Exhibit 2, Attachment A

Compensatory Mitigation Plan by Bioimpact, Inc.

COMPENSATORY MITIGATION PLAN
FOR
DEVELOPMENT OF THE
ST. JOHN MARINA
SUMMER'S END GROUP
U.S. VIRGIN ISLANDS

PREPARED FOR
SUMMER'S END GROUP

PREPARED BY

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This plan follows the compensatory mitigation guidelines as set forth in 40 CFR Part 230, Compensatory Mitigation for Loses of Aquatic Resources: Final Rule. The fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to the waters of the United States authorized by Department of the Army permits.

I. INTRODUCTION

The Summer's End Group, LLC is proposing to construct a 144 wet slip, fixed dock marina with services including pump out, fueling and amenities for marina guests and the public. Also included are a Custom facility, retail stores, restaurants, and parking.

Benthic surveys were conducted in February of 2018, and despite the passage of two category 5 hurricanes there were only slight changes in the benthic environment, and due to recovery of areas that were impacted, both by the storm and previous anchoring there was no net change in the amount of impact which will result of the proposed project. A total of 39,258.18 sq. ft. of docks are over areas with submerged aquatic vegetation (SAV), the majority of which has densities between 20% and 100%. Based on a 46% survival due to shading, since the Applicant is using grated decking, 21,199.42 sq. ft. (0.487ac) of seagrass may be lost. At the maximum capacity and at the maximum size boat in each slip, there will be 5.65 acres of shading due to vessels. It can be assumed that 50% of the seagrass in this footprint will be lost due to vessels being in place for more than 2 weeks at a time. There will be some survival due to angle of the sun and vessel types and some available light. There will be impacts due to spudding impact during construction which will probably account for between a 900-1020 sq. ft. of impact (6 sq. ft. per spudding event and between 150 and 170 relocations. The operation of the marina will have an impact due to prop wash scour and you can assume another 10% of seagrass loss.

The project also has the potential of impacting SAV within an envelope of approximately 8 acres as vessels move around during the construction of the marina. The construction impact will be related to barge movements and spuds. This can be minimized through monitoring and delineating spudding and anchoring areas. Barge shading will be mitigated through the periodic relocation of barges to prevent shading impacts. The surrounding SAV may also be impacted by construction related turbidity impacts. This will be abated by the sediment and siltation control and through stringent monitoring. The operation of the marina will have an impact due to prop wash scour resulting in an additional loss of up to 10%. In total, approximately 3.75 acres of seagrass may be lost as a result of the project.

The project has potential to impact *Acropora* and other Endangered Species Act ("ESA") listed species through vessel strikes. To minimize this impact, the applicant will place informational buoys delineating the shallow hard bottom areas at the entrance of Coral Harbor and will provide information signage on the dock advising mariners to avoid shallow reefs while in transit and to avoid anchoring in areas of coral and seagrass.

In order to minimize the direct impact to seagrass caused by pilings, the seagrass within the piling foot prints will be transplanted and plugs will be used to seed the area in the northwest corner of the bay which has been impacted by the deposition of sediment. There are 960 piles which will be driven and these will impact an area of approximately 1350 ft^2.

The applicant will provide pump out facilities and waste receptacles within the marina for use of the marina clients. In addition, the applicant encourage appropriate waste disposal for boats moored in the bay by regularly scheduling a pump out vessel to visit the bay. The goal of these waste disposal services is to reduce or eliminate impacts to the bay's water quality resulting from improper disposal of waste and refuse in the sea.

The applicant previously proposed removing derelict vessels including the cleanup of any remaining sunken vessels that had not been removed during the Coral Bay Community Council clean up. With the passage of Hurricanes Irma and Maria, dozens of boats were sunken and wrecked within the bay.

Subsequently, the U.S. Coast Guard has engaged contractors to clean up the bay by removing those vessels. It is probable that the Coast Guard's contractors will remove most, if not all, of the derelict vessels present within the bay. Consequently, the applicant's initial proposal is no longer a large scale mitigation proposal within the bay. Instead, the applicant proposes the collection and removal of debris from the bay, including the collection of smaller pieces left behind when derelict vessels were removed and other debris including items like tires, trash cans, boards, tree limbs and ropes. Based on observations during the February 2018 seagrass survey, a minimum of 1200 sq. ft. of debris remain which should be removed from the seagrass beds for the health of those beds.

The applicant will plant mangroves along the shoreline to recreate the shoreline's mangrove fringe. The mangroves throughout the bay have been badly damaged, and the planting of additional mangroves along the shoreline will help to restore the habitat.

The applicant also proposes to remove debris and reef restoration within greater Coral Bay. SEG proposes to both collect debris from vessels and homes scattered by the hurricane and to repair corals within a 750 acre area in Coral Bay. There are towels, sails, boards, pieces of galvanized metal, and branches off trees scattered in the nearshore environment. This debris is lying in seagrass beds and on corals, resulting in mortality to both. The applicant proposes to collect a minimum of 10,000 sq. ft. of debris which will be documented using pre- and post-clean up scaled photographs of the reefs and seagrass beds in greater Coral Bay. If loose corals are encountered during the cleanup they will be reattached with SplashZone two-part underwater epoxy.

