

Appendix C-3

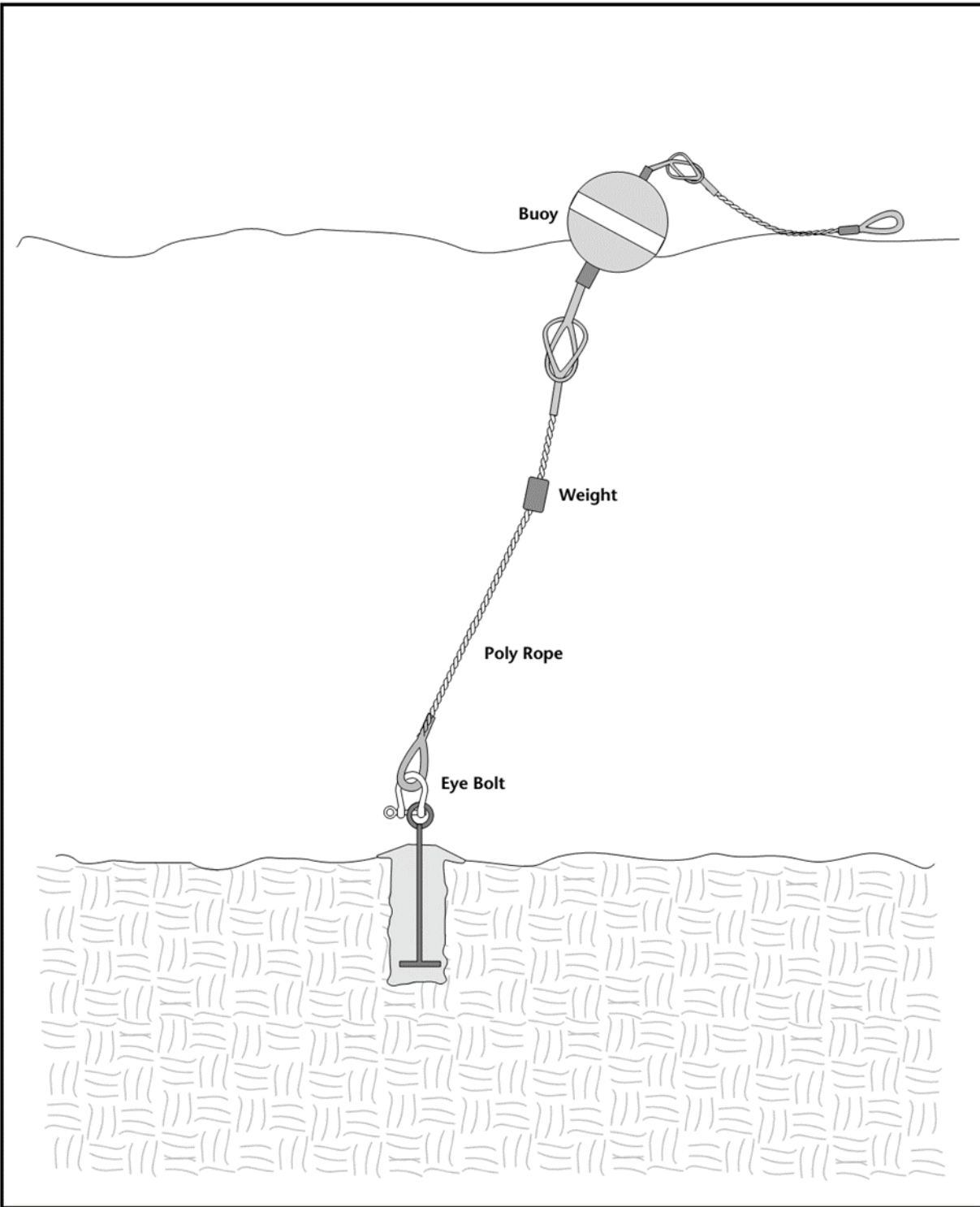
Response to comments of the national Fish and Wildlife Service, August 4, 2015 on SAJ-2004-12518 (SP-JCM), for the St. John Marina - Summer's End Marina in Coral Harbor on St. John

The impact calculations presented in Fish and Wildlife's response was correct for the marina and boat shading, "The applicant estimates that the marina impacts on the marine bottom which is mostly sea grass, is as follows: 1.42 acres of docks and 5.7 acres of boat slip shading." The 7.1 acres was the project impact area in which construction impacts could occur, this included the temporary construction impacts of 2.0 acres, the 2.0 acres were not in addition to.

