FINDING OF NO SIGNIFICANT IMPACT

Issuance of Negotiated Agreements for Use of Outer Continental Shelf (OCS) Sand from Canaveral Shoals II Borrow Area on Mid-Reach, South-Reach, and Patrick Air Force Base (PAFB) project segments in Brevard County, FL

Pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), and Department of the Interior (DOI) regulations implementing NEPA (43 CFR 46), the Bureau of Ocean Energy Management (BOEM), U.S. Army Corps of Engineers Jacksonville District (Corps), and the U.S. Air Force (45th Space Wing) have prepared several environmental documents that consider use of OCS sand from the Canaveral Shoals II (CS II) borrow area with placement on multiple beach segments of the Brevard County, FL shoreline (i.e., North-Reach, South-Reach, Mid-Reach, and PAFB) (Attachment 1). Most recently, the Corps (lead agency) and BOEM (cooperating agency) prepared a supplemental Environmental Assessment (SEA) to evaluate a new location for stockpiling sand from CS II at Spessard Holland Park, Brevard County, with subsequent excavation and truck haul to the Mid-reach project segment (Attachment 2).

Proposed Action

BOEM's action is to enter into negotiated agreements authorizing use of OCS sand resources from the CS II borrow area. The project sponsors request to enter into two separate negotiated agreements with BOEM for use of OCS sand within the CS II borrow area to nourish the Mid-Reach, South-Reach, and PAFB segments of the Brevard County, FL shoreline. The agreement with the Corps and Brevard County would be for the Mid-Reach and South-Reach, whereas the agreement with the Corps and 45th Space Wing would be for PAFB. The project segments are either congressionally authorized as a storm risk reduction project (i.e., Mid-Reach and South-Reach) or permitted (i.e., PAFB) by the Corps' Regulatory Division under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. For this construction event, the Corps plans to provide construction oversight and management for all project segments.

<u>Mid-Reach and South-Reach Segments</u>:

The Corps proposes to dredge up to 1,300,000 Cubic Yards (CY) of OCS sand from the CS II borrow area and place that sand along two project segments at Mid-Reach (~ 500,000 CY) and South-Reach (~800,000 CY), Brevard County, FL. The shoreline

length totals 11.8 miles, including the stockpiling location at Spessard Holland Park. This proposal is for the initial construction of the Mid-Reach segment and the sixth nourishment (including initial construction) of the South-Reach segment. BOEM authorized use of OCS sand in prior nourishment activities of the South-Reach segment pursuant to negotiated agreements in July 2000 (amended 2001), January 2005, September 2009, July 2013 (amended Feb 2014), and October 2017.

Temporary stockpiling and subsequent truck haul would occur along approximately 2,090 feet of shoreline at Spessard Holland Park for the Mid-Reach segment in order to avoid impacts to nearshore hard bottom associated with hydraulic placement. An offshore pipeline will transport hydraulically pumped beach quality sand from the hopper dredge to the stockpile area within Spessard Holland Park. The stockpile area has the capacity to store an estimated 97,000 CY. Heavy Equipment will mechanically excavate stockpiled material for truck haul to the Mid-Reach segment. After placement and transfer of the sand stockpile, a minor residual volume of sand will remain on the beach at the Spessard Holland Park.

PAFB:

The Corps and 45th Space Wing propose to dredge up to 600,000 CY of OCS sand from the CS II borrow area and place that sand along the permitted segment of PAFB, approximately 4 miles of shoreline in central Brevard County, FL. Hopper dredges will excavate beach quality sand from CS II and hydraulically pump material via an offshore pipeline to the permitted placement area. This proposal would be the second nourishment of the PAFB segment. BOEM authorized use of OCS sand at PAFB segment pursuant to a negotiated agreement in January 2013 (amended June 2014, extended in January 2015, and extended in January 2017). The most recent agreement expired on 11 January 2019 before construction occurred.

Alternatives to the Proposed Action

BOEM considered the proposed action and no action alternative:

- ❑ Alternative A – Proposed action: dredging from CS II with placement on Mid-Reach, South-Reach, PAFB, and temporary stockpiling location at Spessard Holland Park
- ❑ Alternative B – No action: do not issue negotiated agreements for the projects at this time

The Corps and 45th Space considered other action alternatives to the proposed action before selecting beach nourishment as the preferred alternative. The proposed action includes a new stockpiling area because the previous location used is no longer viable.

Under the no action alternative, storms and erosion would continue to cause extensive damage to infrastructure along the oceanfront, and large portions of the beach would continue to be vulnerable given the likely delay in the nourishment of the project areas until identification of a different sediment source. If erosion continued, beach habitat for resting, foraging, and nesting animals could decrease, which could be especially detrimental to protected species like sea turtles and shorebirds.

Environmental Effects

The Corps, 45th Space Wing, and BOEM have prepared several environmental documents analyzing the various aspects of the proposed action. Summaries of relevant documents are provided in Attachment 3; the recent SEA and this Finding of No Significant Impact (FONSI) incorporate those by reference.

These documents consider the full scope of potential environmental effects associated with dredging of OCS sand from the CS II borrow area and placement of material within Mid-Reach, South-Reach, and PAFB project limits, including the connected action of conveying sediment to the stockpile location at Spessard Holland Park.

BOEM independently reviewed these environmental documents to determine if analysis of the proposed action and associated environmental effects was adequate. The Corps and BOEM first identified and reviewed new information to determine if any resources should be re-evaluated, or if new information would result in a determination of significantly different effects. BOEM concluded that new information further supported or elaborated the information and analyses in prior NEPA documents. Additionally, the occurrence and condition of resources in the affected environment are similar to those previously evaluated resulting in no new significant impacts. BOEM did not find information that warranted a change to the conclusions of the types, levels, or locations of impacts described in the prior documents.

BOEM concluded that the new SEA and prior environmental documents adequately assess the environmental effects of the proposed action and determined that no new circumstances, no new information, or changes in the action or its impacts not previously analyzed would result in a conclusion of significantly different environmental effects.

BOEM identified a suite of mitigation, monitoring, and reporting requirements necessary to avoid, minimize, and/or reduce and track any foreseeable adverse impacts that may result from all project segments and phases of construction. The Corps, 45th Space Wing, and/or Brevard County are responsible for ensuring compliance with all environmental requirements prior to, during, and after construction. The Corps will define roles and responsibilities and coordinate with BOEM in advance of construction to confirm and integrate all environmental compliance requirements into the contract plans and specifications as appropriate. Compensatory mitigation of nearshore hard bottom is complete and associated monitoring is ongoing. The Corps, the County, and the 45th Space Wing will ensure compliance with all of these requirements.

Significance Review

Pursuant to 40 CFR 1508.27, BOEM evaluated the significance of potential environmental effects considering both CEQ context and intensity factors. BOEM considered the potential significance of environmental effects in both spatial and temporal context. Potential effects associated with dredging of CS II borrow area are generally considered reversible because they will be minor to moderate, localized, and short-lived. The only long-term effect within the CS II borrow area is on the physical geomorphology due to the removal of sand; however, limited infilling is anticipated. BOEM considered the ten intensity factors addressed below and did not identify any significant or cumulatively significant adverse effects:

1. Impacts that may be both beneficial and adverse.

BOEM considered potential adverse effects to the physical environment, biological resources, cultural resources, and socioeconomic resources. The CS II borrow area sand composition meets the criteria for native beach compatibility. The project may have minor, short-term effects to essential fish habitat (EFH) with respect to the dredging activities in Canaveral Shoals and placement within each project segment. Quick recovery of benthic invertebrate communities in the borrow area are anticipated along with short-term impacts to nesting sea turtles and shorebirds at the placement sites (i.e., 1-2 years). Some coastal sand dependent species, such as migratory birds, may experience temporary disruptions to foraging and nesting during and shortly following construction. However, those birds that use the beach for foraging or nesting may benefit in the long term from more and better quality habitat because of the project. Standard shorebird monitoring protocols have been developed and will be implemented. Other sand-dependent resources (i.e., benthic invertebrates) may experience minor and short-term effects from dredging and subsequent smothering at the placement site.

Placement of sediment on the Mid-Reach segment will directly impact hard bottom resources. The Corps developed an extensive compensatory mitigation and monitoring plan in collaboration with federal and state resource agencies requiring construction of 4.8 acres of reef. Construction of required compensatory mitigation reefs commenced in 2017 in accordance with the mitigation plan and is expected to be complete in summer 2019 prior to Mid-Reach beach fill construction activities. Monitoring of the mitigation reefs commenced in 2018 and the year one post-construction monitoring report concluded that the constructed reef is functioning in accordance with performance standards outlined in the monitoring plan. The Corps will avoid cultural resources associated with the Space program that occur in the CS II borrow area, as well as nearshore targets within the vicinity of the nearshore pipeline routes. Activities are required to meet all state water quality conditions and turbidity monitoring in accordance with Florida Department of Environmental Protection (FDEP) Joint Coastal Permit (JCP) requirements.

2. The degree to which the proposed action affects public health or safety.
Significant affects to public health and safety are not expected. Generally, the project will provide for increased recreational opportunity from the improved beach and dune habitat. Temporary disruption to aesthetics and recreation may occur in small increments as the construction progresses along the beach; however, completion of each construction segment will result in long-term improvements. Construction equipment may temporarily affect air quality. Noise would temporarily increase at the placement locations during construction, and then would return to ambient levels after project completion. The Corps and BOEM have determined that there are no minority or low-income populations in the project area; therefore, the proposed work is not expected to disproportionately impact populations outlined in Executive Order 12898.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
There are no farmland, wetlands, wild and Scenic Rivers, or Native American lands that would be potentially impacted by this project. Loggerhead, green, and leatherback sea turtles nest within the proposed locations. Hawksbill and Kemp's ridley sea turtles occur in coastal waters off Brevard County but do not nest at the project site. Loggerhead critical habitat (LOGG-N-17) and North Atlantic Right Whale critical habitat occur in the project area. Though protected species and their associated critical habitat occur in the project area, a suite of measures will be implemented to avoid and/or minimize impacts in accordance with the U.S. Fish and Wildlife Service (USFWS) Statewide Programmatic Biological Opinion for beach placement activities (2015), the USFWS Programmatic Piping Plover Biological Opinion (2013), and the NMFS South Atlantic

Regional Biological Opinion (SARBO) (1997). Essential Fish Habitat designations occur in and adjacent to the project site including demersal, pelagic, and highly migratory species; however, no significant affects are expected.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.

No scientifically controversial effects are expected. The CS II Borrow Area has been dredged for multiple nourishment projects. Previous effects were not substantially different from those analyzed. Construction of the Mid-Reach segment of the project will result in burial of nearshore hard bottom; however, the Corps satisfied all compensatory mitigation responsibilities in accordance with the previously coordinated compensatory mitigation plan.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

Beach nourishment is a common solution to coastal erosion problems along the Atlantic coast. As mentioned, this borrow area has been dredged for past projects and routinely monitored without documentation of substantial unexpected effects. The proposed project is similar in scope and activities, so unknown effects or risks are not expected. Additionally, long-term monitoring continues at Canaveral Shoals to document any potential physical and biological implications of multiple dredging events.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

No precedent for future action or decision in principle for future consideration is made in BOEM's decision to authorize use of OCS sand resources for construction of the Brevard County shoreline including Mid-Reach, South-Reach, and PAFB segments. BOEM considers each use of a borrow area on the OCS as a new federal action. The Bureau's authorization of the use of the borrow area does not dictate the outcome of future leasing decisions. Future actions will also be subject to the requirements of NEPA and other applicable environmental laws.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Significance may exist if it is reasonable to anticipate cumulatively significant impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Impacts in the borrow area and on the beach are expected to be short-term and recoverable, and therefore not significant when added to ongoing and future projects in the area. Burial of nearshore hard bottom will occur in association with the Mid-Reach segment. However, required compensatory

mitigation completed in advance of construction offsets that adverse impact. The removal of sand from the limited footprint of CS II borrow area is permanent and that could change the shape, characteristics, and function of the bottom habitat in the limited area over the life of the project. There is comparable, undisturbed habitat located on Canaveral Shoals complex and limited infilling within the borrow area is anticipated.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

No adverse effects to historic or pre-contact resources are expected. Seafloor-disturbing activities (e.g., dredging, anchoring, pipeline placement, etc.) may occur during proposed construction activities. The greatest risk to cultural resources exists in the borrow area, along the pipeline corridor, and within the placement areas on the beach. The Corps conducted archaeological clearance surveys within the CS II Borrow Area, beach placement and stockpile locations, and nearshore pumpout and pipeline corridor locations. The Corps and BOEM coordinated with the Florida Division of Historical Resources and State Historic Preservation Officer (SHPO), as required by the National Historic Preservation Act. The SHPO recommended avoidance buffers for known or potential cultural resources in upland, nearshore, and offshore areas. In the CS II Borrow Area, the SHPO recommended a 300-foot buffer around each of five previously recorded targets. Additionally, the Corps and/or BOEM will immediately notify SHPO if an unexpected discovery occurs and cease operations. Based on these mitigations, the Corps and BOEM concluded there would be no adverse effect to historic properties; the Florida SHPO concurred by letter on 15 May 2019.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The project overlaps with threatened loggerhead and green sea turtles, and endangered leatherback sea turtles. The project may affect nesting sea turtles, but adherence to state and federal requirements, including sand quality, will minimize impacts. The threatened piping plover and red knot may occur on shore. These shorebirds may experience temporary disturbance to its foraging habitat; therefore, the project may affect but is not likely to adversely affect these protected species. The gopher tortoise (proposed for ESA-listing) may occur in the dune habitat; however, the project will not affect the gopher tortoise. The threatened West Indian manatee occurs in coastal and estuarine habitat within Brevard County. The dredge and support vessels may encounter this species and may affect, but are not likely to adversely affect the manatee.

The proposed project will comply with the USFWS Statewide Programmatic Biological Opinion (2015), the USFWS Programmatic Piping Plover Biological Opinion (2013), and the NMFS South Atlantic Regional Biological Opinion (SARBO) (1997). The 1997 SARBO is currently under reinitiation and includes BOEM as a joint consulting agency. All new species and associated critical habitat designations listed since 1997 have been fully coordinated with NMFS. In the interim of NMFS finalizing the revised SARBO, the Corps (at NMFS direction) continues to conduct dredging operations under the 1997 SARBO and associated reasonable and prudent measures (RPMs) and terms and conditions (T&Cs). The Corps and NMFS completed a project-specific consultation in 2008 to address project impacts to foraging green sea turtles associated with placement of sediment at Mid-Reach and burial of nearshore hard bottom foraging habitat. NMFS provided a project-specific Incidental Take Statement and associated RPM's and T&C's for the Mid-Reach segment. The 45th Space Wing also previously consulted with NMFS for the PAFB segment of the project, including all new listed species and designated critical habitat to date. Subsequently, the 45th Space Wing decided to partner with the Corps in managing construction of Mid-Reach, South-Reach, and PAFB segments. Since the Corps is now the lead agency and the PAFB action is included in the reinitiated SARBO, both NMFS and the Corps' South Atlantic Division concurred that dredging associated with all three project segments fall under the SARBO. All relevant RPM's and T&C's associated with each opinion will be implemented.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The Corps, Brevard County, and the 45th Space Wing are responsible for ensuring compliance with all environmental requirements, including compliance with Federal, State, and local laws. The Corps is required to prepare an environmental compliance matrix to confirm and document all environmental requirements and identify roles and responsibilities to ensure compliance prior to, during, and after construction. Additionally, the dredging contractor is required to provide an environmental protection plan that verifies compliance with environmental requirements. The Florida Department of Environmental Protection (FDEP) provided multiple consolidated joint coastal permits (JCP) and subsequent modifications for each segment of the project (Mid-Reach: Permit No. 0254479-001-JC; Permit Modification No. 0254479-005-JN; South-Reach: Permit No. 0137212-016-JC; Permit Modification No. 0137212-017-JN; PAFB: Permit No. 0294526-001-JC; Permit Modification No. 0294526-002-JN). The JCP and associated modifications for each project segment constitute a finding of consistency with Florida's Coastal Management Program, as required by Section 307 of the Coastal Zone Management Act and constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341. As

required by the Magnuson-Stevens Fishery Conservation and Management Act, the Corps and BOEM have coordinated with NMFS on EFH over the years relative to each Brevard County beach segment. The Corps and the 45th Space Wing have committed to implementing EFH Conservation Recommendations associated with prior consultations. Recent correspondence with NMFS Habitat Conservation Division (dated 7 June 2019) pertaining to this project confirmed that no further conservation measures are required.

The proposed action complies with the Marine Mammal Protection Act. Marine mammals are not likely to be adversely affected by the project and incorporation of safeguards to protect threatened and endangered species during project construction (i.e., vessel speed requirements, protected species observers, etc.) would also protect marine mammals in the area. Migratory birds may experience minor, short-term interruptions to foraging or resting activities linked to prey smothering or turbidity increases. These effects would be limited, with full recovery of shoreline resources expected. The Corps, 45th Space Wing, and/or Brevard County will implement measures to avoid impacts to migratory birds, hatchlings, or eggs along with pre- and post-project monitoring requirements.

Consultations and Public Involvement

Preparation of prior NEPA documents typically included an opportunity for public involvement via scoping letters, public meetings, etc. The Corps circulated a scoping letter for the recent 2019 SEA describing the proposed stockpiling area for the Brevard Mid-Reach Project to federal, state, and local agencies on 22 October 2018. The Corps also released the draft SEA for public review on 6 March 2019. The Corps and BOEM considered all comments and integrated responses as appropriate.

Conclusion

BOEM considered the consequences of issuing two negotiated agreements authorizing use of OCS sand from the CS II Borrow Area with placement on Mid-Reach, South-Reach, and PAFB project segments. BOEM independently reviewed prior relevant NEPA documents and served as a cooperating agency in the development of the recent 2019 SEA (Attachment 2). BOEM finds the documents comply with the relevant provisions of the CEQ regulations implementing NEPA, DOI regulations implementing NEPA, and other Bureau requirements.

Based on the evaluation of potential impacts and associated mitigating measures discussed in the referenced NEPA documents, BOEM finds that entering into the

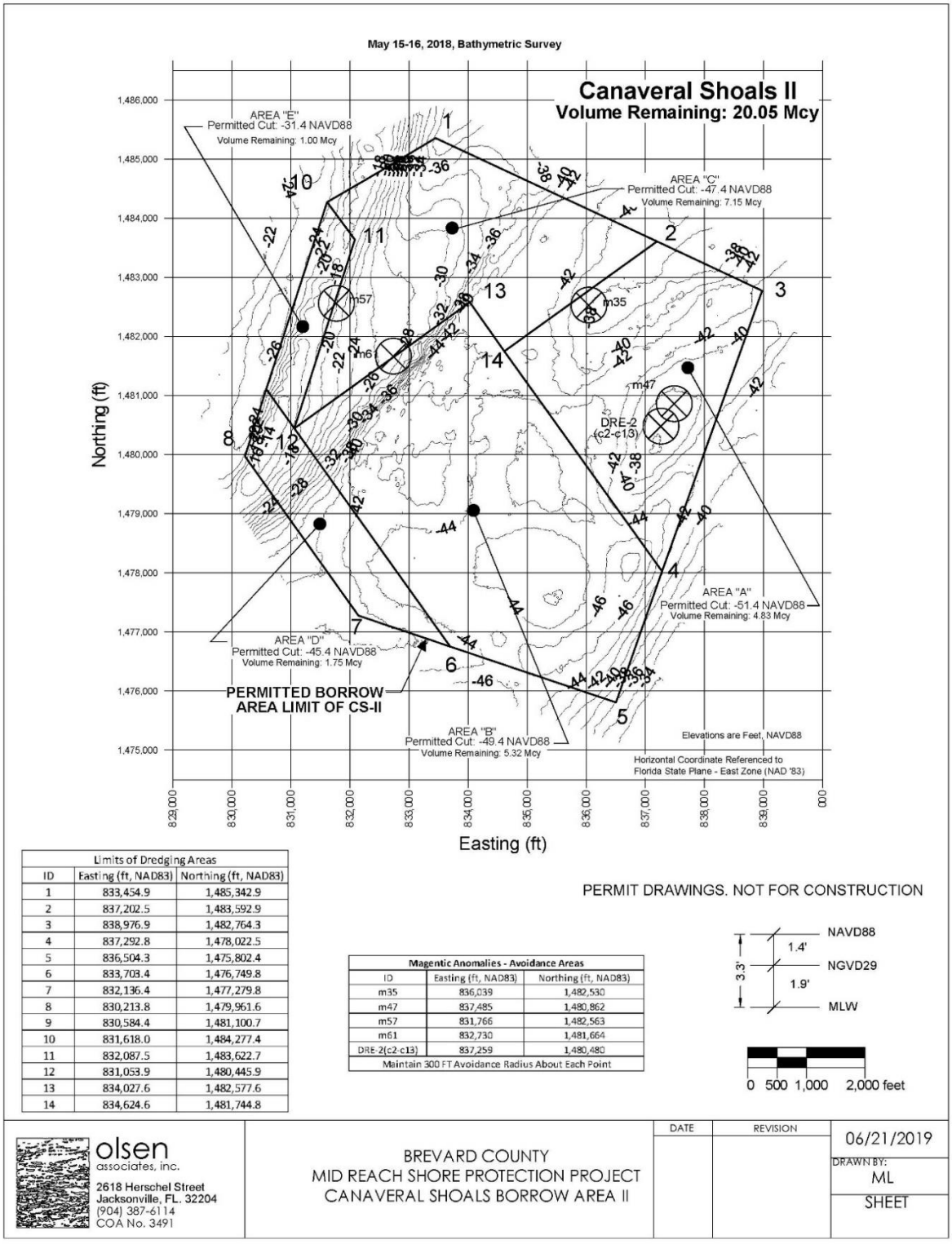
negotiated agreements, with the implementation of the mitigating measures, does not constitute a major Federal action significantly affecting the quality of the human environment, in the sense of NEPA Section 102(2)(C), and will not require preparation of an EIS.

