



UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

October 25, 2018

F/SER47 AR/pw

(Sent via Electronic Mail)

Colonel Andrew Kelly, Commander
Jacksonville District Corps of Engineers, Antilles Office
Fundacion Angel Ramos, Annex Building
383 Franklin Delano Roosevelt Avenue, Suite 202
San Juan, Puerto Rico, 00918

Attention: José A. Cedeño-Maldonado

Dear Colonel Kelly:

NOAA's National Marine Fisheries Service (NMFS) reviewed the letter dated July 12, 2018, from the Jacksonville District regarding public notice SAJ-2004-12518 (SP-JCM). The Summer's End Group, LLC, requests authorization from the Department of the Army to construct a private commercial marina in Coral Harbor, Estate Carolina, Coral Bay, St. John, U.S. Virgin Islands. The marina design, as currently proposed, would consist of 144-slips constructed from 960 piles to accommodate vessels up to 160 feet long, along with 12 permanent moorings, a dinghy dock, fuel pump, and redevelopment of upland areas. The project would result in the loss of a significant amount of seagrass, identified as essential fish habitat (EFH) for federally managed species under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). As part of the ongoing EFH consultation, the District requested the NMFS review the additional information provided by the applicant:

- *Environmental Assessment Report [EAR] for the Development of the St. John Marina, Coral Bay, St. John USVI*, dated April 2014
- The applicant's response to NMFS-Habitat Conservation Division submitted to the District on August 15, 2017
- *Marina Site Suitability Analysis – Wind and Wave Analysis* (Suitability Analysis), dated December 9, 2017
- *Compensatory Mitigation Plan for Development of the St. John Marina* (Mitigation Plan), revised February 2018
- Coral Bay Community Council and Save Coral Bay comments to the District on the project, dated May 4, 2018
- A description of the proposed action and action area, a description and analysis of potential routes of effect or the manner in which the action may affect EFH, and a summary of the District's determination of effect pursuant to the provisions of the Magnuson-Stevens Act prepared by the District.

Consultation History

By letter dated February 5, 2015, the NMFS responded to the public notice dated January 7, 2015, providing EFH conservation recommendations and objections pursuant to Section 404(q) of the Clean Water Act and concluding the proposed project would adversely affect EFH designated by the Caribbean Fishery Management Council. Specifically, the proposed project design had the potential to affect 12 acres of the sea bottom, including an estimated 9.12 acres of seagrass. The proposed mitigation activities,



including planting mangroves and removing debris, did not quantify the seagrass habitat restored by these actions; therefore, the NMFS did not have sufficient information to determine if mitigation activities would sufficiently offset the impacts to seagrass habitat. Under the EFH provisions of the Magnuson-Stevens Act, the NMFS recommended the Department of the Army not authorize the project as proposed. Furthermore, by letter dated March 2, 2015, the NMFS determined the project may result in substantial and unacceptable impacts to aquatic resources of national importance (ARNI) pursuant to Part IV 3(b) of the Memorandum of Agreement between the Department of Commerce and the Department of the Army dated August 11, 1992.

On July 9, 2015, the District issued a revised public notice listing the same applicant and SAJ number and requested continued consultation with the NMFS Habitat Conservation Division. By email dated September 11, 2015, the NMFS informed the District the alterations did not change the project substantively and, therefore, warranted no changes to the previous letters.

By letter dated July 12, 2018, the District provided the applicant's response to the comments from the NMFS and other agencies along with steps and measures to avoid and minimize the potential impacts of the proposed project on EFH, should the District permit the project. These steps and measures include:

- Analysis of an alternative location and design
- Completion of comprehensive benthic assessments
- Use of grated decking on the proposed docking structures, walkways, and finger piers
- Design of the marina to avoid dredging; positioning of larger vessels and slips in deeper waters
- Inclusion of pump out and waste collection facilities in the marina design
- Implementation of a boaters education program as part of operations of the marina
- Implementation of the Clean Marina Action Plan
- Implementation of acoustic impact attenuation measures during the proposed pile driving activities
- Use of erosion and sediment control measures during upland construction and floating silt curtains during in-water work; implementation of water quality and environmental monitoring plans
- A plan to transplant to a safe location seagrass harvested from within the footprint of proposed piles
- Implementation of the Mitigation Plan, including removal of debris, repair of corals throughout Coral Bay, mangrove planting, and long-term management and maintenance of stormwater control structures throughout the Coral Bay watershed.