The number of boats within Coral Harbor has increased since the previous assessment and there are now 140 vessels moored or on anchor and this does not include the dinghies and tenders who are tied up along the docks off of Skinny Legs on the northern sided of the marina. There are currently 27 vessels which will be displaced by the marina. A large portion of the vessels are not legally moored. With the construction of the marina and a slip for the use of DPNR's enforcement boat the applicant hopes to see a significant reduction in vessels outside the marina footprint. Also some the existing vessels in the harbor have expressed an interest in moving in to the marina. No matter the reduction of vessels outside marina, the marina with its additional 144 slips and 12 moorings will result in a significant increase in vessels within Coral Harbor. The vessels in the marina, will have pump out service and refuse service and will not be at anchor. Many of the vessels currently in the bay have 3 and 4 anchors out and are resulting in large scars in the seagrass beds.

The larger mooring field is no longer a part of this application. The mooring field requested has been removed from this application even though it was previously approved the Department of Planning and Natural Resources, Division of Coastal Zone Management. ("DPNR"). This idea, which was first suggested by National Marine Fisheries Service as a mitigation measure, would have helped abate on going impacts caused by poor mooring practices and unauthorized boating activities. While installation and management of a properly designed mooring field could greatly reduce the ongoing degradation currently occurring within Coral Harbor as a result of illegal moorings, there was strong public objection, especially by boaters within the bay. DPNR approval does not require construction of every component permitted and is contingent on receipt of all other required permits. By removing the mooring field from the ACOE permit application, Summer's End Group will not be seeking to obtain the remaining permits that would be necessary for the installation of the mooring field. Consequently, the mooring field does not need to be considered in the review of the pending application.

The applicant still is requesting 12 moorings which will be used for overflow or for boaters who do not wish to come to the docks. All moorings will be the helix type moorings with floated lines so they do not impact the seafloor and the seagrass beds.



Example of proposed mooring type.

The CCBCs estimate is more than the CZM submerged lands foot print which includes all navigation areas and the entire footprint in which the marina lies. “ Permittée proposes to construct a marina and designated mooring field, and the use and occupancy of approximately 1.7 acres or 74,900 sq. ft. of structures occupying submerged land, and 25.8 acres or 1,123,848 sq.

ft. of submerged lands surrounding the structures.” This considers all of the area between the property and the channel.



Submerged Land Lease Area



Marina footprint within Coral Harbor.

The surveys done as a part of this study (which was updated 2015, 2016 and 2017) shows seagrasses up to 30-100% out to 10ft of water depth falling to 5-30% as water deepens and finally only has sparse colonization over 14ft. There is actually denser seagrass than depicted on the NOAA maps. Some individual coral colonies were found within the marina construction area, several large heads of *Solenastrea bournoni*, as well as several small *Siderastrea radicans* on debris and a single *Psuedodiploria strigosa*. The bay is a shark nursery and a small blacktip and lemon shark were seen during surveys. Sea turtles are also present within the bay and both hawksbill sea turtles (*Eretmochelys imbricata*) and green turtles (*Chelonia mydas*) were seen during the long-term turtle assessment (NMFS Response Appendix A).

A total of 39,258.18sq.ft of docks are over areas with 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, 21,199.42sq.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 shaded by the boats will be lost due to vessels being in placed 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 900-1020sq.ft of impact (6sf 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% loss. In total, approximately 3.75 acres of seagrass will probably be lost as a result of the project.

In order to reduce potential impacts barges will not be used to deliver fuel. All seagrasses within the piling footprints will be transplanted. Boat lifts will be utilized in the shallowest slips to reduce shading impacts. BMPs within the Coral Harbor watershed will be maintained to improve water quality. Derelict and sunken vessels will be removed to allow recolonization
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by seagrasses. The mitigation plans to offset and compensate for these impacts are found in Appendix D.

Marinas can have a variety of additional indirect impacts through vessel operations and water quality impacts. The project is avoiding dredging and minimizing the amount of seagrass impact and exposure of sediments for resuspension, and will be planting The Island Resources Foundation found elevated chemicals found in bottom paints was having a significant effect within Benner Bay. Tributyltin (TBT) is one of the worse bottom paints and it is ban internationally but still allowable with restrictions in the US.