II. OBJECTIVES

The objective of this mitigation plan is to minimize the impact of the marina development on Coral Harbor and to improve the water quality and habitat function the harbor provides. In order to mitigate for the project impacts, seagrasses within the area of direct impact will be transplanted, at least 1200 s.f. of debris will be removed from the seagrass beds within Coral Harbor and 10,000 s.f of debris will be cleaned up within a 750 acre area of Coral Harbor and any loose corals encountered will be repaired. In addition, the applicant proposes improvements in the Coral Habor watershed to reduce deposition of terrestrial sediments and mangroves plantings to enhance habitat along the shoreline. Finally, the applicant will provide pump out services at the marina and it will schedule services for a pump out vessel to visit the Coral Bay regularly to service vessels at anchor outside the marina.

III. SITE SELECTION

The plan proposes to transplant the *Thalassia* and *Syringoduim* found within the 1,350 s.f. of the piling footprint to an area in the northwestern corner of the harbor. Seagrass has been lost in this area due to the deposition of sediment. The Summers End Group will undertake improvements and maintenance of the drainage facility to significantly abate inflows of terrestrial sediment into this area, that once had thriving seagrass beds. The placement of seagrass sod units in this area and the reduction of sediments being discharged from the watershed should serve to accelerate the re-colonization of this area.

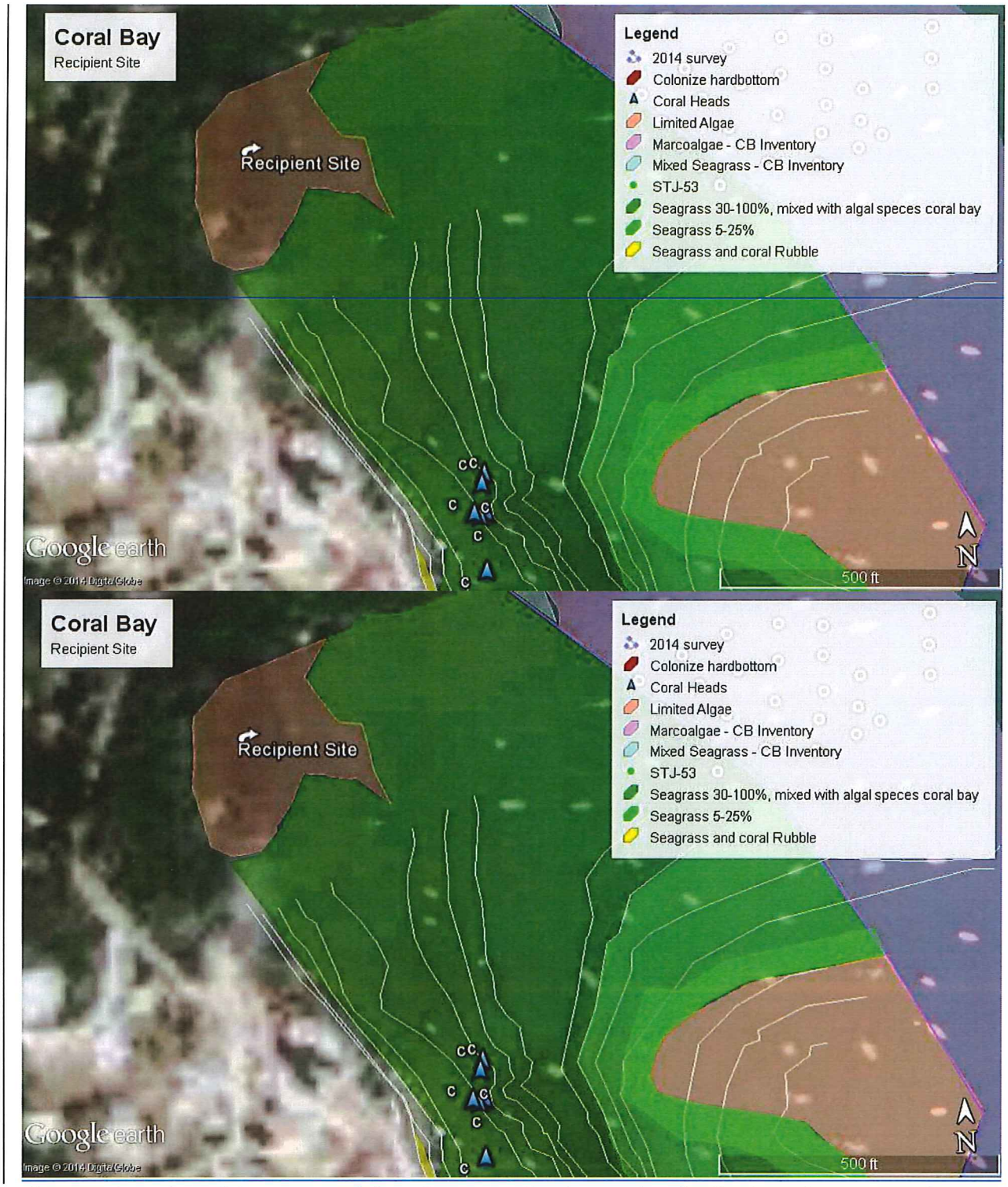


Figure 1. Location of Seagrass Recipient Site. Post-hurricane, the distribution of seagrasses has not significantly changed. Halophila stipulacea is now more abundant than prior to storm.

The applicant will plant mangroves along the shoreline seaward of the boardwalk and riprap. This planting effort will restore what was once an entire mangrove line shoreline prior to early development of the area. Three hundred red mangrove (*Rhizophora mangle*) propagules will be placed along the 850

feet of waterfront. The area to the west is colonized by red mangroves and this planting effort will create a more continuous mangrove fringe.