Essential Fish Habitat within the Project Area

The District has defined the action area to include approximately 114 acres of navigable waters subject to the potential direct and indirect impacts of the proposed project. The docks, moorings, slips, and navigation ways of the marina would occupy approximately 25.5 percent (nearly 26 acres) of the approximate 97 acres of marine bottom within Coral Harbor. Within this action area, approximately 0.80 acres of coral colonized hardbottom is located 1,100 feet south of the project site, and 2.15 acres of coral colonized hardbottom is located 2,100 feet to the southeast of the project site.

The proposed marina site is on the eastern side of Coral Harbor. On August 2, 2018, the NMFS (Habitat Conservation and Protected Resources Divisions) visited the action area with representatives of USVI Department of Planning and Natural Resources. The purpose of the visit was to characterize the seagrass, coral, and hardbottom communities and compare the characterization to observations collected in January and February 2014 and February 2018 by agents for the applicant. Notably, Hurricane Irma directly hit St. John in September 2017, and the purpose of the site visit was to assess changes to the area from the

hurricane. The observations the NMFS made on-site are consistent with the findings of the applicant's post-hurricane assessment.

The harbor bottom contains a mosaic of sandy bottom, live/hardbottom with coral, macroalgal beds, and seagrass. Native turtle grass (*Thalassia testudinum*) remains the dominant seagrass throughout the bay, some areas with 100 percent cover, followed by manatee grass (*Syringodium filiforme*) and lesser shoal grass (*Halodule wrightii*). Throughout the seagrass beds within the project footprint, the NMFS observed a high abundance of juveniles from commercially important fish species, including gray snapper (*Lutjanus apodus*) and schoolmaster (*Lutjanus griseus*), relatively large colonies of smooth star coral (*Solenastrea bournoni*), and several small colonies of lesser starlet coral (*Siderastrea radians*). Prior to Hurricane Irma, dense mangroves, primarily red mangroves (*Rhizophora mangle*), dominated the Coral Harbor shoreline. Post-hurricane observations include bare and mangled mangroves along the shoreline, various types of debris scattered throughout the bay, seagrass scouring due to vessel groundings, and the presence of the non-native seagrass *Halophila stipulacea*, primarily in disturbed bottom areas.

According to the benthic assessments provided by the applicant, the proposed project footprint does not include hardbottom or coral colonized hardbottom; however, two shallow hardbottom areas colonized by corals occur approximately 1,100 feet south and 2,100 feet southwest of the proposed project footprint, on both sides of the mouth of Coral Harbor. These hardbottom areas are within the District-defined 114-acre action area. At these sites, the NMFS observed colonies of coral species listed as threatened under the Endangered Species Act (ESA) and identified by the applicant, including elkhorn coral (*Acropora palmata*), lobed star coral (*Orbicella annularis*), and mountainous star coral (*O. faveolata*). The NMFS observed nearly twice as many Orbicellid colonies along the eastern mouth of the bay than the ten colonies reported by the applicant. However, the NMFS was not able to locate the single colony of ESA-listed pillar coral (*Dendrogyra cylindrus*) reported by the applicant at the eastern mouth of the harbor.

Impacts to Essential Fish Habitat

The impacts to seagrass from the proposed marina remain unclear, and the NMFS believes a meeting with the District and applicant would clarify these impacts. The bullets below provide our understanding to the seagrass impacts:

- The installation of 960 piles would permanently affect 0.03 acres of seagrass.
- Relocating 12 moorings would permanently affect 0.094 acres of seagrass.
- Spudding by barges during construction would directly affect about 0.023 acres of seagrass. These impacts may not be permanent depending upon the success of best management practices taken.
- Dock structures would shade seagrass habitat, likely diminishing its fishery support value. The area of the dock structures is 1.68 acres. The severity of these impacts will vary based on the amount of shading and density of seagrass. The NMFS does not have sufficient information to assess the severity of the shading within these 1.68 acres.
- Vessels moored at the docks also will shade seagrass habitat, similarly diminishing its fishery support value. The NMFS estimates up to 5.65 acres of seagrass habitat would be shaded by the vessels. As noted above, the severity of these impacts will vary based on the amount of shading and density of seagrass. The NMFS does not have sufficient information to assess the severity of the shading within these 5.65 acres.
- Areas adjacent to the dock and vessel footprints often exhibit shading impacts due to shadow extensions. The NMFS estimates up to 1.41 acres of seagrass habitat would be shaded in this manner. As noted above, the severity of these impacts will vary based on the amount of shading and density of seagrass. The NMFS does not have sufficient information to assess the severity of the shading within these 1.41 acres.