JEFFREY REIDENAUER Digitally signed by JEFFREY REIDENAUER
Date: 2019.08.12 09:48:33 -04'00'

Jeffrey Reidenauer
Chief, Marine Minerals Division

Date

Attachment 1
CSII Borrow Area Map and Placement Sites



Limits of Dredging Areas		
ID	Easting (ft, NAD83)	Northing (ft, NAD83)
1	833,454.9	1,485,342.9
2	837,202.5	1,483,592.9
3	838,976.9	1,482,764.3
4	837,292.8	1,478,022.5
5	836,504.3	1,475,802.4
6	833,703.4	1,476,749.8
7	832,136.4	1,477,279.8
8	830,213.8	1,479,961.6
9	830,584.4	1,481,100.7
10	831,618.0	1,484,277.4
11	832,087.5	1,483,622.7
12	831,053.9	1,480,445.9
13	834,027.6	1,482,577.6
14	834,624.6	1,481,744.8

PERMIT DRAWINGS. NOT FOR CONSTRUCTION

Magentic Anomalies - Avoidance Areas		
ID	Easting (ft, NAD83)	Northing (ft, NAD83)
m35	836,039	1,482,530
m47	837,485	1,480,862
m57	831,766	1,482,563
m61	832,730	1,481,664
DRE-2(c2-c13)	837,259	1,480,480
Maintain 300 FT Avoidance Radius About Each Point		

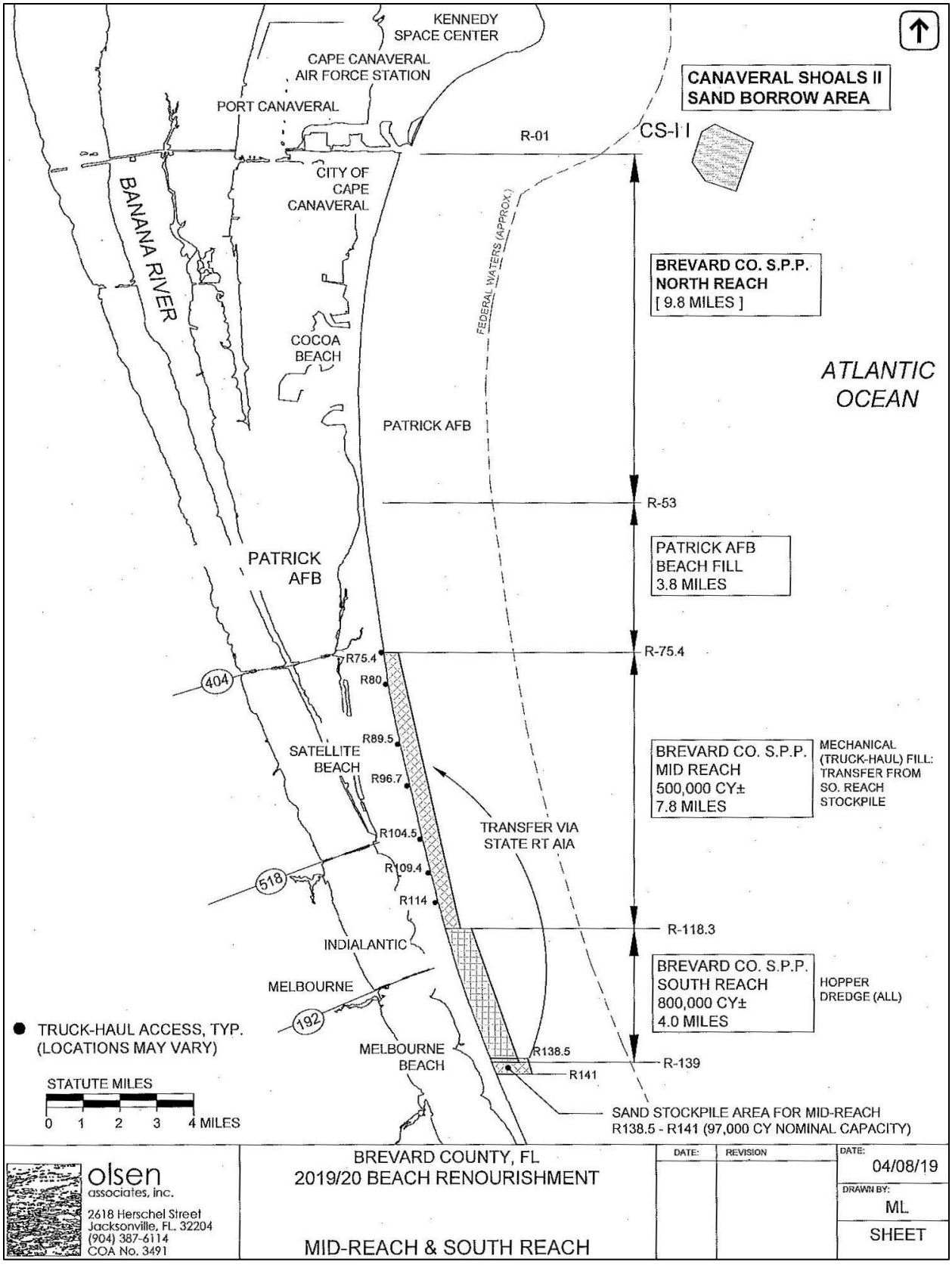
olsen associates, inc.
2618 Herschel Street
Jacksonville, FL. 32204
(904) 387-6114
COA No. 3491

BREVARD COUNTY
MID REACH SHORE PROTECTION PROJECT
CANAVERAL SHOALS BORROW AREA II

DATE	REVISION	06/21/2019
		DRAWN BY: ML
		SHEET

Note: Volume estimates calculated by Olsen Associates, Inc.

Canaveral Shoals II Borrow Area Map



Brevard Mid- and South-Reach Placement Areas

Attachment 2
Supplemental Environmental Assessment
Proposed Sand Stockpile Area
Shore Protection Project Mid-Reach Segment
Brevard County, FL

July 2019

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

PROPOSED SAND STOCKPILE AREA

BREVARD COUNTY, FLORIDA SHORE PROTECTION PROJECT MID-REACH SEGMENT

BREVARD COUNTY, FLORIDA

U.S. Army Corps
of Engineers
JACKSONVILLE
DISTRICT

BOEM
Bureau of Ocean Energy Management

US Army Corps of Engineers
JACKSONVILLE DISTRICT

BOEM
Bureau of Ocean Energy Management

FINDING OF NO SIGNIFICANT IMPACT

BREVARD COUNTY FLORIDA SHORE PROTECTION PROJECT MID-REACH SEGMENT PROPOSED STOCKPILE AREA

BREVARD COUNTY, FLORIDA

The U.S. Army Corps of Engineers, Jacksonville District (Corps) has prepared a Supplemental Environmental Assessment (SEA) in accordance with the National Environmental Policy Act of 1969, as amended (NEPA), and the White House's Council of Environmental Quality regulations to assess the environmental effects of constructing a stockpiling area. The stockpile area would be constructed seaward of the existing dune vegetation line within Spessard Holland Park. Beach compatible sand from Canaveral Shoals will be transported and placed within the stockpile area by hydraulic discharge from a dredge. Stockpiled sand will then be truck hauled and placed along the Mid-Reach project shoreline. Construction of the stockpile, from initial construction to final unloading and grading, will be limited to 1 November through 30 April. Construction will occur seven days per week 24 hours per day until completion. Material will be stockpiled and hauled away multiple times during a single season so that a volume greater than the stockpile's nominal estimated capacity of 97,000 cubic yards will be provided to the Mid-Reach Shore Protection Project. After use of the sand stockpile in a given season, a residual volume of approximately 45,000 cubic yards of sand will remain along the beach berm at the stockpile area, relative to existing conditions, graded to the elevations and slopes of the adjacent nourished and natural beach conditions. This SEA evaluates the effects of the Preferred Alternative and the No Action Alternative.

I have reviewed the SEA for the proposed action. This Finding incorporates by reference all discussions and conclusions contained in the SEA enclosed hereto. Based on information analyzed in the enclosed SEA, reflecting pertinent information obtained from agencies having jurisdiction by law and/or special expertise, I conclude that the proposed action will not significantly affect the quality of the human environment, does not require an Environmental Impact Statement, and is not contrary to the public interest. Reasons for these conclusions are in summary:

a. The Preferred Alternative is in compliance with the Endangered Species Act of 1973, as amended. The Corps has determined that the Preferred Alternative is not likely to adversely affect the threatened Florida manatee, endangered or threatened nesting sea turtles, threatened piping plover, and threatened red knot. The gopher tortoise is a candidate for possible future Federal listing. Coordination with the U.S. Fish and Wildlife Service (USFWS) regarding these species is complete. USFWS concurred with the Corps' determination in a letter dated March 7, 2019. In this case, the National Marine Fisheries Service's South Atlantic Regional Biological Opinion (issued 20 October 1997) applies to this project and will be followed.

b. This project has been coordinated with the State of Florida, and all applicable water quality standards are met. Water Quality Certification has been obtained from the Florida Department of Environmental Protection. Pursuant to the Clean Water Act of 1972, as amended, the discharge of dredged or fill material associated with the Preferred Alternative is compliant with the section 404(b)(1) Guidelines (40 CFR 230). In addition, a determination of consistency with the Florida Coastal Zone Management program pursuant to the Coastal Zone Management Act of 1972 was obtained from the State of Florida on May 10, 2019.

c. The Preferred Alternative has been coordinated with the Florida State Historic Preservation Officer (SHPO) and the appropriate federally recognized Tribes in accordance with Section 106 of the National Historic Preservation Act and consideration given under the NEPA. The Corps has determined that the Preferred Alternative will have no adverse effect on historic properties. SHPO concurred with this determination in a letter dated May 15, 2019.

d. This project has been coordinated with the National Marine Fisheries Service (NMFS) for potential effects to Essential Fish Habitat (EFH). NMFS concurred with the no effect determination in correspondence dated March 29, 2019.

e. The proposed project has been evaluated pursuant to the Migratory Bird Treaty Act. The Corps Migratory Bird Protection procedures will be implemented for this project.

f. Benefits to the public will include improved existing recreation opportunities associated with dry beach and by increasing beach area.

All practicable means to avoid and minimize adverse environmental effects have been incorporated into the Preferred Alternative. Measures that will be in place during construction to eliminate, reduce, or avoid adverse impacts to below the threshold of significance to fish and wildlife resources include the following:

- Dredging and staging activities will occur within the authorized template;
- Water-based activities will follow standard sea turtle protection measures and the terms and conditions of the National Marine Fisheries Service's South Atlantic Regional Biological Opinion;
- Water quality will be protected by adherence to the State of Florida water quality criteria;
- Any water-based activity would follow standard manatee protection measures.

In view of the above and the attached SEA, and after consideration of public and agency comments received on the project, I conclude that the Preferred Alternative would not result in a significant effect on the quality of the human environment; therefore preparation of an Environmental Impact Statement is not required.

KELLY.ANDREW.DONALD.JR.1025510875

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Date: 2019.07.15 17:28:36 -04'00'

Andrew D. Kelly, Jr.
Colonel, U.S. Army
District Commander

Date

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
ON
PROPOSED SAND STOCKPILE AREA
BREVARD COUNTY, FLORIDA SHORE PROTECTION PROJECT
MID-REACH SEGMENT
BREVARD COUNTY, FLORIDA

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DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
ON
PROPOSED SAND STOCKPILING AREA
BREVARD COUNTY, FLORIDA SHORE PROTECTION PROJECT
MID-REACH SEGMENT
BREVARD COUNTY, FLORIDA

1 PROJECT PURPOSE AND NEED

1.1 INTRODUCTION

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is proposing to periodically nourish the beach and/or rebuild the dune within the Mid-Reach Segment, Brevard County, Florida. A detailed description of this project can be found in the *Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement* (Final GRR SEIS)*, Brevard County, Florida, Mid-Reach Segment, Hurricane and Storm Damage Reduction Project* (2010, revised 2011, addendum 2014) and is incorporated herein by reference. In summary, this report recommended a small-scale beach fill varying from a 0-foot to 20-foot extension of the mean high water line plus advanced nourishment to maintain the design volume. The original plan included dredging sand from the offshore borrow site known as Canaveral Shoals, temporary placement at a dredged material management area on Cape Canaveral Air Force Station (CCAFS), and then truck-hauled to the Mid-Reach Beach. The placement area at CCAFS is no longer available.

Subsequent to completion of the Final GRR SEIS, the Corps and Brevard County, the Non-Federal sponsor for this project, further investigated the possibility of using sand from upland quarries as well as Canaveral Shoals to nourish the Mid-Reach Beach. A detailed description of the proposed use of upland quarries as an additional source of sand for the Mid-Reach Segment of Brevard County, Florida can be found in the *Final Environmental Assessment* (Final EA) (2016) and is also incorporated herein by reference.

The purpose of this Supplemental Environmental Assessment (SEA) is to evaluate using a portion of Spessard Holland Park, Brevard County, as a temporary stockpiling area for beach quality sand from the project's existing, permitted offshore borrow areas, Canaveral Shoals I located in State of Florida waters and/or Canaveral Shoals II located in the Outer Continental Shelf waters. In summary, beach quality sand would be dredged from Canaveral Shoals and transported via hydraulic pipeline to the stockpile area within Spessard Holland Park. The stockpile area has the capacity to temporarily store an estimated 97,000 cubic yards at a given time. Once stockpiled, the material would then be transported by truck and placed along the congressionally authorized Mid-Reach Segment. After placement and transfer of the sand stockpile, a minor residual volume of sand would be left along the beach at the Spessard Holland Park.

This SEA also evaluates the pipeline corridor by which sand from Canaveral Shoals would be placed to the Spessard Holland Park. The proposed action would be utilized for initial construction and periodic future renourishments of the Mid-Reach project segment. The purpose of the action is to reduce overall project costs, increase efficient use of dredge equipment mobilized to the project, ensure maximum flexibility for cost effective sand acquisition and construction methods, and reduce use of upland sand resources, and improve assurance of sand fill quality and available quantity through use of historically proven sediment resources from the project's offshore borrow areas. The construction and use of the stockpile area will allow for avoidance of hardbottoms. There are no nearshore hardbottom resources along or near the proposed sand stockpile location that might be impacted by a pipeline.

Canaveral Shoals II is located on the Outer Continental Shelf (OCS) and, therefore, falls under the jurisdiction of the Bureau of Ocean Energy Management (BOEM). BOEM is authorized under Public Law 103-426 [43 United States Code (U.S.C.) 1337(k)(2)] to negotiate on a non-competitive basis the rights to OCS sand resources for coastal storm risk management projects. BOEM may undertake a connected action (i.e., authorize use of additional OCS sand sources to support the volume needs for the Mid-Reach project segment) that is related to, but unique from the Corps' proposed action. BOEM's proposed action is to issue a negotiated agreement authorizing use of the additional sand resources at the request of Brevard County and the Corps to support construction of Mid-reach. The placement of stockpile sand at Spessard Holland Park is an associated authorization of the sand extracted from the OCS; therefore, BOEM is serving as a cooperating agency in the preparation of this SEA, specifically as it relates to sediment from Canaveral Shoals II.

1.2 PROJECT AUTHORITY

A General Reevaluation Report (GRR) for the Brevard County, Florida Shore Protection Project, Mid-Reach Segment was authorized by Section 418 of the Water Resources Development Act (WRDA) of 2000 (see below).

SEC. 418 BREVARD COUNTY, FLORIDA
"The Secretary shall prepare a general reevaluation report on the project for shoreline protection, Brevard County, Florida, authorized by section 101(b)(7) of the Water Resources Development Act of 1996 (110 Stat. 3667), to determine, if the project were modified to direct the Secretary to incorporate in the project any or all of the 7.1 mile reach of the project that was deleted from the south reach of the project, as described in paragraph (5) of the Report of the Chief of Engineers, dated December 23, 1996, whether the project as modified would be technically sound, environmentally acceptable, and economically justified."

Additional language concerning the Mid-Reach Project was included in the WRDA 2007:
SEC. 3045. BREVARD COUNTY, FLORIDA.

“(a) SHORELINE.—The project for shoreline protection, Brevard County, Florida, authorized by section 101(b)(7) of the Water Resources Development Act of 1996 (110 Stat. 3667), is modified to authorize the Secretary to include the mid-reach as an element of the project from the Florida department of environmental protection monuments R-75.4 to R-118.3, a distance of approximately 7.6 miles. The restoration work shall only be undertaken upon a determination by the Secretary, following completion of the general reevaluation report authorized by section 418 of the Water Resources Development Act of 2000 (114 Stat. 2637), that the shoreline protection is feasible.’’

In response to section 418 of the WRDA of 2000 and section 3045 of WRDA 2007, the Corps prepared the General Reevaluation Report (GRR) as well as a Supplemental Environmental Impact Statement (SEIS) for the proposed Mid-Reach Project. The GRR SEIS, dated August 2010, (revised April 2011) and Addendum (April 2014) presented the results of this shoreline protection study. Based on the review of the GRR SEIS and Addendum, it was determined (September 2014) that construction of the Mid-Reach Project is feasible, thus it is now congressionally authorized pursuant to section 3045 of the WRDA of 2007.

1.3 PROJECT LOCATION AND DESCRIPTION.

The proposed temporary sand stockpile would be constructed along 2,090 feet of shoreline in the central portion of Spessard Holland Park, between Florida Department of Environmental Protection (FDEP) reference monuments R138.5 and R140.8, with residual (post-stockpile) beach fill extending another 214 feet to R141. The northern 530 feet of the stockpile would be constructed within the south end of the authorized limits of the Brevard County Florida Shore Protection Project (BCFSPP), South Reach Segment (i.e., from R138.5 to R139). The southern 1,560 feet of the stockpile would be constructed immediately adjacent to and south of the South Reach (i.e., from R139 to R140.8), with residual post-stockpile berm fill extending another 214 feet southward (i.e., from R140.8 to R141). **(Figure 1: Location Map)**

The proposed sand stockpile shall be constructed seaward of the existing dune vegetation line upon the existing sand beach. Beach compatible sediment dredged from Canaveral Shoals will be transported and placed to the stockpile by hopper dredge and hydraulic discharge. A temporary pipeline upon the nearshore seabed between approximately 30-ft depth and the beach, seaward or immediately north of the stockpile shoreline, will convey the sand from the hopper dredge to the beach stockpile, identical to that used to construct the beach fill along the adjacent BCFSPP South Reach Segment. The sand will be mechanically graded to the stockpile by payloaders and bulldozers. Construction access and staging between the upland and the sand stockpile would be established near the mid-point of the stockpile (near R140). A temporary sand ramp across the dune will be replanted after construction. Sand from the stockpile will be loaded to dump-trucks by a mechanical excavator and delivered and placed to the Mid-Reach project shoreline via existing upland roads, with one-way haul distances of between 4 and 11.5 miles. Construction of the stockpile, from initial construction to final unloading and grading, will be limited to 1 November through 30

April, with allowance for construction up to 7 days per week and 24 hours per day. As time permits, reloading and transfer of sand at the stockpile will permit multiple uses of the stockpile area during a single season so that a volume greater than the stockpile's nominal estimated capacity of 97,000 cubic yards of beach fill could be provided to the Mid-Reach, through the stockpile, from November through April. A residual volume of approximately 45,000 cubic yards of sand will remain along the beach berm at the stockpile area, relative to existing conditions, graded to the elevations and slopes of the adjacent nourished and natural beach conditions. This residual sand will improve performance of the BCFSPP project by anchoring the south end of the project with an enhanced transition (end-taper) to the existing beach. There are no nearshore hardbottom resources along or near the proposed sand stockpile location. The nearest hardbottom is located over 4 miles to the north, at the south end of the BCFSPP Mid-Reach segment.

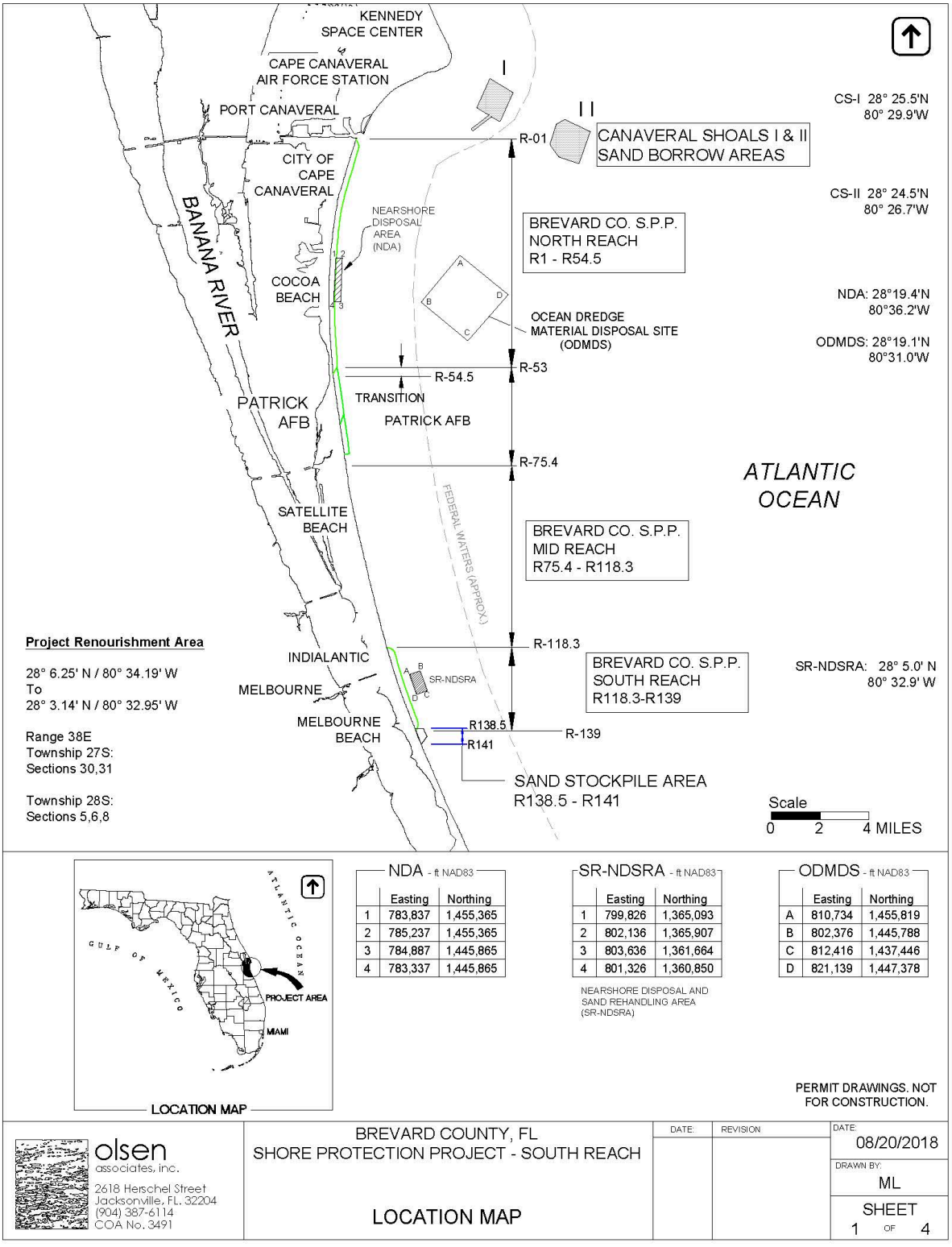

Figure 1: Location Map

1.4 PROJECT NEED OR OPPORTUNITY.

The proposed action will ensure beach-compatible sand for the Mid-Reach project, reduce the depletion of limited upland mine sources, extend the area of positive beach impact, and reduce project costs. It is anticipated that the proposed stockpile area shall reduce overall project costs of the Mid-Reach segment through (i) more efficient use of an offshore dredge plant by increasing the overall sand quantity required for the dredge mobilization, (ii) avoidance of the cost of upland quarry sand purchase and processing, (iii) substantially reduced roadway transport distance of project sand, and (iv) lesser Quality Assurance cost associated with ensuring consistent beach-quality sand from upland sources relative to the proven quality of the offshore sand. Likewise, important environmental benefits are anticipated to accrue from (i) reduced overland truck-haul transport from upland sand quarries to the beach, and (ii) improved assurance of high-quality sand to be placed from proven offshore sand sources.

