

Kelly Egan, Project Manager
Project Manager, Biologist
Regulatory Office
US Army Corps of Engineers
4400 PGA Blvd Suite 500
Palm Beach Gardens, FL 33410

Re: SAJ-2004-12518 (SP-JCM)
St. John Marina

Dear Ms. Egan:

Please accept this letter as The Summer's End Group, LLC's (Applicant) response to the National Marine Fisheries Service (NMFS) requests for additional information by email correspondence dated September 26, 2018 from Protected Resources Division (PRD) and by letter dated October 25, 2018 from the Habitat Conservation Division (HCD) regarding the above referenced application. The Applicant sought clarification and assistance in responding to these requests with several conference calls with Jose Cedeno-Maldonado and NMFS staff from both divisions. The Applicant responds as follows.

- 1. **Action Area** Pursuant to 50 C.F.R. 402.02, the term Action Area is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." Accordingly, the Action Area typically includes the affected jurisdictional waters and other areas affected by the authorized work or structures within a reasonable distance.*

Applicant Response:

The US Army Corps of Engineers (USACE) and NMFS requested a comprehensive circulation study be completed by the Applicant to accurately assess the area of potential impacts and thereby define an appropriate action area. A defined action area is necessary to assess reasonable potential impacts and appropriately quantify the compensatory mitigation required to offset those impacts. NMFS-PRD provided the following comment on the scoping draft for the requested circulation study from Sea Diversified, Inc. dated April 26, 2019:

"For example, if modeling were to show turbidity would stay within 100 ft of the project footprint, then the benthic survey logically would not be needed over the entire ~100 acres of Coral"

Please see Exhibit 1, Attachment A, Sea Diversified scoping document mark-up, June 10, 2019.

The USACE references the law pursuant to 50 C.F.R. 402.02., and defines “action area” as “all areas to be affected directly or indirectly by the federal action...”, “...areas affected by the authorized work or structures within a reasonable distance.”

The Applicant has completed the requested comprehensive circulation study. The results of the circulation study, inclusive of the numerical modeling analysis, defines the areas to be affected directly or indirectly as approximately 120 meters around the proposed marina (approx. 45 acres). Based on the modeling results and data, Humiston & Moore Engineers recommend the action area for potential impacts be established within 120 meters of the proposed marina.

Please see Exhibit 2, Attachment A, St. John Marina Numerical Modeling Analysis prepared for Sea Diversified, Inc. by Humiston & Moore Engineers.

Based on the modeling analysis, Applicant states that the 114 acres of action area previously proposed by staff is not reasonable based on the area of impacts identified by the studies performed. Further, “the benthic survey logically would not be needed” based on data provided, the Applicant requests that the action area defined by the District as the area within 120 meters around the proposed marina (approx. 45 acres) based on the data and analysis provided.

The USACE and NMFS reviewed and commented on the scope of work developed for the circulation study, including the specific methods needed to generate the data and analysis sought by NMFS in its review of this application. NMFS was quite specific as to the information sought and recognized the impact that the information generated would have on the defined action area as the comment on the draft scope shows.

Based on the Applicant’s and USACE’s discussions with NMFS, the action area should be limited to the areas of anticipated direct and indirect impacts which is identified by the studies provided to be the area within 120 meters around the proposed marina.

- 2. Essential Fish Habitat within the Project Area.** *NMFS believes that corals listed under the Endangered Species Act (ESA-listed corals) may be affected by the proposed action. USACE’s consultation request letter indicates that there are shallow reef and hardbottom areas to the south and southeast of the proposed marina footprint, immediately adjacent to the mouth of the harbor on both sides. The letter states that there is approximately 0.8 acre of shallow reef/hardbottom located on the west side of the mouth of Coral Harbor, about 1,100 feet (ft) from the project site and approximately 2.15 acres of shallow reef and hardbottom located on the east side of the mouth of Coral Harbor, about 2,100 ft from the project site. Please provide a comprehensive survey of ESA-listed corals in the action area. The detailed survey methodology should be*

developed in concert with NMFS in order to ensure that it is capable of detecting and identifying any ESA-listed coral species that may be present.