IV. SITE PROTECTION INSTRUMENT

The recipient site is located in Coral Harbor, St. John. As these are sovereign submerged lands, both USACE and CZM permits would have to be obtained for any future alteration of this area; therefore, no Site Protection Instruments are necessary to protect the recipient area since any changes would require review and approval of these agencies. In order to protect the recipient area from incidental impacts, informational buoys will be placed to alert boaters of the shallow seagrass beds and the presence of the transplant recipient area.

IV. BASELINE INFORMATION

This project proposes alterations to the marine environment through the construction of a marina, involving the driving of 960 piles that will directly impact 1350 sq. ft. of seafloor and associated benthic community.

The project area is located on the eastern side of Coral Harbor within Coral Bay on the east end of the island of St. John. There were dense seagrass beds offshore with a shoreline that is a mixture of muddy/cobble to the north and riprap to the south. There was a narrow band of muddy sand between the cobbly shore seagrass beds to the north and a mixture of seagrass and cobble to the south. There were a few large coral heads offshore of the culvert discharge in the middle of the property. Only four coral heads were found during the February 2018 survey after the passage of the hurricanes. This could be due to very poor visibility during the February 2018 survey or the coral heads may have been moved by the waves. One coral appears to have died. Dense seagrass, primarily *Thalassia testudinum*, were found in the offshore environment at depths between 1 and 11 ft, below 11 ft. this species diminishes and algal species become more prevalent. *Syringodium filiforme* also becomes more prevalent with depth. There are additional damaged areas within the seagrass beds as a result of the hurricanes but there are also areas which have obvious seagrass recolonization. There is not a significant change in distribution of seagrasses across the Harbor.

In 2009. Paul Bologna presented the "Assessing Faunal Utilization of Seagrass and Mangrove Habitats in St. John" at the annual meeting of the International Marine Conservation Congress, George Madison University, Fairfax, Virginia. He stated that, "Results indicate that Coral Bay Harbor, the most anthropogenically impacted site, had the highest *T. testudinum* biomass, but the lowest floral diversity. Its faunal community was dominated by small polychaetes with significantly lower secondary production."

The area is heavily used for boat mooring and there are large scars associated with most of the moorings, even those with properly installed anchors. Ropes swinging from the moorings denude large areas of seagrass. As previously noted, the area has also been significantly impacted by two Category 5 hurricanes.