1.5 AGENCY GOAL OR OBJECTIVE.

The objective of this SEA is to determine whether the proposed stockpiling of offshore-dredged sand and subsequent mechanical excavation and placement via truck-haul along the Mid-Reach would result in significant environmental effects on the human environment at the project location. The need for mitigation measures or best management practices to reduce any potentially adverse effects is also a decision to be made. If no significant impacts are identified during the National Environmental Policy Act (NEPA) process, the Corps will make the decision to sign a Finding of No Significant Impact (FONSI) and move forward with the Preferred Alternative. If significant impacts are identified, the Corps will decide to implement mitigation measures to reduce the impacts to a lower-than-significant threshold, proceed with the Notice of Intent to prepare an Environmental Impact Statement, or not implement the Preferred Alternative.

1.6 RELATED DOCUMENTS.

Summaries of prior Federal studies relevant to this project are as follows:

a. Final EA, Proposed Use of Commercial Upland Quarries as an Additional Source of Sand Hurricane and Storm Damage Reduction Project, Mid-Reach Segment Brevard County, Florida. (July 2016). This report evaluates the use of commercial upland quarries as an additional source of sand. The FONSI was signed on August 4, 2016.

b. Department of Army Record of Decision (August 3, 2012) for Department of Army Permit SAJ-2005-08688, Section 10/404. Department of Army Regulatory Division adopted the Corps Final 2011 GRR SEIS. This action triggered BOEM consulting with NMFS for dredging of Canaveral Shoals II to support the permit project.

c. Final GRR SEIS, Brevard County, Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment (August 2010, Revised April 2011, and Addendum April 2014). This report recommended a small-scale beach fill varying from a 0-foot to 20-foot extension of the mean high water line plus advanced nourishment to maintain the

design volume. The source of sand would be the offshore borrow site known as Canaveral Shoals. Approximately 3.0 acres of nearshore hardbottom would be impacted and mitigated by constructing 4.8 acres of reef comprised of articulated concrete mattresses. A Record of Decision was signed on September 8, 2014.

d. Limited Reevaluation Report and Environmental Assessment, North Jetty Sand-Tightening and Jetty Extension, Canaveral Harbor, Florida. US Army Corps of Engineers, Jacksonville (2003). This report recommended permanent sand tightening and north jetty extension to maximize the positive benefit of sand management at the harbor entrance and to reduce maintenance dredging. The project is designed to maintain impounding of sand north of the north jetty consistent with sand bypassing operations. A Finding of No Significant Impact was signed on September 3, 2002.

e. Limited Reevaluation Report, Brevard County, Florida, Shore Protection Project. US Army Corps of Engineers, Jacksonville (1999). This report added project refinements of an access lane to Canaveral Shoals Borrow Area I, two alternative borrow areas (Canaveral Shoals II and Space Coast Shoals), two nearshore disposal and sand re-handling areas, and updated benefits, costs and cost sharing.

f. Feasibility Report with Final Environmental Impact Statement. US Army Corps of Engineers, Jacksonville (1996). This study recommended beach nourishment along two reaches: (1) North Reach; and (2) South Reach. Patrick Air Force Base (PAFB) was removed from the study at their own request. The North Reach extended 9.4 miles from Port Canaveral Entrance to PAFB (FDEP Monuments R-1 to R-53). The South Reach extended approximately 11 miles from PAFB to Spessard Holland Park North (R-75.3 to R-138). Of this original South Reach, the northern 7.8 miles were found to have nearshore outcrops of coquina rock and isolated patches of sabellariid worm rock from about R-75.3 to R-118. Beach nourishment along this 7.8-mile long area would result in potential impact (burial) of up to 31 acres of rock hardgrounds. Brevard County and the Corps jointly elected to delete this reach of shoreline. The South Reach was modified to the limits R-119 to R-138. The Record of Decision was signed on November 14, 2000.

g. Reconnaissance Report, Brevard County, Florida. US Army Corps of Engineers, Jacksonville (1992). The intent of this reconnaissance study was to assess the shoreline along the Brevard County being impacted by beach erosion. Federal participation was recommended for four reaches: Cocoa Beach, PAFB, Satellite-Indian Harbour Beach, and Indialantic-Melbourne Beach. PAFB was removed from further study by their own request.

h. Design Memorandum, Canaveral Harbor, Florida. US Army Corps of Engineers, Jacksonville (1992). This report recommended deepening the Inner Entrance Channel to 40 feet and deepening portions of the Middle Turning Basin and West Access Channel to 39 feet.

i. Supplement to the General Design Memorandum, Sand Bypass System, Canaveral Harbor, Florida. US Army Corps of Engineers, Jacksonville (1991). This report

recommended using a dredge to move sand from the north side of the north jetty to beaches on the south side of the south jetty as the most cost effective and technically feasible method of bypassing. The analysis used an annual bypassing volume of 106,000 cubic yards, and recommended dredging every five years at a quantity of 530,000 cubic yards each event.

j. General and Detail Design Memorandum Addendum: Brevard County, Florida. US Army Corps of Engineers, Jacksonville (1978). This report provided the engineering, design and cost/benefit analyses for the 2.0 mile Indialantic segment including sand source.

k. General and Detail Design Memorandum: Brevard County, Florida. US Army Corps of Engineers, Jacksonville (1972). This report provided results of the engineering, design, and cost/benefit analyses for the Cape Canaveral segment and Indialantic segments of the beach nourishment project. A segment of 2.1 miles at Cape Canaveral was recommended using material from Canaveral Harbor dredging. The 2.0 mile segment at Indialantic was deferred until an economical sand source could be found.

k. Beach Erosion Control Study on Brevard County, Florida (1967). This report recommended Federal participation in a 2.8 mile beach nourishment project just south of Canaveral Harbor and for 2.0 miles at Indialantic-Melbourne Beach.

Summaries of prior Non-Federal studies relevant to the project are as follows:

a. Assessment of Nearshore Rock and Shore Protection Alternatives along the “Mid-Reach” of Brevard County, Florida. Olsen Associates (2003). The intent of this study was to “identify (1) the physical abundance and character of nearshore rock outcrops, (2) the severity of beach erosion impacts and (3) potential alternatives for shore protection along approximately 7.6 miles of the Brevard County shoreline between PAFB and the existing northern boundary of the Brevard County Federal Shore Protection Project, South Reach, near Indialantic.” The report describes numerous alternatives, including hydraulic fill from R-99 to R-118.3, truck-haul beach fill from R-94.2 to R-99, and truck-haul dune fill from R-85.4 to R-89 and R-75.4 to R-81.

b. Independent Study Report, Brevard County, Florida Shore Protection Project. D. Kriebel, R. Weggel, R. Dalrymple. (2002). Also known as the Brevard County Independent Coastal Expert (ICE) Report. This report analyzed the effects of the Canaveral Harbor Federal Navigation Project on erosion of adjacent shorelines. 6 This study concluded that the Federal navigation project has caused erosion damages to the shoreline of Brevard County over a distance of 10 to 15 miles south of Canaveral Harbor. The report concluded that the entire amount of sand fill planned during the 50-year lifetime of the North Reach of the Brevard County Shore Protection Project should be considered as mitigation for the effects of the Navigation Project and should be constructed at 100% Federal cost.

Adjacent Projects include the following:

a. Brevard County Federal Shore Protection Project. This project includes two reaches, described as the North Reach and the South Reach. The North Reach is bounded by Port Canaveral to the north and PAFB to the south. The South Reach begins near the town of Indialantic and extends southward to Spessard Holland Park. PAFB and the previously constructed South Reach beach fills bound the present 'Mid-Reach' study area. The North Reach project fill area includes 9.4 miles of shoreline from Florida Department of Environmental Protection (FDEP) Monument R-03 to R-53. Initial construction was completed in April 2001 and placed approximately 3.1 million cubic yards of material. The Air Force funded a nourishment of its beaches from R-53 to R-70, which was constructed in conjunction with the North Reach and placed 0.6 million cubic yards of fill. The South Reach project was initially nourished in two segments due to permit restrictions concerning turtle nesting season; the first segment (R-122.5 to R-139) was completed in April 2002 and the second segment (R-118.3 to R-123.5) was completed in April 2003. Total fill in the South Reach was approximately 1.6 million cubic yards. The final construction template consisted of a zero-foot design berm plus an advance fill of an additional 50 to 65 feet of berm width depending on the location. The nourishment interval for the North and South Reaches is six-years. Subsequent periodic and post-hurricane renourishments of the North and South Reach segments were constructed in 2005, 2011, 2014, and 2017-18.

b. Canaveral Harbor Federal Navigation Project. Port Canaveral is located at the north end of Brevard County, approximately 14 miles north of the north limit of the Mid-Reach study area. The entrance channel and jetties are maintained through a Federal Navigation Project. Concerns over the impact of the channel and jetties to down-drift beaches led to an independent study of the effects of Canaveral Harbor completed in September 2002. The findings of the study stated that Canaveral Harbor contributed to the erosion of down-drift beaches up to 10 to 15 miles south of the channel. The Federal Navigation Project includes a bypassing feature, wherein approximately 936,000 cubic yards of material are moved by dredge every 6 years from the north side of the channel to the south side of the channel as mitigation for the channel impacts.

c. Patrick Air Force Base. The US Air Force has constructed beach fill projects on the Atlantic shoreline of PAFB. Recent additions of material were placed in a beach nourishment and a dune construction project in 2001 and 2005. In 2001, approximately 598,300 cubic yards of sand were placed from R-53 to R-70 from the Canaveral Shoals II offshore borrow area via direct hopper dredge pump-out. Material in the amount of 321,500 cubic yards was placed between monuments R-54.4 and R-75.3 in conjunction with the Brevard County North Reach Federal shore protection project in 2005. Placements within the southernmost two miles of the base, where nearshore rock outcroppings exist, was limited to placement above water and in the dune area. The material was obtained from the Canaveral Shoals II borrow area. Based upon the as-built sediment samples along the project area, all of the sand placed was well within State requirements for beach fill. The fines fraction was less than 1% throughout and monitored turbidity levels at both the PAFB and adjacent areas were low (well below maximum allowances) and nearly identical to the levels measured prior to the dredging

activities (Olsen 2003). The 2005 beach fill included on-beach stockpiling of approximately 60,000 cubic yards of sand from Canaveral Shoals II along the central PAFB shoreline which was subsequently truck-haul transferred and placed to the southern two miles of the PAFB shoreline. Additionally, a total of approximately 100,000 cubic yards of sand have been bypassed from the Cape Canaveral Air Force station beach north of Port Canaveral via truck-haul transfer and placement to the PAFB shoreline in 2011, 2015, and 2018.

d. Brevard County Dune Restoration. In winter 2004/2005, Brevard County completed a dune restoration project in association with the FEMA emergency berm project and the State interim dune project following hurricane damages. The project aimed to provide restoration of the dunes with a placement ranging from 5 to 10 cubic yards per linear foot of shoreline using sand from upland sources. Approximately 307,300 cubic yards of material were placed in the Mid-Reach and another 252,200 cubic yards placed along the south beaches. In spring 2006, FEMA funded a restoration of 127,584 cubic yards in the Mid-Reach and 47,770 cubic yards along the south beaches. In the spring of 2008 another project was funded by the County and State of Florida, without FEMA funding, to place 95,777 cubic yards in the Mid-Reach and 31,948 cubic yards along the south beaches. In 2009 FEMA funded another 91,822 cubic yards in the Mid-Reach and 69,132 cubic yards in the south beaches. In 2014, work funded by the County and State of Florida, placed 191,770 cubic yards in the Mid-Reach and 47,262 cubic yards in the south beaches. The most recent work in 2017-18 placed 156,590 cubic yards in the Mid-Reach and 178,210 cubic yards in the south beaches. Together these emergency response dune projects have placed 970,843 cubic yards in the Mid-Reach and 625,522 cubic yards in the south beaches between 2005 and 2014. All of these projects used upland sand sources.

1.7 DECISIONS TO BE MADE.

This Environmental Assessment supplements the GRR SEIS, and specifically evaluates the effects of using a sand stockpile area and pipeline corridors on the beach south of the project area for initial and continual construction of the Mid-Reach Beach.

1.8 SCOPING AND ISSUES.

1.8.1 ISSUES EVALUATED.

A Scoping letter, dated October 22, 2018 (Appendix C), was transmitted to the public and identified issues relevant to the proposed use of an on-beach sand stockpiling area using material from Canaveral Shoals for sand transfer to the Mid-Reach shoreline:

- Effects to federally listed species;
- Effects to beach vegetation during construction;
- Truck traffic impacts associated with truck-haul operations;
- Essential Fish Habitat (EFH) (Hardbottoms).

Please use the following link to access the GRR SEIS for more detailed information on this project:

http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Brevard

1.9 WATER QUALITY CERTIFICATION.

A Joint Coastal Permit (water quality certification) modification has been obtained from the FDEP for the proposed use of the stockpiling area (Appendix C).

2 ALTERNATIVES

This section describes the no action alternative and the Preferred Alternative. All other reasonable alternatives were evaluated within the aforementioned 2010, revised 2011, with an addendum in 2014 Final GRR SEIS (revised) and the 2016 Final EA and are incorporated herein by reference. The Preferred Alternative was selected based on the information and analysis presented in the Affected Environment and Environmental Effects sections of this SEA.

2.1 DESCRIPTION OF ALTERNATIVES.

2.1.1 NO ACTION ALTERNATIVE (STATUS QUO)

The proposed sand stockpiling area would not be used for Mid-Reach beach nourishment. In this case, a different stockpiling area would need to be identified and an additional Environmental Assessment conducted.

2.1.2 ACTION ALTERNATIVE: USE OF SAND STOCKPILE AREA

The action alternative includes hydraulically placing material in the proposed temporary beach stockpiling location by dredge from Canaveral Shoals I and/or II and pipeline corridors. This material would be mechanically transferred by truck-haul on Highway A1A using established transport routes and placed along the Mid-Reach segment.

2.2 ISSUES AND BASIS FOR CHOICE

The action alternative, establishment and use of the proposed sand stockpiling area, is necessary because stockpiling of sand within a Dredged Material Management Area at Cape Canaveral Air Force Station, as originally proposed within the GRR SEIS, is no longer available. Using a stockpiling area reduces the overall project costs and increases efficient use of dredge equipment mobilized to the project, reduces use and depletion of upland sand resources and associated impacts of long-distance overland truck-haul, improves assurance of sand fill quality and available quantity through use of historically proven sediment resources from the project's offshore borrow area.

2.3 PREFERRED ALTERNATIVE(S)

Action Alternative, hydraulically placing material in the stockpiling location by dredge from Canaveral Shoals I and/or II and mechanically transferring the material by truck-haul on Highway A1A using established access routes and placed along the Mid-Reach Shore Protection Project is the preferred alternative. However, beach quality sand from new expanded, and/or existing upland quarries for Mid-Reach nourishment may also be used and evaluated in the future.

2.4 COMPARISON OF ALTERNATIVES

Table 1 lists alternatives considered and summarizes the major features and consequences of the proposed action and no action alternative. See section 4.0 Environmental Effects for a more detailed discussion of impacts of alternatives.

Table 1: Summary of Direct and Indirect Impacts

ALTERNATIVE ENVIRONMENTAL FACTOR	Action Alternative: Use of Sand Stockpiling Area	No Action* Status Quo
GENERAL ENVIRONMENTAL SETTING	Minor short term effect to the stockpiling area as well as the pipeline route through the adjacent offshore and nearshore areas.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.1 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.1
NATIVE BEACH AND OFFSHORE SAND COMPOSITION	Offshore sand composition from Canaveral Shoals meets the Bureau of Beaches and Coastal Systems – Rules and Procedures for Using Sand-Filled Geotextile Dune Cores (Permits for Construction and Maintenance) FAC Rule 62B-56.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.5.1 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.2
NESTING SEA TURTLES	Sand stockpiling activities may affect nesting sea turtles. Work would be performed in compliance with USFWS and State permit requirements including sand quality.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.3.1 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.3.1
PIPING PLOVER	Sand stockpiling activities may affect, but are not likely to adversely affect the plover. Use of offshore sand from Canaveral Shoals would result in similar effects, i.e. potential temporary disturbance and alteration of the beach face (foraging habitat). Work would be performed in compliance with USFWS and State permit requirements.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.3.2

ALTERNATIVE ENVIRONMENTAL FACTOR	Action Alternative: Use of Sand Stockpiling Area	No Action* Status Quo
RED KNOT	Sand stockpiling activities may affect, but are not likely to adversely affect the red knot. Use of offshore sand from Canaveral Shoals would result in similar effects, i.e. potential temporary disturbance and alteration of the beach face (foraging habitat). Work would be performed in compliance with USFWS and State permit requirements.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.3.2
GOPHER TORTOISE	No effect. Gopher tortoises shall be avoided within the dune habitat of the stockpile area.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.3.6 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.3.3
WEST INDIAN MANATEE	Possible encounters with manatees by dredge and support vessels during dredge and disposal operations. These operations may affect, but are not likely to adversely affect the manatee. Work would be performed in compliance with USFWS and State permit requirements.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.3.3
ESSENTIAL FISH HABITAT	Minor short-term effect to EFH adjacent to the stockpile area and pipeline route. The sand stockpile site is located 4 miles south of the nearest occurrence of hardbottom, such that there is no anticipated impact to nearshore hardbottom from loss of sand at the stockpile site during either loading (from the dredge) or offloading (to the trucks).	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.6 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.5

ALTERNATIVE ENVIRONMENTAL FACTOR	Action Alternative: Use of Sand Stockpiling Area	No Action* Status Quo
MIGRATORY BIRDS	Minor short-term effect. Standard migratory bird protection protocols will be incorporated into the project plans and specifications. The contractor will be required to abide by those protocols and all monitoring timeframes as specified by all applicable licenses and permits.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.3.2, 7.2.5.3 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.4
OTHER WILDLIFE RESOURCES	Minor and short-term effect to other wildlife resources such as macro invertebrates.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.5 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.6
CULTURAL, HISTORIC, AND ARCHAEOLOGICAL RESOURCES	No adverse effect to cultural resources or historic properties contingent on maintaining buffers around identified cultural resources.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.7 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.8

ALTERNATIVE ENVIRONMENTAL FACTOR	Action Alternative: Use of Sand Stockpiling Area	No Action* Status Quo
WATER QUALITY	Sand stockpiling would be required to meet State (acceptance) criteria. All work would be performed in compliance with the State permit.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.12 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.9
AESTHETICS	Offshore sand from Canaveral Shoals used for stockpiling would maintain existing beach aesthetics by preserving or improving sand dune and beach conditions.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.9 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.10
RECREATION	Temporary disruption and/or localized suspension of recreation at sand stockpile locations during construction activities. Sand stockpiling would improve existing recreational opportunities associated with dry beach by maintaining or increasing beach area.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.11
HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)	No effect.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.13 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.12

ALTERNATIVE ENVIRONMENTAL FACTOR	Action Alternative: Use of Sand Stockpiling Area	No Action* Status Quo
AIR QUALITY	Short-term impact from emissions by construction equipment associated with sand stockpiling and truck-haul will not significantly impact air quality.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.14 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.13 Greater short-term impact from emissions by construction equipment associated with alternate sand stockpiling or upland sand because haul distance will be greater for these options.
NOISE	Construction generated noise would temporarily raise the noise level at the sand stockpile site.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.15 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.14
ENERGY REQUIREMENTS AND CONSERVATION	Expenditure of energy resources (fuel) would be required for sand stockpiling activities.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.17 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.15 If the proposed stockpile area is not used there will be greater expenditure of fuel associated with longer truck-haul distances from upland quarries.

ALTERNATIVE ENVIRONMENTAL FACTOR	Action Alternative: Use of Sand Stockpiling Area	No Action* Status Quo
NATURAL OR DEPLETABLE RESOURCES	Offshore sand is the only natural and depletable resource associated with this alternative.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.18 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.16
NATIVE AMERICANS	There are no lands belonging to Native Americans in the project area.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.20 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.17
REUSE AND CONSERVATION POTENTIAL	There is no potential for reuse or conservation with this alternative.	The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA specifically: 2010, revised 2011 Final Integrated General Reevaluation Report And Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.21 2016 Final Environmental Assessment Proposed Use of Upland Quarries As An Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.18

*Additional information can be found within the GRR SEIS using the following link:

http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Brevard

3 AFFECTED ENVIRONMENT

The Affected Environment section describes the existing environmental resources of the areas that would be affected if any of the alternatives were implemented. This section describes only those environmental resources that are relevant to the decision to be made. It does not describe the entire existing environment, but only those environmental resources that would be affected by the alternatives if they were implemented. This section, in conjunction with the description of the "no action" alternative, forms the base line conditions for determining the environmental impacts of the proposed action and reasonable alternatives. (The reader is encouraged to access the GRR SEIS for additional information on the affected environment.)

3.1 GENERAL ENVIRONMENTAL SETTING

The proposed stockpiling area is located on a coastal barrier island of central Brevard County on Florida's east coast, and is bound on the west by the extensive estuarine lagoon system of the Indian River and on the east by the Atlantic Ocean. This area consists of an open sandy beach. The stockpiling area would be constructed along Spessard Holland Park, owned by Brevard County, at and along the south end of the South Reach **(Figure 1)**. Specifically, the stockpiling area would be constructed between the two major areas of Spessard Holland Park that are principally used for public access and recreation (i.e., Spessard Holland Park North and Spessard Holland Park South), and therefore minimize the impacts to public beach access and use (**Figures 2 and 3**).

Figure 2: South Reach Stockpile Area – Southward View

Figure 3: Sand Stockpile Area – Northward View.

An upland dune system is present in the proposed stockpiling area. The dunes are generally narrow and characterized as coastal strand. The coastal strand is typically vegetated with sea oats (*Uniola paniculata*), dune grass (*Ammophila breviligulata*), sea grape (*Coccoloba uvifera*), sea rocket (*Cakile edentula*), cacti (*Opuntia compressa*),

croton (*Croton puntatus*), pennywort (*Hydrocotyle bonariensis*), beach elder (*Iva imbricate*), sea purslane (*Susuviam portulacustrum*), wild bean (*Strophostyles helvola*), and morning glory (*Ipomea purpurescens*). The maritime hammock is composed of sea myrtle (*Baccharis halimilifolia*), salt cedar (*Timorous gallic*), wax myrtle (*Maraca cerifera*), youpon (*Ilex vomitoria*), senna (*Cassia fasiculata*), southern red cedar (*Juniperus silicicola*), muscadine (*Vitis rotundifolia*), Virginia creeper (*Partenocissuss quinquefolia*), and greenbriar (*Smilax bona-nox*) (**Figures 4 and 5**).

Figure 4: Dune Vegetation

Figure 5: Dune Vegetation

3.2 NATIVE BEACH COMPOSITION

The native beach sediments of the proposed stockpile area from R138.5 and R140.8 consist of grey to light grey colored, poorly-graded, fine grained quartz sand with variable amounts of shell fragments and a silt content of 4.5%. The mean grain size of the native beach sediments is 0.24 mm. The northern portion of the stockpile area has been nourished with borrow material from Canaveral Shoals as part of the Brevard County Florida Shore Protection Project South Reach Segment. The last renourishment was in 2018. The samples collected after the renourishment characterize the existing beach sediments from R138.5 to R139 as light grey, fine to medium-grained quartz sand with some medium grained sand-sized shell, less than 1% silt, and a mean grain size of 0.36 mm.