Applicant Response:

The Applicant consulted Sea Diversified, Inc. and Humiston & Moore Engineers (H&M) to provide a comprehensive circulation study in order to determine the possibility of impacts to ESA-listed corals. Based on the results of the circulation study, H&M determined that the action area should be approximately 120 meters around the proposed marina (approx. 45 acres) based on the results of the study.

According to the circulation study, the 45-acre area around the marina has a potential for impact from sediment deposition to a depth of two meters (most natural resources are above two meters in depth) as a result of boating activities. The overall analysis provides reasonable assurances that the proposed marina will not adversely impact the ESA-listed corals located at the west and east mouth of the harbor, due to both the depth of those resources and the distance from the marina.

Humiston & Moore Engineers state in their circulation study that the results show that Harbor Point reef will not be affected by the marina operation. Harbor Point is the area noted above in the NMFS RAI as the reef/hardbottom located on the west side of the mouth of Coral Harbor. The results of the circulation study show that there is an 8% possibility of the sediment reaching Pen Point but only at a depth below three meters where there are no corals or areas of significance. Sea Diversified, Inc. performed both side scan sonar and multibeam sonar on 100% of Harbor Point and Pen Point reefs. The results of the side scan sonar indicate no coral or area of concern below 2 meters depth.

Humiston & Moore engineers recommended that the action area be identified as the area within roughly 120 meters of the proposed marina, this identified area also corresponds to wave and current conditions 92% of the time. This area would cover the area with potential for sediment deposition down to 2-meters in depth (most natural resources are above 2-meter depth) could occur from marina activities. Accordingly, this is the area of concern for both mitigation and monitoring.

Neither Harbor Point nor Pen Point reefs are located within the recommended action area. The Applicant is not required to mitigate for areas that are not impacted directly or indirectly by the proposed project. Based on the studies performed, no further benthic surveys are required at the reef areas at the mouth of the harbor as they are not within the area that will be directly or indirectly impacted by the proposed project.

Please see Exhibit 2, Attachment A, St. John Marina Numerical Modeling Analysis prepared for Sea Diversified, Inc. by Humiston & Moore Engineers.

The Summer's End (SE) Harbor Management Docking and Mooring Plan (HDMP) was developed by Marine Management and Consulting, (MMC) President and Managing director Jeff Boyd. The HDMP is designed to protect of the coral colonies and hardbottom areas noted by Sea Diversified, Inc. and Humiston & Moore Engineers (H&M) in their work. The HDMP requires a clearly marked navigational channel directing vessel ingress to and egress from Coral Harbor, provides for enforcement and security of harbor activities by a United States Virgin Islands Department of Planning and Natural Resources (DPNR) officer and a pilot vessel to escort vessels into and out of Coral Harbor as necessary. The clear delineation of the channel, together with the other proposed actions, will provide assurances that the reefs, including all ESA listed corals, will be protected from direct impacts.

As a result of the Circulation Study completed by Sea Diversified, and the HDMP prepared by MMC, the Applicant states that the marina development and operations will not directly or indirectly impact the 0.80 acres of coral colonized hardbottom located 1,100 feet south of the project site, or the 2.15 acres of coral colonized hardbottom located 2,100 feet to the southeast of the project site.

Please see the Summer's End Harbor Management Docking and Mooring Plan, by Marina Management and Consulting, attached as Exhibit 3, Attachment A.

- 3. *Minimization of Impacts to Essential Fish Habitat*** - *The Applicant reduced the footprint of the marina by reducing the number of slips from 145 to 144 and the number of pilings from 1,333 to 960. The dock size was reduced by 0.01 acres, which would reduce the area of direct impact by 0.03 acres and the area of shading by 0.04 acres. Although we appreciate inclusion of these additional project minimization measures, they fall short of expectations for a project of this scale. The NMFS recommends additional avoidance and minimization of impacts by reducing the number of slips in shallow areas where there would be little clearance between the sea bottom and moored vessels. Such adaptations could include the use of single pilings in place of finger piers and a significant reduction in the number of slips and vessel sizes the Applicant aims to accommodate.*

Applicant Response:

In order to minimize impacts that could result from prop-wash or bottom scour in the slips located at south section of the marina dock with water depths ranging from 6 – 7 feet, the Applicant will limit the draft for vessels allowed to dock in these slips. The draft and operational limitations for vessels allowed to use these slips have been incorporated into the Summer's End HDMP.

