel directly across Centerline Road from the historic slave village ruins is Parcel 10C. This is the parcel designated as the disposal site for 3,300 cubic yards of dredge spoil according to the documents filed for the Sirius Marina project.

The applicant, T-Rex St John, proposes to transport 3,300 cubic yards of dredged materials from the creek in Coral Bay, and deposit them over roughly one acre in the indicated parcel. They estimate this will cover the parcel to a depth of approximately two feet. The dredge disposal area is highlighted in the illustration below (in red) and its proximity to the historical ruins (in green) is immediately apparent. In fact the distance between the ruins and the dredge disposal site is less than 125 feet. Furthermore, the elevation of the historic ruins is approximately 25 feet, and the elevation of the disposal site is approximately 5 feet. The road between the historic site and the disposal site (Centerline Road) did not exist until 1951. So it is quite logical to assume that artifacts from the slave village may have found their way down the slope and ended in the lower elevations only 125 feet away.



Returning to the original 1833 painting, it is clear how close these features were, in the eye of Frederik von Scholten. This area is likely to be rich in historic artifacts which, pursuant to the National Historic Preservation Act and NEPA Public Interest Review, must be studied and inventoried before they are buried in up to two feet of dredge spoils.



David Silverman, President, Save Coral Bay, Inc.
22 January 2016

**ATTACHMENT 5: Cumulative Impacts of Proposed Fill of Wetlands
and Open Water in Coral Bay Harbor**

Cumulative Impacts of Proposed Fill of Wetlands and Open Water in Coral Bay Harbor

1. Introduction

The Army Corps is required to evaluate the cumulative impacts of the proposed action on the aquatic environment. Cumulative impacts are defined in 40 CFR 230.11(g) which reads:

(g) Determination of cumulative effects on the aquatic ecosystem.

(1) Cumulative impacts are the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems.

(2) Cumulative effects attributable to the discharge of dredged or fill material in waters of the United States should be predicted to the extent reasonable and practical. The permitting authority shall collect information and solicit information from other sources about the cumulative impacts on the aquatic ecosystem. This information shall be documented and considered during the decision-making process concerning the evaluation of individual permit applications, the issuance of a General permit, and monitoring and enforcement of existing permits.

In this note we review the impacts to the portion of northeast Coral Bay Harbor locally known as "the creek." This is the site where the applicant requests permission to dredge, install bulkheads seaward of the current shoreline, backfill the bulkheads with dredge material, and cap with a concrete apron.

Based on our knowledge of the natural conditions of the creek prior to late 20th century development, the impact of activities during the 20th century, and the proposed impacts stemming from this project, we believe that the cumulative impact is far greater than the incremental impact from this one project, and must therefore be taken into consideration by the Corps.

2. Proposed Activity – Direct Impacts

The detailed analysis of the proposed construction in the creek for the Sirius Marina has been documented elsewhere in these comments. Briefly, the applicant proposes to dredge approximately 1 acre to a depth of -6 feet, install approximately 800 feet of steel sheet bulkhead, partially seaward of the current shoreline and partially in a mangrove wetlands, discharge dredged materials into the open water and wetlands behind the bulkhead, and cap with a concrete apron, approximately 1 acre in size. These component activities are illustrated below:



Figure 1: Proposed Development in the Creek

The key volumetric figures which quantify this development (according to the PN) are the following:

Project Component	Area or Volume
Dredge Area	40,510 sq ft (0.93 acre)
Dredge Depth	-6 ft
Dredge Material Removed	3,890 cubic yards
Bulkhead Length	800 ft
Bulkhead Distance from Current Shoreline	30'-50' (varies)
New Filled Land Area (Open Water)	15,000 sq ft (0.34 acre)
Filled Land Area (Mangrove Wetlands)	6,490 sq ft (0.15 acre)
Concrete Apron Area	50,226 sq ft (1.15 acre)

3. Condition of the Creek Prior to Development Impacts

We have assembled an archive of aerial and terrestrial photographs of Coral Bay, dating from the mid 20th century through the present. These photographs are our best primary evidence of the original shoreline location on the northern edge of the Creek prior to the fill operations of the 1970's. The next two pages show aerial photographs of the northern shore of Coral Bay and the creek from 1946 and 1954. For each photograph we show the original image beside the same photograph with the open water of the creek outlined in turquoise and our best estimate of the fringing mangrove upland extent outlined in green.

