



UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

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Dear Sir or Madam:

This letter responds to your request for consultation with us, the National Marine Fisheries Service (NMFS), pursuant to Section 7 of the Endangered Species Act (ESA) for the following action.

Applicant(s)	SER Number	Project Type(s)
1. U.S. Air Force, Patrick Air Force Base (PAFB) 2. Bureau of Ocean Energy Management 3. U.S. Army Corps of Engineers	SER-2017-18558	Reinitiation of Consultation SER-2009-03376 for the use of the Outer Continental Shelf sand resource (Canaveral Shoals II) for beach renourishment at PAFB

Consultation History

We received the letter from PAFB requesting consultation on March 31, 2017. In accordance with the ESA, PAFB partnered with the cooperating agency Bureau of Ocean Energy Management (BOEM) who oversees borrow areas on the outer continental shelf (OCS), and the permitting agency, U.S. Army Corps of Engineers (USACE). PAFB is the lead Federal action agency representing all in this consultation. We requested additional information from PAFB on May 23, 2017. We received a final response on June 9, 2017, and initiated consultation that day.



We completed a consultation on the use of the OCS sand resource (Canaveral Shoals II) for beach renourishment at PAFB dated April 30, 2010 (SER-2009-03376). Reinitiation of this consultation was requested to address species listed and critical habitat designated since 2010, including Atlantic sturgeon, the expansion of North Atlantic right whale critical habitat, and the designation of loggerhead sea turtle critical habitat. No other changes are proposed for the project including the take associated with dredging that was analyzed in the last Opinion. To date, no take has occurred under the previous Opinion. This consultation will focus solely on the effects to newly listed species and critical habitat.

Project Location

The project locations consist of the beach areas along Patrick Air Force Base, Brevard County, Florida, borrow sites within the Atlantic Ocean, and the ocean areas between the borrow areas and the placement areas:

- Beach renourishment by placing beach sand along approximately 11,480 linear feet (lin ft) of shoreline (above and below mean high water) between the Florida Department of Environmental Protection's (FDEP) reference monuments R-53 at 28.271965°N, 80.605792°W and R-75 at 28.212745°N, 80.597081°W (North American Datum 1983).
- Dune repair by placing sand along the South Beach dune located between FDEP reference monuments R-65 and R-75 above the mean high water line.
- The borrow areas (Canaveral Shoals I and II) are located approximately 12 miles north of PAFB and about 2-5 miles offshore at 28.411554°N, 80.431310°W (North American Datum 1983), and the ocean areas between the borrow areas and the placement areas.



Image of the beach nourishment location between FDEP reference markers R-53 and R-75, location of the borrow site, and surrounding area (©2017 Google; Data SIO, NOAA, U.S. Navy, NGA, GEBCO; Image Landsat/Copernicus)

Project Description

The applicant proposes to continue the proposed action as described in the original consultation completed by NMFS on April 30, 2010 (SER-2009-003376). The description from the 2010 consultation is provided below along with the conservation measures agreed to in that consultation:

The Air Force proposes to place approximately 80,000 cubic yards of sand for the dune repair component of the project. This sand would be obtained from an upland site (the upland Cape Canaveral Air Force Station Sand Borrow Area). Between DEP reference monuments R-70 and R-75.4, above the mean high water line, only dune repair will occur. In addition, the Air Force proposes to use a hopper dredge to excavate approximately 310,000-350,000 cubic yards of material from the Canaveral Shoals offshore borrow areas I and/or II, located approximately 12 miles north of Patrick Air Force Base (PAFB) and about 2-5 miles offshore. Water depths at borrow areas I and II range from -8 to -17 feet and -10 to -46 feet, respectively. The proposed action includes dredging the material, hydraulically pumping it onto PAFB North Beach, and mechanically distributing the material per profiling specifications from R-53 to R-65. A stockpile area will be developed between DEP reference monuments R-61 and R-65 to allow truck hauling of sand south of R-65 for beach restoration along the PAFB Central and South Beaches (Air Force Biological Assessment, May 2009).