NMFS acknowledged the reduction of piles for the marina and the slips in the marina. The pile reduction are Applicant's most recent efforts at minimization of impacts and does not acknowledge Applicant's previous efforts to minimize impacts. To assist staff in reviewing

minimization, Applicant has prepared a list of modifications to the project made thus far to minimize project impacts in response to comments in the federal and territorial review process of its pending applications. Applicant has demonstrated compliance with the requirements to avoid impacts by previously submitting a substantive and dispositive “alternatives analysis” as required by the Section 404(b)(1) Guidelines. The alternatives analysis outlined the Project purpose and analyzed multiple sites with the region. The analysis supports the conclusion that there were no practicable alternatives that satisfy the project purpose with less adverse environmental impacts that are available and capable of being acquired and developed taking costs, existing technology and logistics into account in light of the overall project purpose. See also response to Question 4.

Applicant has implemented the following minimization efforts including:

- Relocating docks further away from shore to remove the need for a dredge permit. By not dredging and, instead shifting, slips and vessels into deeper water, Applicant has minimized project impacts by eliminating impacts from re-suspended sediments that would have been caused by dredging within the project footprint. Please refer to the analysis submitted by Applicant regarding the defined action area for further information.
- Locating docks within the harbor at deeper depths to minimize the risk of potential prop wash and scouring.
- Modifying the original plans by replacing floating docks with solid composite decking with fixed docks with solid composite decking installed at a minimum of 4' above the mean high-water line in response to comments from USACE and NMFS.
- Substituting grated decking on the fixed docks throughout the facility to provide additional light exposure to submerged aquatic vegetation. These modifications to the marina provided substantially reduced (near-shore) and or eliminated deeper water impacts to seagrasses at the marina dock locations.
- Adding boat lifts to A Dock greatly reducing the shading impacts on seagrasses.
- Imposing operational and draft limitations for vessels docking at F Dock slip section I, where there are water depths of 6 – 7 feet to minimize and prevent prop-wash and scouring and limit suspension of sediment, thereby minimizing impacts to benthic habitat.
- Fund a grant that provides for a full time DPNR enforcement officer for Coral Harbor and the island of John. A full-time enforcement officer for St. John helps to dramatically improve the marine environment from long term damages caused by non-compliant boaters and others. Added enforcement helps to ensure the monitoring of boating

activities and moorings and enforce compliance with existing regulations and permits to protect sea grass beds and corals from prop dredge and anchor damage.

- Reducing the time needed for pile installation by 25% as a result of the geotechnical study and subsequent engineering re-evaluation,

Please see Avoidance and Minimization document attached as Exhibit 4, Attachment A.

The Applicant performed a break-even analysis to establish the vessel size and number of slips necessary for a marina to achieve economic sustainability on St. John. This project is specifically designed to both meet the project purpose and comply with the requirements for permitting, including avoidance, minimization and mitigation in accordance with regulations. The 144-slip mix of slips that accommodate both small and large vessels within the marina is based on that analysis and constitutes the alternative that meets the overall project purpose, providing a viable facility in this market and location while also complying with regulatory protections for the environment. The model runs for the economic analysis tested not only the existing design, but also several alternate scenarios. The study concluded that any reduction of the size of the marina below 144 slips or reducing the size range of vessels the marina could accommodate substantially impairs the financial viability of the project. Most significantly, such reductions in the marina greatly increase the economic risk of the project, and substantially increases the losses in the first several years, pushing the break-even point out into the future to an extent that capital funding at reasonable rates is imperiled or impossible to obtain.

A practicable alternative is defined in 40 C.F.R. Section 230.10(a)(2) as an alternative that is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Alternatives that do not satisfy the project purpose are not feasible. In the analysis of feasibility, issues of costs, existing technologies, and logistics must be considered. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense.

Applicant has worked with the USACE and NMFS from the initial concept to the current proposal. Applicant has responded to agency requests for additional information with a great deal of complex study and scientific analysis to establish that avoidance requirements have been met and further engaged in substantial minimization of the proposed project in its efforts to satisfy the regulatory requirements. What remains are unavoidable impacts resulting from a water dependent project. Accordingly, Applicant is submitting detailed mitigation to offset any unavoidable impacts. Applicant has meticulously analyzed the current environmental conditions in the harbor, the lack of enforcement of existing rules related to mooring and boat operations, illegal boating activity in Coral Harbor, the condition of publicly funded watershed projects that are failing mostly due to lack of maintenance, and the continuing impact of insufficiently treated stormwater carrying sediments into the harbor, to design its compensatory mitigation for this project to provide long-term ecological improvement in Coral Harbor and subsequently Coral Bay .

