



**UNITED STATES DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration

**NATIONAL MARINE FISHERIES SERVICE**

Southeast Regional Office

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St. Petersburg, Florida 33701-5505

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

October 16, 2015

F/SER47:JK/pw

(Sent via Electronic Mail)

Colonel Jason Kirk, Commander  
U.S. Army Corps of Engineers, Jacksonville District  
Planning and Policy Division, Environmental Branch  
701 San Marco Boulevard  
Jacksonville, Florida 32207-8175

Attention: Terri Jordan-Sellers

Dear Colonel Kirk:

NOAA's National Marine Fisheries Service (NMFS) reviewed the draft Environmental Assessment entitled "*Identification of Alternative Sand Sources for the Dade County Beach Erosion Control Project, Miami-Dade County, Florida*" (EA) dated July 2015 and prepared by the Jacksonville District. The Bureau of Ocean Energy Management (BOEM) is serving as a cooperating agency under the National Environmental Policy Act for this EA. Offshore sand sources used previously for beach nourishment in Miami-Dade County are depleted, and 3,600,000 cubic yards of sand is needed by the District's Beach Erosion Control and Hurricane Protection Project for the remaining 11 years of federal participation, with the exception of a segment in Sunny Isles where the remaining federal participation is 23 years. In the draft EA, the District reviews the environmental effects of utilizing sand source alternatives determined to meet the project's future requirements.

The draft EA describes two alternatives, including the No Action alternative. The Preferred Alternative is composed of seven potential sand sources, including two sites offshore Martin and St. Lucie Counties in federal waters; two sites in Miami-Dade County at Baker's Haulover Inlet ebb shoal and Lummus Park in Miami Beach; and three commercial upland sand mines, one in Miami-Dade County (referred to as ACI) and two in Glades County (referred to as Ortona and Witherspoon). Draft EA Section 1.4 indicates the discussed fill placements have been authorized previously, hence the draft EA's scope is limited to identifying new sand sources and transporting sand to the project beaches.

The Jacksonville District's initial determination is substantial, long-term, adverse impacts to essential fish habitat (EFH) or federally managed fisheries are not expected from the project. However, the District expects minor, temporary adverse impacts to the water column during dredging and beach placement; minor, temporary impacts to benthic species due to displacement during dredging; and temporary impacts to hardbottom from pipeline deployment and retrieval. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the NMFS offers the following comments and recommendations



pursuant to authorities of the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

## **Project History**

The NMFS previously provided the Jacksonville District comments germane to dredging shoals in federal waters offshore Martin and St Lucie Counties, including comments on:

- The Final Supplemental Environmental Impact Statement, dated August 2011, entitled *Martin County, Florida, Hurricane and Storm Damage Reduction Project*.
- The Draft Environmental Impact Statement, dated May 2012, entitled *St. Lucie County South Beach and Dune Restoration Project*.
- Public notice SAJ-2009-03448 (IP-GGL), dated December 1, 2011, for the application from the St. Lucie County Erosion Control District to construct a beach nourishment project.

In these reviews, the NMFS concluded the environmental documentation provided did not support the contention that dredging offshore shoals resulted in discountable impacts to fishery resources (i.e., migratory, pelagic species) and the adjacent shorelines.

## **Sand Sources at Lummus Park, Baker's Haulover Inlet, and Upland Mines**

The NMFS has previously reviewed the use of fill material obtained from Lummus Park and the three commercial sand mines. Additionally, on August 6, 2015, the NMFS surveyed portions of the ebb shoal at Baker's Haulover Inlet with representatives of the Jacksonville District and Florida Inland Navigation District and did not observe seagrass on the shoal; however, well-developed seagrass and hardbottom communities surrounding the shoals should be avoided. The draft EA describes the sediment specification requirements in a few sections. Section 2.2 describes a process in 2000 where the Jacksonville District, Miami-Dade County Department of Environmental Resources Management (DERM), and Florida Department of Environmental Protection (FDEP) developed the *Dade Sand Specification*. In addition, the Clean Water Act Section 404(b) Evaluation (Appendix A) provides requirements for the general characteristics of the sand. The NMFS does not object to using these sand sources so long as the fill material meets the above guidelines, including any updates to the *Dade Sand Specification* from the FDEP or DERM. In addition, best management practices (BMPs) should be implemented during dredging to minimize and monitor water quality degradation, sedimentation, and turbidity impacts to nearby habitats.

## **Essential Fish Habitat within the Offshore Shoals and Pipeline Corridors**

The draft EA does not include a complete, stand-alone EFH Assessment. Instead, elements of an EFH Assessment are distributed throughout the draft EA, as described in draft EA Table 23. In general, the draft EA correctly identifies the EFH and Habitat Areas of Particular Concern (HAPCs) in the pipeline corridors and within offshore shoals. Corrections and additional information needs are identified below.