3.3 THREATENED AND ENDANGERED SPECIES

3.3.1 NESTING SEA TURTLES

The loggerhead, green, and leatherback sea turtles are known to nest within the proposed stockpiling area; (**Table 2**). The hawksbill (*Eretmochelys imbricata*) and Kemp's ridley (*Lepidochelys kempi*) sea turtles also occur in coastal waters off of Brevard County, but are not known to nest within the project area.

Table 2. Sea Turtle Species that may nest on the stockpiling area
Species are listed in order of relative abundance.

Common and Scientific Names	Status[a]	Life Stages Present	Abundance Within the Project Area	Seasonal Presence	Nesting Season
Loggerhead sea turtle (*Caretta caretta*)	T	Adults, sub-adults, juveniles, and hatchlings	Abundant	Year-round (most abundant during spring and fall migrations)	April-September
Green sea turtle (*Chelonia mydas*)	T	Adults, sub-adults, juveniles, and hatchlings	Common	Year-round	July-September
Leatherback sea turtle (*Dermochelys coriacea*)	E	Adults, sub-adults, juveniles, hatchlings	Rare	March-October	March-July

[a] Status: E = endangered, T = threatened under the Endangered Species Act of 1973.

3.3.1.1 Loggerhead Sea Turtle

The loggerhead sea turtle (*Caretta (Cc)*) is federally Threatened due to loss or degradation of nesting habitat from coastal development and beach armoring; disorientation of hatchlings by beachfront lighting; nest predation by native and non-

native predators; degradation of foraging habitat; marine pollution and debris; watercraft strikes; disease; and incidental take from channel dredging and commercial trawling, longline, and gill net fisheries (USFWS, 2015a). Critical habitat, LOGG-N-17 (National Oceanic and Atmospheric Administration, Federal Register), has been designated to help conserve this species and this designation includes the South Reach Beach (a portion of the stockpiling area lies within the extreme southern portion of the South Reach Beach (Latitude 28 degrees 3 minutes)). Southeast Florida is one of only two loggerhead nesting aggregations with more than 10,000 females nesting per year (USFWS, 2015a). For 2018, there have been a total of 1,034 loggerhead nests and 1,342 false crawls recorded above the high tide line on the South Reach beach through October 2018 (Seeney, Solis, and Mansfield, 2018), for a nesting success rate of 43.5%. Additionally, on the South Reach Beach, 706 false crawls and 15 nests were recorded below the High Tide Line.

3.3.1.2 Green Sea Turtle

Classified as a federally Endangered species, the green sea turtle (*Chelonia mydas (Cm)*) has declined due to commercial harvest for eggs and meat, disease, degradation of nesting habitat from coastal development and beach armoring; disorientation of hatchlings by beachfront lighting; nest predation by native and non-native predators; degradation of foraging habitat; marine pollution and debris; watercraft strikes; and incidental take from channel dredging and commercial fishing operations (USFWS, 2015b). Critical habitat has been designated for this species, but does not overlap with the project area. The Florida green turtle nesting aggregation is recognized as a regionally significant colony (USFWS, 2015b). For 2018, there have been a total of 27 green turtle nests recorded and 75 false crawls above the high tide line on the South Reach Beach through October 2018 (Seeney, Solis and Mansfield, 2018), for a nesting success rate of 26.5%. Additionally, on the South Reach beach, 20 false crawls and 1 green turtle nests were recorded below the High Tide Line.

3.3.1.3 Leatherback Sea Turtle

The leatherback sea turtle (*Dermochelys coriacea (Dc)*) is federally endangered due to exploitation by humans for eggs and meat, as well as incidental take in numerous commercial fisheries of the Pacific (USFWS, 2015c). Other factors threatening leatherbacks globally include loss or degradation of nesting habitat from coastal development; disorientation of hatchlings by beachfront lighting; nest predation by native and non-native predators; degradation of foraging habitat; marine pollution and debris; and watercraft strikes (USFWS, 2015c). Critical habitat has been designated for this species, but does not overlap with the project area. Important leatherback nesting areas include the Atlantic coast of Florida (USFWS, 2015c). For 2018, there have been a total of two leatherback nests recorded on the South Reach Beach through October 2018 (Seeney, Solis and Mansfield, 2018), for a nesting success rate of 100%. False crawls were not documented below high tide line.

Table 3. 2018 Sea Turtle Surveys Monthly Results for Brevard County South Reach

SOUTH REACH	Nests (#)			False Crawls (#)			Nesting Success Rate (%)		
	Cc	Cm	Dc	Cc	Cm	Dc	Cc	Cm	Dc
March	0	0	0	0	0	0	NA	NA	NA
April	5	0	1	1	0	0	83.3%	NA	100.0%
May	370	0	1	204	0	0	64.5%	NA	100.0%
June	353	2	0	542	8	0	39.4%	20.0%	NA
July	243	7	0	505	27	0	32.5%	20.6%	NA
August	63	11	0	89	20	0	41.4%	35.5%	NA
September	0	7	0	1	20	0	0.0%	25.9%	NA
October	0	0	0	0	0	0	NA	NA	NA
Totals	**1,034**	**27**	**2**	**1,342**	**75**	**0**	**43.5%**	**26.5%**	100.0%

3.3.2 PIPING PLOVER

Classified as federally Threatened, the piping plover (*Charadrius melodus*) is a small shorebird that has declined due to habitat loss and degradation caused by coastal development, recreation, navigation, dredging and shoreline stabilization and replenishment projects (USFWS, 2007). Critical habitat has been designated for this species, but does not overlap with the project area. Piping plovers may occasionally occur along the stockpiling area beach primarily during spring and fall migrations but also during winter months.

3.3.3 RED KNOT

The red knot (*Caladris canutus rufa*) is a small shorebird that is federally threatened due to declines in food resources (horseshoe crab eggs), sea level rise, some shoreline projects, and coastal development (USFWS, 2014). Critical habitat has not been designated for this species. Red knots may occasionally occur along the stockpiling area beach primarily during spring and fall migrations but also during winter months.

3.3.4 GOPHER TORTOISE

The eastern population of the gopher tortoise *(Gopherus po/yphemus),* including Florida, is a candidate species for possible future listing as federally threatened or endangered (USFWS, 2015e). Habitat alteration and land development pose the most serious threat to the gopher tortoise (Gopher Tortoise Council, 2015). It occurs throughout sandy and scrub habitats of Brevard County, including disturbed habitat. This species may occur in the vicinity of the dunes.

3.3.5 WEST INDIAN MANATEE

The West Indian Manatee (*Trichecus manatus*) is a threatened species primarily due to habitat loss and fragmentation, entanglements in fishing gear, collisions with boats, and other causes (USFWS 2019). This species is found in the coastal and estuarine areas of Brevard County most of the year. Critical habitat has been designated for this species, but does not overlap with the project area.

3.4 MIGRATORY BIRDS

Table 4. 2018 Migratory Bird Survey Data for Brevard County South Reach (Seeney, Solis and Mansfield, 2018; University of Central Florida). Species within the proposed stockpile area are expected to be similar to species recorded within the South Reach.

Weekly Shorebird Survey 2018																
Date	Survey Area	Wilson's Plover	Piping Plover	Semipalmated Plover	Snowy Plover	Red Knot	Least Tern	Royal Tern	Laughing Gull	Sanderling	Willet	Ruddy Turnstone	Black-bellied Plover	Caspian Tern	Ring-billed gull	Skimmer
16-Apr	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	5	2	18	6	12	4	Not present	10	2
23-Apr	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	3	4	25	5	10	4	Not present	6	2
30-Apr	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	0	4	21	8	13	7	Not present	5	2
7-May	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	5	2	18	5	10	5	Not present	4	Not present
14-May	SOUTH REACH	Not present	Not present	3	Not present	Not present	3	Not present	2	18	Not Present	7	3	Not present	5	Not present
20-May	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	1	3	5	33	2	8	Not Present	Not present	3	2
28-May-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	3	Not present	2	31	2	11	Not Present	Not present	2	Not present
4-Jun-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	5	3	29	7	2	9	Not Present	Not present	5	Not present
11-Jun-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	Not present	Not Present	Not Present	Not Present	Not Present	Not Present	Not present	Not Present	Not present
18-Jun-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	Not present	Not Present	Not Present	1	Not Present	Not Present	Not present	Not Present	Not present
25-Jun-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	Not present	3	Not Present	Not Present	Not Present	Not Present	Not present	Not Present	1
2-Jul-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	Not present	Not Present	Not Present	3	Not Present	Not Present	Not present	Not Present	Not present
7-Jul-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	Not present	2	Not Present	5	Not Present	Not Present	Not present	Not Present	Not present
16-Jul-18	SOUTH REACH	Not present	Not present	Not present	Not present	Not present	Not present	Not present	2	Not Present	8	Not Present	Not Present	Not present	Not Present	Not present

3.5 ESSENTIAL FISH HABITAT

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act of 1996, waters and substrate adjacent to the Mid-Reach Beach have been identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC, 1998). EFH is defined as those waters and substrate necessary for fish to spawn, breed, feed, or grow to maturity. EFH adjacent to the Mid-Reach Beach includes demersal soft bottom, water column, and demersal hardbottom with their associated ichthyofaunal communities.

The demersal soft bottom fish assemblage that inhabits the open shelf off eastern Florida consists of 213 species and 53 families (Gilmore et al., 1981; Gilmore, 2001). Of the 13 total taxa collected adjacent to the Mid-Reach Beach, demersal soft bottom species ranked third (gulf kingfish), fourth (kingfish), and fifth (sand drum) in terms of abundance. Federally managed species that inhabit demersal soft bottom in the region include penaeid shrimps.

The major coastal pelagic families occurring in inshore and coastal waters of eastern Florida are requiem sharks (*Carcharhinidae*), eagle and cownose rays (*Myliobatidae*), ladyfish (*Elopidae*), tarpon (*Megalopidae*), anchovies (*Engraulidae*), herrings (*Clupeidae*), mackerels (*Scombridae*), jacks and pompanos (*Carangidae*),

mullets (*Mugilidae*), bluefish (*Pomatomidae*), and cobia (*Rachycentridae*). Within the Mid-Reach project area, smaller coastal pelagic species such as false pilchard occurred in the surf zone were observed. Coastal pelagic species managed by the SAFMC are cobia (Rachycentron canadum), king mackerel (Scomberomorus cavalla), Spanish mackerel, and little tunny (Euthynnus alletteratus) (SAFMC, 1998). Life stages of all of these species may occur in the project area.

A thorough diving survey of the seabed was performed on August 22, 2010. This survey was conducted by professional staff from the Brevard County Natural Resources Management Office staff with assistance from East Coast Biologists (Karen Holloway Adkins *et al*). The survey documented no hardbottom within the project area, potential pipeline corridors, or 500 feet north or south thereof.

The survey consisted of 20 transects extending from 22 feet water depth into the surf zone (4-6 feet water depth). Each transect was transited by scuba divers, towed at slow speed near the seabed behind a vessel. The survey lines included 10 shore-normal transects spaced more or less uniformly along the project shoreline with 10 diagonal transects between each shore-normal transect. The transects comprised approximately 26,000 line-feet (4.9 miles) of survey, along which divers inspected the seabed at close range. The northernmost transect was located at R-140 +500' and the southernmost transect at R-151 +500', with transects spaced approximately every 1000' between these. The sea state was calm and underwater visibility was approximately 4-5 feet. Divers remained approximately 2-4 feet from the bottom throughout all survey activity in order to visually inspect the sea bed composition. No hardbottom or sign of hardbottom was seen by divers at any time during the inspection of the area.

While divers were working, staff on the accompanying boat visually searched the shoreline within and landward of the surf zone for sign of rock. No rock was seen. Likewise, survey personnel from Morgan & Eklund, Inc., conducting beach monitoring surveys along this shoreline for over the past twenty years, have never reported the presence or suggestion of nearshore rock along or adjacent to the project stockpile area during their wading or hydrographic surveys.

Additionally, the project specifications will require that any overflow of the dredge and/or during loading and transport that occurs at the offshore dredging site, shall result in no leakage during transport. The proposed sand stockpile site is located 4 miles south of the nearest occurrence of hardbottom, such that there is no anticipated impact to nearshore hardbottom from loss of sand at the stockpile site during either loading (from the dredge) or offloading (to the trucks).

3.6 OTHER WILDLIFE RESOURCES

The intertidal beach zone within the stockpiling area beach is generally characterized by a quartz sand and shell hash bottom. The intertidal zone extends from Mean High

Water (MHW) to Mean Low Water (MLW) and is routinely inundated by water and influenced by wave action during each tidal cycle. The beach in this zone is generally populated by small benthic macroinfauna that are short lived and highly fecund. The mole crab (*Emerita talpoida*), coquina clams (*Donax variabilis, D. parvula*) and several species of polychaetes tend to be the dominant species within the intertidal zone (Nelson, 1985; Gorzelany and Nelson, 1987). Other invertebrates known to inhabit the intertidal zone within the project area include several species of gastropods, isopods and amphipods (Gorzelany and Nelton, 1987). Shorebirds that can be found utilizing the intertidal zone for foraging are the least tern (*Sterna antillarum*), royal tern (*Sterna maxima*), sandwich tern (*Sterna sandvicensis*), black skimmer (*Rynchops niger*), and snowy plover (*Charadrius alexandrines*) (Myers and Ewel, 1990).

The bottom characteristics of the nearshore area within the surf zone are similar to the intertidal zone except that the sand is constantly inundated with water. Benthic invertebrate species reported to inhabit this area include bivalves, gastropods, polycheates, amphipods, portunid crabs, and sand dollars. The dominant fish species that occur in this zone are bottom feeding carnivores that feed on the benthic invertebrate fauna (Gilmore, et al., 1981). These include catfish (*Arius felis*), lizardfish (*Synodus foentens*), croakers and kingfish (*Scianidae*), and pompano (*Trachinotus carolinus*) (Nelson 1985; Gilmore, et al., 1981). Other fish species that can be found in the surf zone periodically include jacks (*Carangidae*), mackerels (*Scombridae*), ladyfish (*Elops saurus*), bluefish (*Pomatomus saltator*), anchovies (*Engraulidae*) and herrings (*Clupeidae*) (Gilmore, et al., 1981).

3.7 CULTURAL, HISTORIC, AND ARCHAEOLOGICAL RESOURCES

The earliest widely accepted date of occupation by aboriginal inhabitants of Florida dates from around 12,500 years ago, and new evidence suggests that people were present in the region even earlier (Halligan et al. 2016). This earliest cultural period, called the Paleo-Indian period, lasted until about 7500 B.C. Few Paleo-Indian archeological sites are recorded in south Florida. During this period, the continental shelves were exposed, and the Florida peninsula encompassed an area approximately twice the current size of the State of Florida. Gradual sea level rise which occurred between about 10,000 years ago to 6,000 years ago resulted in the submergence of many terrestrial archaeological sites along the coast.

During the Archaic period (ca. 7500 B.C.-ca. 500 B.C.), prehistoric people exploited a wider range of resources and may have led a more sedentary existence than earlier periods. Most Archaic period archeological sites recorded in the Florida Master Site File (FMSF) are clustered along the Atlantic and Gulf coasts. Sea levels continued to rise until reaching approximate modern levels during this period. The stabilization of sea levels resulted in the formation of estuaries where Archaic period populations heavily exploited coastal resources. Large prehistoric Archaic period shell rings have been identified on coastal sites (Russo 2006). Freshwater and saltwater middens are well documented for

this region. Submerged terrestrial prehistoric sites are likely to be found in nearshore and offshore settings.

The Late Archaic period Orange culture is recognized for using a distinctive type of pottery manufactured using fiber temper. While most widely known from northeast Florida, Orange culture sites have been identified along the southeast coast. Site types generally consist of middens composed of oyster and coquina shell along the coasts and freshwater pond snail along the inland rivers and streams.

The late prehistoric period marked the beginning of economic and social changes leading to the development of distinct regional and sub-regional cultures. In northeastern Florida the introduction of a new type of ceramics marked a 2000 year long period defined as the St. Johns Period. This period is divided into two sub-periods that were defined by Milanich and Fairbanks (1980): St. Johns 1 (2500-1200 B.P.) and St. Johns II (1200-500 B.P.). During the St. Johns Period prehistoric people continued many of the same cultural practices as the Archaic Period. St. Johns I Period people continued to focus on hunting and gathering a wide variety of terrestrial, marine, and riverine species form both inland and coastal settings (Milanich 1994:256-257). After 1200 B.P., the number of St. Johns Period sites increased and in many instances they became more socially complex (Milanich 1994).

Juan Ponce de Leon, is the first European credited with discovery of Cape Canaveral in 1513; however, several earlier maps show the area (Lydecker et al. 2015). For Spain, Florida was a strategic interest that was critical to hold in its efforts to protect ships bringing treasure and trade goods from Mexico and Cuba to Spain. In an attempt to control the sea lanes, the French established Fort Caroline near present day Jacksonville. In 1564, Pedro Menendez de Aviles and a fleet of 19 vessels forced the French to abandon attempts to establish French outposts in Florida. At least five sixteenth-century Spanish shipwrecks are documented as having sunk in the Cape Canaveral area (Lydecker et Al. 2015). Recently, the French flagship, *La Trinite* which sank in a storm in 1565, was discovered near Cape Canaveral. In 1715, a convoy of 11 Spanish vessels carrying gold, silver, and exports from the Orient were wrecked on Florida's East Coast. Subsequent re-discovery of gold and silver in the twentieth century gave this area the name "Treasure Coast". At least one shipwreck, potentially a part of the 1715 fleet, has been identified within the Area of Potential Effects (APE).

In 1763, the English gained temporary possession of the region from the Spanish. During the American Revolution, the Spanish retook Florida from the British in 1781. During the Second Spanish period, the population of Florida continued to grow. As the eighteenth century ended and the nineteenth century began, the Seminole Indians were increasingly forced into the interior of Florida. In the early nineteenth century, Spain's control over Florida was weak, and after the First Seminole War, Spain sold Florida to the U.S. (McIver 1983). In 1821, Florida became an American territory and remained a territory until 1845, when it was granted statehood. Brevard County was created from a renamed St. Lucie

County in 1855. By the 1880s and 1890s, Henry Flagler's Florida East Coast Railroad reached Titusville and Melbourne.

In the 1940s, the Navy constructed a Naval Air Station at the location of present day Patrick Air Force Base. In the late 1950s, the government constructed the Long Range Proving Ground which later became the Kennedy Space Center.

PREVIOUS CULTURAL RESOURCE INVESTIGATIONS

Several submerged and one terrestrial architectural investigation have been completed within portions of the proposed project. Beginning in 2008, HTQ and Seafarers Quest conducted cultural resource surveys off Cocoa and Melbourne Beaches (HTQ Inc., et al. 2008, 2010, 2012; Sinclair 2014; Funk et al. 2015). Subsequent diver investigations identified a shipwreck site. The site, designated 8BR1928, consists of a large debris field of exposed artifacts and objects including ships' hardware and wood fragments. Subsequent investigations identified artifacts and ship fittings dating to the early eighteenth century associated with a Spanish wreck. Site 8BR1928 has not been evaluated for eligibility for listing on the National Register of Historic Places (NRHP).

An architectural investigation of three structures associated with the Melbourne Beach Optical Tracking Annex was completed in 2008 (Penders 2008). The annex was located within Spessard Holland Park, constructed in 1956/1957, and originally included nine structures. Three of the structures (8BR2223, 8BR2224, and 8BR2225) and a camera pad were recorded in 2008. The facility was used to support the United States Air Force Missile tracking program, Sputnik tracking, as well as for the NASA Apollo and Space Shuttle programs. The complex was designated as a resource group (8BR2222) and a potential National Register District. Since the facility was recorded, it has been demolished.

3.8 WATER QUALITY

The waters off the coast of Brevard County, as well as the interior of the County, are listed as Class III waters by the State of Florida. Class III waters are suitable for fish consumption; recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife.

3.9 AESTHETIC RESOURCES

The shorefront along the South Reach project area is interspersed among Spessard Holland Park North and Spessard Holland Park South and undeveloped properties with substantial, mostly natural dune vegetation and tree canopy. The natural beach dune (or bluff) habitat mostly exists along the shorefront, along with coastal hammock in many locations. Storm erosion of the beach results in significant scarping of the bluff, loss of vegetation, and damage to dune walkovers and other structures.

3.10 RECREATION RESOURCES

Common beach- and water-related activities along the project area include sunbathing, shell collecting, surf- and boat-fishing, swimming, surfing, wind- and kitesurfing, boating and kayaking and occasionally snorkeling when the water is clear. The public has access to the South Reach project area through multiple beach access points. Beach recreation is central to most local business interests in the area.

3.11 HAZARDOUS, TOXIC AND RADIOACTIVE WASTE

There are no known sources of hazardous, toxic, or radioactive wastes (HTRW) within or adjacent to the proposed stockpiling area. HTRW includes any material listed as a "hazardous substance" under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

3.12 AIR QUALITY

Ambient air quality along coastal Brevard County as well as the interior of the County is generally good due to prevalent ocean breezes from the northeast through the southeast, and due to the general lack of significant industrial development. Brevard County is classified as an attainment area for all Federal Air Quality Standards.

3.13 NOISE

Ambient noise levels along coastal Brevard County are generally low to moderate and are typical of recreational environments, with occasional exceptions related to military aircraft landing and take-off operations at Patrick Air Force Base. Otherwise, the major noise producers include the breaking surf, adjacent and residential areas, and vehicular traffic along State Route A1A.

3.14 ENERGY REQUIREMENTS AND CONSERVATION

Dredging and truck-haul operations potentially associated with the project will require temporary investments of fuel energy.

3.15 NATURAL OR DEPLETABLE RESOURCES

The beach quality sand obtained from Canaveral Shoals is the only natural and depletable resource associated with the proposed project activity.

3.16 NATIVE AMERICANS

There are no lands which belong to Native Americans within the project area.

3.17 REUSE AND CONSERVATION POTENTIAL

There is no potential for reuse or conservation associated with the proposed project activities.

4 ENVIRONMENTAL EFFECTS

This section is the scientific and analytic basis for the comparisons of the alternatives. See Table 1 in section 2.0 Alternatives, for summary of impacts. The following includes anticipated changes to the existing environment including direct, indirect, and cumulative effects. Additional information on environmental effects associated with the authorized project and No Action Alternative can be found in the Final GRR SEIS.

4.1 GENERAL ENVIRONMENTAL EFFECTS

4.1.1 PROPOSED ACTION, USE OF SAND STOCKPILE AREA

The principal elements of the proposed action include the following:

(a) Hydraulic placement of beach quality sand along 2,090 feet of beach within the proposed stockpiling area at Spessard Holland Park;
(b) Mechanical excavation and transfer by truck-haul of sand from the stockpiling location at Spessard Holland Park to the Mid-Reach Beach;

Beach quality sand would be excavated from the Canaveral Shoals I and/or II borrow areas by a dredge and hydraulically transported as a slurry, or a sand and water mix, through a mostly submerged pipeline to the proposed stockpiling area. The Corps will maintain previously established 300-feet cultural resource buffers around targets USACE-0006, USACE-0007, and USACE-008, USACE-009, and USACE-010 within the Canaveral Shoals II borrow area. The temporary pipeline would extend approximately 2,000 feet from shore, between about 30 feet water depth and the beach berm, consisting of an approximately 24-inch to 32-inch diameter pipeline resting upon the bottom sediment with a floating section at the seaward end for hook-up and pump-out. A corridor for placement of the temporary pipeline, ideally along or immediately north of the stockpile area, will avoid potentially significant cultural resource targets of USACE-0003, USACE-0004, and USACE-005. The significant targets identified and in previous surveys of Canaveral Shoals will be buffered and off limits dredging, spudding, or anchoring within these buffers. No hardbottom resources exist along this area that might be impacted by a pipeline.