Applicant's proposal provides sufficient mitigation to result in a net improvement for water quality within Coral Harbor. Applicant further asserts it has provided sufficient data and analysis to the agencies to support the conclusion that Applicant has met the requirements for avoidance, minimized the project to the extent economically and reasonably feasible given the overall project purpose and provided sufficient mitigation to offset the project's unavoidable impacts.

4. Additional Information Needed to Evaluate Impacts to Essential Fish Habitat

The NMFS asserts Applicant did not adequately consider relocating the marina or reducing its size in response to local conditions that trigger the need for additional infrastructure. As described in the Suitability Analysis previously submitted, the winds at Coral Harbor as typically come from the east/southeast, which means the proposed marina would be exposed often to offshore waves. The Suitability Analysis concluded the estimated one-year return wave heights at the project site would exceed established industry guidelines for berthing operations conditions. The analysis also concluded additional infrastructure, such as a floating wave attenuator, is necessary to ensure operations criteria are not exceeded and additional coastal infrastructure, such as a rubble mound breakwater, is necessary to mitigate the effects of a 50-year wave event. In-situ measurement data would be required to strengthen this analysis, and would be required to determine the potential impacts from the additional infrastructure.

Applicant Response:

As previously noted in the response to Question 3, Applicant asserts that they have provided sufficient data and analysis in support of its avoidance analysis for the project site and no further analysis is required. In support of which Applicant states that Bioimpact, Inc. was retained to provide a comprehensive Alternative Site Analysis report that considered 10 sites where a marina could be developed on St. John. The analysis evaluated the sites for: compatibility with existing land uses and landscape; potential effects to existing business and local economy; compatibility with existing infrastructure; potential conflicts and adverse effects related to navigation; quantification of potential impacts to benthic habitats; and potential effects to protected or sensitive resources within or in the vicinity resulting from construction and operation of the marina; and, what avoidance and minimization measures could be undertaken at locations that would still satisfy the project purpose. The results of the alternative site analysis identified that the location proposed for St. John Marina provides the best practicable alternative on the island for a marina serving varying sizes of vessels and providing needed services and amenities to boaters in and around St. John. A practicable alternative is defined in 40 C.F.R. Section 230.10(a)(2) as an alternative that is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Property that the Applicant cannot reasonably obtain,

utilize, or manage to fulfill the project purpose is not a practicable alternative. 40 C.F.R. Section 230.10(a)(2).

Please see Exhibit 5, Attachment A, Alternative Analysis.

NMFS staff also asserts that additional infrastructure will be required based on wave heights analysis. The Applicant asserts that additional infrastructure will not be necessary for the operation of the marina based on recommendations from Water Environment Consultants and Marina Management & Consultants as well as an additional review completed by Marina Management & Consultants who is also the designer of Yacht Haven Grand on St. Thomas which has been successfully operated for more than a decade.

The Applicant asserts a correction to the comment above from NMFS that *“The analysis also concluded additional infrastructure, such as a floating wave attenuator, is necessary to ensure operations criteria...”*

The letter from Matt Goodrich, P.E., Water Environment Consultants dated February 20, 2018 clarifies by stating the following:

“As noted by the Corps in the January 28, 2018 letter, the WEC report explains that additional infrastructure to attenuate waves is one of the methods...”

“...the WEC report also explains that there are other alternatives to address the wave events that exceed the criteria. The proposed project will employ alternative approaches other than wave attenuation infrastructure (e.g., breakwaters).”

“...there are no regulator requirement to satisfy these specific criteria.”

“...vessels will be evacuated from the marina in advance of hurricane conditions. Therefore, the only wave height consideration is in regard to structure design and survivability.”

“The fixed docks used for the marina are designed for wave conditions that exceed the ASCE’s harbor tranquility criteria. This is accomplished by using a decking that allow water to pass through) thereby reducing wave uplift forces) and by using a heavy duty dock system.”

