



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>

May 18, 2015

F/SER4:JK/pw

(Sent via Electronic Mail)

Colonel Alan Dodd, Commander
U.S. Army Corps of Engineers, Jacksonville District
Jacksonville Regulatory Office, South Permits Branch
4400 PGA Boulevard, Suite 500
Palm Beach Gardens, Florida 33410

Attention: Susan Kaynor

Dear Colonel Dodd:

NOAA's National Marine Fisheries Service (NMFS) reviewed supplemental public notice SAJ-1984-04146 (SP-GGL) dated April 16, 2014. The Broward County Board of County Commissioners (BCBCC) requests authorization from the Department of the Army to add berths for cargo vessels within the Port Everglades Southport Turning Notch by dredging mangroves and uplands and by replacing a bulkhead. As summarized below, the NMFS provided essential fish habitat (EFH) conservation recommendations for this action by letter dated April 2, 2014. A supplemental public notice for the project has been released because the original public notice did not fully address impacts to corals at the turning notch and their mitigation, which includes relocating corals from the Southport Turning Notch onto 0.29 acres of boulders placed within the Memphis Artificial Reef¹. The Jacksonville District's initial determination is the proposed coral relocation and boulder placement would not have a substantial adverse effect on federally managed fisheries or EFH, including coral, which the South Atlantic Fishery Management Council (SAFMC) designates as a Habitat Area of Particular Concern (HAPC) in the fishery management plan for the snapper/grouper complex. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the following comments and recommendations are provided pursuant to authorities of the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Consultation History

The supplemental public notice affirms the work described in the original public, dated March 3, 2014, remains unchanged. Specifically, BCBCC requests authorization from the Department of the Army to add berths for cargo vessels within Port Everglades by dredging 8.61 acres of mangroves and 16.87 acres of uplands to a depth of -46.3 feet NAVD adjacent to the Southport Turning Notch. The proposal also includes removing a riprap berm at the eastern edge of the notch that protects the mangroves to be dredged and installing 5,905 feet of bulkhead (1,600 described as "environmentally-friendly") around the expanded turning notch to create four new berths and to expand an existing berth. As compensatory mitigation for the mangrove impacts, BCBCC would debit mangrove restoration credit from the West Lake Park project (authorized on March 2, 2006, under SAJ-2002-0072 IP-LAO) and debit credit from a mangrove creation and restoration project immediately northwestward of the Southport Turning Notch (authorized on November 26, 2013, under SAJ-2012-02627 NW-GGL). On April 2, 2014, the NMFS recommended the Department of the Army not authorize dredging of mangroves to expand the turning notch unless the Jacksonville District determined project plans reflect all practicable avoidance and minimization of mangrove impacts and a functional assessment showed the compensatory mitigation

¹ The Jacksonville District authorized this artificial reef under permit SAJ-1998-05824.



would fully offset impacts to mangroves and coral. To date, the Jacksonville District has not responded to the EFH conservation recommendation.

Corals within the Project Area

The supplemental public notice includes a Coral Relocation Plan dated April 2015. This plan includes results from a coral assessment performed by agents for the applicant in June 2014, which shows 9,713 individual coral colonies totaling 539,254 square centimeters of live coral tissue are present. The corals are comprised of nine species and measure up to 29 centimeters in diameter; 814 of the corals are greater than 10 centimeters in diameter.

All demersal fish species under SAFMC management associated with coral habitats are contained within the fishery management plan for the snapper-grouper complex and include some of the more commercially and recreationally valuable fish of the region. All of these species show an association with coral or hardbottom habitat during their life history. In grouper, the demersal life history of almost all *Epinephelus* species, several *Mycteroperca* species, and all *Centropristis* species takes place in association with coral habitat. Coral, coral reef, and hardbottom habitats benefit fishery resources by providing food or shelter.

The SAFMC designates coral as an HAPC, which is a subset of EFH that is either rare, particularly susceptible to human-induced degradation, especially important ecologically, or located in an environmentally stressed area. Coral directly benefit the fishery resources of Broward County waters by providing nursery habitat and shelter. Coral is also part of a habitat complex that includes mangrove, seagrass, and hardbottom habitats, and this complex supports a diverse community of fish and invertebrates within Broward County waters. SAFMC provides additional information on EFH and HAPCs and how they support federally managed fishery species in *Fishery Ecosystem Plan of the South Atlantic Region*, which is available at www.safmc.net.

Minimization of Impacts to Corals

The Coral Relocation Plan describes the applicant's proposal to relocate 814 corals that are 10.0 centimeters in diameter or larger, have a thickness of 3.0 centimeters or greater, and are healthy based on an in-water assessment at the time of relocation. The recipient site is the Memphis Artificial Reef, located approximately 1.5 miles offshore Dania Beach in 38 to 40 feet of water. The applicant would add limestone boulders to the artificial reef site and transplant the corals to the boulders. The NMFS offers the following comments on the Coral Relocation Plan:

- The minimum thickness of the corals targeted for relocation should be reduced from greater than or equal to 3.0 centimeters to greater than or equal to 2.0 centimeters. The plan describes only relocating encrusting coral colonies greater than or equal to 3.0 centimeters in thickness and do not fragment on removal. The NMFS recommends relocating encrusting corals greater than or equal to 2.0 centimeters in height including adult corals that may fragment upon removal. Corals that fragment upon removal can be relocated successfully if the fragments of the same colony are relocated and epoxied together. Fragmented colonies will grow back together as demonstrated by "skinning" techniques used to incorporate corals into nursery rearing environments, where such corals are deliberately fragmented prior to attachment to induce faster growth.
- The Florida Fish and Wildlife Conservation Commission (FWC) Coral Health Protocol² should be used to determine if *Siderastrea radians* corals are candidates for relocation. The NMFS disagrees that partial bleaching (paling and discoloration) and partial mortality are indicators of

² The FWC Coral Health Protocol is maintained by the FWC Special Activity License Program and can be obtained by email from Lisa.Gregg@MyFWC.com.