The sand discharged by the dredge would be naturally dewatered by sand dikes and graded to construct the sand stockpile upon the beach by bulldozers and payloaders. Turbidity shall be measured during discharge per State water quality monitoring requirements. The sand stockpile shall be constructed seaward of the existing dune vegetation line, with landward slope of approximately 1(v):1.3(h) angle-of-repose commencing east of the principal vegetation line to a crest elevation of up to approximately +20 feet North American Vertical Datum (NAVD) (plus vertical tolerance) and approximately 77-foot width, thence sloping seaward at slope of approximately 1(v):2(h) to intersection with the existing or residual beach profile, whichever is lower.

Sand from the stockpile shall be loaded into dump-trucks by excavator and payloader and hauled to the Mid-Reach beach construction area via existing public roads. Construction access and staging between the upland and the sand stockpile would be

established along the approximate mid-point of the stockpile, near FDEP reference monument R-140, at areas where the existing upland features minimum vegetation. One or two 14- to 24-feet wide sand-fill ramps (causeways), and access through the existing vegetation, would be constructed with the offshore sand fill to “bridge” the approximate 75-feet wide distance between the upland and the sand stockpile, in order to facilitate offloading of the sand from the beach stockpile to the upland (State Route A1A) and northward to the Mid-Reach shoreline. After construction, those portions of the sand ramps which are to remain shall be planted with native dune vegetation.

The maximum limit of temporary excavation shall be seaward of the existing dune vegetation line sloping seaward at maximum slope of 1(v):8(h), and landward of the existing mean high water shoreline sloping landward at minimum slope of 1(v):50(h), as defined by the intersection of the lines thereof.

The residual beach profile sand fill, after placement and transfer of the sand stockpile, shall be a berm of elevation +6.7 feet NAVD, sloping seaward at 1(v):40(h) to elevation +5.2 feet NAVD at the seaward toe of the sand stockpile, thence sloping seaward at 1(v):12(h) to intersection with the ambient seabed, with nominal vertical tolerances for construction allowance assumed throughout. The residual beach profile sand fill at the south end of the stockpile shall taper (transition) southward to the existing beach contours at R141; and, at the north end of the stockpile, it shall taper (transition) northward to the existing or renourished beach contours north of R139 within the existing limits of the BCFSPP South Reach fill area. The elevation and seaward slope of the residual sand berm to be left after use of the stockpile is similar to that of the beach berm constructed along the BCFSPP South Reach (to the north) and the existing natural beach (to the south). The residual volume of sand left upon the beach, as nourishment, would be approximately 45,000 cubic yards beyond the pre-stockpile condition, located at and within 1/3-mile immediately south of the south end of the BCFSPP South Reach project area.

It is anticipated that the sand stockpile would be typically constructed concurrent with placement of sand along the South Reach project using the same dredge, offshore borrow area(s), and land-based construction equipment (bulldozers, etc.) as utilized for the South Reach. Once established, the stockpile of offshore sand would be mechanically excavated, transferred and placed to the Mid-Reach shoreline by excavator, payloaders, and dump-trucks, and placed along the Mid-Reach shoreline where hydraulic placement is otherwise not permitted, as described above. Sand from the stockpile would be transported to the Mid-Reach along State Route A1A (not along the beach), for one-way distances between 4 miles and 11.5 miles at maximum. (Anticipated one-way haul distances from approved upland sources are significantly greater.) Contingent upon the operation of the dredge and the mechanical movement of sand, the stockpile could be utilized multiple times during a single dredge mobilization, further improving the cost effectiveness of the dredge and further decreasing the potential requirement for upland sand.

All dune vegetation within Spessard Holland Park would be avoided to the maximum extent practical. Inadvertent damage to vegetation would be replaced with similar native dune species, along with replanting of the sand stockpile access ramps. Some residual sand would be left within the stockpiling area between nourishment intervals. A1A is a state highway where commercial trucking is allowed and continues to be used for transport of beach quality sand from upland quarries for dune construction along the Mid-Reach beach. In summary, there would be minor short term effects to the stockpiling area as well as the pipeline route through the adjacent offshore and nearshore areas.

Additionally, if the contractor's truck-haul transfer operations employ approximately 5 months of the maximum allowable construction window (6 months), and based on the current volume estimate of up to 250,000 cubic yards required for initial project construction, the expectation would be approximately 95 truckloads round trip per day, or about 1660 cubic yards per day, on overall average. This volume of sand truck-haul delivery is similar to that of Brevard County's most recent truck-haul construction activity for post-storm dune reparations along the Mid-Reach and South Beaches, during which 235,411 cubic yards of sand were delivered and placed from December 11, 2017 to April 21, 2018, at an average rate of 1,783 cubic yards per day (Amec FW, 2018). The sand truck-haul delivery and placement rates during the County's prior dune reparation projects, since 2005, have been similar or greater. For example, County dune repairs in 2006 delivered and placed 174,623 cubic yards from February 27 to April 26, 2006, at an average rate of 2,910 cubic yards per day (Amec 2006), noting that the transport distances of the sand for these projects, from upland quarries, were on the order of five times greater than the proposed transfer distance from the on-beach stockpile. The contractor will be allowed to transport sand 24 hours if they desire, as already allowed by Florida Department of Transportation, but the final trucking schedule will not be known until the contractor is selected. The maximum construction window is expected to be November 1 until April 30th or six months. If the contractor transfers an average of 2900 cubic yards/day during truck-haul transfer operations, which is consistent with expectations from previous County projects that have transferred similar quantities of sand per day over significantly greater haul distances, truck haul transport of 250,000 cubic yards from the South Reach stockpile to the Mid-Reach could be completed in approximately 87 working days within the six month construction window.

In broad overview, dredge placement of a 97,000 cubic yards stockpile requires about 10 days (i.e., based upon demonstrated prior sand placement production along the South Reach of 10,000 cubic yards /day) and subsequent offloading by truck-haul requires at least 34 days (at 2900 cubic yards/day). Placement and truck-haul transfer of the initial construction volume of 250,000 cubic yards along the Mid-Reach plus dredge placement of 45,000 cubic yards residual beach fill volume along the stockpile area would thus require on the order of 30 days of dredge and fill activity (295,000 cubic yards at 10,000 cubic yards /day) plus minimum 87 days of truck-haul transfer (250,000 cubic yards at 2900 cubic yards /day), assuming no overlap with the dredge stockpiling, for a total of 117 working days. Additive to this is minimum 35 days contingency (30%),

thus totaling 152 days -- or about 5 months out of the 6-month available construction window from November 1 through April 30. To accomplish this, in addition to standard allowance for a 24 hour period for dredging and beach (stockpile) placement, allowance for truck-haul during a 24 hour period has been determined to be advantageous for this project. These are the reasons for this determination:

1. This action alone will not increase truck traffic, and in fact, it will reduce the overall number of transport miles. It may or may not influence the number of truck trips through any particular location.
2. The transport at night will reduce the overall traffic density and therefore help reduce public impact.
3. Transport will be via state Highway A1A which was designed for safe transport at night.

4.1.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no general environmental effects in the area of the proposed stockpile area and pipeline route if this location were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.1;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.1.

4.2 NATIVE BEACH SAND COMPOSITION

4.2.1 PROPOSED ACTION, USE OF SAND STOCKPILE AREA

In order to ensure compliance with State (and associated Federal) criteria and project permits, sand placed to the Mid-Reach from offshore or upland sources must meet specifications stipulated by FAC 62B-41.007, including requirements that the sediment contain less than 0.5% coarser than ¾", less than 5% coarser than #4 sieve, less than 5% finer than #230 sieve, free of debris, toxic material, foreign material, and not prone to cementation. Placement of sediment from Canaveral Shoals is permitted along the Mid-Reach through the project's existing FDEP permit (0254479-001-JC), including through stockpile of Canaveral Shoals sand upon the beach. Additional detailed compliance criteria have been specified for beach-compatible fill placement along the Mid-Reach with specific regard to sediment from upland sources. The sediment placed to the stockpile area, for transfer to the Mid-Reach and as residual remaining along the stockpile area, shall meet these requirements, as reflected by the characteristics of the existing beach and the Canaveral Shoals dredge material, per contemporary evaluation of the natural beach, Canaveral Shoals fill material, and beach-compatible fill material

from upland sources (Bodge 2018). The specifications will ensure that material from Canaveral Shoals placed within the stockpiling area will have grain size distributions similar to the stockpiling area beach at the South Reach as well as the Mid-Reach project segment, consistent with the observed quality of material previously placed to the Brevard County shore protection project from Canaveral Shoals (Bodge 2018), plus nominally allowed tolerance.

- Less than 0.5% retained on ¾" sieve;
- Less than 5% retained on #4 sieve;
- Less than 15% retained on #10 sieve;
- Between 45% and 97% passing #35 sieve (0.5 mm);
- Between 15% and 75% passing #50 sieve (0.3 mm),
- Less than 25% passing #80 sieve,
- Less than 3% passing #230 sieve,
- Allowable mean grain size = 0.27 mm to 0.60 mm
- Color: 7.5 YR or 10 YR, greater than or equal to 6.0 Value, less than or equal to 2.0 Chroma, and Carbonate Content = 20% to 50%.

The Quality Assurance/Quality Control Plan requires inspections of the beach area and sediment quality by the Non-Federal sponsor (Brevard County) and/or an engineer representative. These inspectors shall have prior training or experience in beach nourishment and construction inspection, testing, and shall be knowledgeable of the project design, state permit conditions, and requirements for acceptable sediment quality. The plan includes methods of remediation in the event of non-beach-compatible material being placed on the beach. Remediation methods may include, but not limited to, excavating the non-beach compatible material and removing it to a permitted upland location; mixing the non-beach compatible material with compatible material so that it does comply with project sand requirements; or screening the non-beach compatible material and removing non-compatible material to a permitted upland location.

4.2.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to the native sand composition of the proposed stockpile area if this location were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.5.1;
2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.2.

4.3 THREATENED AND ENDANGERED SPECIES

The Corps has determined that placement of sand from Canaveral Shoals within the proposed stockpiling area may affect nesting sea turtles and may affect, but is not likely to adversely affect, the piping plover, red knot, and West Indian manatee. All placement activities would be performed in compliance with the terms and conditions of the Statewide Programmatic Biological Opinion (2015) and the Programmatic Piping Plover Biological Opinion (2013) issued by the U.S. Fish and Wildlife Service (USFWS). The Corps' final determination relative to project impacts as well as the need for protective and mitigation measures is subject to review by and coordination with the USFWS.

4.3.1 SEA TURTLES

The placement of sand from Canaveral Shoals within the proposed stockpiling area may affect nesting sea turtles by altering the beach face, resulting in potential adverse impact to nesting and hatching success, (including effects from grade changes, sediment material, compaction, escarpment formation, and artificial lighting during construction). Compatibility of off-shore borrow areas with the native beach is one of the requirements of the USFWS biological opinion, which states that "beach-compatible fill shall be placed on the beach or in any associated dune system. Beach compatible fill must be sand that is similar to a native beach in the vicinity of the site that has not been affected by prior sand placement activity. The fill material must be similar in both coloration and grain size distribution to that native beach. Beach compatible fill is material that maintains the general character and functionality of the material occurring on the beach and in the adjacent dune and coastal system. Fill material shall comply with FDEP requirements pursuant to the Florida administrative code (FAC) subsection 62b-41.005(15). If a variance is requested from FDEP, the USFWS must be contacted to discuss whether the project falls outside of the biological opinion. A quality control plan shall be implemented pursuant to [FAC rule 62B-56.]" The Corps has determined that the sand specifications provided in Section 4.2.1 would meet these requirements.

An additional 1774 feet of nesting beach, beyond the existing construction limits of the Brevard County Shore Protection Project (South Reach) will be impacted by the stockpiling activity over the six month period of construction, of which at least three months are during non-nesting periods (i.e., December through February). During active construction of the stockpile, the berm elevation of the stockpile shall be temporarily higher, and with steeper seaward slope, than the shore protection project (as described in prior EA documents) and adjacent beaches. This may result in temporary inhibition of marine turtle nesting (i.e., false crawl) for turtles attempting to access the beach directly along the stockpile location. However, this potential effect would be limited to less frequent, early season nesting activity in March and April. Marine turtle nests that are actually established within the stockpile would be immediately relocated to a non-construction area, prior to 9 am that morning, by the marine turtle permit holder. The stockpile activity would not impact established marine turtle nests or hatchlings, because all nests shall be relocated from the stockpile area commencing at least 65 days prior to construction. Since the offshore sand borrow area is the same as for the existing shore protection project, it is presumed and previously established that the compatibility of

material and subsequent impacts to nesting turtles and the nest incubating environment would not be different from the prior analysis. The potential impacts of residual sand fill upon the beach from the stockpile are identical to those of the adjacent South Reach shore protection project, and would not have no significant adverse impact upon sea turtle nesting or emergence success. Escarpments and compaction along the sand stockpile area and adjacent residual beach fill area shall be monitored pursuant to the State Programmatic Biological Opinion. No significant impacts to bird breeding or nesting are anticipated. The stockpile area shall be monitored for shorebird activity in a manner identical to that required for the adjacent shore protection project.

4.3.2 PIPING PLOVER AND RED KNOT

The placement of sand from Canaveral Shoals within the proposed stockpiling area may affect, but is not likely to adversely affect, the piping plover and red knot. The stockpiling area does not meet the criteria to be considered an Optimal Piping Plover Area. However, it may at times be utilized by both the piping plover and the red knot during spring and fall migration or winter. Beach placement effects may include the disturbance of normal activities such as feeding and roosting during construction; degradation of wintering habitat or habitat used during migration by altering the natural sediment composition, and; depressing the invertebrate base in some areas. For eroded beaches, sand placement may also have a beneficial effect on the habitat's ability to support the plover and the knot. As stated earlier, placement activities would be performed in compliance with biological opinions issued by the USFWS, and this includes the use of compatible fill material as described in 4.3.1.

4.3.3 GOPHER TORTOISE

Per Florida Fish and Wildlife Conservation Commission's (FWC) gopher tortoise permitting guidelines, if gopher tortoises are located in the dune system of the project site, a 25 foot buffer zone in all directions from the mouth of the burrow will be placed around burrows prior to construction to avoid impacts to the burrows. If gopher tortoises must be relocated, coordination with FWC will also be implemented per the FWC gopher tortoise permitting guidelines (FWC 2008; Revised 2010).

4.3.4 WEST INDIAN MANATEE

The following standard protection measures will be implemented to minimize potential impacts to manatees:

a.) All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The Permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.

b.) All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while within 2000 feet of the beach (excluding the

Port Canaveral Entrance Channel) and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

c.) Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.

d.) All on-site project personnel are responsible for observing water related activities for the presence of manatee(s). All in-water operations, including vessels, must be shut down if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.

e.) Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-800-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service for Vero Beach (1-772-562-3909).

f.) Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the Permittee upon completion of the project. Awareness signs that have already been approved for this use by the FWC must be used. One sign measuring at least 3 feet by 4 feet which reads *Caution: Manatee Area* must be posted at the primary dredge/vessel boarding area. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shutdown of in-water operations must be posted on every vessel, in a location prominently visible to all personnel engaged in water-related activities.

4.3.4.1 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to sea turtles, piping plovers, red knots, gopher tortoises, and West Indian manatee if the proposed stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.3.1;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.3.1.

4.4 MIGRATORY BIRDS

4.4.1 PROPOSED ACTION, USE OF SAND STOCKPILE AREA

The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on migratory birds. Appropriate monitoring and protection measures would be required during the nesting season to ensure that construction activities remain compliant with the Migratory Bird Treaty Act and do not result in the destruction of eggs, chicks, or adult birds.

During the placement of sand on the beach there may be some interruption of foraging and resting activities for shorebirds that utilize the project area. This impact would be short-term and limited to the immediate area of disposal and time of construction. There would be sufficient beach area north and south of the renourishment sites that can be used by the displaced birds while construction takes place. Increased foraging opportunities for some species, such as sea gulls, may also occur as a result of the discharge activity. Elevated turbidity levels within the immediate vicinity of the discharge site may interfere with foraging by sight feeders such as the brown pelican (*Pelecanus occidentalis*). However, increased turbidity levels would be limited to a small portion of the shoreline and should not result in significant impacts to foraging activities.

4.4.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to migratory birds if the proposed stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.3.2; 7.2.5.3

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.4.

4.5 ESSENTIAL FISH HABITAT (EFH)

4.5.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

There are no hard bottom resources adjacent to the shoreline of the proposed stockpiling area as stated in Section 3.5. The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in temporary turbidity along the stockpiling area's shoreline. Turbidity would be monitored per State permit requirements. The Canaveral Shoals borrow area is compatible with native beach materials as stated in Sections 4.2.1 and 4.3.1.1. The proposed sand stockpile site is located 4 miles south of the nearest occurrence of hardbottom, such that there is no

anticipated impact to nearshore hardbottom from loss of sand at the stockpile site during either loading (from the dredge) or offloading (to the trucks) and no effects to EFH is anticipated.

4.5.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to EFH if the proposed stockpile area were not utilized. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.6;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.5.

4.6 OTHER WILDLIFE RESOURCES

4.6.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on other wildlife resources. Sand placement activities would result in sedimentation and temporary turbidity which would affect macroinvertebrates (i.e. arthropods [sand fleas] and mollusks [clams]) that inhabit the beach. Recovery should occur in phase with normal seasonal recruitment patterns documented for the project area (Lacharmoise et al.).

Nelson (1989) reviewed the literature on the effects of beach nourishment projects on sand beach fauna and concluded that minimal biological effects resulted from beach renourishment. Nelson reviewed several studies on the most common beach invertebrates of the southeastern U.S., including the mole crab (*Emerita talpoida*), the surf clam, (*Donax sp.*) and the ghost crab (*Ocypode quadrata*). None of the studies cited by Nelson (1989) showed significant or lasting impacts to any of the above species resulting from beach nourishment. Hackney et al. (1996) provide a more recent review of the effects of beach restoration projects on beach infauna in the southeastern U.S. They also reviewed studies on the above species and agree with the conclusions set forth by Nelson (1989), with the suggestion that construction should take place in winter months to minimize potential effects, and that the sand used should be a close match to native beach sand. In review of past studies, there was a considerable short-term reduction in the abundances of mole crabs, surf clams, and ghost crabs attributable to direct burial. Recruitment and immigration were generally sufficient to re-establish populations within one year of construction. No long-term adverse effects are anticipated to the intertidal macroinfaunal community due to placement activities (Deis et al. 1992, Nelson 1985, Gorzelany & Nelson 1987). It is anticipated that beach renourishment will occur every six years from the borrow area

and could occur every three years via truck haul. It is also possible for these beach nourishments to be more frequent depending on storms and funding stream.

4.6.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to other wildlife resources if the proposed stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.5;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.6.

4.7 CULTURAL, HISTORIC, AND ARCHAEOLOGICAL RESOURCES

4.7.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

There is one previously identified cultural resource group listed in the FMSF that was determined eligible for listing in the National Register of Historic Places (NRHP) (the Melbourne Beach Optical Tracking Annex comprised of 8BR2222, 8BR2223, 8BR2224, 8BR2225). This group was recorded within the proposed equipment storage area APE. Since these structures were initially recorded, they have been demolished. In addition to these, there is one shipwreck site (8BR1928), that is located within the offshore APE which has not yet been evaluated by Florida SHPO. Based on the location of the site, the installation of one or more subline corridors on the seafloor to carry sand from the offshore dredges to the sand stockpile area could have potentially impacted site 8BR1928. Consequently, the Corps contracted a submerged and terrestrial cultural resource survey within the proposed APE to identify the location of significant components of 8BR1928 and any other unrecorded cultural resources within the APE.

The placement of additional sand within the stockpile area is likely to protect cultural resources from coastal erosion impacts. Pursuant to Section 106 of the National Historic Preservation Act (NHPA), consultation was initiated with the Florida SHPO. Based on this consultation, the Corps conducted a submerged cultural resource survey offshore in areas of the proposed sublines, a magnetometer survey of the beach, and a Phase I terrestrial cultural resource assessment survey of the equipment storage areas to identify and avoid adverse effects to historic properties within the APE. The survey identified three cultural resource targets within the Brevard Mid-Reach Sand Stockpile environmental study area. The survey is documented in the report titled: *Submerged Cultural Resources, Terrestrial Archaeological, and Magnetometer Surveys for the Mid-Reach Sand Stockpile, Brevard County, Florida* (James et al. 2019). The survey of the nearshore APE re-located a previously identified cannon (designated USACE-0005)

and two new target clusters designated Cluster 2 (USACE-0003) and Cluster 3 (USACE-0004). Due to the nature and location of these clusters these targets are potential historic properties. The Corps proposes to maintain avoidance buffers of 250 feet around USACE-0003, 175 feet around USACE-0004, and 150 feet around USACE-005 to avoid adverse effects to potentially significant resources. Consultation on the results of the survey and the determination of effects was initiated by letter with the Florida SHPO and appropriate federally recognized tribes on May 3, 2019. The Florida SHPO concurred with the Corps' determination of no adverse effects by letter dated May 15, 2019 (DHR Project File No.: 2015-0809-C).

4.7.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to cultural resources if the proposed stockpile area would not be utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.7;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.8. Consultation for this EA was initiated on March 7, 2015 (DHR Project File No. 2015-809) and additional consultation is required if upland Quarries are utilized.

4.8 WATER QUALITY

4.8.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on water quality (i.e. temporary turbidity in nearshore waters). Turbidity would be monitored per State permit requirements.

4.8.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to water quality if the proposed stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.12;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.9.

4.9 AESTHETIC RESOURCES

4.9.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on aesthetics. The primary short term impact would be construction activity within the stockpiling area, which is located within Spessard Holland Park. There would be no primary long term impacts other than an insignificant amount of residual sand left within the stockpiling area.

4.9.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to aesthetic resources if the proposed stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.9;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.10.

4.10 RECREATION RESOURCES

4.10.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on recreational opportunities. Construction activity would temporarily disrupt recreation; however, Spessard Holland Park would remain open and access to a portion of the beach would continue to be possible.

4.10.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effect to recreation resources if the proposed stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.11.

4.11 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)

4.11.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

There are no known hazardous, toxic or radioactive wastes in the project areas that would be affected by the chosen alternative actions. There is a potential for hydrocarbon spills with dredging and construction equipment in the area, but accident and spill prevention plans delineated in the contract specifications should prevent most spills.

4.11.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effects associated with HTRW if the stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.13;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.12.