“...the WEC report concludes that the site is expected to provide safe berthing for recreational boats during operational conditions except for a small fraction of the time.”

“The smallest vessels in the marina will be on boat lifts and safe moorings of these vessels is not a concern during conditions when waves exceed the operational criteria.”

The letter from Jeff, Boyd, President, Marine Management & Consulting RE: SAJ-2004-12518 (SP-JCM) further clarifies design components and operational protocols that offset the need for any additional attenuation.

“The proposed marina plan arranges berths so that the largest vessels are positioned towards the seaward and windward-end of the marina plan, the smallest vessels are positioned towards the landward-end of the marina plan in the lee of the mega yachts which effectively attenuate the incident waves and reduce wave conditions towards the leeward-end of the marina where smaller boats are docked.”

In addition to the foregoing, HDMP provides for additional operational measures that are commonly seen in marinas within the USVI. MMC will implement the HDMP operational measures for the St. John Marina as the alternative to additional infrastructure.

“Tiedowns for boats in the marina that will be adjusted by marina staff address changes in wind and wave as needed.”

“The smallest berths in the marina, 36 feet, will use boat lifts to remove smaller boats from the water.”

“This marina will require pre-authorization to enter or leave the marina based on size, draft, and wind conditions as warranted. When conditions warrant, tenders will escort large vessels into and out of the marina.”

On a per vessel size and location analysis “Long term berths will also include expandable elastic shock chords inserted within the mooring lines thus mitigating the surge and or fetch and slowing the movement periods of the vessels.”

MMC evaluated several other marina facilities in close proximity to the proposed St. John Marina in Coral Harbor. Wind data was submitted as a comparison to other existing and successful marinas in close proximity. MMC concluded that that the proposed marina location is on par with or better than other facilities in the region in regard to impacts resulting from wind and wave action within in the action area.

Please see referenced supporting documents:

Exhibit 6, Attachment A, Letter from Matt Goodrich, P.E., Principal, Water Environment Consultants

Exhibit 6, Attachment B, Letter from Jeff Boyd, President, Marine Management & Consulting

Exhibit 6, Attachment C, Wave Graphics from Marine Management & Consulting

Based on the foregoing, Applicant asserts that the HDMP submitted together with the explanation of alternative methods provided by Water Environment Consultants are sufficient to refute staff concern that the wind and wave action require additional infrastructure, and supports Applicant's determination that a wave attenuator, is unnecessary for the successful operation of the project. Consequently, Applicant's request for authorization will not be modified to include any additional infrastructure and there will be no additional impacts to Essential Fish Habitat.

**5. Additional Information Needed to Evaluate Impacts to Essential Fish Habitat
Continued:**

The NMFS agrees with the USACE that a geotechnical study would aid evaluation of impacts from pile installation. The Applicant estimates an average of 300 strikes to install each pile (960 total). At six piles installed per day, the pile driving requires 166 days under the assumption that the sediments within the project footprint are composed of a mix of fine, silty sand, and clay throughout the 25-foot embedment depth. The District requested a geotechnical study from the Applicant to identify the sediments within the marina footprint that would support these assumptions; however, the study was not provided. If harder substrates are present within the embedment depth, pile installation may require additional strikes, longer installation times, or additional equipment. Any of these actions could increase impacts of sedimentation and shading on seagrass during construction activities.

Applicant Response:

Applicant retained Sea Diversified, Inc. to conduct the requested geotechnical study and the work has been completed. The scope and method of the study conducted was reviewed and discussed with the USACE and NMFS prior to field activities to assure the data collected would generate the information sought by USACE and NMFS to evaluate the application for possible impacts to Essential Fish Habitat.

The results of the geotechnical study indicate that no hard substrates are present within the embedment depth for the piles. Further, the study shows that the vibra-hammer method for pile installation originally proposed by the Applicant is a viable and effective installation method throughout the marina footprint.