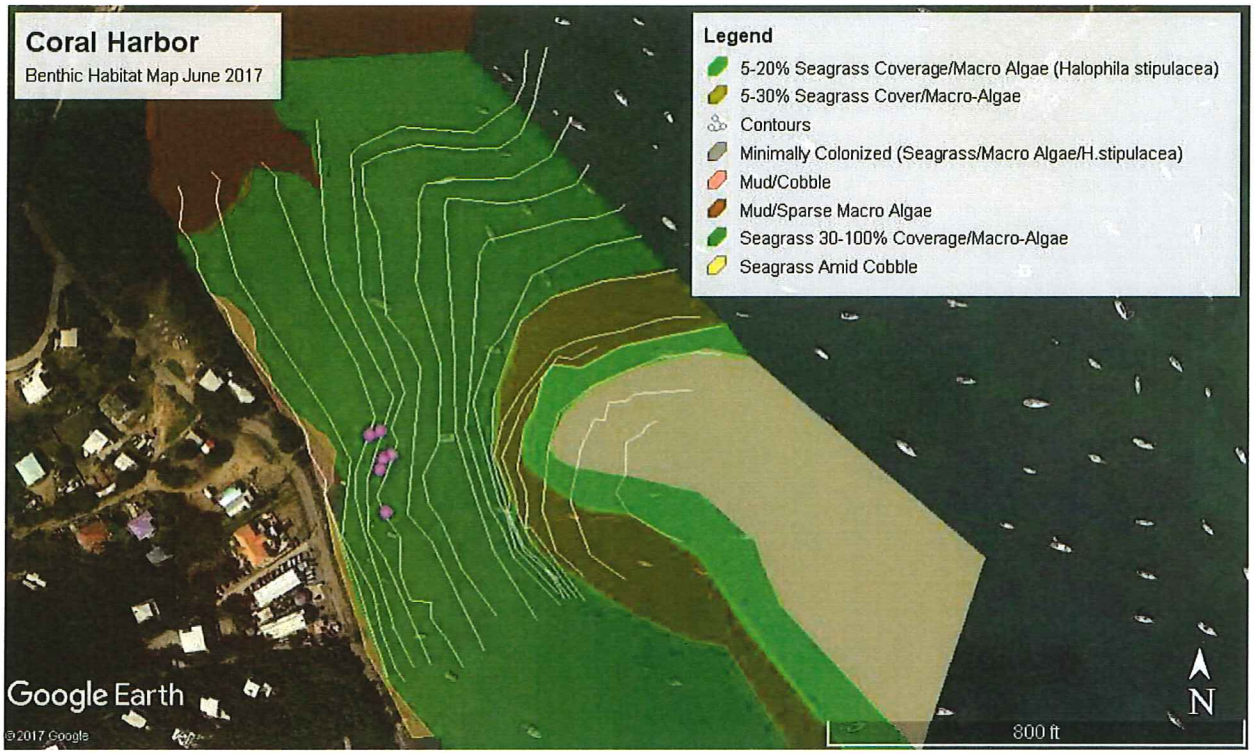
Benthic Community Survey Methods

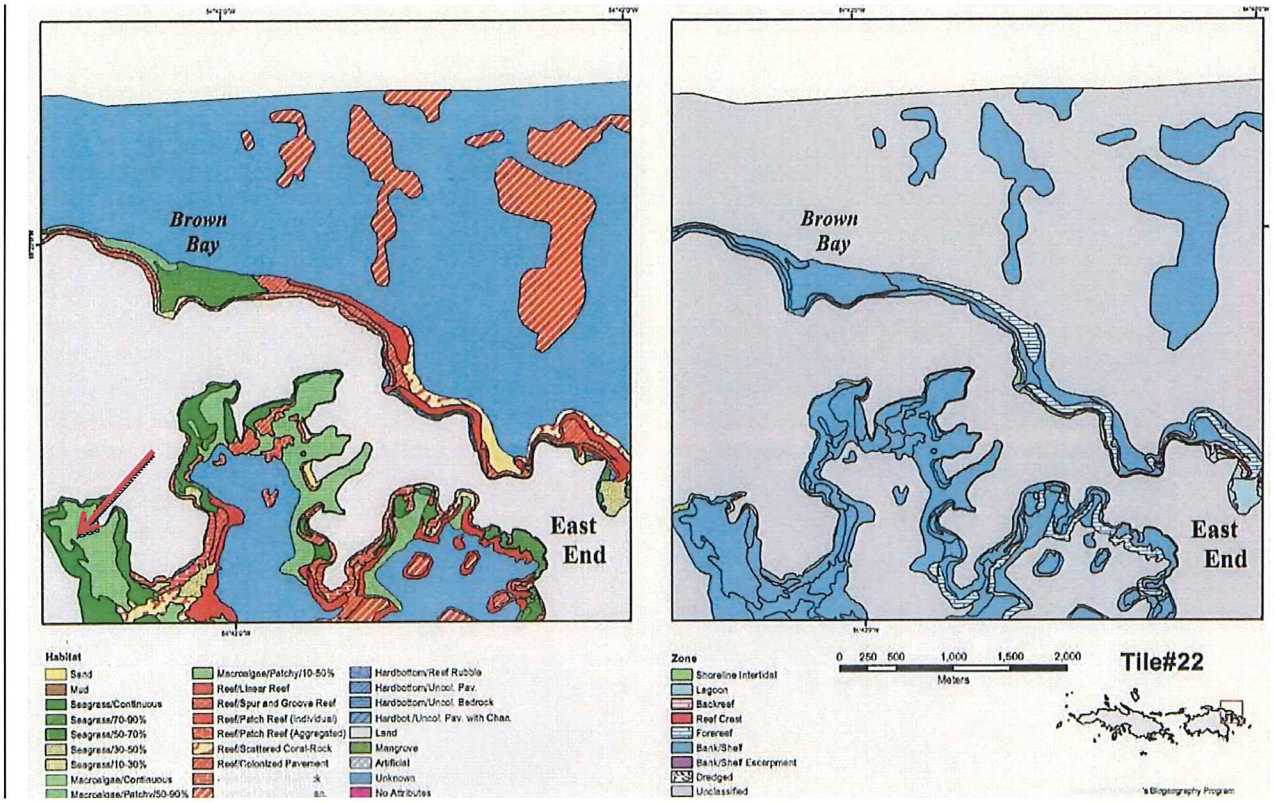
In addition to the seagrass survey information provided in the initial application, the site was resurveyed in 2015, 2016, and May and June of 2017. The site data has been updated following two major

hurricanes in September, 2017 with surveys done in February 2018. The entire site, including the marina location, buoy locations, potential construction foot print and transit routes, was surveyed. The changes noted post-hurricanes include an increase in the abundance of *Halophila stipulacea.* Prior to the 2017 hurricanes, it was present in the deepest areas with primarily macro-algal cover, as regrowth in some areas where there were previously scars in seagrass beds from anchor and rope drags, and in new areas that had been disturbed by anchor and rope drags. It is now also present within the *Thalassia* and Syringodium beds. The benthic map prepared in 2014 still accurately depicts the abundance and distribution of species; however, the lines are less distinct. North of the culvert, there is a narrow muddy band of uncolonized sand which varies in width between 7 ft. and 28 ft. along the shoreline and then *Syringodium filiforme* beds which grade into abundant *Thalassia testudinum*. The seagrass beds are dense and continuous offshore with scattered blow outs that are predominantly caused by debris, anchoring, moorings, and, most recently, by the hurricanes. To the south of the existing stormwater culvert, there is riprap revetment along the shoreline and cobbles amid the seagrass at a distance of 5 ft. to 35 ft. from shore. *Thalassia* dominates these grass beds all the way into shore on the southern side of the applican'ts property. These beds are extremely dense, broken only by debris, blowouts and anchor scars. There were six relatively large coral heads, *Solenastrea bournoni,* found offshore of the discharge point and all were located and still healthy as of 2017. During our 2018 re-survey, only 4 were found. Small *Siderastrea radians* colonies found on scattered debris and cobbles in the area are still present; however, it is obvious that some of the debris has been moved and some of these small colonies may have been lost.