1946 Aerial Photograph of the Creek in Coral Bay Harbor



Figure 2: 1946 Aerial Image with Open Water and Fringing Mangroves Delineated

1954 Aerial Photograph of the Creek in Coral Bay Harbor

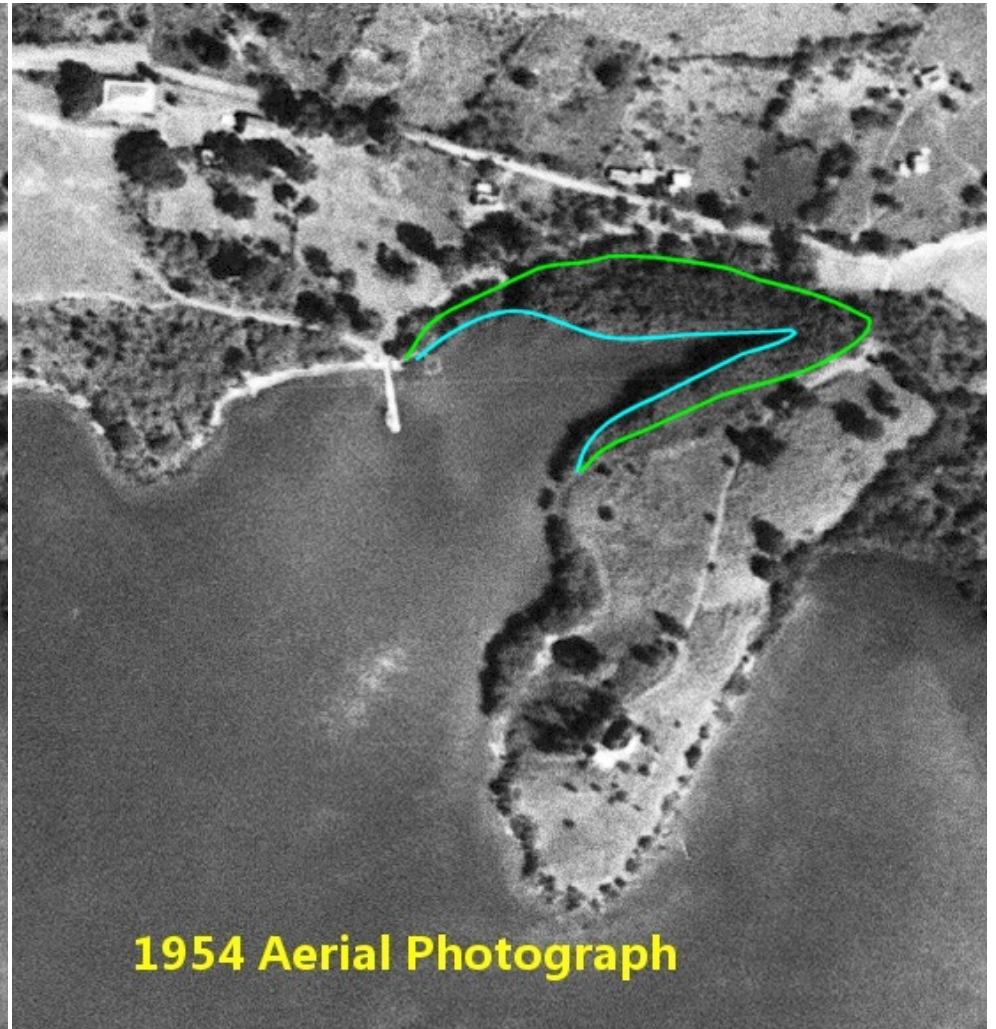
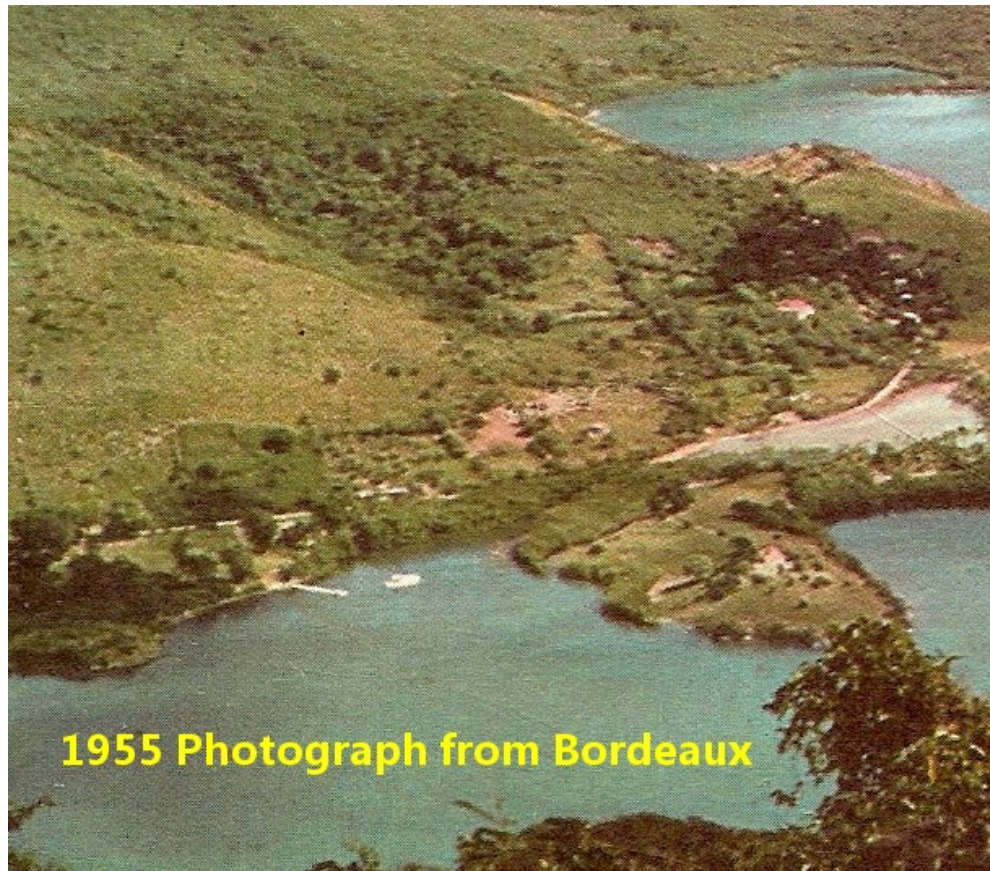


Figure 3: 1954 Aerial Image with Open Water and Fringing Mangroves Delineated

One additional photograph, taken from Bordeaux Mountain and looking into the creek, clearly shows the contour of the shoreline and the blue water which extends to the north beginning just east of the town dock, forming a small cove on the shoreline. This photograph was dated 1955.



1955 Photograph from Bordeaux

Figure 4: 1955 Photograph of North Coral Bay Harbor and the Creek



Figure 5: 1955 Detail Showing Shoreline and Open Water

4. Illegal Filling of the Creek During Between 1955 and 1973

Between the time the previous photographs were taken (1955 and prior) and the present day (2015), a series of at least two non-permitted fill operations took place in the Coral Bay creek. We have documented the extent of this fill with a series of photographs comparing the present shoreline with the shoreline from the earlier photographs. We have also documented the local and federal response to the 1973 illegal fill in a series of newspaper articles from that time.

The first photograph is a modern aerial (2008) of the creek and in particular the northern shoreline (behind Coral Bay Marine and Skinny Legs Restaurant).



Figure 6: Coral Bay Creek – 2008

The next image is the same as the 2008 aerial photograph, however the boats in the water and two small floating docks have been removed to make the shoreline comparison easier to see.



Figure 7: Coral Bay Creek - 2008 - Boats Removed for Clarity of Shoreline

The next image is an enlargement of the 1954 aerial depicted earlier, covering the same region as the 2008 image, so that they can be overlaid for comparison.

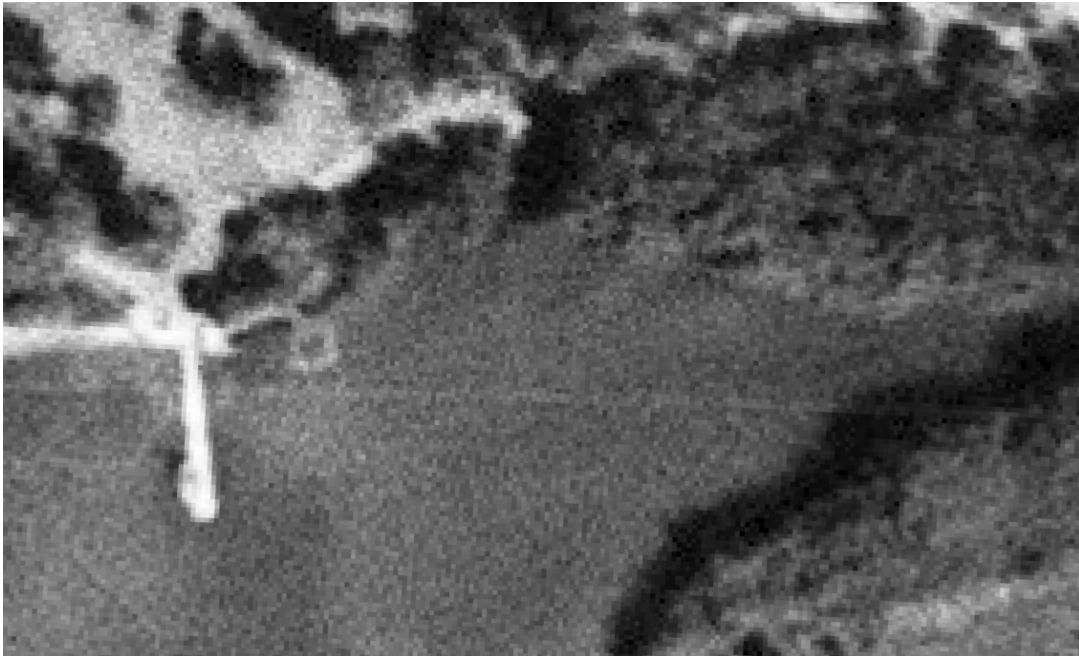


Figure 8: 1954 Enlarged - Coral Bay Creek

Using the previous image as the base, we have highlighted the apparent shoreline with a yellow line, and the open water shaded in blue. The original fringing mangrove wetlands extended landward of the yellow line as shown below, highlighted in green.