TechnoMarine Manufacturing has reevaluated the marina design and engineering based on the geotechnical study produced by Sea Diversified, Inc. and has updated the project's pile driving summary. The pile driving summary states that the Applicant will be able to drive 8 piles per day using a vibra-hammer for a duration of 120 days. As a result of the geotechnical study and subsequent engineering re-evaluation, Applicant modifies its request to seek authorization for the installation of up to 8 piles per day for a duration of approximately 120 days. The proposed modification to the installation process results in a 25% reduction in the time required for piling installation compared to that originally proposed by Applicant. Further, the proposal, as

revised to allow the use of vibrohammer, results in significant reductions in impacts to the environment by reducing the time needed for installation and reducing the noise generated by installation of individual piles and the duration of the noise for the installation of all the piles. Applicant states that based on the results of the geotechnical analysis and the circulation study, NMFS concern of increased impacts to seagrasses caused by sedimentation and shading during construction activities are not supported by the data generated. Applicant further states that NMFS have sufficient information at this time to complete its evaluation of impacts to Essential Fish Habitat.

Please see attached:

Exhibit 9, Attachment A, Survey Report Geophysical Investigation and Bathymetric Survey Summer's End Marina by Sea Diversified, Inc.

Exhibit 7, Attachment A, Letter from Olivier Bigler, P.E., Technomarine Manufacturing, Inc. dated September 17, 2019.

6. Additional Information Needed to Evaluate Impacts to essential Fish Habitat

Continued:

The Applicant provided water current measurements showing water movement within Coral Harbor is sluggish with circulation and currents influenced by tides and wind. Turbidity levels are consistently high within Coral Harbor, especially compared to areas throughout the rest of Coral Bay, resulting from limited exchange and flushing in and out of the bay. The Applicant's analysis of water current measurements acknowledges that under such conditions, re-suspended fine sediments would remain in the water column of Coral Harbor for an extended period potentially resulting in long-term increases in turbidity and associated detrimental effects to the benthic community, potentially worsening the already compromised water quality of Coral Harbor. In order to assess fully impacts on seagrass due to prop wash, the District requested a study of water circulation from the Applicant to assess the potential impacts with respect to sedimentation, water quality, and turbidity. Some of the proposed slips that would accommodate large vessels 100 feet or longer, which typically draft between five to nine feet, would be located in water depths of eight to nine feet, which could result in vessels frequently stirring-up and re-suspending sediments during the operation of the marina. Because the Applicant did not provide this study, the 4 agencies do not have enough information to fully assess or quantify the potential loss of seagrass due to prop wash scouring.

Applicant Response:

Response: In response to the Districts request, the Applicant has provided a comprehensive and detailed circulation study. The Applicant consulted Sea Diversified, Inc. and Humiston & Moore Engineers to complete the circulation study and provide the District and NMFS the requested analysis. The extensive scope for this study was discussed and revised with USACE and NMFS staff prior to initiation in order to provide the data needed to accurately assess impacts related

to sedimentation, water quality, and turbidity and provide the analysis to address NMFS concerns.

The results of the study conclude that finer particles (silt), once displaced tend to deposit in deeper water within the bay where they are not likely to be disturbed. Based on the circulation study results, it appears that ESA-listed corals, elkhorn and staghorn coral critical habitat will not be impacted during construction or by the operation of the project.

There will be some impact to seagrass within the action area, including the marina and the adjacent area within 120 meters of the project. This analysis is complete and will be submitted under separate cover.

Please see St. John Marina Numerical Modeling Analysis, by Humiston & Moore Engineers attached as Exhibit 2, Attachment A.

7. ESA-Listed Coral Relocation

1. *Please provide the number, species, and size of ESA-listed corals that are going to be reattached in the 750-acre action area.*
2. *Who will be doing the coral repair work, and what are their qualifications to collect, handle, and reattach ESA-listed corals (if listed corals are to be reattached)?*

Applicant Response:

ESA-Listed Coral Relocation is no longer proposed based on the results of the circulation study. Based on discussions with NMFS and the USACE as well as the results of the circulation report, the Applicant states the proposed compensatory mitigation to improve water quality in Coral Harbor will be more than sufficient to offset any impacts.

Please see St. John Marina Numerical Modeling Analysis, by Humiston & Moore Engineers attached as Exhibit 2, Attachment A.