The seagrass densities between depths of one foot and 11 feet range from 30% to 100%. The lower densities are found primarily in areas that are recolonizing after previous disturbances. *Thalassia* represents 80% of the seagrass and *Syringodium* approximately 20%. *Halodule beaudettei* is present in areas of regrowth. As depth increases, seagrass densities decrease and *Syringodium* becomes more abundant and represents a greater percentage of the seagrass present. At a depth of 11 feet to 13 feet, the seagrass densities fall to 5% to 30%. At depths of 13 feet to 14 feet, seagrass densities are no greater than 5% and macroalgae is the dominant colonizer. At 15 feet of depth, there is only an occasional *Thalassia* shoot, and macroalgae is the dominant colonizer and has colonized between 10% and 70% of the seafloor. *Halimedia* is the most common algae present. *Halophila stipulacea* is patchily to moderately abundant amid the algae at depth and is found in blowout sand scattered within the seagrass beds throughout the site. Also found at this depth are *Caulerpa, Udotea, Avrainvillea, Penicillus capitatus, Laurencia, Hypnea* and *Dictyota*. At greater depths, 16 feet to 19 feet, the macroalgae density decreases and patches of *H. stipulacea* are present in greater densities than were found in 2017. The system is light-limited at this depth. Beyond the inner harbor, dense seagrass is present in depths exceeding 25 feet.


100% coverage of seagrass at depths up to 10ft.





The NOS Benthic Habitat Map Tile 22.

In the past, sea cucumbers (*Holothuria mexicana*) were common as were sea stars (*Oreaster reticulatus*), and several juvenile conch were noted during all surveys. Due to limited visibility, the number of fish seen are usually limited. Tarpon (*Megalops atlanticus*) and yellowtail jacks (*Lutjanus chyrsurus*) have been seen, as well as one juvenile black tipped shark (*Carcharhinus limbatus*).

The bay is a known shark nursery. The Coral Bay Community Council funded a study of the harbor and found the harbor is heavily used by lemon, black tip, and nurse sharks.

The Figure below from their study shows the long line catch locations of sharks within the harbor.

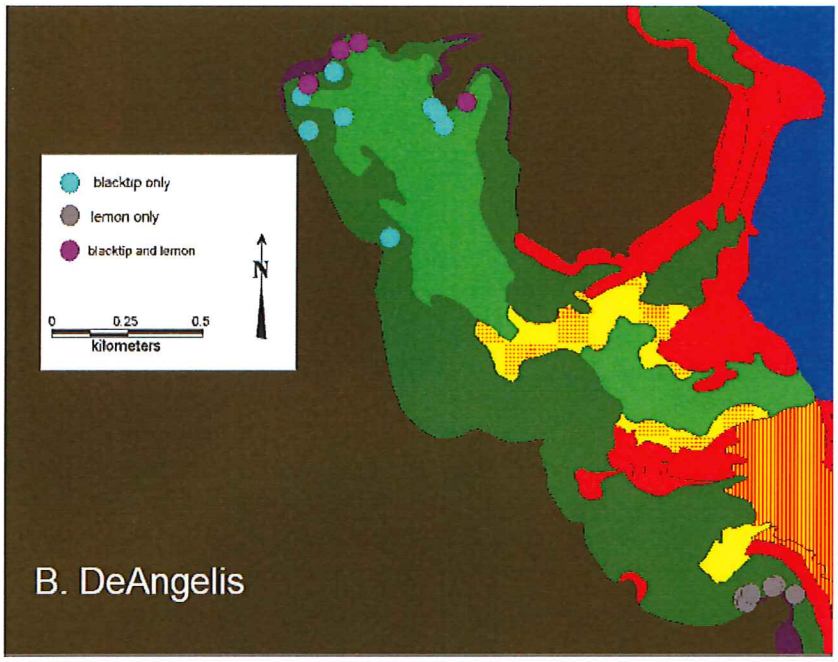


Fig. 1 Capture locations of blacktip and lemon sharks in Coral Harbor and Lagoon Point

At 13 ft algae is become the dominant species


Seagrass still covers up to 25% at 12 ft


At 11 ft, the transition happens and seagrass densities start to decline


At 15 ft, algal species dominate


An occasional seagrass shoot can still be found at 14 to15 ft


Seagrass and algae at 13 ft.


Dense beds between 1 and 11 ft.


The seagrasses are thriving


Some area are highly mixed seagrass and algae


One of the large coral heads (24 inches in diameter)


Coral growing on debris


Sea star


Sea cucumber

No pictures are available from the February, 2018 survey due to extremely poor water quality.

VI. COMPENSATION FOR UNAVOIDABLE IMPACTS

The marina docks have been positioned offshore to avoid dredging and to avoid the maximum amount of the densest seagrass while still allowing for access into the bay.

The project will directly impact approximately 1,350 sq. ft. due to the placement of 960 piles ranging from 14 to 18 inches in diameter (66 piles of 14-inch square concrete, 457 piles of 14-inch round steel encased concrete, and 437 piles of 18-inch round steel encased concrete).

The following calculations are based on seagrass densities prior to the hurricanes in September 2017, there are some new blowouts and some recolonization of previous disturbance areas but this should have minimal impact on the overall impact.