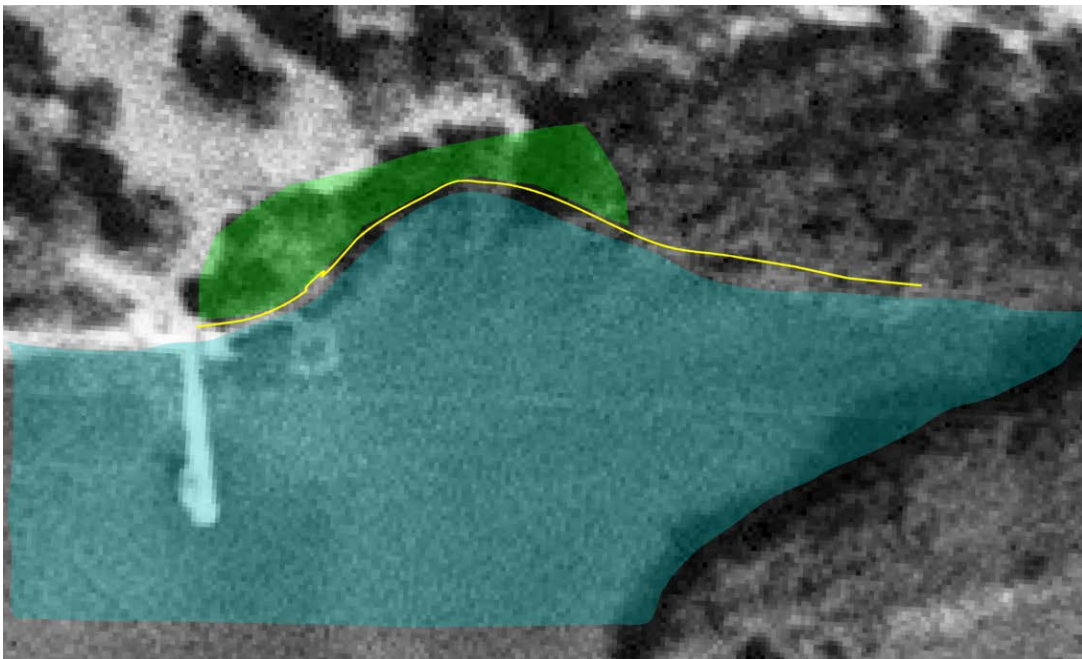


Figure 9: 1954 Photo With Water and Shoreline and Wetlands Highlighted

The next image takes the 1954 shoreline, open water and wetlands and superimposes these features on the 2006 photograph. It should be apparent that the easternmost extent of the creek has not changed over this period of time. The mangroves have grown, but the open water is in the same location and extent. The same is true of the open water to the west of the town dock – it hasn't changed during this time period.

What has clearly changed is the shoreline and open water directly east of the town dock. The land has clearly been extended into the creek the full distance of the town dock (90 feet in length) and for a distance east of the dock of approximately 200 feet. All of the fast land beneath the blue shading and south of the yellow shoreline is filled land, where previously open water existed. Similarly, all of the green shaded area which was previously fringing mangrove wetlands is now filled land. The mangroves east of the green shaded area remain as they were in the earlier photographs.



Figure 10: 2015 Photograph With 1954 Shoreline and Water Superimposed

The red shaded area in the photograph below highlights the filled land where there previously was open water. The area of this filled land is approximately 16,400 square feet (0.4 acre). Adding to this the roughly 7,000 square feet of filled mangrove wetlands (green shaded area) results in an estimate of the filled open water and wetlands of approximately 23,400 square feet, or 0.54 acre.



Figure 11: Filled Land Highlight

5. Contemporaneous Accounts of Illegal Fill Operations – 1973

We have also researched the archives of the Virgin Islands Daily News and located several news accounts of the illegal fill operation in 1973 and the government response in 1974. These articles identify the location, estimate the quantity of fill, identify the area as prime bird habitat, and indicate that the US Army Corps of Engineers was informed of the violation and involved in the response.

It should be readily apparent from the photographic evidence, the contemporaneous news accounts, and visual inspection of the materials in the fill location, that a substantial illegal fill of open waters and wetlands, amounting to a minimum of 0.5 acre of the creek, took place in 1973.

Charge Road Builders With Illegal Dumping

CRUZ BAY—At the request of members of the St. John branch of the Virgin Islands Conservation Society last Thursday, the Department of Conservation and Cultural Affairs investigated alleged illegal dumping of road construction spoils materials in the salt water tidal marsh area east of the Benjamin Franklin School in Coral Bay.

Dr. Arthur Dammann, fish and wildlife biologist for the Department of Conservation and Cultural Affairs made an on-site inspection over the weekend and reported to Commissioner Hortense M. Rowe violations of both federal and local laws by Pizzagalli Construction Company in dumping its spoils in the salt water marsh.

According to Dr. Dammann, Commissioner Rowe has issued a stop order to halt further dumping. It was learned that stop

orders on construction work normally are processed through the Department of Property and Procurement.

However, Commissioner Alphonse Holder told The Daily News that he had "received nothing from Mrs. Rowe's office nor would be expect to receive anything from her office."

He explained that his office would issue stop orders only after receiving a report from an inspector, engineer or the Commissioner of Public Works. Commissioner Rowe was unavailable for comment, and Commissioner John Harding of Public Works is off island.

The Daily News contacted Federal Highway Administrator Frank Porter, whose office oversees federally funded highway projects for the Office of Emergency Preparedness. Porter is authorized to recommend final

payment or withholding of federal funds for such projects.

Porter told The Daily News "We do what we can to make sure the contractor lives up to the specifications and requirements of his contract. He noted that 'excess materials cannot be dumped in salt water anywhere without a permit'."

The unauthorized dump fill activity by Porter reportedly not only violates federal law but is in violation of the Earth Change Law which took effect Oct. 1, 1972 and Act 3404, the Shoreline Alteration Bill, which was introduced by Sen. Virdin Brown and co-sponsored by Sen. Noble Samuel and signed by Governor Evans March 20.

Pizzagalli is subject under provisions of Act 3402 to a fine of not less than \$10,000. Each day such violation occurs, constitutes a separate violation.

The three to four acre marsh area in Coral Bay has previously been cited by members of the Audubon Society as a unique observation point on St. John for local students as well as tourists to observe some 38 species of land and water birds.

According to observers, the dumping has been going on for several weeks.

This reported violation is the second time Pizzagalli has been cited for violations of their federally funded road construction project.

Conservation Probes Violation Of Statute

By DORIS JADAN

CORAL BAY - According to observers in the Coral Bay area of St. John, the Pizzagalli Construction Company has been dumping fill on the property of Fred Smith over the past 3 months with the consent of the owner, but reportedly in violation of Act 3402.

The act specifically prohibits filling of any marsh, swamp, pond or shoreline areas without a permit. No permit has been applied for or granted either to Smith or the Pizzagalli Co., Dept. of Conservation and Cultural Affairs officials told the Daily News.