4.12 AIR QUALITY

4.12.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in low level emissions from construction equipment operating at the stockpiling site. Exhaust emissions from the construction equipment would have a temporary effect on air quality. The short-term impact from emissions by the dredge and other construction equipment associated with the project would not significantly impact air quality. FDEP does not regulate marine or mobile emission sources (dredge and construction equipment) within Brevard County. No air quality permits would be required for this project. Brevard County is designated as an attainment area for Federal air quality standards under the Clean Water Act. Since the project is located within an attainment area EPA's General Conformity Rule to implement Section 176(c) of the Clean Air Act does not apply and a conformity determination is not required.

4.12.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effects to air quality if the stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.14;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.13.

4.13 NOISE

4.13.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

The placement of sand from Canaveral Shoals within the proposed stockpiling area would temporarily raise the noise level in the area. Noise associated with the stockpiling activity would specifically include construction equipment (i.e. front end loaders and trucks). Beach fill construction activity and the attendant noise impacts would occur 7 days per week during a 24 hour period. No sensitive receptor sites (i.e. hospitals) would be affected.

4.13.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no effects associated with noise if the stockpile area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.15;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.14.

4.14 ENERGY REQUIREMENTS AND CONSERVATION

4.14.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

Energy requirements associated with the use of the proposed stockpiling area would be confined to the fuel used to operate construction equipment at the stockpiling area.

4.14.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no energy requirements or opportunities for conservation if the proposed stockpiling area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.17;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.15.

4.15 NATURAL OR DEPLETABLE RESOURCES

4.15.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

No natural energy resources occur within the proposed stockpiling area. Fuel is a depletable resource that would be consumed by construction equipment during stockpiling operations. Impacts to natural resources are discussed elsewhere in this document. The use of these natural or depletable resources is not considered an unacceptable adverse impact of the proposed project.

4.15.2 NO ACTION ALTERNATIVE (STATUS QUO)

Natural or depletable resources would not be affected if the proposed stockpiling area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.18;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.16.

4.16 NATIVE AMERICANS

4.16.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

No portion of the proposed action is located within or adjacent to known Native American-owned lands, reservation lands, or Traditional Cultural Properties; however, Native American groups have lived throughout the area as evidenced by the presence of prehistoric archaeological sites in the region, and their descendants continue to live within the State of Florida and throughout the United States. Pursuant to Section 106 of the NHPA and obligations regarding the Corps' Trust Responsibilities to federally-recognized Native American Tribes, and in consideration of the Burial Resources Agreement between the Corps and the Seminole Tribe of Florida, consultation is complete with Native American tribes having ancestral ties to this region, including the Seminole Tribe of Florida, the Seminole Nation of Oklahoma, Thlopthlocco Tribal Town, and the Miccosukee Tribe of Indians of Florida. Consultation is complete.

4.16.2 NO ACTION ALTERNATIVE (STATUS QUO)

Native Americans would not be affected if the proposed stockpiling area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.20;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.17.

4.17 REUSE AND CONSERVATION POTENTIAL

4.17.1 PROPOSED ACTION, USE OF A SAND STOCKPILE AREA

There is no potential for reuse associated with the proposed project activities, therefore this is not applicable to the proposed action. Energy requirements for the proposed alternatives would be confined to fuel for construction equipment as stated in Section 4.14.

4.17.2 NO ACTION ALTERNATIVE (STATUS QUO)

There would be no reuse potential if the proposed stockpiling area were not utilized for this purpose. The effects determination for the no action alternative would be as described in other environmental effects previously reviewed and disclosed under NEPA, specifically:

2010, revised 2011 Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, Brevard County Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 7.2.21;

2016 Final Environmental Assessment Proposed Use of Upland Quarries as an Additional Sand Source, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment: Section 4.18.

4.18 CUMULATIVE IMPACTS

Cumulative impact is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such other actions" (40 CFR 1508.7). Similar cumulative impacts for this project can be found within the NEPA reports listed in the related documents in **Section 1.6** and are incorporated herein by reference. Reasonably foreseeable actions include potential actions by Brevard County within the project area to continue to stockpile sand in order to renourish the beach. Reasonably foreseeable future land uses adjacent to

the stockpile area include Spessard Holland Park and adjacent residential areas. The density of development within the surrounding residential area may increase over-time.

Table 5 summarizes the impact of such cumulative actions by identifying the past, present, and reasonably foreseeable future condition of the various resources which are directly or indirectly impacted by the proposed action and its alternatives. The table also illustrates the with-project and without-project condition (the difference being the incremental impact of the project). Also illustrated is the future condition with any reasonable alternatives (or range of alternatives). The time boundary condition for this analysis begins with pre-development and ends when the 50 year life of the project is reached. The space boundary condition has been set on the sand stockpiling area and pipeline corridor as well as the federally authorized North and South Reach beaches which are located north of the stockpiling area.

Table 5: Summary of Cumulative of Impacts

	Past (baseline condition)	Present (existing condition)	Future with Proposed Action, Use of Stockpiling Area	No Action Alternative (Authorized Project, use of Canaveral Shoals)
Native Beach Composition	Beach quality sand from Canaveral Shoals has been placed north of the proposed stockpiling area. Beach quality sand from quarries has also been used to rebuild the dune along the Mid-Reach Beach. These beaches were eroding prior to beach nourishment and provided less infrastructure protection.	The sand stockpiling area and beaches to the north consist of native parent material as well as beach quality sand from Canaveral Shoals and upland quarries (Mid-Reach dune).	The placement of sand from Canaveral Shoals within the proposed stockpiling area would be required to meet State and Federal acceptance criteria to ensure compatibility with the native beach. The creation of the stockpiling area would provide greater flexibility to nourish the Mid-Reach Beach and reduce storm effects.	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune).
Protected Species and Habitats Threatened and Endangered Species (nesting sea turtles, piping plover, red knot); Essential Fish Habitat (i.e. water column, hardbottoms [rock habitat], wetlands, etc.); Migratory Birds; Other Wildlife Resources	Populations were significantly greater prior to human development. Declines are attributed to loss or degradation of habitat as well as other human related factors.	Education and enforcement of relevant laws have resulted in some population increases (i.e. nesting sea turtles within the South Reach project area). Habitat has also improved in some cases due to land conservation, pollution abatement, and regulatory practices.	Habitat alteration due to climate change effects (i.e. sea level rise), continued loss or degradation of habitat due to development, and other human related factors will pose significant future challenges in protecting these species and their habitats. The creation and use of a stockpiling area using sand from Canaveral Shoals would be performed in compliance with all applicable laws.	Habitat alteration due to climate change effects (i.e. sea level rise), continued loss or degradation of habitat due to development, and other human related factors will pose future significant challenges in protecting these species. The authorized project would be performed in compliance with all applicable laws, and would help provide habitat for coastal species.
Cultural, Historic, and Archaeological Resources	Ongoing erosion and storm event effects have added to the degradation of cultural resources located along the shoreline and in the nearshore environment. .	No known present actions are occurring in the project vicinity.	Dredge material placement may result in the stabilization of existing shorelines and minimize future erosion in some areas. Near shore cultural resources will be avoided.	Erosion and storm event effects will continue to degrade cultural resources located along the shoreline and in the nearshore environment.

Water Quality	Prior to Federal and State laws being enacted and enforced, water quality had significantly declined due to human related factors (i.e. turbidity caused by upland runoff, septic tank leachate, etc.).	Present day water quality has significantly improved due to local, State, and Federal pollution abatement programs.	The placement of sand from Canaveral Shoals within the proposed stockpiling area as well as beaches to the north may result in some temporary turbidity. However, this should not exceed background levels and would not result or contribute to long-term water quality impacts. All work would be performed in compliance with State Water Quality Certification/permit.	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune). This may result in some temporary turbidity. However, this should not exceed background levels and would not result or contribute to long-term water quality impacts. All work would be performed in compliance with State Water Quality Certification/permit.
Aesthetics	Urban development along the shoreline has affected the aesthetics of the area.	The proposed stockpiling area is located within a public park. Beaches to the north are primarily built out. However, numerous local beachside parks have been established. The beach remains narrow and vulnerable to erosion.	The placement of sand from Canaveral Shoals within the proposed stockpiling area as well as beaches to the north would reduce the risk of damage to shoreline infrastructure (buildings and parks) and should generally improve the appearance of these locations.	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune).These actions should generally improve the appearance of these locations.
Recreation	Opportunities for beach recreation have been affected by shoreline development as well as storm induced erosion.	Numerous beach access routes have been established. However, opportunities for recreation are at risk due to erosion, or loss of beach area.	The placement of sand from Canaveral Shoals within the proposed stockpiling area as well as beaches to the north would preserve and protect many recreational opportunities. Construction would temporarily affect recreation.	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune).These actions should generally improve recreational opportunities.

Hazardous, Toxic, and Radioactive Waste (HTRW)	There are no known HTRW locations in the project area or other beach locations.	There are no known HTRW locations in the project area or other beach locations.	There should be no risk of encountering HTRW within the stockpiling area or other beach locations.	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune).These actions should not encounter HTRW.
Air Quality	Prior to Federal and State laws being enacted and enforced, air quality had declined.	Present day air quality has significantly improved due to local, State, and Federal pollution abatement programs. The area remains in attainment with air quality criteria.	The placement of sand from Canaveral Shoals within the proposed stockpiling area as well as beaches to the north may result in additional temporary and minor impacts to air quality but these would not be permanent.	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune).These actions would result in minor impacts to air quality but these would not be permanent.
Noise	Noise levels have likely remained unchanged for some time due the urbanized environment.	Noise levels continue to be typical for this urbanized project area.	The placement of sand from Canaveral Shoals within the proposed stockpiling area as well as beaches to the north would result in additional temporary and minor noise impacts.	Under the no action alternative, sand from Canaveral Shoals would not be placed on South Reach Beach for use as a sand stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune).These actions would result in minor noise impacts.
Energy Requirements and Conservation	Past beach nourishment in the project area required insignificant uses of energy.	Beach nourishment or dune construction continues to require insignificant uses of energy.	The placement of sand from Canaveral Shoals within the proposed stockpiling area as well as beaches to the north would result in an insignificant increase in the use of energy (fuel).	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune). This would result in an insignificant increase in the use of energy (fuel).

Natural or Depletable Resources	Past beach nourishment in the project area requires the use of sand, which is a depletable natural resource.	Present day beach nourishment in the project area requires the use of sand, which is a depletable natural resource.	The placement of sand from Canaveral Shoals within the proposed stockpiling area as well as beaches to the north would contribute to the depletion of sand sources.	Sand from Canaveral Shoals would not be placed within the proposed stockpiling area. Beaches to the north of the proposed stockpiling area would continue to be nourished with sand from Canaveral Shoals and upland quarries (Mid-Reach dune). This would contribute to the depletion of sand sources.
Native Americans	There are no Native American lands in the project area.	There are no Native American lands in the project area.	There are no Native American lands in the project area.	There are no Native American lands in the project area.
Reuse and Conservation Potential	There is no potential for reuse associated with the proposed project activities.	There is no potential for reuse associated with the proposed project activities.	There is no potential for reuse associated with the proposed project activities.	There is no potential for reuse associated with the proposed project activities.

4.19 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

4.19.1 IRREVERSIBLE

An irreversible commitment of resources is one in which the ability to use and/or enjoy the resource is lost forever. As previously stated, sand is a depletable resource and, therefore, the transfer of this sand from the offshore borrow area to beach and dune system is considered an irreversible commitment of resources.

4.19.2 IRRETRIEVABLE

An irretrievable commitment of resources is one in which, due to decisions to manage the resource for another purpose, opportunities to use or enjoy the resource as they presently exist are lost for a period of time. Typically, it refers to the use of renewable resources, including human effort, and to other utilization opportunities foregone in favor of the proposed action.

The project would result in the temporary loss of benthic habitat and associated fauna within the stockpile area. This is an irretrievable loss because benthic habitat will redevelop and fauna will reoccupy the affected areas following construction.

4.20 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

Most of the beach sand infauna (i.e. sand fleas, etc.) will be unavoidably lost as a result of sand placement activities. However, these losses are not expected to have a long-term, significant adverse impact on the surrounding environment since infauna outside of the fill areas and borrow areas will recolonize the disturbed sandy areas within one to three seasons after construction, respectively, and changes in macroinfaunal community assemblages should result in a minimal loss of productivity.

4.21 LOCAL SHORT-TERM USES AND MAINTENANCE/ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Shoreline protection using beach quality material with periodic nourishment is an ongoing effort. Beach nourishment projects have a temporary and short-term impact on local offshore and nearshore biological resources. Most motile organisms (fishes, crabs, and some sand dwelling organisms) within the borrow area and nearshore zone should be able to escape these areas during construction. Some less-motile individuals that are unable to escape from construction will be lost, but are expected to recolonize after project completion. Short-term reductions in primary productivity and reproductive and feeding success of invertebrate species and fish are expected.

4.22 INDIRECT EFFECTS.

The existing project shoreline consists of public beach park facilities. There is relatively limited opportunity for future development. No additional development along the stockpile shoreline is anticipated to occur.

4.23 COMPATIBILITY WITH FEDERAL, STATE, AND LOCAL OBJECTIVES

The Federal objective is to contribute to national economic development consistent with protecting the nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements. Federal planning concerns other than economic include environmental protection and enhancement, human safety, social wellbeing, and cultural and historical resources. Federal, State and county objectives include (1) the reduction of expected storm damages through beach nourishment and other project alternatives; (2) maintaining beaches as suitable recreational areas; (3) maintaining suitable beach habitat for nesting sea turtles, invertebrate species, and shorebirds; (4) maintaining commerce associated with beach recreation in Brevard County, and (5) avoidance or minimization of adverse impacts to sensitive environmental marine resources along the project area. The proposed project activity is consistent with Federal and local objectives and with the State's Coastal Zone Management Plan.

4.24 CONFLICTS AND CONTROVERSY

There are no known conflicts or controversy associated with creating the proposed sand stockpiling area. The State of Florida's approval for use of Spessard Holland Park has been obtained through the FDEP Water Quality Certification Permit modification for the South Reach (#0137212-017-JN) issued on May 9, 2019 (Appendix C). Brevard County's approval letter noting support of using Spessard Holland Park is in Appendix C.

4.25 UNCERTAIN, UNIQUE, OR UNKNOWN RISKS

There are no uncertain, unique or unknown risk associated with creating the proposed sand stockpiling area.

4.26 PRECEDENT AND PRINCIPLE FOR FUTURE ACTIONS.

The proposed activities are consistent with, and/or adaptions of, prior permitted activities conducted by the Corps, Brevard County, and the U.S. Air Force. These include prior beach nourishment and periodic nourishment along the North Reach and South Reach of the Brevard County Federal Shore Protection Project, Patrick Air Force Base (including stockpile placement of Canaveral Shoals sand upon the PAFB beach and subsequent truck-haul transfer to the adjacent shoreline) and emergency dune restoration along the Mid-Reach and South Beaches by Brevard County.

4.27 ENVIRONMENTAL COMMITMENTS

The Corps commits to avoiding, minimizing or mitigating for adverse effects during construction activities by including the following commitments in the contract specifications:

1. Protective measures for threatened and endangered species shall be enforced in accordance with the USFWS Statewide Programmatic Biological Opinion (2015), the USFWS Programmatic Piping Plover Biological Opinion (2013), and the State permit.

2. All water quality terms and conditions of the State permit shall be implemented.

3. Migratory birds (adult birds, eggs and chicks) shall be protected during construction activities. Migratory bird surveys will be conducted during nesting season and buffer zones will be placed around nests that are found.

4. Essential Fish Habitat conservation correspondence received from NMFS on March 29, 2019 stated: NMFS offers no EFH conservation recommendations pursuant to Magnuson-Stevens Fishery Conservation and Management Act and no recommendations under the Fish and Wildlife Coordination Act (Appendix C).

5. A cultural resource survey to identify historic properties was completed within the APE. The survey identified three targets in the nearshore APE. The Corps will maintain buffers around these three targets and the five targets identified in the Canaveral Shoals II borrow area. In the event that unanticipated cultural resources are discovered during the project, then protective measures shall be utilized and the actions coordinated with SHPO and appropriate Native American tribes.

6. All truck-haul shall be conducted with allowance for up to twenty-four hours seven days a week operations. This action alone will not increase truck traffic and in fact, it will reduce the overall number of transport miles. It may or may not influence the number of truck trips through any particular location. The transport at night will reduce the overall traffic density and therefore help reduce public impact. Transport will be via State Highway A1A which was designed for safe transport at night.

7. Air emissions such as vehicular exhaust and dust shall be controlled.

8. The contracting officer would notify the contractor in writing of any observed noncompliance with Federal, State, or local laws or regulations, permits and other elements of the contractor's Environmental Protection Plan.

9. The contractor would train his personnel in all phases of environmental protection.

10. The environmental resources within the project boundaries and those affected outside the limits of permanent work would be protected during the entire period of work.

11. An oil spill prevention plan shall be required.

4.28 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

4.28.1 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (42 U.S.C. § 4321-4335)

Environmental information on the project has been compiled and this Supplemental Environmental Assessment (SEA) has been prepared. Additionally, the GRR SEIS is

incorporated herein by reference. A scoping letter on the placement of sand from Canaveral Shoals within the proposed stockpiling area to nourish the Mid-Reach Beach was mailed out to all Federal, State, and local agencies on October 22, 2018. A Notice of Availability dated March 6, 2019 of the draft EA was coordinated with interested stakeholders for review and comment. The project is in full compliance with NEPA.

4.28.2 ENDANGERED SPECIES ACT OF 1973 (16 U.S.C. § 1531-1544)

The proposed work would be performed in accordance with the USFWS Statewide Programmatic Biological Opinion (SPBO) (2015) and the USFWS Programmatic Piping Plover Biological Opinion (P3BO) (2013). A coordination letter was sent to the USFWS on January 23, 2019. The USFWS Decision Document (dated March 7, 2019) is located in Appendix C. The 2015 SPBO will be complied with regarding nesting and hatching sea turtles. USFWS concurs that the project "may affect but is not likely to adversely affect" the piping plover and red knot. However, based on habitat available in the project area and the low incidence of documented use by piping plovers, USFWS advised that surveys for piping plover and the red knot are not needed for this project. USFWS concurs with the Corps' determination of "may affect, not likely to adversely affect" for the manatee. The Corps will implement the FWC "Standard Manatee Conditions for In-Water Work" and additional minimization measures outlined in the SPBO. This project was coordinated under the Endangered Species Act (ESA) and is therefore, in full compliance with the Act.

4.28.3 FISH AND WILDLIFE COORDINATION ACT OF 1958, AS AMENDED (16 U.S.C. § 661-666C)

The proposed action was coordinated with the USFWS through NEPA scoping and ESA consultation. The USFWS Decision Document (dated March 7, 2019) and the NMFS response document (dated March 29, 2019) are located in Appendix C. NMFS correspondence stated NMFS offers no recommendation under the Fish and Wildlife Coordination Act. This project is in full compliance with the Act.

4.28.4 NATIONAL HISTORIC PRESERVATION ACT OF 1966 (INTER ALIA) (54 U.S.C. § 300101 ET SEQ.)

NHPA was enacted to preserve historical and archaeological sites in the United States, and it created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation Offices. Consultation with SHPO and federally recognized Native American Indian Tribes is complete. The project is in compliance with Section 106 of the NHPA, as amended prior to the FONSI. As part of the Corps' compliance with the requirements and consultation process contained within the NHPA implementing regulations of 36 CFR Part 800, the Corps has ensured that the proposed project is also in compliance with the Archaeological and Historic Preservation Act, as amended (PL 93-291), Archaeological Resources Protection Act (16 U.S.C. §§470aa-470mm) (PL 96-95), American Indian Religious Freedom Act (PL 95-341), Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. §3001 et. seq.) and its implementing regulations, Executive Orders (EO) 11593, 13007, and 13175, the Presidential Memo of 1994 on Government to Government

Relations and appropriate Florida Statutes, and the Abandoned Shipwrecks Act (43 U.S.C. §§2101-2106).

Pursuant to Section 106 of the NHPA, and in consideration of the NEPA consultation with the Florida SHPO, the Miccosukee Tribe of Indians of Florida, the Seminole Nation of Oklahoma, the Seminole Tribe of Florida, and Thlopthlocco Tribal Town of Oklahoma was coordinated by letter dated May 3, 2019. Initial consultation with the Florida SHPO confirmed the Corps' need to conduct a cultural resource survey to map and evaluate the distribution of wreckage associated with 8BR1928 and locate other potential historic properties within the APE (DHR Email dated November 5, 2018). In a letter dated May 15, 2019 Florida SHPO concurred with survey results and the Corps' determination of no adverse effect contingent upon maintaining avoidance buffers within 250 feet of USACE-0003, 175 feet of USACE-0004, 150 feet of USACE-0005, and 300 feet of targets USACE-0006 through USACE-0010.

4.28.5 CLEAN WATER ACT OF 1972, AS AMENDED (33 U.S.C. § 1251 ET SEQ.)

The existing Brevard Mid-Reach water quality certification, permit #0254479-001-JC, was approved and modified as #0254479-005-JN, dated May 13, 2019 (Appendix C), to include fill placement via the proposed stockpile activity. Brevard County requested modification of the South Reach permit (#0137212-016-JC) to include construction of the proposed stockpile, and that permit was approved and modified as #0137212-017-JN, issued by FDEP on May 9, 2019 (Appendix C). A Section 404(b) evaluation is included in this report as Appendix A. The project is in full compliance with this Act.

4.28.6 CLEAN AIR ACT OF 1970, AS AMENDED (42 U.S.C. § 7401-7671Q)

No air quality permits would be required for this project. This project has been coordinated with U.S. Environmental Protection Agency (EPA) and is in compliance with Section 309 of the Act.

4.28.7 COASTAL ZONE MANAGEMENT ACT OF 1972 (16 U.S.C. § 1451-1466)

A Federal consistency determination in accordance with 15 CFR 930 Subpart C is included in this report as Appendix B. The proposed work was coordinated with the State. The Florida State Clearing House correspondence (dated May 10, 2019) stated, "based on the information submitted and minimal project impacts, the State has no objections to the subject project and, therefore, it is consistent with the Florida Coastal Management Program (FCMP). The Coastal Zone Management Act determination document is located in Appendix C. The project is in full compliance with this Act.

4.28.8 FARMLAND PROTECTION POLICY ACT OF 1981 (7 U.S.C. § 4201 ET SEQ.)

No prime or unique farmland should be impacted by implementation of this project. This Act is not applicable.

4.28.9 WILD AND SCENIC RIVER ACT OF 1968 (16 U.S.C. § 1271-1287)

No designated Wild and Scenic river reaches would be affected by project related activities. This Act is not applicable.

4.28.10 MARINE MAMMAL PROTECTION ACT OF 1972 (16 U.S.C. § 1361-1423H)

Protective measures for marine mammals such as whales and manatees will be implemented as previously described in the 2010, revised 2011 GRR SEIS. This project was coordinated with the USFWS and NMFS. The project is in full compliance with the Act. Correspondence with USFWS (dated March 7, 2019) and NMFS (dated March 29, 2019) are located in Appendix C.

4.28.11 ESTUARY PROTECTION ACT OF 1968 (16 U.S.C. § 1221-1226)

No designated estuary would be affected by project activities. This Act is not applicable.