8. Upland Permitting

1. *(Partially Addressed) We will need to analyze the impacts from construction and operations of the marina to water quality in the bay, and then their effects to ESA species and critical habitat. Will the Applicant need to obtain a multi-sector general permit? Construction general permit? If the answer to either of these questions is yes, please identify each permit and its specific requirements with regard to sediment/erosion control and monitoring requirements (i.e., number and types of*

discharges, measurable monitoring requirements like water volume and concentration of contaminants expected in discharges, visual monitoring requirements, the stormwater pollution prevention plan, etc.). If no multi-sector general permit or construction general permit will be obtained, please explain why.

USACE explained that its purview is in-water work, and these permits are outside its purview (multi-section general permits and construction general permits are delegated to USVI from USEPA). However, NMFS needs this information in order to assess whether effluent will impact listed species. NMFS understands that USACE is limited in its ability to enforce monitoring at upland outfalls.

Applicant Response:

Applicant will obtain and comply with any and all permits delegated to USVI from USEPA relative to the protection of water bodies from stormwater impacts related to construction and operation of the project. Control of stormwater from construction site requires the installation of silt fence and siltation barriers to prevent discharges during storm events. Applicant will maintain the silt fencing and siltation barriers until construction is complete. Further, Applicant has proposed as part of its mitigation to provide rehabilitation and long term maintenance for portions of the stormwater system within the drainage basin which are presently unmaintained.

(Partially Addressed) What impact will stormwater discharge entering Coral Harbor from proposed upland development outfall(s) have on listed species (i.e., corals, sea turtles, fish)? [note: DVD Enclosure 6A diagrams erosion and sediment control plan] Impact considerations should include and specify all water quality contaminants. Similar to 15, above, USACE explained that its purview is in-water work; however, NMFS needs this information to assess whether effluent will impact listed species.

Applicant Response:

Applicant's upland development is a very small proportion of the uplands within the drainage basin. Applicant will comply with the delegated program for protection of water quality to USVI from USEPA for the operation and maintenance of its project. As discussed above, Applicant will rehabilitate and provide long term maintenance for portions of the stormwater system presently installed in the drainage basin, but not maintained, that is adversely impacting Coral Harbor which will thereby provide a net improvement in stormwater quality entering the Harbor. Presently there are no funds available to provide for long term maintenance and operation of the stormwater system installed in the drainage basin as the grants which paid for the stormwater improvements did not include funds for maintenance. As staff will doubtless agree, surface water management systems fail to protect water quality when such systems are not regularly and timely maintained, and may actually cause impairment to the water body.

9. Vessel Docking and Mooring

1. *Are there expectations to expand the marina in the future?*

Applicant Response: The Applicant has no plans to expand the marina in the future. In regard to the additional questions raised by Staff, the Applicant has addressed all concerns expressed by staff in the marina's Harbor Management Plan, including the reorganization of existing noncompliant vessels, and the comparison of current vessel traffic to anticipated vessel traffic when the marina is complete.

Please see attached Harbor Management Plan by Jeff Boyd, President of Marine Management and Consulting attached as Exhibit 3, Attachment A.

2. *What is the process for removal and installation of existing moorings? What impact will the proposed move of existing moorings have on listed species?*

Applicant Response:

As per Applicant's Harbor Management Vessel Docking and Mooring Plan: *"....in cooperation and coordination with USVI DPNR, the St. John Marina developers have agreed to professionally install, have inspected and maintain up to 75 public moorings throughout Coral Harbor, whose locations will be noted in the plan. The existing moorings that do not meet the standards set for the new moorings, or are a navigational hazard when presently located within the overall mooring plan area may be totally professionally removed with no impacts to listed species."*

3. *Will the proposed marina result in a redistribution of existing vessels? (in order to conduct a vessel strike analysis, I need to compare the number of new vessels to be docked and new vessels to be moored under the proposal to existing vessels moored in Coral Harbor)*

Applicant Response:

Applicant's Harbor Management Vessel Docking and Mooring Plan states:

"It is estimated that there are currently 55 +/- vessels moored and anchored throughout Coral Harbor, of which approximately 95% are non-compliant with the Rules and Regulations for Mooring and Anchoring Vessels in the U.S. Virgin Islands, as identified in Title 25, Chapter 16 of VIRR."

Because of the pervasiveness of habitually non-compliant boats in the harbor, it is estimated that less than half of its current occupants would be willing to come into compliance and be relocated to a new mooring, and thus are expected to vacate Coral Harbor to places unknown.