The Air Force's BA stated that the proposed action would not adversely affect nearshore hardbottom, which is important developmental habitat for juvenile green sea turtles (*Chelonia mydas*). The Air Force's determination is based on the monitoring results from the previous two renourishments in 2005 and 2000, which were provided to NMFS. The Air Force's consultant, Olsen Associates, Inc., has been conducting annual monitoring of the amount of exposed nearshore hardbottom in the project area to determine if this hardbottom has been affected by sedimentation (i.e., burial) from the previous two renourishments. Based on the results of the monitoring, the amount of exposed hardbottom in the most recent (July 2009) survey is the greatest observed since quantitative data have been available (beginning in 2001 and 2004). By transect line measure, there was 55 percent more exposed hardbottom in 2009 than in both 2001 and 2004. Likewise, there was 30 percent more exposed hardbottom in 2008 than in both 2001 and 2004. In each year since renourishment in 2005, the total amount of exposed hardbottom has been greater than in the baseline (2004) conditions – with the exception of 2006, during which large sand bars were migrating ashore, across the rock terrace, along most of Brevard County. Even in 2006, the amount of exposed hardbottom increased or remained the same nearest the fill from the 2005 project (i.e., at DEP reference monuments R-70 to R-73), where one would expect hardbottom exposure to decrease the most if there was significant alongshore diffusion of sand from the prior beach renourishment activity (March 4, 2010, memorandum from Dr. Kevin Bodge, Olsen Associates, Inc.). The results of the monitoring suggest there has not been a quantifiable effect on the amount of exposed hardbottom due to the two most recent renourishments (in 2005 and 2000). This may be due to the small amount of fill that was placed and the project design, which aims to minimize the amount of fill placed below mean high water in areas where hardbottom is known to occur. Nearshore hardbottom is patchily distributed from DEP reference monuments R-65 to R-70 and becomes more frequent from DEP reference monuments R-70 to R-75.4 and south of the project area. Because nearshore hardbottom is present, the project template was designed as slope/profile repair above mean high water with limited fill placement (approximately 2,481 cubic yards) and grading between mean high water and mean low water, decreasing in extent from north to south between DEP reference monuments R-65 to R-70 (where hardbottom is patchily distributed). However, in the segment where nearshore hardbottom is

more frequent (between DEP reference monuments R-70 to R-75.4), only dune restoration above the mean high water line is proposed in order to prevent/minimize impacts to nearshore hardbottom. As previously stated, the hardbottom monitoring reports submitted by the Air Force show that this nearshore hardbottom has not been affected by sedimentation from the past two beach renourishment events at PAFB (in 2005 and 2000), both of which used the same fill template that is proposed for this project and entailed dune restoration only (above the mean high water line) in the segment where nearshore hardbottom is more prevalent.

The Air Force has requested a biological opinion from NMFS to cover ten years and two renourishment cycles (one renourishment every five years although dependent on storm effect intensity). The proposed action would be the same as described above for each dredging/renourishment event, unless severe erosion occurs due to frequent or intense storm activity, which may necessitate changes to the proposed action. Thus, changes in the proposed action that would result in more than two dredging/renourishment events over the next 10 years from the completion of this consultation may require reinitiation of consultation.

Conservation Recommendations

The Air Force has proposed the following updated conservation measures to be included as part of the proposed action. The following conservation measures are required in addition to the Terms and Conditions set forth in the original Biological Opinion for the use of the Outer Continental Shelf sand resource (Canaveral Shoals II) for beach renourishment at PAFB (SER-2009-03376). Modifications are made to the conservation recommendations stated in the original Biological Opinion (SER-2009-03376) related to North Atlantic right whales to include the updated information and requirements necessary for the expanded North Atlantic right whale critical habitat (81 FR 4837, Publication Date January 27, 2016). All Terms and Conditions within the original Biological Opinion (SER-2009-03376) will remain unchanged.

- 1) Construction will take place outside of the primary sea turtle nesting season and will be limited to November 1 through April 30. If the beach renourishment project is conducted between March 1 and April 30, surveys for early nesting sea turtles are required. If the beach renourishment project is conducted between November 1 and 30, surveys for late nesting sea turtles are required. If nests are found in the beach renourishment area, they must be relocated (USFWS biological opinion, June 2, 2009).
- 2) The Air Force will comply with NMFS's March 23, 2006, *Sea Turtle and Smalltooth Sawfish Construction Conditions* (enclosed).
- 3) The Air Force will comply with the Terms and Conditions in NMFS's September 25, 1997, regional biological opinion (RBO) on hopper dredging along the South Atlantic Coast of the United States (NMFS 1997). The 1997 RBO incorporates (by reference) NMFS's 1995 biological opinion on hopper dredging of channels and beach nourishment activities in the southeastern United States from North Carolina through Florida East Coast. The contractor(s) will be required to follow the Terms and Conditions in the 1997 and 1995 biological opinions mentioned above. As per Term and Condition #7 in NMFS's 1995 biological opinion, the Air Force will participate in the Right Whale Early Warning System (EWS). The purpose of this network is to assure that North Atlantic right whales undergoing their seasonal migrations southward are afforded every level of protection while in the

southeast United States's calving area.¹ Term and Condition #7 requires the following protocol for dredging projects that occur in the right whale calving area from December through March: During the calving season, aerial survey teams fly over the waters of Florida and Georgia to locate right whales. There are also land-based volunteers who look for right whales from the beach. Any information provided by observers is reported to the EWS network. The network disseminates right whale location information to mariners in the waters of Florida and Georgia within half an hour of a right whale sighting via the typical marine communication network. Mariners shall check various communication media for general information regarding avoiding ship strikes and specific information regarding right whale sightings in the area. These include NOAA weather radio, USCG NAVTEX broadcasts, and Notices to Mariners. Dredge and barge operators will take all practicable measures to avoid contact with the whale and ensure compliance with the right whale avoidance regulation requirements described in Conservation measure 5 below.