4.28.12 FEDERAL WATER PROJECT RECREATION ACT (16 U.S.C. § 460L-12-460L-21), AS AMENDED

The principles of this Act, have been fulfilled by complying with the recreation cost sharing criteria as outlined in Section 2 (a), paragraph (2) of the Act. Another area of compliance includes the public beach access requirement on which the renourishment project hinges (Section 1, (b)).

4.28.13 SUBMERGED LANDS ACT OF 1953 (43 U.S.C. § 1301-1356A)

The project would occur on submerged lands of the State of Florida. The project shall be coordinated with the State and is in full compliance with the Act.

4.28.14 COASTAL BARRIER RESOURCES ACT AND COASTAL BARRIER IMPROVEMENT ACT OF 1990 (16 U.S.C. § 3501-3510)

There are no designated coastal barrier resources in the project area that would be affected by this project. These Acts are not applicable.

4.28.15 RIVERS AND HARBORS ACT OF 1899, AS AMENDED (33 U.S.C. § 401-467N)

The proposed work would not obstruct navigable waters of the United States. The project is in full compliance with the Act.

4.28.16 ANADROMOUS FISH CONSERVATION ACT (16 U.S.C. § 757A-757F)

Anadromous fish species would not be affected. The project was coordinated with NMFS and is in full compliance with the Act. This correspondence is located in Appendix C.

4.28.17 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT (16 U.S.C. § 703-715S)

Protective measures shall be implemented so that no migratory birds would be affected by project activities. The project is in full compliance with these Acts.

4.28.18 MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT (16 U.S.C. § 1361-1447F)

The term "dumping" as defined in the Act (33 U.S.C. § 1402 (f)) does not apply to the disposal of material for beach nourishment or to the placement of material for a purpose other than disposal (i.e. placement of rock material as an artificial reef or the construction of artificial reefs as mitigation). Therefore, the Marine Protection, Research and Sanctuaries Act does not apply to this project. The disposal activities addressed in this SEA have been evaluated under Section 404 of the Clean Water Act.

4.28.19 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (16 U.S.C. § 1801-1891D)

An Essential Fish Habitat Assessment for this project was submitted to the NMFS via letter dated March 6, 2019. The NMFS correspondence (dated March 29, 2019) stated “NMFS offers no EFH conservation recommendations pursuant to the Magnuson-Stevens Fishery Conservation and Management Act. This correspondence is located in Appendix C. The project is in full compliance with the Act.

4.28.20 UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES ACT OF 1970 (42 U.S.C. § 4601-4655)

The purpose of this Act (PL 91-646) is to ensure that owners of real property to be acquired for Federal and federally assisted projects are treated fairly and consistently and that persons displaced as a direct result of such acquisition will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. The proposed work should not involve real property acquisition and/or displacement of property owners or tenants. This Act does not apply.

4.28.21 E.O. 11990, PROTECTION OF WETLANDS

There are no wetlands in the project area. This EO does not apply.

4.28.22 E.O. 11988, FLOOD PLAIN MANAGEMENT

This EO states that Federal agencies shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out agency responsibilities. The project would have no adverse impacts to flood plain management.

4.28.23 E.O. 12898, ENVIRONMENTAL JUSTICE

On February 11, 1994, the President of the U.S. issued Executive Order (E.O.) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This E.O. mandates that each Federal agency make environmental justice (EJ) part of the agency mission and to address, as appropriate, disproportionately high and adverse human health or environmental effects of the programs and policies on minority and low-income populations. Significance thresholds that may be used to evaluate the effects of a proposed action related to EJ are not specifically outlined. However, Council on Environmental Quality (CEQ) guidance

requires an evaluation of a proposed action's effect on the human environment and the Corps must comply with Executive Order 12898. The Corps has determined that a proposed action or its alternatives would result in significant effects related to EJ if the proposed action or an alternative would disproportionately adversely affect an EJ community through its effects on:

- Environmental conditions such as quality of air, water, and other environmental media; degradation of aesthetics, loss of open space, and nuisance concerns such as odor, noise, and dust;
- Human health such as exposure of EJ populations to pathogens;
- Public welfare in terms of social conditions such as reduced access to certain amenities like hospitals, safe drinking water, public transportation, etc.; and
- Public welfare in terms of economic conditions such as changes in employment, income, and the cost of housing, etc.

The Corps conducted an evaluation of EJ impacts using a two-step process: as a first step, the study area was evaluated to determine whether it contains a concentration of minority and/or low-income populations. The second step includes evaluation to determine whether the proposed action would result in a disproportionately, high adverse effect on these populations.

As defined in Executive Order 12898 and the CEQ guidance, a minority population occurs where one or both of the following conditions are met within a given geographic area:

- The American Indian, Alaskan Native, Asian, Pacific Islander, Black, or Hispanic population of the affected area exceeds 50 percent; or
- The minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

An affected geographic area is considered to consist of a low-income population (i.e. below the poverty level for purposes of this analysis) where the percentage of low-income persons:

- is at least 50 percent of the total population; or
- is meaningfully greater than the low-income population percentage in the general population or other appropriate unit of geographic analysis.

Step 1: Study Area's Minority and Low-Income Population Average Percentages

Using the USEPA EJAssist Tool, the project area was identified and the average percentage for the EJ criteria are compared in **Table 6** for the project area and Puerto Rico. (No data was available to compare to overall U.S. averages.)

Table 6. USEPA EJAssist environmental justice criteria percentages.

	User-Defined Project Area %	Florida State Average %
Minority Population	2%	44%
Low Income Population	12%	37%

Based on the information provided by the USEPA EJAssist tool, the average minority population is approximately 2% of the total population and approximately 12% of the individuals in the project area are considered below the poverty level. Therefore, the study area which comprises Spessard Holland Park, Brevard County, Florida does not constitute an EJ community because the population percentages do not exceed 50 percent, indicating that the study area does not contain a high concentration of minority and low-income population.

Since Spessard Holland Park does not contain a concentration of minority and/or low-income populations such that it would result in a disproportionate, high adverse effect on these populations, Step 2 is not incorporated.

4.28.24 E.O. 13089, CORAL REEF PROTECTION

The EO refers to "those species, habitats, and other natural resources associated with coral reefs." There are no coral reefs within, or adjacent to, the project area. This EO does not apply.

4.28.25 E.O. 13112, INVASIVE SPECIES

The proposed activity does not include actions that would introduce invasive species.

4.28.26 E.O. 13186, MIGRATORY BIRDS.

This EO requires, among other things, a Memorandum of Understanding (MOU) between the Federal Agency and USFWS concerning migratory birds. Neither the Department of Defense MOU nor the Corps' Draft MOU clearly address migratory birds on lands not owned or controlled by the Corps. For many Corps civil works projects, the real estate interests are provided by the Non-Federal sponsor. Control and ownership of the project lands remain with a Non-Federal interest. Measures to avoid the destruction of migratory birds and their eggs or hatchlings shall be implemented.

4.29 PUBLIC INTEREST FACTORS.

Factors were considered in determining whether a regulatory permit for this action would be in the public interest (33 CFR 325.3(C)). While it does not issue itself a permit under the Clean Water Act or the Ocean Dumping Act, the Corps is required to apply "the same criteria, procedures, and requirements which apply to the issuance of permits" (33 CFR 335.2 and ER 1105-2-100 Appendix C, part C-6). The proposed action, on balance, would not be contrary to the public interest.

5 LIST OF PREPARERS

5.1 PREPARERS

Preparer	Discipline	Role
Wendy Dauberman-Zerby, U.S. Army Corps of Engineers	Biologist	Principal Author
Jason Moser, U.S. Army Corps of Engineers	Archaeologist	Cultural Resources
Doug Piatkowski, BOEM	Physical Scientist	Reviewer/Preparer

5.2 REVIEWERS

This SEA was reviewed by the Corps, Jacksonville District, supervisory chain of the Environmental Branch. This SEA was also reviewed by BOEM.

6 PUBLIC INVOLVEMENT

6.1 SCOPING AND DRAFT SEA

Pursuant to the National Environmental Policy Act and Corps Regulation, a scoping letter dated October 22, 2018 was issued for this proposed action. The Corps issued a Notice of Availability (NOA) for the review of the SEA and proposed Finding of No Significant Impact (FONSI) to stakeholders on March 6, 2019.

6.2 AGENCY COORDINATION

Coordination has been conducted and is complete with appropriate agencies and is described in this document. Agency coordination letters and documents can be found in Appendix C

6.3 COMMENTS RECEIVED AND RESPONSE

Comments received in response to the scoping letter are summarized below. All comment letters or emails received can be found in Appendix C. In regard to the Notice of Availability of the draft EA and Proposed Finding of No Significant Impact, no recommendations were received from stakeholders. One comment was received from NMFS's NOAA, correspondence dated March 29, 2019, stating the NMFS offers no EFH conservation recommendations pursuant to the Magnuson-Stevens Fishery Conservation and Management Act and no recommendations under the Fish and Wildlife Coordination Act. This correspondence is located in Appendix C.

Scoping Letter: Public Comments

- Several different comments were expressed regarding the use of upland quarries as an additional source of sand to nourish the Mid-Reach Beach.

Town of Indialantic

- The following inquiries are regarding the plan to permit trucking of sand from Spessard Holland Park to the Mid-Reach on State Road A1A.

- Number of trucks per day?

  RESPONSE:
  If the contractor uses the maximum allowable construction window (6 months) based on the current volume estimate of 250,000 cubic yards (CY) required the expectation would be roughly 154 truckloads round trip per day or about 1660 CY per day, on overall average.

  Based on the County's most recent truck-haul project, 3,000 CY/day or 167 trucks (round trip) per day is a more reasonable production rate to expect.

This is a similar level of daily trucking impact experienced during the County's 2018 dune nourishment in the Mid-Reach where trucks also passed through Indialantic.

- The time of day that the trucks will be traveling north and/or south along SR-A1A.

  RESPONSE: The contractor will be allowed to transport sand 24 hours if they desire, as allowed by FDOT, but the final trucking schedule will not be known until the contractor is selected.

- The days of the week that the trucks will be hauling on SR-A1A

  RESPONSE: Construction will be allowed 7 days per week.

  The maximum construction window is expected to be November 1 until April 30th, or six months. If the contractor moves 3000 CY/day, as they have in previous county projects, the truck-haul work could be completed in 83 days within the six month construction window.

  Additionally, A1A is a State highway where commercial trucking is allowed.

  The stockpile plan will not result in significantly more truck traffic through Indialantic than would happen if using the previous plan of mines in Indian River County where the trucks pass through Indialantic.

  Please keep in mind the final answers cannot be determined until the contractor shares their plan.

- We request that you minimize truck traffic and what traffic that does exist is limited to daylight hours.

  RESPONSE: The Corps and the local sponsor have addressed this concern and have determined that truckhaul during a 24 hour period to be advantageous for this project. These are the reason for this determination:

  1. This action alone will not increase truck traffic and in fact, it will reduce the overall number of transport miles, if not the number of trips through the town.
  2. The transport at night will reduce the overall traffic density and therefore help reduce public impact.
  3. Transport will be via State Highway A1A which was designed for safe transport at night.

Environmental Protection Agency (EPA)

- Recreation: The EPA recommends the USACE document any impacts to recreation (even temporary) related to beach closures due to the proposed sand storage area in the Draft NEPA document. Additionally, the EPA recommends the USACE document and disclose any impacts to the local community and economy due to potential beach closures.

  RESPONSE: Please see Section 4.10.1 for a discussion of impacts to recreation.

- Sand Transportation: It is EPA's understanding that the sand will be transported from the current borrow area to a temporary storage site at Spessard Holland Park. For NEPA disclosure, the EPA recommends the USACE discuss the expected route that the trucks will take. The EPA also recommends the USACE discuss the number of trucks, duration of truck-haul and time of day that the trucks will transport the sand to the storage location within the Draft NEPA document. The EPA also recommends the trucks avoid residential neighborhoods as much as possible.

  RESPONSE: Please see Section 4.1.1 for a discussion of the effects of the truck haul.

- Noise: As discussed above, the EPA recommends the USACE discuss any noise related impacts associated with the truck-haul transport of the sand to the temporary storage area within the draft NEPA document. The EPA also recommend that the routes of the truck-haul avoid residential neighborhoods and sensitive communities such as children and elderly communities.

  RESPONSE: Please see Section 4.13 for a discussion of effects of noise for the proposed project.

- Air Quality: As discussed above, the EPA recommends the USACE discuss any air quality (i.e., mobile source air toxics) related impacts associated with the truck-haul transport of the sand to the temporary storage area within the draft NEPA document. Additionally, the EPA recommends that the discussion include air quality impacts to sensitive communities such as the elderly and children. The EPA also recommends the USACE avoid transportation routes that are near these communities.

  RESPONSE: Please see Section 4.12 for a discussion of air quality effects.

- Environmental Justice (EJ): Also related to the previous comments, the EPA recommends the USACE disclose any impacts to EJ communities especially related to increases in truck traffic through low income, minority communities. An increase in truck traffic through EJ communities could increase health impacts associated with air quality (i.e., MSATs) and noise.

RESPONSE: Please see Section 4.28.23 for discussion of environmental justice evaluation.

- Wetlands: The EPA recommends the USACE disclose any impacts (if any) related to wetlands. The EPA recommends the USACE avoid and minimize impacts to wetlands and mitigate wetland impacts according to the Clean Water Act Section 404(b)(1) Guidelines and related regulations.

  RESPONSE: No wetlands are within the footprint, or adjacent to, the sand stockpiling area.

National Marine Fisheries Service (NMFS)

- The NMFS recommends the supplemental NEPA assessment examine the potential for sand leakage during transfer to the stockpile (including dewatering), whether that leakage could affect hardbottom habitat, and measures the Jacksonville District will take to prevent sand leakage. The NMFS also recommends the supplemental NEPA assessment discuss measures to manage the stockpile while it is in place and during loading of the dump trucks.

  RESPONSE: Please see Section 3.5 for hardbottom survey discussion. Please see Section 4.1.1 for discussion on measures to manage the stockpile while it is in place and during loading of the dump trucks.

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APPENDIX A - SECTION 404(B) EVALUATION

SECTION 404(b) EVALUATION
ENVIRONMENTAL ASESSMENT
ON
PROPOSED USE OF STOCKPILING AS AN ADDITIONAL SOURCE OF SAND
HURRICANE AND STORM DAMAGE REDUCTION PROJECT, MID-REACH SEGMENT
BREVARD COUNTY, FLORIDA

I. Project Description

a. Location. The proposed work will be performed along the Atlantic Ocean shoreline of Brevard County, Florida. The proposed temporary sand stockpile would be constructed along 2,090 feet of shoreline of central Spessard Holland Park, between Florida Department of Environmental Protection (FDEP) reference monuments R138.5 and R140.8, with residual (post-stockpile) beach fill extending another 214 feet to R141. The northern 530 feet of the stockpile would be constructed within the south end of the authorized limits of the BCFSPP South Reach (i.e., from R138.5 to R139). The southern 1,560 feet of the stockpile would be constructed immediately adjacent to and south of the South Reach (i.e., from R139 to R140.8), with residual post-stockpile berm fill extending another 214 feet southward (i.e., from R140.8 to R141). See Figure 1 in the main text.

General Description. The project includes the following principal activities. A portion of Spessard Holland Park, Brevard County, would be utilized as a temporary stockpiling area for beach quality sand from Canaveral Shoals. In summary, beach quality sand would be dredged from Canaveral Shoals and transported via hydraulic pipeline to the stockpile area within Spessard Holland Park. The stockpile area has the capacity to temporarily store an estimated 97,000 cubic yards. Once stockpiled, the material would then be transported by truck and placed along the congressionally authorized Mid-Reach Segment. After placement and transfer of the sand stockpile, a minor residual volume of sand would be left along the beach at the Spessard Holland Park. This SEA also evaluates the pipeline corridor by which the sand from Canaveral Shoals would be placed to the park. The proposed action would be utilized for initial construction and periodic future renourishments of the Mid-Reach project segment. The purpose of the action is to reduce overall project costs and increase efficient use of dredge equipment mobilized to the project, reduce use of upland sand resources, and improve assurance of sand fill quality through use of historically proven sediment resources from the project's offshore borrow areas.

b. Authority. A general re-evaluation report for Brevard County, Florida was authorized by the Water Resources Development Act (WRDA) of 2000, which stated

SEC. 418 BREVARD COUNTY, FLORIDA
"The Secretary shall prepare a general reevaluation report on the project for shoreline protection, Brevard County, Florida, authorized by section 101(b)(7) of the Water Resources Development Act of 1996 (110 Stat. 3667), to determine, if the project were modified to direct the Secretary to incorporate

in the project any or all of the 7.1 mile reach of the project that was deleted from the south reach of the project, as described in paragraph (5) of the Report of the Chief of Engineers, dated December 23, 1996, whether the project as modified would be technically sound, environmentally acceptable, and economically justified."

Additional language concerning the Mid-Reach was included in the Water Resources Development Act of 2007, as follows.

SEC. 3045. BREVARD COUNTY, FLORIDA.
"(a) SHORELINE.—The project for shoreline protection, Brevard County, Florida, authorized by section 101(b)(7) of the Water Resources Development Act of 1996 (110 Stat. 3667), is modified to authorize the Secretary to include the mid-reach as an element of the project from the Florida department of environmental protection monuments R-75.4 to R-118.3, a distance of approximately 7.6 miles. The restoration work shall only be undertaken upon a determination by the Secretary, following completion of the general reevaluation report (GRR) authorized by section 418 of the Water Resources Development Act of 2000 (114 Stat. 2637), that the shoreline protection is feasible.''

In response to section 418 of the WRDA of 2000 and section 3045 of WRDA 2007, the Corps prepared the GRR as well as a Supplemental Environmental Impact Statement (SEIS) for the proposed Mid-Reach Project. The GRR SEIS, dated August 2010, (revised April 2011) and Addendum (April 2014) presented the results of this shoreline protection study. Based on the review of the GRR SEIS and Addendum, it was determined (September 2014) that construction of the Mid-Reach Project is feasible, thus it is now congressionally authorized pursuant to section 3045 of the WRDA of 2007.

d. General Description of Fill Material.

(1) General Characteristics of Material. Canaveral Shoals I and II borrow areas will be required to meet State and Federal (acceptance) criteria. The proposed criteria can be reviewed in Section 4.2.1.

(2) Quantity of Material. The temporary beach stockpile area has the capacity to stockpile 97,000 cubic yards of material.

(3) Source of Material. Beach quality sand will be hydraulically placed via pipeline from Canaveral Shoals I and/or II borrow areas.

e. Description of the Proposed Discharge Site.

(1) Location. Beach quality sand will be hydraulically placed via pipeline from an offshore dredge into a temporary beach stockpile area along 2,090 feet of shoreline of central Spessard Holland Park, between FDEP reference monuments R138.5 and R140.8, with residual (post-stockpile) beach fill extending another 214 feet to R141. The northern 530 feet of the stockpile would be constructed within the south end of the authorized

limits of the BCFSPP South Reach (i.e., from R138.5 to R139). The southern 1,560 feet of the stockpile would be constructed immediately adjacent to and south of the South Reach (i.e., from R139 to R140.8), with residual post-stockpile berm fill extending another 214 feet southward (i.e., from R140.8 to R141).

(2) Size. The total project stockpile area comprises 2,090 feet of shoreline.

(3) Type of Site. the stockpiling area would be constructed between the two major areas of Spessard Holland Park that are principally used for public access and recreation (i.e., Spessard Holland Park North and Spessard Holland Park South), and therefore minimize the impacts to public beach access and use (Figures 5 and 6, Section 3.1).

(4) Type of Habitat. The proposed stockpiling area is located on a coastal barrier island of central Brevard County on Florida's east coast, and is bound on the west by the extensive estuarine lagoon system of the Banana and Indian Rivers and on the east by the Atlantic Ocean. This area consists of an open sandy beach.

(5) Timing and Duration of Discharge. The exact timing of initial construction is not known. The maximum construction window is expected to be November 1 until April 30th or six months. If the contractor moves 3,000 CY/day, as they have in previous county projects, the truck-haul work could be completed in approximately 83 days within the six month construction window. Placement of sand to the beach project area will be limited to November 1 through April 30, with special conditions for environmental protection implemented for construction from March 1 through April 30, and from November 1 through 30 (early and late marine turtle nesting season, respectively).

f. Description of Disposal Method. Beach quality sand will be hydraulically placed via pipeline from an offshore dredge into temporary beach stockpile area which has the capacity to stockpile 97,000 cubic yards. Once stockpiled, the material will be mechanically transferred by truck-haul and placed along the congressionally authorized Mid-Reach Segment of the Brevard County Hurricane and Storm Damage Reduction Project.

II. Factual Determinations

a. Physical Substrate Determinations.

(1) Substrate Elevation and Slope. Details will be available with the final design.

(2) Sediment Type. Stockpile sand will be required to meet criteria described in Sections 4.2.1 of this document.

(3) Dredge/Fill Material Movement. The fill material will be subject to cross-shore erosion by waves with alongshore movement to both the north and south, and with principal net movement of fill material to the south.

(4) Physical Effects on Benthos. The intertidal beach zone within the stockpiling area beach is generally characterized by a quartz sand and shell hash bottom. The intertidal zone extends from MHW to MLW and is routinely inundated by water and influenced by wave action during each tidal cycle. The beach in this zone is generally populated by small benthic macroinfauna that are short lived and highly fecund. The mole crab (*Emerita talpoida*), coquina clams (*Donax variabilis, D. parvula*) and several species of polychaetes tend to be the dominant species within the intertidal zone (Nelson, 1985; Gorzelany and Nelson, 1987). Other invertebrates known to inhabit the intertidal zone within the project area include several species of gastropods, isopods and amphipods (Gorzelany and Nelton, 1987). Shorebirds that can be found utilizing the intertidal zone for foraging are the least tern (*Sterna antillarum*), royal tern (*Sterna maxima*), sandwich tern (*Sterna sandvicensis*), black skimmer (*Rynchops niger*), and snowy plover (*Charadrius alexandrines*) (Myers and Ewel 1990). The bottom characteristics of the nearshore area within the surf zone are similar to the intertidal zone except that the sand is constantly inundated with water. Benthic invertebrate species reported to inhabit this area include bivalves, gastropods, polycheates, amphipods, portunid crabs, and sand dollars. The dominant fish species that occur in this zone are bottom feeding carnivores that feed on the benthic invertebrate fauna (Gilmore, et al., 1981). These include catfish (*Arius felis*), lizardfish (*Synodus foentens*), croakers and kingfish (*Scianidae*), and pompano (*Trachinotus carolinus*) (Nelson 1985; Gilmore, et al., 1981). Other fish species that can be found in the surf zone periodically include jacks (*Carangidae*), mackerels (*Scombridae*), ladyfish (*Elops saurus*), bluefish (*Pomatomus saltator*), anchovies (*Engraulidae*) and herrings (*Clupeidae*) (Gilmore, et. al., 1981).

b. Water Circulation, Fluctuation and Salinity Determination.

(1) Water Column Effects. Fill placement will not have long-term or significant impacts, if any, on salinity, water chemistry, clarity, color, odor, taste, dissolved gas levels, nutrients or eutrophication.

(2) Current Patterns and Circulation. Currents in the project area are both tidal and longshore. Net movement of water due to the longshore current is typically from the north to the south.