Samples were taken to assess if there were already issues with heavy metals in the soils within the bay. The sediment samples found that no TBT is present. The testing found very low amounts of hydrocarbons, 79mg/kg and no mercury was found in any of the samples. All samples had high Aluminum but aluminum is known to be as much as 26% of soils and sediments. Only copper was found over NOAA's Threshold Effects Level (TEL) 18.7mg/k and it did not exceed the Probable Effects Level (PEL) 108mg/kg and was well below the Effect Range Median (ERM) 270mg/kg. The highest copper was 26mg/kg found in sample 1 which was take on the eastern side of the project footprint. The results of the testing is appended herewith.

Summers End will be prohibiting all bottom cleaning with in the marina and will only allow eco-friendly boat products (eco-friendly boat cleaning products are made of organic, phosphate-free and biodegradable soaps) to wash vessels with.

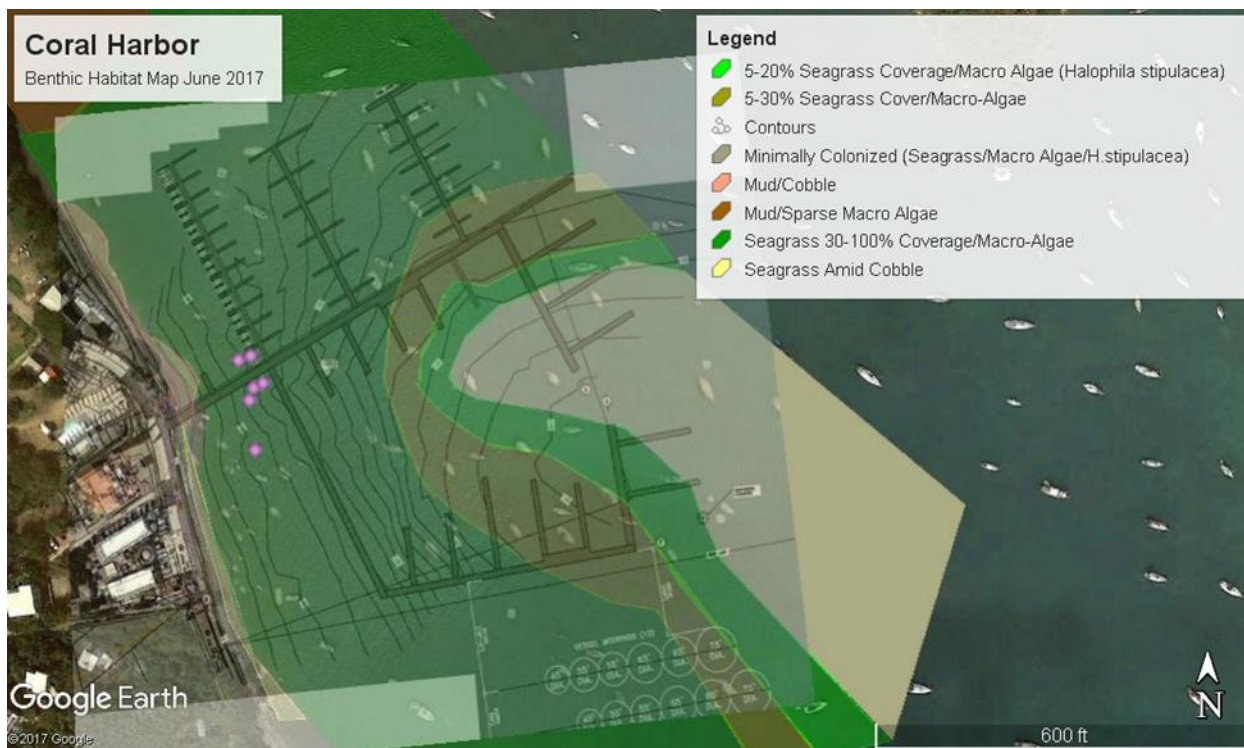
Service Recommendations:

1. The applicant should address all direct and indirect impacts of the project to sea grasses within the project limits.

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 39,258.18sq.ft of docks are over areas with 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, 21,199.42sq.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 this will be lost due to vessels being in placed 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 900-1020sq.ft of impact (6sf 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% loss. In total, approximately 3.75 acres of seagrass will probably be lost as a result of the project.