Type	Habitat	Number	Acres	Sq. ft.
Moorings	30-100% Coverage Seagrass	9 (8 +0.5,0.5)		
Moorings	5-30% Coverage Seagrass	3 (1.5 + 1.5)		
	Total	12		
Docks			1.69	73,591.10
	Riprap (above MHW)		0.01	235.00
	Docks Less Above MHW		1.68	73,356.10
	Mud/Cobble		0.02	762.20
	30-100% Coverage Seagrass		0.90	39,258.18
	5-30% Coverage Seagrass		0.48	20,927.41
	5-20% Coverage Seagrass Macro-Algae		0.13	5,836.21
	Minimally Colonized		0.15	6,572.10
	Total		1.68	73,356.10

A total of 39,258.18 sq. ft. of docks will be constructed over areas with SAV, the majority of which have densities between 20% and 100%. The applicant anticipates a 46% survival rate of SAV due to shading because the Applicant is using grated decking to allow some light to penetrate. We estimate 21,199.42 sq. ft. (0.487ac) of seagrass may be lost. At the maximum capacity with the maximum size boat in each slip, there will be 5.65 acres of shading within the marina due to vessels. We assumed that 50% of the seagrass under vessels would be lost due to vessels being in place for more than 2 weeks at a time. There will be some seagrass survival due to angle of the sun and different vessel types and some available light. Spudding during construction may account for 900 sq. ft. to 1,020 sq. ft. of seagrass impacts (6 sq. ft. per spudding event and between 150 and 170 relocations). The operation of the marina will also have an impact to SAV due to prop wash scour so we have assumed an additional 10% loss of SAV attributable to that impact. Based on these assumptions of SAV impact, the applicant estimates approximately 3.75 acres of seagrass will likely be lost as a result of the project.

The applicant is working with DPNR to relocate moored vessels from the project footprint. Once the mooring field is identified, the applicant will assist in surveying the location(s) and, if at all possible, will locate the mooring in an area with no benthic resources. Based on a maximum of 17 vessels requiring

mooring relocation, and if all of them had to be relocated in to areas containing seagrass, with an average vessel length of 30'and an 8' beam, shading and potential additional anchor or rope impacts should not exceed 240 sq. ft. per vessel. Based on these assumptions, a maximum seagrass impact of 4,080 sq. ft. or 0.094 acre would result.

Impacts of marina

VII. MITIGATION WORK PLAN

THALASSIA TRANSPLANT

Prior to the start of the marina project, the piling locations will be marked. *Thalassia* remaining in the piling footprints will be collected by divers in large sod units using trowels to cut completely through the root mass, the ideal unit size is approximately 1 sq. ft. and 8"-10" in depth. The sod units will be placed in underwater bins and carried to the transport tray located beneath the boat.

When the tray is full, the boat will move at idle speed to the recipient site in the northwest corner of the bay. The boat will monitor depth and will not get into areas so shallow that the tray will hit the bottom. The sod units will be removed from the tray and carried to the recipient area. A small depression will be made for each sod unit and, once fitted in place, the excavated sand will be back-filled around the unit. Sea grass staples will be placed in each unit to aid in stability. The units will be evenly scattered across the recipient site to facilitate the re-colonization of the area.

SEG will relocate any seagrass which may be impacted by the relocation of moorings for vessels. The seagrass will be transplanted to the applicant's seagrass recipient site in Coral Harbor and these transplants will be monitored and maintained along with the transplanted seagrass from the marina's docks. The mooring transplants would be done concurrently with the seagrass transplant for the marina

project. Adequate room exists within the recipient site to receive these additional seagrass transplants if needed.

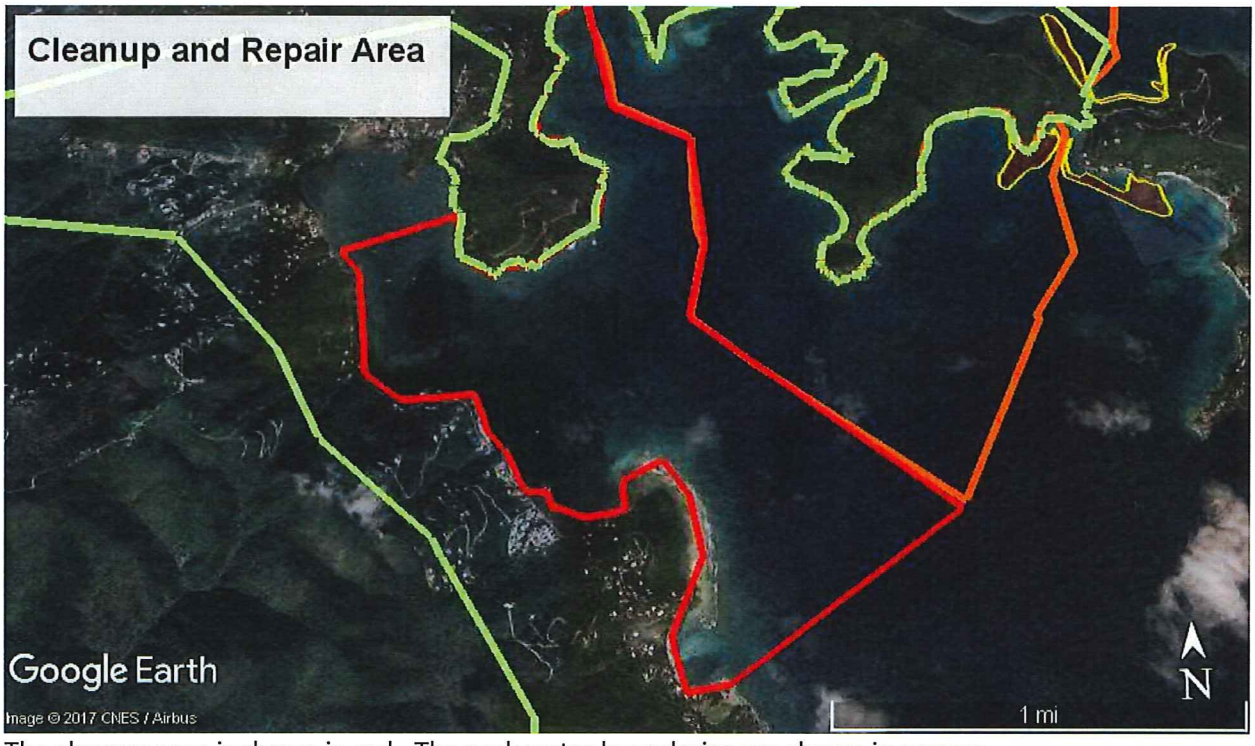
Once the relocation is complete, five transect lines will be established and a baseline report will be prepared. Transects will be videoed and photographed on a monthly basis for a period of two years after the transplant efforts. Thereafter, the beds will be monitored on a quarterly basis for the next three years. Reports will be provided with the videos to the reviewing agencies within 30 days of each survey.