According to Marc Buchanan, former president of the V.I. Conservation Society whose home overlooks Centerline Road near Coral Bay, "One or two trucks, the last trucks of the day, were all we noticed at first, beginning the end of May or early June. We were actively aware of this since the big trucks with the dirt use air brakes." Buchanan explained that later the number of loads

increased. He agreed with other estimates that 1,000 cubic yards of fill, more or less, have been dumped illegally in the swamp and mangrove area on the Smith property over the past three months. One truck load is 10 cubic yds.

Contract for the Centerline Road reconstruction work was awarded to the Pizzagalli Construction Company, low bidder on the project at \$1,966,182. The Office of Emergency Preparedness pays for approximately 75 per cent of the total amount.

Commissioner of Conservation and Cultural Affairs Hortense Rowe told The Daily News she is in the process now of bringing the various legal aspects of the case into perspective. The commissioner indicated that her department will take appropriate action to enforce the law.

It states that "no person shall clear, grade, fill, alter modify...waters and shorelines of the Virgin Islands unless a written permit has been obtained."

Permits are obtained through the Department of Conservation. The law defines "person" to mean any "individual, firm, partnership, association, corporation or other entity, the government of the United States, the government of the Virgin Islands or any department, agency, or authority of such governments, and includes any officer of the foregoing." Paragraph 410 of the law states that any person who violates any provisions of the law shall be fined not less than \$10,000 nor more than \$20,000. Each day upon which a violation occurs constitutes a separate violation.

The Daily News contacted Clarence Alexander, Pizzagalli foreman on St. John, by telephone. Alexander said that Pizzagalli had been dumping on the Fred Smith property behind Franklin School, but said there had been no dumping there for the past month. (Other reports note that dirt had been dumped on the Smith property earlier this month.) "Someone wants a big story," Alexander said. "The owner wanted fill. It's private land, a swamp that needed filling." When Alexander was asked if he was aware that filling any swamp or marsh on public or

(See PROBE, Page 23)

Probe

(Continued from Page 3)

private land was a violation of Act 3402, the Pizzagalli official told The Daily News, "I know all about the laws. Don't tell me anything about the V.I. code." Alexander terminated the interview abruptly by hanging up.

Members of the St. John Branch of the V.I. Conservation Society first reported the dumping of fill on the waterfront property Sept. 13 to James Francis of the Department of Conservation. An on-site inspection was made for Mrs. Rowe by Dr. Arthur Dammann two days later.

Red mangrove trees in the tidal marsh area have been knocked down on the eastern end of the property according to several

persons assessing the damage from Coral Harbor. According to information from the Soil and Water Conservation District on St. Croix, any damage to any mangrove trees is subject to legal action by the Army Corps of Engineers. Deputy District Engineer Lluch of the San Juan area has been notified, according to V.I. Conservation members on St. John. Ted Johnson of the Soil and Water Conservation District will meet Monday on St. John with V.I. Conservation Society president Charles Tilton and St. John members of the organization along with a representative of the Department of Conservation.

Pizzagalli Ordered To Cease Fill Operation

CRUZ BAY — A cease and desist order from Commissioner of Conservation Hortense M. Rowe was hand delivered late Monday afternoon to Clarence Alexander, foreman for the Pizzagalli Corporation in order to halt dumping of fill on submerged lands and mangroves fringing Coral Harbor.

Pizzagalli has the contract with Public Works for reconstruction of Centerline Road on St. John. Public Works, according to the contract, is charged with designating dump sites for the road fill and the contractor is paid on a mileage basis for hauling fill to the approved sites, according

to the Office of the Legislature on St. John.

However, no applications for permits have to date been made by Public Works; Pizzagalli, or individual residents desiring to have this fill on their land, according to officials in the Dept. of Conservation. Two local laws, the Shoreline Alteration Act and the Earth Change Law, require that permits be approved before any area is filled.

Thursday morning Elton Chongassing of the Dept. of Conservation and Bill Saalman from the Soil and Water Conservation District in St. Croix met in St. Thomas with Clarence

Gumbs and Orlando Cancel of Public Works Road Division. Public Works must now designate fill areas, Saalam explained, that do not violate the Shoreline Alteration Act or Earth Change Law. Saalam and Chongassing later visited both Enighed Pond where PWD is filling some 10 acres and Coral Bay.

In a question about fill dumped by Pizzagalli recently on private property near Sea Breeze, Saalman said that this fill which blocks the natural drainage of a gut will be removed so that the gut can continue to drain properly.

(See ORDERED, Page 14)

Ordered

(Continued from Page 1)

Until PWD locates fill areas and Earth Change permits are approved, Saalman told The Daily News that dumping by Pizzagalli on submerged lands, or on land belonging to private individuals and land belonging to Emmaus Moravian Church will be stopped. Submerged lands belong to the federal government, but title is expected to be transferred to the local government, bringing such areas under the Shoreline Alteration Act, Saalman added. He will return to St. John next Wednesday to reinspect the areas involved.

Commissioner of Public Works Harding told The Daily News late Thursday while foreman Clarence Alexander was in his office that "something will be worked out" to halt the destructive dumping practices of Pizzagalli. A letter from Elton Chongassing on Monday to Harding requested that the PWD Commissioner take action to see that Pizzagalli lived

up to the terms of their contract for disposing of fill in accordance with the law.

The repeated violations by Pizzagalli of the Earth Change Law and Shoreline Alteration Act are under review by Assistant Attorney General Henry Feuerzeig of the Department of Law.

V.I. Conservation Society president Charles Tilton told The Daily News that he had discussed the federal violations involved in filling submerged lands and destroying mangroves with District Engineer of the Army Corps of Engineers R.S. Lluch in San Juan by phone Thursday.

Rosemary Galiber of the Environmental Studies Program announced that in order to increase awareness of government employees in all department as well as teachers that a special on-site discussion of the values of mangroves to Virgin Islanders and ways to protect remaining mangrove areas will be held this Sunday at Annaberg at 11:00 a.m. before the demonstration Bake-In at noon. "Many persons do not understand why mangroves, marshes, guts are available to them now and for years to come," the environmental education teacher noted.

6. Cumulative Impact of Proposal by Sirius Marina to Fill Open Water and Wetlands

We now turn to the question of cumulative impacts. The proposed action by T-Rex St John would, according to the applicant, fill 14955 square feet of land below mean high water and an additional 6490 square feet of mangrove wetlands. The total acreage of filled aquatic resources amounts to 0.49 acre.

The previous fill operations directly landward of the proposed Sirius fill operation removed 0.54 acre of open water and mangrove wetlands from the creek.

Illustrated below are the original extent of wetlands (pre 1970), the current shoreline and wetland boundary, and the proposed shoreline and wetland boundary based on the fill operation requested for the Sirius Marina.



Figure 12: Cumulative Loss of Wetlands in the Creek

The proposal by T-Rex St John removes almost half the remaining open water of the creek, as can be readily seen in the illustration above. The easternmost portion is reduced to an extremely narrow waterway, and the mouth of the creek is a fraction of its original extent. This cumulative degradation of aquatic resource will have dire consequences on the entire ecosystem of the creek, impacting juvenile

shark habitat, shoreline bird habitat, and mangrove wetland habitat. The secondary and indirect impacts have been discussed elsewhere, including cutting the primary seawater exchange channel with the adjacent salt pond and wetlands.