2. The project's footprint, including the mooring field, should be superimposed on a benthic habitat map in order to determine the extent of marine habitat that would be occupied by the project and to assess the potential impacts to marine habitat from the project's footprint.



3. The applicant should develop a compensatory mitigation plan that reflects not only the direct impacts of the placement of piles, boat slips and decking, but also reflects the long term degradation of the construction and operation of the marina for the entire project limits including the mooring field.

The mitigation plans are found within Appendix D. The mitigation includes, seagrass relocation, derelict vessel removal, maintenance of existing BPM to improve water quality, informational buoys to protect seagrasses and corals, boater information to help teach boaters not the anchor indiscriminately, long term monitoring of water quality, sediment quality and the surrounding environment so that if degradation is noted steps can be taken to abate them.

4. The applicant should assess the possible long term effects of contaminants on marine habitats in and around the proposed Summer's End marina at Coral Bay. Measures to mitigate or minimize these long term impacts should be included in the mitigation plan.

A baseline has been established for the sediments within the area and at present metals and contaminants are not elevated. As stated above Summers End will be prohibiting all bottom cleaning with in the marina and will only allow eco-friendly boat products (eco-friendly boat cleaning products are made of organic, phosphate-free and biodegradable soaps) to wash vessels with. Sediments within the marina will be assessed on a yearly basis to look at changes in metal concentrations and if changes are seen methods can be investigated to try and abate any negative impact.

5. With regards to federally listed species under USFWS purview, the Antillean manatee (*Trichechus manatus manatus*) which although rare in the USVI, is still known to occur in those waters. The Corps should require manatee standard conditions for the construction and operation of the marina.

No manatees have not been seen in Coral Harbor, however to protect the manatee if one were to appear, the applicant will implement the standard conditions for construction and operation of the marina.

The following manatee conservation measures will be followed:

1. The contractor instructs all personnel associated with construction of the facility of the presence of manatees and the need to avoid collisions with manatees.
2. All construction personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Endangered Species Act of 1973 and the Marine Mammal Protection Act of 1972. The permit holder and/or contractor will be held responsible for any manatee harmed, harassed, or killed as a result of construction of the project.
3. The project work area shall be surveyed for the presence of manatees at least one hour before any dredging starts and prior to the installation of the silt fence. If manatees are found before any in-water project activity starts, the contractor shall wait for the manatee to leave the area by itself and be at least 100 feet from the project in-water area. Manatees must not be herded or harassed into leaving the area.
4. Siltation barriers will be made of material in which manatee cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project construction will operate at "no-wake/idle" speed at all times while in water within manatee areas and vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards (300 feet) of the in-water work area, all appropriate precautions shall be implemented to ensure protection of the manatees. These precautions shall include operating all equipment in such a manner that moving equipment does not come any closer than 50 to 100 feet of any manatee. If a manatee is within 50 feet of in-water work, all in-

water activities must shut down, until manatee moves on its own at least 100 feet away from the in-water work area. Manatees must not be herded or harassed into leaving the area.

7. Any collision with and/or injury to a manatee shall be reported immediately to the Department of Natural and Environmental Resources Law Enforcement (787-724-5700) and the USFWS Caribbean Ecological Services Field Office (787-851-7297).

8. The contractor shall keep a log detailing sightings, collisions, or injury to manatees, which have occurred during the contract period. Following project completion, a report summarizing the above incidents and sightings will be submitted to the U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office, P.O. Box 491, Boquerón, Puerto Rico 00622.

9. The permit holder and/or contractor shall install and maintain temporary and permanent manatee signs as recommended by the following guidelines:

a. Signs must be placed in a prominent location for maximum visibility. Areas that are recommended include: dock walkways, dock master offices, near restrooms or other high patron foot traffic areas. b. Signs must be replaced when faded, damaged or outdated. c. If the facility is large or has multiple docks with separate walkways that are a considerable distance apart, multiple signs should be installed. d. These signs must not face the water, must never be attached to pilings or navigational markers in the water. Some exceptions to signs facing the water exist for temporary signs during in-water work. e. For durability, all signs should be fiberglass, PVC or metal with rounded corners (hand-sanded to remove all sharp edges and burrs), constructed of 0.08 Gauge 5052-H38 Aluminum with an Alodine 1200 conversion coating and Engineer Grade Type I reflective sheeting. Signs constructed to other specifications may not provide durability acceptable to the consumer. f. Signs other than depicted may be considered, but should be approved by USFWS.