Offshore Shoals: The draft EA does not provide detailed descriptions of the shoals in federal waters proposed for dredging, instead the draft EA incorporates information by referring to the

environmental documents mentioned in the *Project History* section of this letter. Comment letters from the NMFS addressing these documents are dated January 7, 2011; June 29, 2011; July 18, 2011; July 25, 2011; October 3, 2011; November 28, 2011; and December 29, 2011; are incorporated by reference.

Pipeline Corridors: The District's characterization of coral reef and hardbottom communities located within pipeline corridors is found within draft EA Section 4.4.1.2. Depending on the location of the beach fill, the 36-inch pipeline would extend 6,243 to 8,370 feet from the shoreline and cross coral reef and hardbottom features referred to as nearshore hardbottoms, nearshore ridge complex, and the inner reef. Overall, this section is not well-cited and updates are needed, for example:

- The text indicates presence of soft corals (or octocorals) in sand deposits of three to six inches or on sand bottom do not qualify as being characterized as hardbottom habitats. The text should be updated to indicate the presence of soft corals and sponges is indicative of hardbottom habitat as holdfasts and attachment points are secured to hardbottom buried beneath the sediment. The observation of sediment being present is likely an indication of recent sediment deposition as these types of organisms will not “grow out” of a sediment layer, which means the sediment accumulated subsequent to attachment of the organisms.
- The text states the only hardbottom habitat with [scleractinian] corals present is never closer than 1,500 feet from the shoreline and generally greater than 1,800 feet from the shoreline. Based on a mapping exercise using the coral reef and hardbottom data available from the Florida Fish and Wildlife Research Institute,<sup>1</sup> there are several areas along the Miami-Dade shoreline with mapped hardbottom habitat within 1,500 feet of the shoreline. Notable examples include (but are not limited to) areas off Miami Beach, Bal Harbour, Sunny Isles, and Golden Beach.
- A more in-depth technical review would strengthen this section. For example, the statement “organisms that colonize these areas are more tolerant of the dynamic conditions that exist in these areas, and comprise a stable community adapted to sand movement of the nearshore system” needs citation; the NMFS is unaware of literature supporting the contention. Large-scale fill events can disrupt natural cycles of burial and re-exposure diminishing the value of hardbottom areas to the early life stages of fishery species.
- Only one monitoring report from 1987 is referenced in providing a characterization of the coral and hardbottom habitats offshore Miami-Dade County. Several key publications and technical reports completed after 1987 have led to an improved characterization and understanding of the coral reef and hardbottom habitats in this area. The final EA should provide a more comprehensive review. Suggested additions include, but are not limited to:
  - Banks K., Riegl, B., Shinn E., Piller W., Dodge R. 2007. Geomorphology of the southeast Florida continental reef tract (Dade, Broward, and Palm Beach Counties, Florida, USA). *Coral Reefs* 26(3):617-633.

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<sup>1</sup> Available on-line at: [http://ocean.floridamarine.org/mrgis/Description\\_Layers\\_Marine.htm](http://ocean.floridamarine.org/mrgis/Description_Layers_Marine.htm)

- CSA International Inc. 2009. Ecological functions of nearshore hardbottom habitat in east Florida: A literature synthesis. Tallahassee, FL: Florida Department of Environmental Protection, Bureau of Beaches and Coastal Systems. 266 pp.
- Walker, B., Riegl, B., and Dodge, R. 2008. Mapping coral reef habitats in southeast Florida using a combined technique approach. *Journal of Coastal Research* 24(5):1138-1150.
- Walker, B. 2012. Spatial Analyses of Benthic Habitats to Define Coral Reef Ecosystem Regions and Potential Biogeographic Boundaries along a Latitudinal Gradient. *PLoS ONE* 7(1): e30466. doi:10.1371/journal.pone.0030466
- Walker B., Jordan L., and Spieler R. 2009. Relationship of reef fish assemblages and topographic complexity on southeastern Florida coral reef habitats. *Journal of Coastal Research SI* (53):39-48.

### **Impacts to Essential Fish Habitat from dredging offshore shoals**

Offshore shoals: As mentioned in the *Project History* section, previous consultations have not provided justification for determinations that dredging the offshore shoals would have minimal impact on the shoreline. In draft EA Section 4.7, the District presents results from a sand source wave modeling effort using the Coastal Modeling System Wave model to assess the potential impacts of dredging sands from outer continental shelf waters on the adjacent shorelines in St. Lucie and Martin Counties. The model examines changes to the wave field inside the “depth of closure,” which the District defines as the offshore limit of sand movement due to wave action. The goal of the project design is to avoid any changes to wave heights and directions landward of the depth of closure, because such changes could potentially have an effect on sediment transport patterns along the adjacent shoreline. The depth of closure offshore of St. Lucie County and Martin County were approximated to be eight meters (~26 feet). Model results indicated that even during the most extreme wave conditions, wave heights and directions were completely unaffected inside of the depth of closure at both sites. While the draft EA states the full report is located in the *Draft Limited Re-evaluation Report (LRR) for the Dade County, Florida Beach Erosion Control and Hurricane Protection Project* (July 2015, Appendix A, Sub-Appendix B), parts of the report are missing in the LRR. The NMFS requests a copy of the report the complete report.