7. Conclusion

Although we believe we have demonstrated that the direct impacts of the proposed dredging and filling of the creek in Coral Bay are sufficiently extensive to require denial of the permit under NEPA, and the availability of practicable alternatives with substantially less damage to aquatic resources require denial of the Section 404 permit, we also believe that the cumulative impact of filling the creek, as demonstrated in this analysis, would warrant denial of the permit by itself. We believe this evidence is conclusive that the proposed activity would have significant, irreversible impacts to a critical aquatic feature of Coral Bay, which is itself an aquatic resource of national importance.

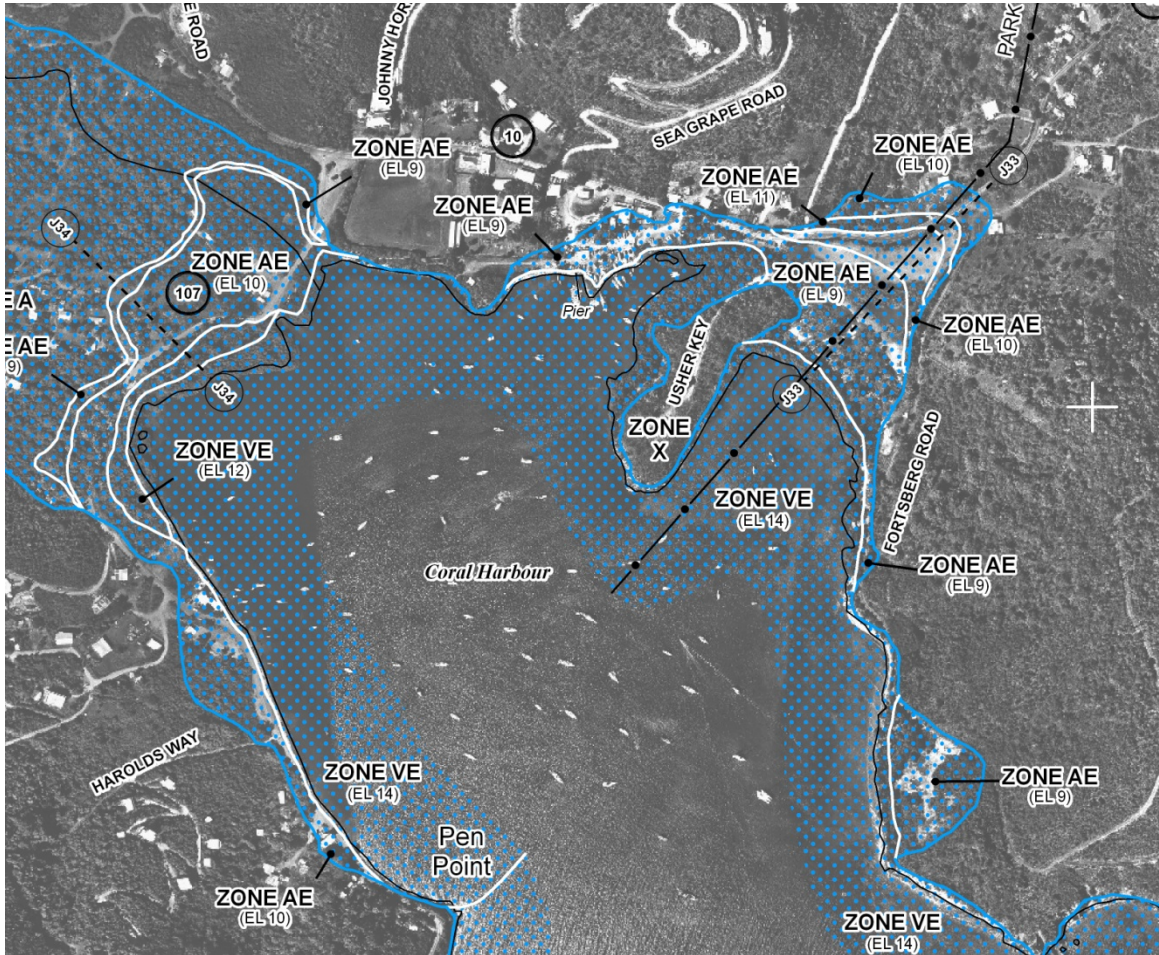
David Silverman, President, Save Coral Bay, Inc.

22 January 2016

ATTACHMENT 6: Flood Plain Considerations for Sirius Marina

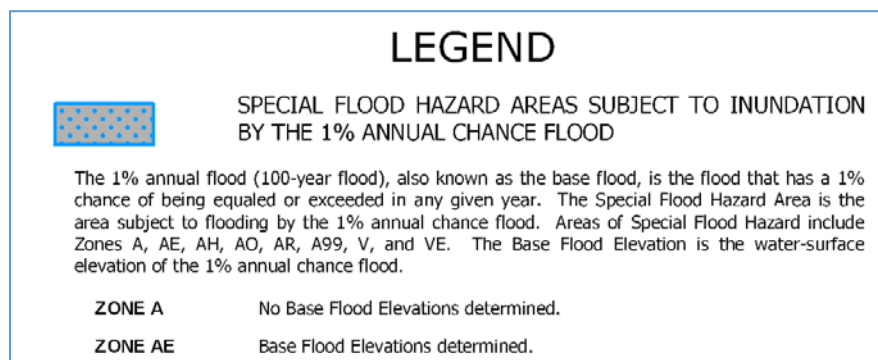
Flood Plain Considerations for Sirius Marina

Reproduced below is a portion of the FEMA flood hazard zone rate map which includes the vicinity of the proposed Sirius Marina:



This map is captioned "Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map, Panel 0035G, Map Number 780000035G, Map Revised April 16, 2007."

The Zones shown with blue dots are flood hazard zones, and the AE zone which is of interest to the Sirius Marina project is described in the map legend below:



The illustration below overlays the main components of the Sirius Marina project on the FEMA flood hazard map. It is apparent that the marina upland structures (office, marina service building), the marina infrastructure (Waste Water Treatment Plant, Underground Fuel Tanks, Water Supply, Backup Generator) are all within the flood zone. It is also apparent that the proposed dredge spoil disposal site is within a flood zone and a drainage ghut traverses the site.



The requirements for consideration of flood plains is stated in 33 CFR 320.4 which reads, in part:

In accordance with the requirements of Executive Order 11988, district engineers, as part of their public interest review, should avoid to the extent practicable, long and short term significant adverse impacts associated with the occupancy and modification of floodplains, as well as the direct and indirect support of floodplain development whenever there is a practicable alternative. For those activities which in the public interest must occur in or impact upon floodplains, the district engineer shall ensure, to the maximum extent practicable, that the impacts of potential flooding on human health, safety, and welfare are minimized, the risks of flood losses are minimized, and, whenever practicable the natural and beneficial values served by floodplains are restored and preserved.

Elsewhere in these comments we have identified practicable alternatives that do not involve occupancy or modification of floodplains.

It is of particularly grave concern that depositing 3300 cubic yards of fine dredge spoils in a possible wetland, a known flood hazard zone, atop a mapped drainage ghut, and less than 200 feet from the shoreline of Coral Bay, is a disaster waiting to happen. A major rain event could wash tons of dredge material directly into Coral Bay harbor, smothering everything in its path. For this reason alone, the selected dredge disposal site must be denied.