CLEAN UP OF DEBRIS IN CORAL HARBOR

During the 2018 surveys, it was observed that there is a significant amount of small debris within the harbor including tires, tree limbs, clothing, sail pieces, boards, trash cans, and similar items. The applicant will collect a minimum of 1200 sq. ft. of debris from the seagrass beds within the harbor and document it with scaled photographes.

CLEAN UP OF DEBRIS AND REPAIR OF CORALS WITHIN 750 ACRES OF CORAL HARBOR

In order to provide sufficient mitigation for the impacts, surveys will be made of 750 acres of Coral Harbor outside the NPS boundary as shown below.



The cleanup area is shown in red. The park water boundaries are shown in orange.

Dives in the cleanup area revealed large amounts of terrestrial and vessel related debris in the marine environment. Some of the debris is natural in origin such as trees trunks and branches, but much of it is roofing materials, chairs, cloth, and a variety of building materials. This debris can be found on the reef

and within seagrass beds, smothering corals and seagrass. This material is can be moved during subsequent storms and has the potential of causing additional and continuing damage.

Divers will swim transects throughout the cleanup area collecting debris found on the reefs and in the seagrass beds. Photographs will be taken of the debris prior to removal and of the area after the debris is removed. Lift bags will be used to collect larger pieces of debris. All material will be collected and properly disposed of at the Bovoni Landfill in St. Thomas. A minimum of 10,000 sq. ft. of material will be collected by divers from seagrass beds and coral colonized areas. The material collected will be documented by scale photographs.

Divers will survey the reef and any corals that have been knocked loose will be re-attached to their substrate using two-part underwater epoxy (Splashzone). The base of each coral will be carefully cleaned with a wire brush and the substrate cleaned to remove algae and any other material which may interfere with the adhesion of the epoxy or cement. Each coral will be carefully placed and held until the epoxy or cement starts to set. Corals will be photographed prior to and after re-attachment.

Divers will work systematically through the bay to ensure that all areas are covered.

MANGROVE PLANTING

Three hundred red mangrove propagules will be planted along the shoreline across the 850 feet of shoreline on approximate 3 feet centers. The mangroves will be carefully placed so that they have the greatest chance of survival and will be placed just above the MHW line. The mangroves will be placed amid the riprap/stones on the southern end of the property. Mangroves will be replaced over the five year monitoring as necessary to assure colonization of the entire shoreline.

PLACEMENT OF INFORMATIONAL BUOYS

The Summers End Group will place buoys at the locations shown below. These informational buoys will warn boats of the presence of the natural resources and shallow areas on the approach to the Yacht Club at Summers End. The buoys will be located at: at 18° 20.703'N 64° 42.897'W; 18° 20.460'N 64° 42.750'W; 18° 20.437'N 64° 42.542'W; 18° 20.122'N 64° 42.437'W; 18° 19.949'N 64° 42.046'W; 18° 20.061'N 64° 41.409'W; and, 18° 19.819'N 64° 40.709'W. A total of 7 buoys will be placed with screw anchors and loaded lines so they will have no impact on the seafloor. Some of the buoys will be placed in sand and several will be in seagrass beds. Due to the use of the anchoring system, the buoys should have no impact on seagrass resources.

INFORMATIONAL SIGNAGE

Summers End Group will provide information to all boats using the marina on the necessity of the protection of natural resources and the importance of the use of safe boating practices for all the boats using the marina. Signage will also be placed in conspicuous places on the docks showing nearby shallow areas, proper anchoring procedures and steps necessary to protect sea turtles and marine mammals.

PUMPOUT AND WASTE FACILITIES

Currently, there is no pump out or waste disposal facilities within the harbor and disposal of wastes are not policed. The marina will provide these services to all boaters in the bay, not just those docking at the marina, at cost. These efforts will help substantially reduce the unpermitted discharges of waste into the harbor and help lower the nutrient input. There will be both a pump out facility at the dock and a pump out vessel scheduled regularly to service vessels in the harbor.

VIII. MAINTENANCE PLAN

Once the project is completed, the recipient seagrass transplant site will be surveyed on a monthly basis for a period of two years. If grass rhizomes become unburied they will re-buried and, if necessary, seagrass staples will be utilized.

The mangroves will be surveyed on a biweekly basis for the first two months and then on a monthly basis for the first two years to ensure that they are stable and becoming well rooted. Propagules will be replaced as needed to create a continuous fringe.

IX. ECOLOGICAL PERFORMANCE STANDARDS

In order to objectively evaluate the mitigation projects, ecological performance standards must be established. The object of these mitigation projects is to minimize impact to benthic resources which provide high quality habitat to protected marine species by replacing any lost functional value of the benthic resources caused by the impacts. The performance standards will include both the viability of the transplanted seagrass, as well as its use by protected species.