While combined long-term and short-term slip rental sales will average 90%+, marina occupancy will average annually at approximately 30%+/-, due to insurance regulations and other hurricane season related concerns, and seasonal tourist fluctuations.”

4. *What is the vessel size class for each of the 12 new moorings, and what is the respective depth at each mooring?*

Applicant Response:

Applicant’s Harbor Management Vessel Docking and Mooring Plan states: “Twelve (12) moorings directly associated with the marina will be available for boats from approximately 30-60’. Depth for each mooring will be a minimum of 10’ and a maximum of 17’.”

5. *Please compare the current vessel traffic (i.e., number and size of boats moored in Coral Harbor) to the number and size of boats proposed to be docked (in the marina) and moored in Coral Harbor.*

Applicant Response:

Applicant’s Harbor Management Vessel Docking and Mooring Plan states:

“It is estimated that there are currently 55 +/- vessels moored and anchored throughout Coral Harbor, of which approximately 95% are non-compliant with the Rules and Regulations for Mooring and Anchoring Vessels in the U.S. Virgin Islands, as identified in Title 25, Chapter 16 of VIRR.

Because of the pervasiveness of habitually non-compliant boats in the harbor, it is estimated that less than half of its current occupants would be willing to come into compliance and be relocated to a new mooring, and thus are expected to vacate Coral Harbor to places unknown.

While combined long-term and short-term slip rental sales will average 90%+, marina occupancy will average annually at approximately 30%+/-, due to insurance regulations and other hurricane season related concerns, and seasonal tourist fluctuations.

Boats presently moored or anchored in Coral Harbor range in size from approximately 35’ +/- sail and power boats to a 100’+ schooner. Vessels at the St. John Marina will be similar in size but will additionally include vessels of 150’+/- . An increase in ingress and egress to Coral Harbor is anticipated, whether for use of marina facilities or DPNR designated moorings. Currently approximately 12 boats per day enter and leave Coral Harbor.

When harbor improvements, channel markings, and mooring relocations have been completed and the St. John Marina is operational it is estimated that boat traffic in and out of the harbor to be 20 +/- per day on average, although marina boat traffic and occupancy fluctuate seasonally. While combined long-term and short-term slip rental sales will average 90%+, marina occupancy will average annually at approximately 30%+/- occupancy, due to insurance regulations and other hurricane season related concerns, and seasonal tourist fluctuations.”

Without the professional harbor management provided by marina personnel, reorganization, professional installation of proper mooring tackle & maintenance offered by the project, and mobile and fixed wastewater pump out, Coral Harbor is destined to return to its pre-Irma state of over 115 non-compliant boats committing consistent, long term damage to seagrass and the unabated discharge of untreated wastewater into the harbor.

To summarize, Applicant has no plans to expand the marina in the future. Further, the Applicant has fully addressed all concerns expressed by staff in the marina's Harbor Management Plan, including the reorganization of existing vessels, and the comparison of current vessel traffic to anticipated vessel traffic when the marina is complete.

Please see attached Harbor Management Plan by Jeff Boyd, President of Marine Management and Construction attached as Exhibit 3, Attachment A.

10. Miscellaneous

- a. *What is the approximate proportion of seagrass estimated to be lost due to the proposed project to total seagrass (available for ESA-listed species foraging and refuge) in Coral Harbor?*

Applicant response:

In total it is estimated that 3.75 acres of seagrass may be lost.

- b. *What assurances can the Applicant provide that the turtle grass transplanted to the northwest corner of Coral Bay will survive? Based upon information provided, no seagrass currently grows there.*

Applicant response:

Applicant no longer proposes to transplant sea grass as part of its mitigation proposal.

- c. *Please confirm that both an air bubble curtain and wood block cushions would be used simultaneously to attenuate noise -- and protect juvenile Nassau grouper that may be present in the action area -- during installation of all piles.*

Applicant response:

Based on the geotechnical results produced by Sea Diversified, Inc. and the pile driving summary produced by TechnoMarine Manufacturing, the pile installation will be accomplished

by vibra-hammer which would not require either a bubble curtain or wood block cushions to attenuate noise. In the unlikely event that an impact hammer would be required in pile driving for any reason, an air bubble curtain and wood block cushion would be used simultaneously to attenuate noise as originally proposed.