David Silverman, President, Save Coral Bay Inc.
22 January 2016

ATTACHMENT 7: The Sirius Marina Infringes Littoral Rights of Neighboring Property Owners

CONTENTS

- 1. The Sirius Marina Infringes Littoral Rights of Neighboring Property Owners**
- 2. Appendix A: Attorney Hodge Protest Regarding Littoral Rights of Moravian Conference**

The Sirius Marina Infringes Littoral Rights of Neighboring Property Owners

The rights of landowners to utilize the water in front of their property is explicitly cited as one of the factors which is considered in the Army Corps Public Interest Review. The relevant regulation (33 CFR 320.4(g)(4) states:

(3) A riparian landowner's general right of access to navigable waters of the United States is subject to the similar rights of access held by nearby riparian landowners and to the general public's right of navigation on the water surface. In the case of proposals which create undue interference with access to, or use of, navigable waters, the authorization will generally be denied.

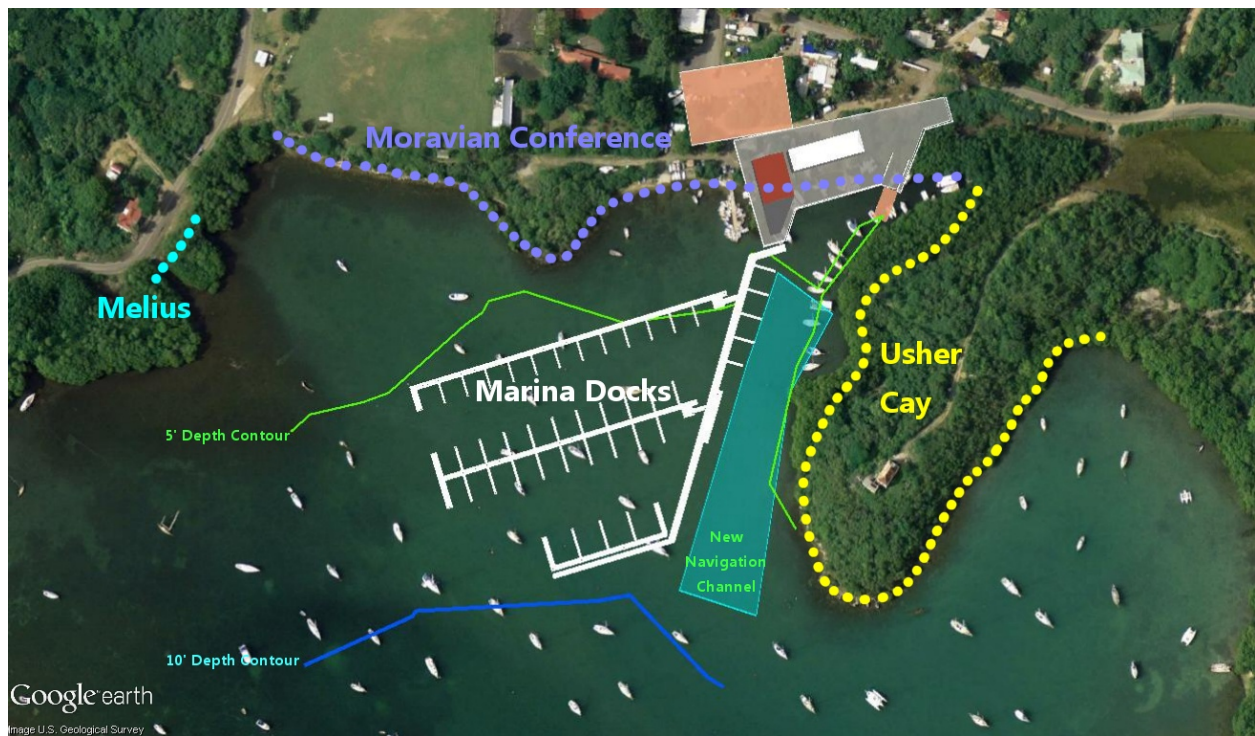
Infringement of littoral rights was a major issue for the landowner of the Sirius Marina project (the Moravian Conference) when the Summer's End Group proposed a mega yacht marina on the western shore of Coral Bay. The Moravian Church felt that the size and location of the Summer's End Marina was such that the Church would not be able to use their waterfront in the manner they wished. This was such a significant concern that the Moravian Church first offered comments at the CZM Public Hearing and subsequently filed an appeal with the Virgin Islands Board of Land Use Appeals when the CZM committee recommended approval of the Summer's End Group permit.

Attached hereto as Appendix A is the letter from the Church attorney, Ms. Maria Hodge, to VI DPNR, discussing the legal basis for littoral rights, and the explanation why the marina proposed by the Summer's End Group infringed upon the rights of the Moravian Church. Here is one of several relevant comments in that letter:

Our client has learned that the Summer's End Group, LLC ("Summer's End") seeks to develop The St. John Marina, a 145-slip marina project located on the western shore of Coral Bay. Based on public reports and review of your Department's records, the size and scope of the marina development proposed by Summer's End would interfere with the rights of the Moravian Church and T-Rex to access, and wharf out over, the water adjoining their land.

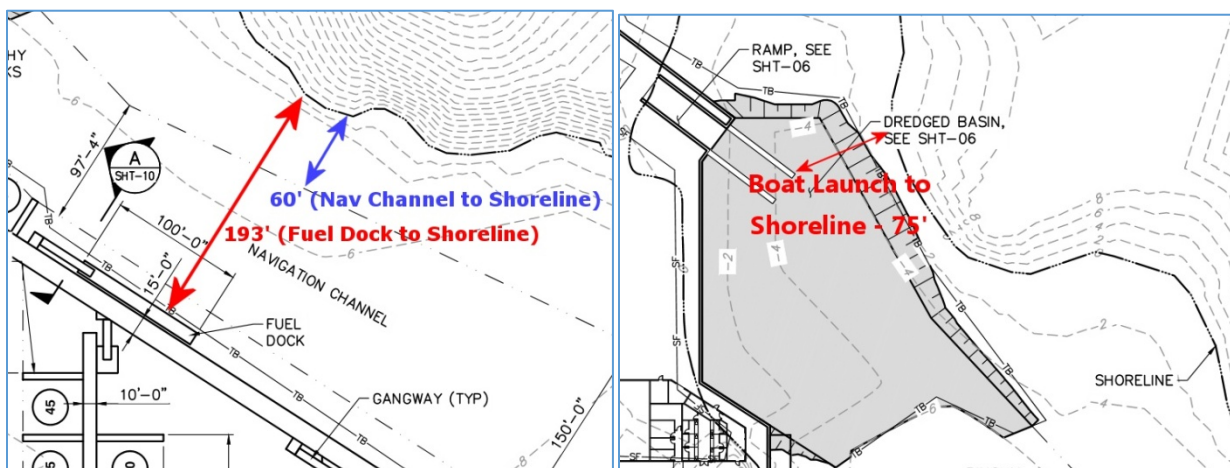
After reviewing the location and size proposed for the Sirius Marina, and its relationship to the shoreline properties of adjacent owners, we strongly believe that the proposed Sirius Marina infringes upon the littoral rights of the owners of Usher Cay, and infringes upon the littoral rights of Beverly Melius, owner of Pickles Restaurant.