“poor health” for *S. radians*. The FWC Coral Health Protocol addresses this issue and provides guidance for determining when this condition does not severely affect *S. radians*.

- The Jacksonville District should evaluate if the boulders proposed to be added to the Memphis Artificial Reef, which are two to six feet in diameter, can withstand the physical forces and remain stable at the site.
- The applicant proposes to transplant the corals to the boulder habitat in the following manner: “Corals will be grouped by species to avoid inter-specific competition and promote colony growth and reproduction. Corals of like species will be attached to within 5-10 cm of each other depending on colony size and area of suitable attachment substrate.” As an alternative, the NMFS recommends the corals be transplanted at regionally appropriate densities; i.e., 1.4 corals per square meter, as described in the Final Environmental Impact Statement for the Port Everglades expansion.
- The NMFS agrees with the applicant’s plan to monitor no less than 25 percent of the relocated corals and to include at least ten colonies of each of the nine species to be relocated. If less than ten colonies of one species are relocated, the applicant agrees that all of the corals of that species should be monitored.
- The performance standard the NMFS recommends for coral relocation is 85 percent survival after two years. Achieving this rate typically requires the environmental conditions at relocation and recipient sites to match closely, which would not be the case for this project because the Southport Turning Notch has lower water quality than the Memphis Artificial Reef. While the NMFS agrees lower transplanted colony survivorship may occur, BCBC’s proposed 50 percent survival after three years is too low. The NMFS recommends the performance standard be 75 percent and the permit identify compensatory actions for corals not surviving relocation.
- The NMFS requests a meeting with the Jacksonville District and the applicant to discuss the amount of compensatory mitigation needed to offset the loss of 8,899 corals. The applicant proposes to mitigate for the loss of 8,899 corals by constructing an additional 1,175 square meters (12,632 square feet) of boulder-based mitigation habitat. The NMFS does not agree with the input parameters used to determine the mitigation requirement. Notably the input parameters do not address the risk of a coral recruitment delay and the coral density targets differing from regionally appropriate coral density estimates. For context, 1,175 square meters of boulder habitat would only allow for colonization by 837 corals at 1.4 corals per square meter. The NMFS estimates the mitigation requirement without assigning a risk score would exceed 1.57 acres of boulder reef. Importantly, the amount of boulder-based mitigation could be adjusted downwards if the applicant relocated smaller size-classes of corals.

EFH Conservation Recommendations

NMFS found the proposed dredging and removal of the riprap berm would adversely impact EFH and provided the Jacksonville District with EFH conservation recommendations on April 2, 2014. In addition to that finding, the NMFS has determined implementation of the proposed coral mitigation plan would adversely impact coral. Section 305(B)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH conservation recommendations for any federal action or permit which may result in adverse impacts to EFH. Therefore, NMFS recommends the following to ensure the conservation of EFH and associated fishery resources:

1. The Jacksonville District verify all boulders added to the Memphis Artificial Reef are of sufficient size to remain in place after deployment and encourage BCBC to accommodate reasonable requests from researchers interested in salvaging corals not proposed for relocation.
2. The permit require relocation of encrusting corals greater than or equal to 2.0 centimeters in height, including corals that may fragment upon removal. For corals that fragment upon removal,

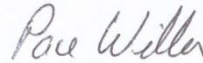
the permit should require fragments from the same colony to be epoxied together at the relocation site.

3. The permit require use of the FWC's Coral Health Protocol to determine if *Siderastrea radians* colonies are candidates for coral relocation.
4. The permit require corals be transplanted to boulders at a density of 1.4 corals per square meter.
5. The required performance standard for the relocation be 75 percent survival with positive tissue growth and secure substrate attachment three years after relocation.
6. The permit require no less than 1.57 acres of boulder-based mitigation be required as compensatory mitigation for the loss of 8,899 corals and additional mitigation for corals not meeting the performance standard.

Section 305(b)(4)(B) of the Magnuson-Stevens Act and implementing regulation at 50 CFR Section 600.920(k) require the Jacksonville District to provide a written response to this letter within 30 days of its receipt. If it is not possible to provide a substantive response within 30 days, in accordance with the "findings" the NMFS has with the Jacksonville District, an interim response should be provided. A detailed response then must be provided prior to final approval of the action. The detailed response must include a description of measures proposed by the Jacksonville District agency to avoid, mitigate, or offset the adverse impacts of the activity. If the response is inconsistent with the EFH Conservation Recommendations, the Jacksonville District must provide a substantive discussion justifying the reasons for not following the recommendations.

Thank you for the opportunity to provide comments. Please direct related correspondence to the attention of Ms. Jocelyn Karazsia at 400 North Congress Avenue, Suite 110, West Palm Beach, Florida, 33401. She also may be reached by telephone at 561-249-1925 or by e-mail at Jocelyn.Karazsia@noaa.gov.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

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