It is the intent of this transplanting program to obtain a minimum of 80% survival of the transplanted seagrasses and have the uncolonized area recover its seagrass population. The Summers End Group is

committed to putting forth the necessary effort to assure that the proposed seagrass relocation is successful and to obtain the greatest survival rate for the transplanted organisms.

The applicant seeks to have 100% survival of 300 mangroves across the front of the property to restore the mangrove fringe.

X. MONITORING REQUIREMENTS

Monitoring the compensatory mitigation project sites is necessary to determine whether the project is meeting its performance standards, and to determine if additional measures are necessary to assure that the compensatory mitigation projects are accomplishing their objectives.

As per the guidelines set forth in §230.96 the mitigation project will be monitored for a minimum of five years. The monitoring will include two programs: monitoring transplanted seagrasses and the mangrove planting area; and, monitoring the cleanup area's coral and seagrasses that have been cleared of debris to determine if recolonization is occurring.

Once the seagrass relocation project is complete, five transect lines will be established and a baseline report will be prepared. The transects will be videoed and photographed on a monthly basis for a period of two years after the transplant. After two years, the beds will be monitored on a quarterly basis for the next three years. Reports will be provided with the videos to the reviewing agencies within 30 days of completion of the survey. All species utilizing the beds will be documented in the monitoring reports.

Twenty five locations will be established in the harbor were debris has been removed and fifty locations will be established in areas where debris has been removed from the cleanup area in the outer bay. These locations will be monitored concurrently with the seagrass relocation monitoring to look for recolonization. If corals are re-attached, they will be marked and monitored on a monthy basis for three months and then on a yearly basis for a period of five years.

The mangroves will be counted on a monthly basis for the first year and replaced as necessary. After the first year, mangroves will be monitored every six months.

XI. LONG TERM MANAGEMENT PLAN

Navigational buoys will be placed at the recipient site notifying boaters of the presence of important resources and the need for caution while boating. Periodic monitoring of the bay will ensure that debris is removed as it is introduced.

The applicant will provide assistance to maintain best management practices ("BMPs") within the watershed to improve runoff water quality and reduce inputs of terrestrial sediment into the marine environment.

The applicant is undertaking a long term water quality monitoring program within the harbor to look at changes during the life of the marina. Twelve water quality stations will be established and monitored on a quarterly basis for turbidity (NTU), dissolved oxygen (DO mg/l), salinity (0/00), pH, and temperature. Sediment traps will be monitored quarterly to check for changes in sediment deposition. Sediment samples will be taken every 5 years. Photo quadrats will be monitored which include seagrass and the nearest ESA coral species.

This data will help evaluate the BMP's that have been installed in the watershed and the marina and help determine if additional measures are be needed to improve water quality and habitats within the bay. If negative changes in the bay's condition are noted, measures can be developed timely to help minimize and abate any identified degradation. Reports will be delivered to the agencies (NMFS, ACE, CZM and DEP) on a quarterly basis as monitoring is conducted.

XII. ADAPTIVE MANAGEMENT PLAN

In the event that there are difficulties with installing and maintaining the mitigation as planned, the Summers End Group is prepared to take additional steps to see that compensatory mitigation is successfully achieved. If necessary, extended monitoring and maintenance or additional marking of the site will be undertaken in order to meet the mitigation goal.

If the mitigation goal of 80% survival for seagrasses is not met at the end of five years, the applicant will prepare a detailed report of why the mitigation was not successful and Summers End will meet with the permitting agencies and develop a plan for additional compensatory mitigation to meet the mitigation goal.

XIII. FINANCIAL ASSURANCES

Summers End Group will secure a performance bond in the amount of the cost mitigation program and subsequent monitoring throughout the implementation and monitoring period. The bond will follow the guidelines set out by the U.S. Army Corps of Engineers Regulatory Guidance Letter No. 50-1, 14 February 2005, SUBJECT: Guidance on the Use of Financial Assurances, and Suggested Language for Special Conditions for Department of the Army Permits Requiring Performance Bonds. The estimated mitigation costs are shown below.

Mitigation			
		One time Cost	Recurring Annually
Seagrass Mitigation			
	Set up of stations	$ 2,500.00	
	Baseline	$ 6,000.00	
	Photoquadrant Baseline	$ 12,000.00	
	Monitoring	$ 36,000.00	
	Relocation of Seagrass for piling and motoring	$ 256,612.50	
Mangrove Mitigation			
	Trees, Mangroves, Planting	$ 20,000.00	
	Monitoring / Maintenance – First 3 years	$ 108,000.00	
	Monitoring / Maintenance -- Last 3 years	$ 108,000.00	
Seagrass/Coral Protection			
	Reef/Shallow Seagrass Information Buoys	$ 10,000.00	
Water Quality Improvement			
Watershed Enhancement	Repair of Existing Projects	$ 75,000.00	
	Annual Maintenance		$ 25,000.00
Environmental Education			
Dock Signage	Educational and Informational Placards	$ 20,000.00	
Long-Term Monitoring Water Quality			
	Water Samples		$ 135,000.00
Environmental Restoration Coral Harbor			
	Debris Cleanup	$ 150,000.00	
	Diver Bay Cleanup / Location of Mooring Footprints	$ 58,000.00	
Totals		$ 862,112.50	$165,000.00