- 4) Dredge-related vessels working at the borrow site, and traveling to and from the borrow area and the beach fill area will travel at no greater than 10 knots during the North Atlantic right whale calving season (November 15 through April 15). The speed restriction applies to all vessels associated with dredging only when traveling within the expanded North Atlantic right whale calving area during calving season.
- 5) By law, vessels shall maintain a 500-yard buffer between the vessel and any North Atlantic right whale, and underway vessels within 500 yards of a right whale must steer a course away from the whale and immediately leave the area at a slow, safe speed (as required by federal regulation 50 CFR 224.103 (c)).
- 6) Report stranded, injured, or dead animals to:
 - a) Any collision(s) with and/or injury to any sea turtle, sawfish, whale, or sturgeon occurring during the construction of a project, shall be reported immediately to NMFS's Protected Resources Division (PRD) at (1-727-824-5312) or by email to takereport.nmfs@noaa.gov and CESAJ-ComplyDocs@usace.army.mil.
 - b) Smalltooth sawfish: Report sightings to 1-844-SAWFISH or email Sawfish@MyFWC.com
 - c) Sturgeon: Report dead sturgeon to 1-844-STURG 911 (1-844-788-7491) or email nmfs.ser.sturgeonnetwork@noaa.gov
 - d) Sea turtles and marine mammals: Report stranded, injured, or dead animals to 1-877-WHALE HELP (1-877-942-5343).
 - e) North Atlantic right whale: Report injured, dead, or entangled right whales to the USCG via VHF Channel 16.

¹ The North Atlantic right whale calving area was revised under the expanded North Atlantic right whale critical habitat designation (81 FR 4837, Publication Date Jan. 27, 2016). Calving area now extends off the coast of North Carolina, South Carolina, Georgia and Florida in water depths of 20-92 ft (6- 28 meters), where these features simultaneously co-occur over contiguous areas of at least 231 squared nautical miles (nmi²) of ocean waters during the months of November through April.

Effects Determination(s) for Species the Action Agency or NMFS Believes May Be Affected by the Proposed Action

Species	ESA Listing Status	NMFS Effect Determination in SER-2009-03376	Action Agency Effect Determination for SER-2017-18558	NMFS Effect Determination for SER-2017-18558
Sea Turtles				
Green	T ²	LAA	LAA	LAA*
Kemp's ridley	E	LAA	NLAA	LAA*
Leatherback	E	NLAA	NLAA	NLAA*
Loggerhead (Northwest Atlantic Ocean distinct population segment [DPS])	T	LAA	LAA	LAA*
Hawksbill	E	NLAA	NLAA	NLAA*
Fish				
Smalltooth sawfish (U.S. DPS)	E	NLAA	NLAA	NLAA*
Shortnose sturgeon	E	ND	NLAA	NP
Atlantic sturgeon (Carolina DPS)	E	ND	NLAA	NP
Marine Mammals				
North Atlantic right whale	E	NLAA	NLAA	NLAA*
E = endangered; T = threatened; NLAA = may affect, not likely to adversely affect; NP = not present, ND = no determination provided * The effects determinations for species considered in the previous consultation (SER-2009-03376) remain unchanged since no changes are proposed to the previously considered action and will not be discussed further in this consultation.				

Green sea turtles: Since the completion of the last consultation (SER-2009-03376), green sea turtles have been divided into 11 distinct population segments (DPSs). We believe that the effects determinations provided in the previous opinion for green sea turtles are the same as those that would affect the North Atlantic and South Atlantic DPS of green sea turtles.

Critical Habitat

Northwest Atlantic loggerhead sea turtle critical habitat: The beach sand placement and the borrow sites are located within Northwest Atlantic loggerhead sea turtle distinct population segment LOGG-N-17 for nearshore reproductive habitat, breeding areas, and constricted migratory habitat. The primary constituent elements (PCEs) for these habitats are:

- Nearshore reproductive habitat: The physical or biological features of nearshore reproductive habitat as a portion of the nearshore waters adjacent to nesting beaches that are used by hatchlings to egress to the open-water environment as well as by nesting females to transit between beach and open water during the nesting season. The following PCEs support this habitat: (i) Nearshore waters directly off the highest density nesting beaches and their adjacent

² North Atlantic and South Atlantic DPS

beaches, as identified in 50 CFR 17.95(c), to 1.6 km offshore; (ii) Waters sufficiently free of obstructions or artificial lighting to allow transit through the surf zone and outward toward open water; and (iii) Waters with minimal manmade structures that could promote predators (i.e., nearshore predator concentration caused by submerged and emergent offshore structures), disrupt wave patterns necessary for orientation, and/or create excessive longshore currents.