Illustrated below are the land and water features that relevant to this discussion. The shoreline of the Moravian Conference is shown with a purple dotted line. The shoreline owned by the family of Usher Cay is a yellow dotted line. The shoreline of Beverly Melius is the turquoise dotted line. The depth contours of 5' and 10' are shown in green and blue respectively.



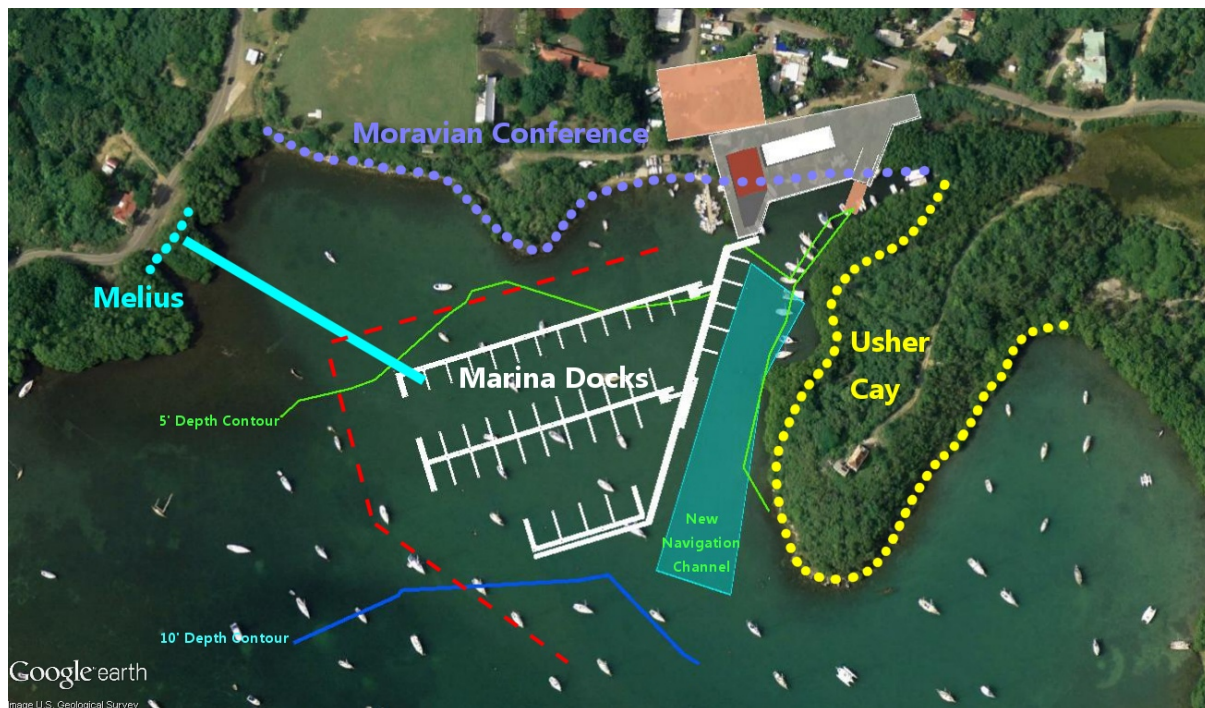
It should be immediately apparent that the marina structures proposed by T-Rex St John for the Sirius Marina not only preclude the Usher Cay owners from making any use of over half their shoreline, but it also impedes their view, subjects them to light pollution from nighttime marina lighting, sound pollution from diesel generators, air pollution from diesel exhaust, and entirely deprives them of the view from their shoreline.

In addition to the indirect environmental impacts, the Sirius Marina project proposes to dredge directly offshore of the Usher Cay property, and the proposed dredge zone, as illustrated in other comments, will impact approximately 10,000 square feet of fringing mangroves on Usher Cay. The marina structures – boat ramp and fuel dock – are less than 200' from the Usher Cay shoreline, as illustrated below:



However it is not only the Usher Cay owners who are deprived of right of access to navigable water. The Melius property is located on a shallow part of Coral Bay, and needs to wharf out to navigable water in front of their shoreline if they decide at some point to construct a dock. Since their property is narrow, they do not have the option to wharf out an angle that might avoid the Sirius Marina – if they were to do so they would infringe upon the littoral rights of their neighbors or be atop a shoal to the south.

The designers of the Sirius Marina stipulated that a 125' navigation channel was required between their marina docks and those of the adjacent marina (Summer's End Group). This channel width is required to provide a safe navigation way for vessels entering and exiting the marina. The illustration below shows the Sirius Marina structure, with the red dashed line at a distance of 125' from the fixed docks.



This illustration makes it apparent that the Melius property cannot reach water depths of over 5' in front of their property without entering the area reserved for the proposed Sirius Marina. In fact, the entire 5' contour in front of the Melius shoreline is consumed by the navigational channel surrounding the Sirius Marina.

As a consequence of its excessive design and location, the Sirius Marina precludes Melius from wharfing out to deep water – the fundamental littoral right of a shoreline property owner. This was the express concern raised by the Moravian Church when the Summer's End Group project was evaluated and so it is surprising that the Sirius Marina developers would impose the same unfair burden on their neighbors and deprive them of the precise rights that the Moravian Church strove to preserve for themselves.

As a matter of Public Interest under NEPA, this project should not be permitted until each of the adjacent property owner's rights of access to navigable water is protected, as required by 33 CFR 320.4(g)(4).

David Silverman, President, Save Coral Bay Inc.
22 January 2016

APPENDIX A

Attorney Hodge Protest Regarding Littoral Rights of Moravian Conference

HODGE & HODGE

August 5, 2014

Department of Planning and Natural Resources
Division of Coastal Zone Management
Via hand Delivery



RE: Opposition to Scope of The Summer's End Group, LLC's Permit Application for
Proposed Development of The St. John Marina (CZJ-3-14 L and CZ- 4-14W)

To Whom It May Concern:

We represent the Moravian Church VI Conference ("Moravian Church" or "the Church"). We are writing to express concerns of the Moravian Church and T-Rex St. John, LLC ("T-Rex"), the lessee of the Church's property at Coral Bay, regarding the permit application of The Summer's End Group, LLC for development of a proposed marina project in Coral Bay, St. John.

The Moravian Church owns property located at the head of Coral Harbor, along the south side of Route 10. T-Rex leases this property from the Moravian Church. The Church has a longstanding interest in developing a marina on the subject property and, jointly with T-Rex, has been drafting an application to CZM for such development. As you know, the Moravian Church and T-Rex attended pre-filing meetings with CZM in May 2014, and intend to submit an application for development of an 85-slip marina to CZM in the immediate future, in conformity with the discussions at those meetings.

Our client has learned that the Summer's End Group, LLC ("Summer's End") seeks to develop The St. John Marina, a 145-slip marina project located on the western shore of Coral Bay. **Based on public reports and review of your Department's records, the size and scope of the marina development proposed by Summer's End would interfere with the rights of the Moravian Church and T-Rex to access, and wharf out over, the water adjoining their land.**

"The right of access to the water in front of his land is the fundamental riparian right which the owner of littoral land enjoys."¹ *Burns v. Forbes*, 412 F.2d 995, 998, 7 V.I. 256 (3d Cir. 1969), citing *Hughes v. Washington*, 389 U.S. 290, 293-294, 88 S. Ct. 438, 19 L. Ed. 2d 530 and 2 Tiffany, Real Property, §§ 659, 660; III American Law of Property § 15.35.