- Operation of marinas commonly leads to loss of seagrass from prop wash, bottom scour, and other activities despite the great care of vessel operators. The extent of these impacts varies considerably within project documentation, ranging from 0.337 acres to 6.5 acres. The NMFS would like additional discussion with the District and applicant on these impacts.

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 seabottom 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.

Additional Information Needed to Evaluate Impacts to Essential Fish Habitat

The NMFS believes the 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, 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.

The NMFS agrees with the District 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.

The applicant provided water current measurements showing water movement in 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

agencies do not have enough information to fully assess or quantify the potential loss of seagrass due to prop wash scouring.

Compensatory Mitigation

To minimize the direct impact of pilings to seagrass, the applicant plans to relocate 0.03 acres of seagrass within the piling footprints to a recipient site in the northwest corner of Coral Harbor, where the Spring Gut discharges into the harbor. The applicant would also relocate any seagrass impacted by the installation of 12 permanent moorings for vessels, however, the Mitigation Plan does not estimate the area of seagrass relocated. The NMFS views the transplanting of seagrass within the direct project footprint as a minimization measure rather than mitigation. Additionally, 0.03 acres of seagrass makes up less than one percent of the minimum estimated potential loss of seagrass due to marina construction and operation. Furthermore, Coral Harbor is highly impacted by the input of terrestrial sediment due to runoff, most of which comes from Spring Gut. The seagrass recipient site in northwest Coral Harbor once had thriving seagrass, but no longer can sustain seagrass habitat due to sediment deposition from Spring Gut. Accordingly, the NMFS does not recommend relocating seagrass to this site and offers to work with the District to find locations that restore ecosystem services by repairing damage from blowouts and prop scars.

The applicant proposes to clean (through debris removal), repair, and assume the long-term maintenance of stormwater management structures located throughout the Coral Bay watershed in an effort to enhance the seagrass habitat. The District cannot fully assess or quantify the beneficial effects of the proposed debris removal and maintenance of stormwater structures on the condition and extent of seagrass beds within Coral Harbor. The NMFS believes this effort could help minimize additional impacts to EFH and agrees with the District that the applicant has not provided enough information to assess the potential beneficial effects on EFH. The NMFS offers to work with the District to quantify the ecological lift this type of mitigation would provide assuming the District believes there is a mechanism for enforcing this permit requirement.

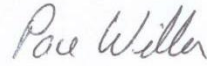
In the Mitigation Plan, the applicant proposes to compensate for impacts to seagrass by collecting a minimum of 0.03 acres of debris from the seagrass beds within Coral Harbor, collecting a minimum of 0.23 acres of debris throughout 750 acres of greater Coral Bay, re-attaching an unspecified number of corals that have been dislodged post-hurricane in greater Coral Bay reef areas, and planting and monitoring 300 red mangrove propagules along 850 feet of shoreline in Coral Harbor. The NMFS generally supports the proposed concepts of debris removal; however, the seagrass habitat restored by these actions needs quantification. While the NMFS normally recommends against out-of-kind mitigation for seagrass impacts, the NMFS acknowledges the severity of the degradation of mangroves from Hurricane Irma along the shoreline and supports restoration of this area as compensatory mitigation. The NMFS acknowledges the Mitigation Plan includes other mitigation activities, including providing signage and information to promote the protection of natural resources and safe boating practices and providing a pump out and waste disposal facility to all boaters in the facility. While the NMFS views the activities as beneficial, the NMFS cannot accept these activities as mitigation for the loss of seagrass habitat. The Mitigation Plan also describes coral re-attachment but does not clearly link the activity to offsetting the direct or indirect impacts to corals and hardbottom resulting from marina construction and operation.

Conclusion

The NMFS believes operation of the marina would result in increased and potentially chronic turbidity within the harbor, which could outweigh the benefits of the proposed compensatory measures. Furthermore, the NMFS believes the mitigation plan proposed by the applicant would not provide sufficient compensation for the potential impacts of the marina on seagrass beds.

Thank you for the opportunity to provide comments. Please direct related correspondence to the attention of Ms. Ashley Ruffo at 3013 Estate Golden Rock, Almeric Christian Federal Building, Building Box 4, Christiansted, USVI, 00820. She may also be reached by telephone at 340-718-1236 or by e-mail at Ashley.Ruffo@noaa.gov.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

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