- Breeding areas: the physical or biological features of concentrated breeding habitat as those sites with high densities of both male and female adult individuals during the breeding season. PCEs that support this habitat are the following: (i) High densities of reproductive male and female loggerheads; (ii) Proximity to primary Florida migratory corridor; and (iii) Proximity to Florida nesting grounds.
- Constricted migratory habitat: the physical or biological features of constricted migratory habitat as high use migratory corridors that are constricted (limited in width) by land on one side and the edge of the continental shelf and Gulf Stream on the other side. PCEs that support this habitat are the following: (i) Constricted continental shelf area relative to nearby continental shelf waters that concentrate migratory pathways; and (ii) Passage conditions to allow for migration to and from nesting, breeding, and/or foraging areas.

We believe only the nearshore reproductive habitat may be affected by the proposed action.

North Atlantic right whale critical habitat: borrow sites also located in critical habitat for North Atlantic right whale calving (Unit 2). The physical features essential to the conservation of the North Atlantic right whale, which provide calving area functions in Unit 2, are:

- Sea surface conditions associated with Force 4 or less on the Beaufort Scale.
- Sea surface temperatures of 7°C to 17°C.
- Water depths of 6 to 28 meters, where these features simultaneously co-occur over contiguous areas of at least 231 nmi² of ocean waters during the months of November through April. When these features are available, they are selected by right whale cows and calves in dynamic combinations that are suitable for calving, nursing, and rearing, and which vary, within the ranges specified, depending on factors such as weather and age of the calves.

We do not believe any of the physical features essential to the conservation of the North Atlantic right whale may be affected by the proposed action.

Analysis of Potential Routes of Effect to Critical Habitat

The proposed beach sand placement will occur within critical nearshore reproductive habitat for the loggerhead sea turtle (LOGG-N-5), which extends one mile from mean high water. Nearshore reproductive habitat includes habitat for the hatchling swim frenzy and for females during the inter-nesting period from the shoreline. This nearshore zone is a vulnerable, pivotal transitional habitat area for hatchling transit to open waters, and for nesting females to transit back and forth between open waters and nesting beaches during their multiple nesting attempts throughout the nesting season. The habitat characteristics of this nearshore zone are important in female nest site selection and successful repeat nesting. In addition to nesting beach suitability and proximity to nearshore oceanic currents needed for hatchling transport, habitat suitable for transit between the beach and open waters by the adult female turtle is necessary. Nesting females typically favor beach approaches with few obstructions or physical impediments such as reefs or shallow water rocks, which may make the entrance to nearshore waters more difficult or even injure the female as she attempts to reach the surf zone. The Florida Fish and Wildlife Conservation Commission classify the

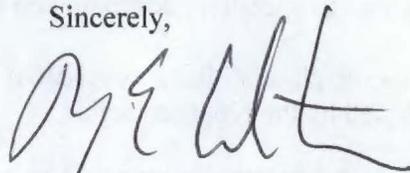
beaches along central Brevard County where the project is located as high density nesting beaches for loggerhead sea turtles. We believe that sand placement to renourish this beach will not create obstacles to nesting sea turtles approaching or hatchlings leaving the beach. The applicant proposes to avoid beach sand placement during nesting season if possible and to monitor for nesting turtles if work must occur during nesting season. The pipeline that will be used to transport sand from the dredge to the beach will be run perpendicular to the beach and will not create an obstacle for turtles that can swim under or over it depending on if the line is floated or placed on the sea floor. Therefore, we believe that even if sand is placed during nesting season, the presence of the pipeline and increased beach profile will have an insignificant effect on sea turtles entering or hatchlings leaving the beach and therefore an insignificant effect on the nearshore reproductive critical habitat.

Conclusion

Because all potential project effects to listed species and critical habitat were found to be discountable, insignificant, or beneficial, we conclude that the proposed action is not likely to adversely affect listed species and critical habitat under NMFS's purview. This concludes your consultation responsibilities under the ESA for species under NMFS's purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. NMFS's findings on the project's potential effects are based on the project description in this response. Any changes to the proposed action may negate the findings of this consultation and may require reinitiation of consultation with NMFS.

We have enclosed additional relevant information for your review. We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Nicole Bonine, Consultation Biologist, at (727) 824-5336, or by email at Nicole.Bonine@noaa.gov.

Sincerely,



Roy E. Crabtree, Ph.D.
Regional Administrator

- Enc.: 1. *Sea Turtle and Smalltooth Sawfish Construction Conditions* (Revised March 23, 2006)
2. *PCTS Access and Additional Considerations for ESA Section 7 Consultations*
(Revised March 10, 2015)

File: 1514-22.S