In draft EA Section 4.5.2, the Jacksonville District reviews impacts from dredging the shoals on sedimentation and water quality degradation from increased turbidity. The assessment does not address how dredging the shoals could affect fish utilization and the use of the shoals as nursery habitat, refuge, and feeding grounds by for fishery species. Dredging could disrupt the geomorphology of offshore shoals that provide a unique assembly of micro-habitats that facilitate high biological productivity effects, as described in Clarke et al. (1988) and Michel et al. (2001) and corroborated with the literature synthesis and fishermen interviews provided by Gilmore (2009).

The NMFS believes impacts to the shoals can be minimized by observing the BMPs used by the projects mentioned in the *Project History* section:

- Design the borrow area with the long axis parallel to the long axis of the shoal, but avoid dredging along the entire long axis of the shoal.

- Maintain a refuge patch at the highest shoal elevations.
- Dredge on the downdrift side of the shoal.
- Excavate only to surrounding ocean floor elevations.
- Minimize turbidity by:
  - Eliminating or reducing hopper overflow.
  - Lowering the hopper fill level.
  - Implementing a recirculation system from the overflow to the draghead.
- Use floating toelines.

Pipeline Impacts: The proposed pipelines would impacts a total of 3.5 acres of coral reef and hardbottom habitat (Table 21). The draft EA states that after the pipeline is removed and the post-pipeline removal impact assessment is conducted, triage of impacted corals, soft corals, and sponges would be done and post-triage monitoring conducted. The Jacksonville District believes these triage efforts have proven effective to further reduce the final impacts of pipeline usage. The District requires a final assessment of impacts to determine compensatory mitigation amounts after the pipeline removal survey report has been finalized and submitted to the District. The District agrees to coordinate the mitigation assessment with the appropriate resource agencies. While the NMFS agrees with this approach, it is possible that additional pipeline impacts can be minimized with the completion of an immediate post-installation survey, so that any dislodged corals, octocorals, and sponges can be immediately re-attached or relocated.

### **EFH Conservation Recommendations**

Section 305(b)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH conservation recommendations when an activity is expected to adversely impact EFH. In consideration of this requirement, provides the following:

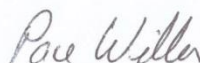
1. All sand sources meet the *Dade Sand Specifications* including any updates to the guidelines from the FDEP or DERM.
2. BMPs are implemented during dredging at Lummus Park and Baker’s Haulover Inlet ebb shoals to minimize water quality degradation sedimentation.
3. In addition to the coordination and monitoring described in draft EA Section 4.4.1.2 of hardbottom habitat near the pipeline, the Jacksonville District requires an immediate post-installation survey to re-attach and relocated corals, octocorals, and sponges damaged during installation. The final assessment to determine compensatory mitigation should reflect input from the NMFS on the type and amounts of mitigation required.
4. The Jacksonville District requires movement of transport barges be limited to corridors lacking hardbottom and coral habitat and the securing of all toelines to avoid any contact with hardbottom or coral habitats.
5. The BMPs for dredging offshore shoals identified above are included in the project designs and are implemented.

Section 305(b)(4)(B) of the Magnuson-Stevens Act and its 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” with the Jacksonville District, an interim response should be provided to NMFS. A detailed response then must be provided prior to final approval of the action. The Jacksonville District’s detailed response must include a description of measures

proposed by the District agency to avoid, mitigate, or offset the adverse impacts of the activity. If the Jacksonville District's response is inconsistent with our EFH conservation recommendations, the District must provide a substantive discussion justifying the reasons for not following the recommendation.

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

Sincerely,



/ for

Virginia M. Fay  
Assistant Regional Administrator  
Habitat Conservation Division

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## Literature Cited

Clarke, D., Fredette, T., and Imsand, D. 1988. Creation of Offshore Topographic Features with Dredged Material. Environmental Effects of Dredging, Information Exchange Bulletin, Vol. D 88 5. Prepared by U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

Gilmore, G. 2009. St Lucie County South Beach Project Initial Essential Fish Habitat Assessment of Potential Borrow Areas. Estuarine, Coastal and Ocean Sciences, Inc., 37 pp., plus appendices.

Michel, J., Nairn, J., Johnson, J., and Hardin, D. 2001. Development and Design of Biological and Physical Monitoring Protocols to Evaluate the Long-term Impacts of Offshore Dredging Operations on the Marine Environment. Herndon, Virginia: Minerals Management Service OCS Report MMS 2001-089, 116 pp. 1 appendix.