¹ "A littoral landowner is one whose land borders an ocean, sea, or lake." *Club Comanche, Inc. v. Gov't of the V.I.*, 278 F.3d 250, 261 n.1 (3d Cir. 2002), citing *Alexander Hamilton Life Ins. v. Gov't of the V.I.*, 757 F.2d 534, 538 (3d Cir. 1985). A riparian landowner is one whose land borders a river or stream. "Generally speaking, the special property rights of littoral and riparian owners are the same, and cases dealing with one type of waterfront landowner are freely applied when adjudicating the rights of the other." *Alexander Hamilton Life Ins.*, 757 F.2d at 538 n.5.

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As the owner of littoral land, the Moravian Church “has the right at common law to erect piers and docks on the submerged public land beyond the water line and to wharf out over it, subject to government regulation and control and with due regard to the rights of the public and adjoining land owners.” *Burns*, 412 F.2d at 998 (citations omitted). The right of a littoral owner to access waters adjacent to its land “is not lightly to be deprived.” *Id.* Development of The St. John Marina by Summer’s End, in accordance with the current proposal, would deprive the Moravian Church of its littoral rights by unreasonably restricting the Moravian Church’s ability to access the water adjacent to its land and to wharf out over it. *See, e.g., New Jersey v. Delaware*, 552 U.S. 597, 612, 128 S. Ct. 1410, 1421, 170 L. Ed. 2d 315 (2008) (“a riparian landowner ordinarily enjoys the right to build a wharf to access navigable waters far enough to permit the loading and unloading of ships.”), *citing* 1 H. Farnham, *Law of Waters and Water Rights* § 62, p. 279 (1904) (“The riparian owner is also entitled to have his contact with the water remain intact. This is what is known as the right of access, and includes the right to erect wharves to reach the navigable portion of the stream.”); *id.*, § 111, p. 520 (“A wharf is a structure on the margin of navigable water, alongside of which vessels are brought for the sake of being conveniently loaded or unloaded.”).

Furthermore, the size of the marina proposed by Summer’s End must be sufficiently controlled such that a channel exists for the navigation of vessels between the proposed Summer’s End marina and the marina development planned by the Moravian Church and T-Rex. *United States v. Willow River Power Co.*, 324 U.S. 499, 504-05, 65 S. Ct. 761, 765, 89 L. Ed. 1101 (1945) (“The fundamental principle of this system is that each riparian proprietor has an equal right to make a reasonable use of the waters of the stream, subject to the equal right of the other riparian proprietors likewise to make a reasonable use.”) (internal citation and quotation marks omitted).

Neither our client nor T-Rex oppose, in principle, the right of the Summer’s End developers to construct a marina at Coral Bay. However, to fairly protect the rights of the Moravian Church VI Conference and its lessee, T-Rex St. John, LLC, we respectfully urge the Division of Coastal Zone Management to appropriately limit the scope of the marina development proposed by The Summer’s End Group, LLC, to ensure that the littoral right of Moravian Church VI Conference and T-Rex St. John, LLC to access and make reasonable use of Coral Harbor is protected.

Sincerely,



Maria Tankenson Hodge

Cc: Moravian Church VI Conference; T-Rex St. John, LLC

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View from Bordeaux

Google earth

Image NASA

Image U.S. Geological Survey

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View From above Ballfield



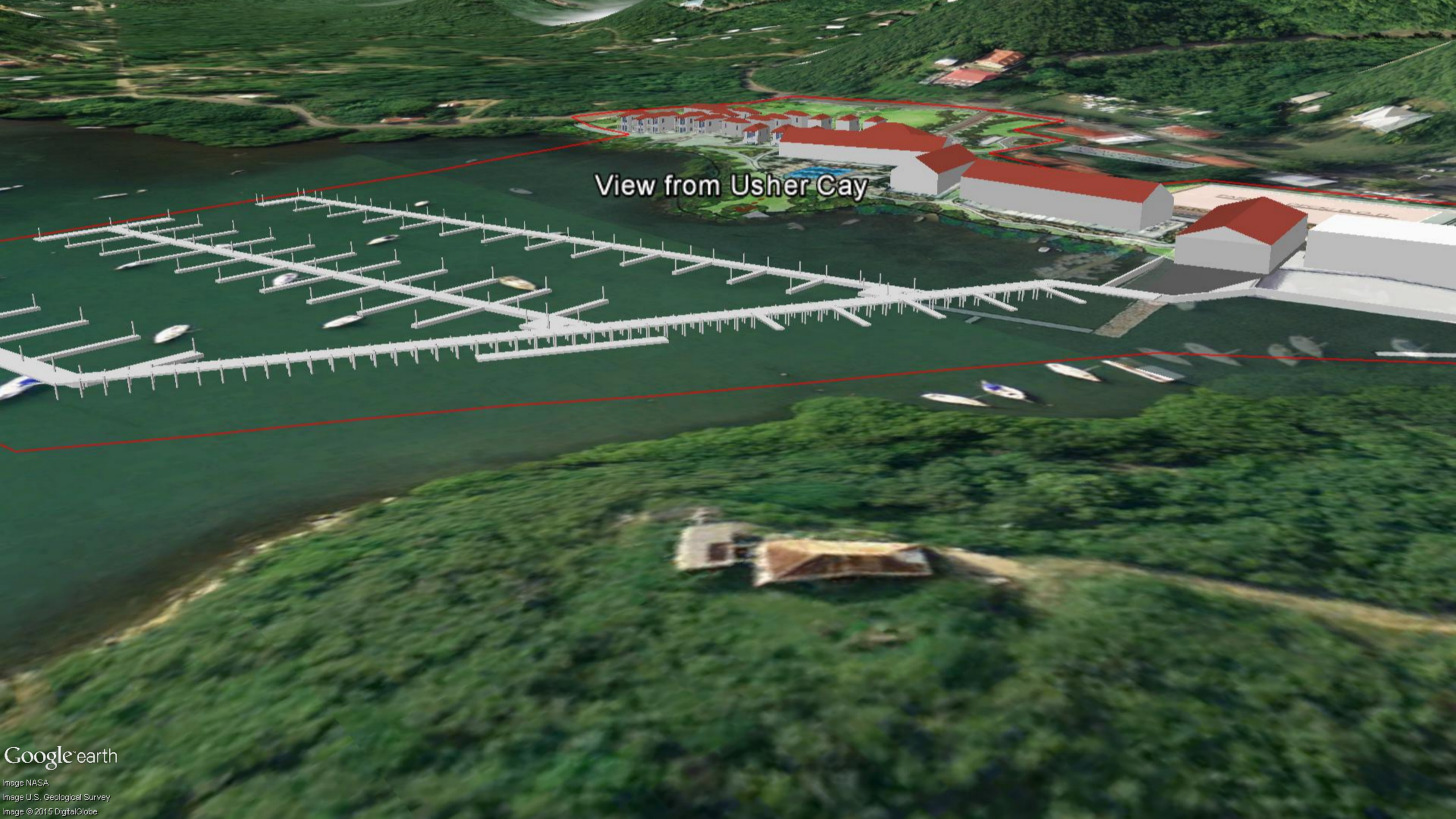
View from Sea Grape

Google earth

Image NASA

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View from Usher Cay

View from Coral Bay