(3) Normal Water Level Fluctuations and Salinity Gradients. Tides in the project area are semi-diurnal. Elevations of mean high water and mean low water tidal datum in Brevard County are approximately 2 feet above and 1.9 feet below the NGVD'29 vertical datum.

c. Suspended Particulate/Turbidity Determinations.

(1) Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site. There will be a potential temporary increase in turbidity levels in the waters adjacent to the Mid-Reach project area shoreline during mechanical placement of the sediment to the beach face. Turbidity will be short-term and localized and no significant adverse impacts are expected. State standards for turbidity should not be exceeded during construction.

(2) Effects on the Chemical and Physical Properties of the Water Column.

(a) Light Penetration. The placement and spread of fill on the beach will increase turbidity in the nearshore area during construction. Because the immediate nearshore area is a high wave energy system and subject to naturally occurring elevated turbidity and sediment, increases due to project construction should not be significant. A nearshore turbidity monitoring program with a plume mixing zone of 150 meters from the placement sites will be implemented during construction. Turbidity will be monitored during construction, and State standards for turbidity should not be exceeded. A nearshore monitoring program will be implemented to assess the potential secondary impacts of sedimentation and turbidity to nearshore hardbottom communities adjacent to the equilibrium toe of fill.

(b) Dissolved Oxygen. Dissolved oxygen levels will not be altered by this project.

(c) Toxic Metals, Organics, and Pathogens. No toxic metals, organics, or pathogens will be released by the project.

(d) Aesthetics. Aesthetic quality will be reduced during that period when work is occurring. There will be a long term increase in aesthetic quality of the beach once the work is completed.

(3) Effects on Biota.

(a) Primary Productivity and Photosynthesis. The level of suspended particles will temporarily increase in the surf zone during construction. Suspended material will prevent light from reaching existing algae temporarily restricting photosynthesis and primary productivity in local areas. Potential secondary impacts of chronic turbidity and sedimentation will be assessed for the nearshore hardbottom communities during the post-construction monitoring.

(b) Suspension/Filter Feeders. Suspension feeders will experience short-term impacts during construction, but no long-term adverse impact.

(c) Sight Feeders. Visual feeders will experience short term impacts, but no long-term adverse impact.

(d) Contaminant Determinations. Deposited fill material will not introduce, relocate, or increase contaminants.

(e) Aquatic Ecosystem and Organism Determinations. The grain size characteristics and composition exhibited by the proposed fill material shall be similar to those of the existing beach sediments. Therefore, no sediment related impacts are expected. The proposed fill material meets the exclusion criteria, therefore, no additional chemical-biological testing will be required.

(1) Effects on Plankton. Although short term effects (e.g., clogging of feeding appendages) on plankton are likely, no adverse long term impacts to planktonic organisms are anticipated.

(2) Effects on Benthos. Adverse short term impacts to non-motile or motile benthic invertebrates are anticipated.

(3) Effects on Nekton. No adverse long-term impacts to nektonic species are anticipated.

(4) Effects on the Aquatic Food Web. No adverse long-term impacts to any trophic group in the food web are anticipated.

(5) Effects on Special Aquatic Sites.

(a) Coral Reefs. There are no coral reefs located within the placement areas.

(b) Sanctuaries and Refuges. There are no sanctuaries or wildlife refuges located within the proposed placement areas.

(c) Wetlands. There are no wetlands located within the proposed placement areas.

(d) Mud Flats. There are no mud flats located within the proposed placement areas.

(e) Vegetated Shallows. There are no seagrass beds located within or adjacent to the beach placement sites.

(6) Endangered and Threatened Species. There will be no significant impacts on any threatened or endangered species from the proposed project or to designated critical habitat for the loggerhead sea turtle. Sea turtle nesting may occur in the project area during the time that beach placement takes place. If construction occurs during the nesting season, a nest monitoring and relocation program will be implemented as required by the USFWS (2015 Statewide Programmatic Biological Opinion (SPBO) and State permit). In accordance with the SPBO, protection measures for nesting sea turtles, Piping Plover, Red Knot and gopher tortoises will be followed to minimize the potential for harm to these species.

(7) Other Wildlife. No significant adverse impacts to small foraging mammals, reptiles, wading birds, or wildlife in general are expected.

(8) Actions to Minimize Impacts. All practical safeguards will be taken during construction to preserve and enhance environmental, aesthetic, recreational, and economic values in the project area.

f. Proposed Disposal Site Determinations.

(1) Mixing Zone Determination. The fill material will not cause unacceptable changes in the mixing zone specified in the Water Quality Certification in relation to: depth, current velocity, direction and variability, degree of turbulence, stratification, or ambient concentrations of constituents.

(2) Determination of Compliance with Applicable Water Quality Standards. Because of the inert nature of the fill material, State water quality standards will not be violated. Turbidity monitoring will be implemented as stipulated by State permits.

(3) Potential Effects on Human Use Characteristics.

(a) Municipal and Private Water Supplies. No municipal or private water supplies will be impacted by the implementation of the project.

(b) Recreational and Commercial Fisheries. Recreational and commercial fisheries will not be permanently impacted by the placement of sand stockpiling material on the beach.

(c) Water Related Recreation. The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on recreational opportunities. Construction activity would temporarily disrupt recreation; however, Spessard Park would remain open and access to a portion of the beach would continue to be possible.

(d) Aesthetics. The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on aesthetics. The primary short term impact would be construction activity within the stockpiling area, which is located within Spessard Holland Park. There would be no primary long term impacts other than an insignificant amount of residual sand left within the stockpiling area.

(e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. The proposed activity is anticipated to maintain or improve beach recreation opportunities associated with these parks. There are no other national and historic monuments, national seashores, wilderness areas, research sites and similar preserves located within the project areas.

(f). Determination of Cumulative Effects on the Aquatic Ecosystem. As long as the characteristics (low proportion of fines) of fill material remain consistent with previous projects, there will be no significant cumulative impacts that result in a major impairment of water quality of the existing aquatic ecosystem as a result of placement of fill at the project site. No cumulative impacts to turtles, fish or wildlife have been documented.

(g). Determination of Secondary Effects on the Aquatic Ecosystem. No adverse secondary effects of the placement of the fill material are anticipated. Long-term monitoring will document potential secondary impacts of turbidity and sedimentation upon adjacent hardbottom habitats.

III. Findings of Compliance or Non-compliance with the Restrictions on Discharge.

a. No significant adaptations of the guidelines were made relative to this evaluation.

b. No practicable alternative exists which meets the study objectives that does not involve discharge of fill into waters of the State of Florida and/or United States.

c. After consideration of disposal site dilution and dispersion, the discharge of fill materials will not cause or contribute to, violations of any applicable State water quality standards for Class III waters. The discharge operation will not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.

d. The Mid-Reach Sand Stockpiling Project at Spessard Holland Park will not jeopardize the continued existence of any species listed as threatened or endangered or result in the likelihood of destruction or adverse modification of any critical habitat as specified by the Endangered Species Act of 1973, as amended.

e. The placement of fill material will not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. The life stages of aquatic species and other wildlife will not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values will not occur.
On the basis of the guidelines, the proposed placement site for the discharge of sand for stockpiling at Spessard Holland Park is specified as complying with the requirements of these guidelines.

APPENDIX B - COASTAL ZONE MANAGEMENT CONSISTENCY

FLORIDA COASTAL ZONE MANAGEMENT PROGRAM
FEDERAL CONSISTENCY EVALUATION PROCEDURES

PROPOSED USE OF A STOCKPILE AREA AS AN ADDITIONAL SOURCE OF SAND HURRICANE AND STORM DAMAGE REDUCTION PROJECT, MID-REACH SEGMENT
BREVARD COUNTY, FLORIDA

1. Chapter 161, Beach and Shore Preservation. The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes.

Response: The proposed plans and information have been submitted to the State in compliance with this chapter.

2. Chapters 186 and 187, State and Regional Planning. These chapters establish the State Comprehensive Plan which sets goals that articulate a strategic vision of the State's future. Its purpose is to define in a broad sense, goals, and policies that provide decision-makers directions for the future and provide long-range guidance for an orderly social, economic and physical growth.

Response: The proposed project has been coordinated with various Federal, State and local agencies during the planning process. The project meets the primary goal of the State Comprehensive Plan through preservation and protection of the shorefront development and infrastructure.

3. Chapter 252, Disaster Preparation, Response and Mitigation. This chapter creates a state emergency management agency, with the authority to provide for the common defense; to protect the public peace, health and safety; and to preserve the lives and property of the people of Florida.

Response: The proposed project involves the placement of beach compatible material onto an eroding beach as a protective means for residents, development, and infrastructure located along the Atlantic shoreline within Brevard County.

4. Chapter 253, State Lands. This chapter governs the management of submerged State lands and resources within State lands. This includes archeological and historical resources; water resources; fish and wildlife resources; beaches and dunes; submerged grass beds and other benthic communities; swamps, marshes and other wetlands; mineral resources; unique natural features; submerged lands; spoil islands; and artificial reefs.

Response: The proposed stockpiling of beach-compatible material at Spessard Holland Park will ensure beach-compatible sand for the Mid-Reach project which would create increased recreational beach and potential sea turtle nesting habitat. No seagrass beds; mineral resources; unique natural features; spoil islands; and artificial reefs are expected to occur within or adjacent to the areas proposed for stockpiling the material. The proposed project would comply with the intent of this chapter.

5. Chapters 253, 259, 260, and 375, Land Acquisition. This chapter authorizes the State to acquire land to protect environmentally sensitive areas.

Response: No land acquisition is proposed in this project.

6. Chapter 258, State Parks and Aquatic Preserves. This chapter authorizes the State to manage State parks and preserves. Consistency with this statute would include consideration of projects that would directly or indirectly adversely impact park property, natural resources, park programs, management or operations.

Response: There are no State parks or preserves that are expected to occur within or along the project area.

7. Chapter 267, Historic Preservation. This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities.

Response: No adverse effects to historic properties within the Area of Potential Effects are expected from construction of the proposed project based upon the results of cultural resource surveys, site investigations, and coordination with the Florida SHPO, and federally recognized Native American tribes. In the event that the proposed work results in the creation or expansion of upland quarries, then appropriate surveys for potential cultural resources shall be undertaken. Appropriate protective measures and, if necessary, mitigation shall be implemented.

8. Chapter 288, Economic Development and Tourism. This chapter directs the State to provide guidance and promotion of beneficial development through encouraging economic diversification and promoting tourism.

Response: The proposed stockpiling area would be used to temporarily store beach quality material. The material would be placed along the Mid-Reach Segment. This would be compatible with tourism for this area and therefore, is consistent with the goals of this chapter.

9. Chapters 334 and 339, Public Transportation. This chapter authorizes the planning and development of a safe balanced and efficient transportation system.

Response: No public transportation systems would be impacted by this project.

10. Chapter 370, Saltwater Living Resources. This chapter directs the State to preserve, manage and protect the marine, crustacean, shell and anadromous fishery resources in State waters; to protect and enhance the marine and estuarine environment; to regulate fishermen and vessels of the State engaged in the taking of such resources within or without State waters; to issue licenses for the taking and processing products of fisheries; to secure and maintain statistical records of the catch of each such species; and, to conduct scientific, economic, and other studies and research.

Response: The material (sediment) proposed for the stockpiling project is sand from Canaveral Shoals. Sand from Canaveral Shoals has demonstrated suitability for marine turtle nesting and hatching success. The placement of sand from Canaveral Shoals within the proposed stockpiling area would result in minor short term effects on water quality (i.e. temporary turbidity in nearshore waters). Turbidity would be monitored per State permit requirements.

11. Chapter 372, Living Land and Freshwater Resources. This chapter establishes the Game and Freshwater Fish Commission and directs it to manage freshwater aquatic life and wild animal life and their habitat to perpetuate a diversity of species with densities and distributions which provide sustained ecological, recreational, scientific, educational, aesthetic, and economic benefits.

Response: The project is expected to have no significant effect on freshwater aquatic life or wild animal life. In the event that the proposed work results in the creation or expansion of the stockpiling area, then appropriate surveys for freshwater resources (i.e. wetlands) shall be undertaken. Appropriate protective measures and, if necessary, mitigation shall be implemented.

12. Chapter 373, Water Resources. This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

Response: This project does not involve water resources as described by this chapter.

13. Chapter 376, Pollutant Spill Prevention and Control. This chapter regulates the transfer, storage, and transportation of pollutants and the cleanup of pollutant discharges.

Response: The contract specifications will prohibit the contractor from dumping oil, fuel, or hazardous wastes in the work area and will require that the contractor adopt safe and sanitary measures for the disposal of solid wastes. A spill prevention plan will be required.

14. Chapter 377, Oil and Gas Exploration and Production. This chapter authorizes the regulation of all phases of exploration, drilling, and production of oil, gas, and other petroleum products.

Response: This project does not involve the exploration, drilling or production of gas, oil or petroleum product and therefore, this chapter does not apply.

15. Chapter 380, Environmental Land and Water Management. This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development.

Response: The proposed renourishment project will not have any regional impact on resources in the area. Therefore, the project is consistent with the goals of this chapter.

16. Chapter 388, Arthropod Control. This chapter provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the State.

Response: The project will not further the propagation of mosquitoes or other pest arthropods.

17. Chapter 403, Environmental Control. This chapter authorizes the regulation of pollution of the air and waters of the State by the Florida Department of Environmental Regulation (now a part of the Florida Department of Environmental Protection).

Response: No lasting adverse effects on water quality, air quality, or other environmental resources will occur. Coordination with the Florida Department of Environmental Protection shall occur prior to construction. The project complies with the intent of this chapter.

18. Chapter 582, Soil and Water Conservation. This chapter establishes policy for the conservation of the State soil and water through the Department of Agriculture. Land use policies will be evaluated in terms of their tendency to cause or contribute to soil erosion or to conserve, develop, and utilize soil and water resources both onsite or in adjoining properties affected by the project. Particular attention will be given to projects on or near agricultural lands.

Response: The proposed project is not expected to occur near or on agricultural lands; therefore, this chapter does not apply.

APPENDIX C - PERTINENT PUBLIC CORRESPONDENCE AND AGENCY DOCUMENTS

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8916

OCT 22 2018

Planning and Policy Division
Environmental Branch

TO WHOM IT MAY CONCERN

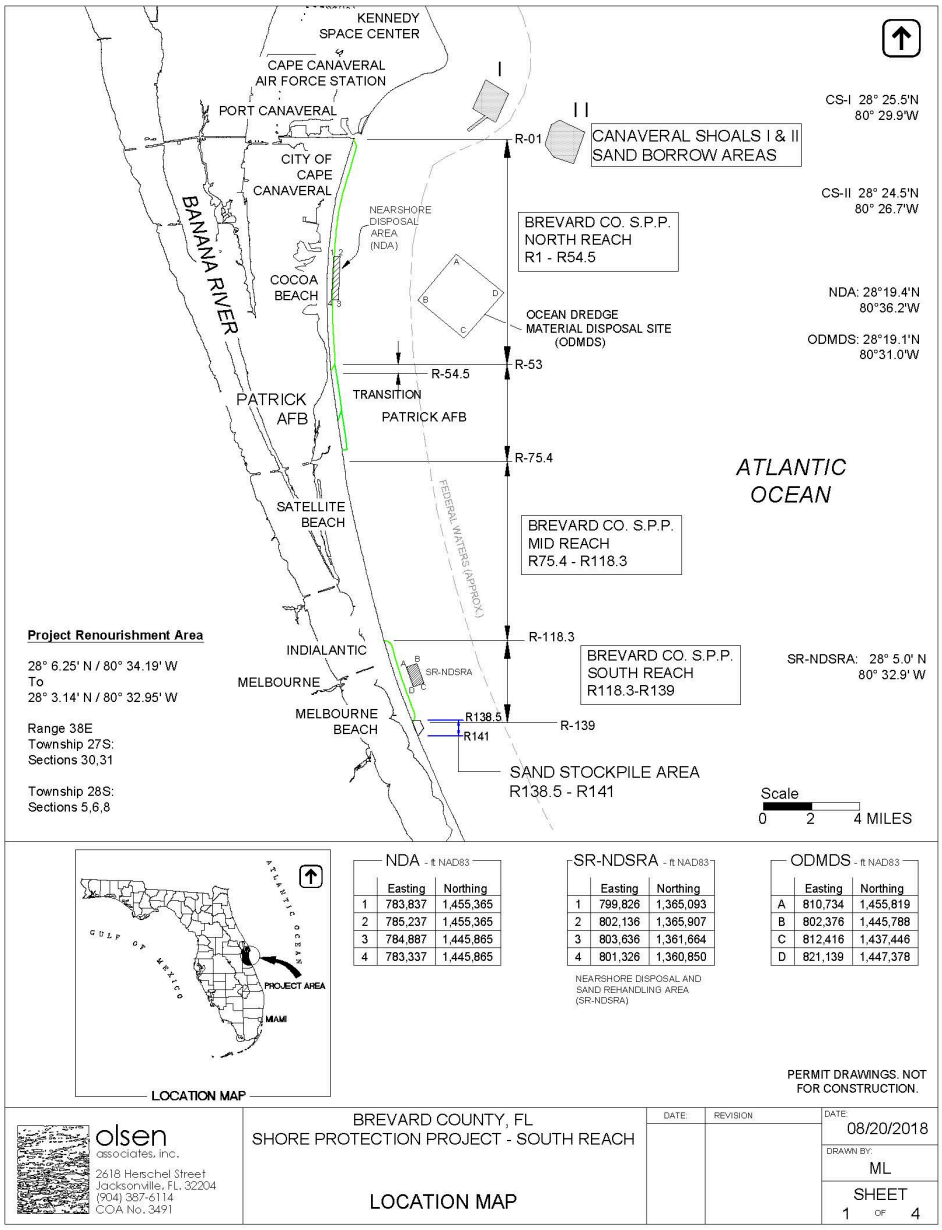
This scoping letter is being promulgated by the Jacksonville District U.S. Army Corps of Engineers (Corps) (lead agency) and the Bureau of Ocean Energy Management, Department of Interior, in compliance with public coordination requirements of the National Environmental Policy Act (NEPA). The purpose of this correspondence is to formally initiate the scoping process as defined by 40 CFR 1501.7 for a proposed sand stockpile site along Spessard Holland Beach Park, Brevard County, Florida (R-138.5 to R-141) (please see attached drawing).

The proposed action would construct a temporary stockpile of offshore-dredged sand between the two major areas of the park that are principally used for public access and recreation (i.e., Spessard Holland Park North and Spessard Holland Park South), and therefore, minimize the impacts to public beach access and use. Sand that is hydraulically placed by hopper dredge to the temporary beach stockpile would be subsequently transferred by truck-haul and placed along the congressionally-authorized Mid-Reach Segment of the Brevard County Hurricane and Storm Damage Reduction Project. Sand transfer between the temporary stockpile and the Mid-Reach would be via roadway. Sand placed to the stockpile would be dredged from the project's existing offshore borrow area, Canaveral Shoals II. After placement and transfer of the sand stockpile, a minor residual volume of sand would be left along the beach at the park. The proposed action may be utilized for initial construction and periodic renourishments of the Mid-Reach Segment. The purpose of the action is to reduce overall project costs and increase efficient use of dredge equipment mobilized to the project, reduce use of upland sand resources and associated impacts of overland truck-haul, and improve assurance of sand fill quality through use of historically proven sediment resources from the project's offshore borrow areas. This project is tentatively scheduled to begin in November 2019.

We welcome your views and comments on the proposed sand stockpile site. Your concerns will be appropriately considered and discussed in a supplemental NEPA assessment to update the 1996 Environmental Impact Statement, 2010 (revised April 2011) Supplemental Environmental Impact Statement, and 2016 Environmental Assessment prepared for this project. Please send your comments or inquiries to Ms. Wendy Dauberman at the letterhead address or via e-mail at wendy.s.dauberman-zerby@usace.army.mil within thirty (30) days of the date of this letter. Please let us also know if you do not want to receive future notifications on this project. If you do not notify us that you would like to be removed from future notices, you will remain on our mailing list.

Sincerely,

Gina Paduano Ralph, Ph.D.
Chief, Environmental Branch



LOCATION MAP

NDA - ft NAD83

	Easting	Northing
1	783,837	1,455,365
2	785,237	1,455,365
3	784,887	1,445,865
4	783,337	1,445,865

SR-NDSRA - ft NAD83

	Easting	Northing
1	799,826	1,365,093
2	802,136	1,365,907
3	803,636	1,361,664
4	801,326	1,360,850

NEARSHORE DISPOSAL AND SAND REHANDLING AREA (SR-NDSRA)

ODMDS - ft NAD83

	Easting	Northing
A	810,734	1,455,819
B	802,376	1,445,788
C	812,416	1,437,446
D	821,139	1,447,378

PERMIT DRAWINGS. NOT FOR CONSTRUCTION.

olsen associates, inc.
2618 Herschel Street
Jacksonville, FL 32204
(904) 387-6114
COA No. 3491

BREVARD COUNTY, FL
SHORE PROTECTION PROJECT - SOUTH REACH

LOCATION MAP

DATE: | REVISION

DATE: 08/20/2018
DRAWN BY: ML
SHEET 1 OF 4

-----Original Message-----
From: Higgins, Jamie [mailto:Higgins.Jamie@epa.gov]
Sent: Friday, November 16, 2018 1:06 PM

To: Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US) <Wendy.S.Dauberman-Zerby@usace.army.mil>
Cc: Higgins, Jamie <Higgins.Jamie@epa.gov>; Militscher, Chris <Militscher.Chris@epa.gov>
Subject: [Non-DoD Source] Spessard Holland Park NEPA Scoping Comments

Hi Wendy,

Below are EPA's Scoping for the Spessard Holland Park Temporary Sand Storage NEPA document.

US Environmental Protection Agency (EPA) Scoping Comments

for

Jacksonville District, U.S. Army Corps of Engineers (USACE)

Spessard Holland Park Temporary Sand Storage

National Environmental Policy Act (NEPA) Document

November 22, 2018

Background: On October 22, 2018, the U.S. Environmental Protection Agency (EPA) received a letter from the Jacksonville District, USACE as the 'lead Federal agency' and the Bureau of Ocean Energy Management (BOEM) announcing that the scoping process had been initiated for the Spessard Holland Park Sand Stockpiling NEPA document. The EPA understands that the USACE has not decided whether to prepare an Environmental Assessment or Environmental Impact Statement and will determine the level of NEPA later in the process. As stated in the USACE's letter, the purpose of the project is to construct a temporary stockpile of offshore-dredged sand between the two major areas of the park that are principally used for public access and recreation (Spessard Holland Park North and Spessard Holland Park South). Sand that is hydraulically placed by hopper dredge to the temporary beach stockpile would be subsequently transferred by truck-haul and placed along the congressionally-authorized Mid-Reach Segment of the Brevard County Hurricane and Storm Damage Reduction Project. The below

scoping comments are based on the very limited information provided in the USACE's October 22nd letter.

Recreation: The EPA recommends the USACE document any impacts to recreation (even temporary) related to beach closures due to the proposed sand storage area in the Draft NEPA document. Additionally, the EPA recommends the USACE document and disclose any impacts to the local community and economy due to potential beach closures.

Sand Transportation: It is EPA's understanding that the sand will be transported from the current borrow area to a temporary storage site at Spessard Holland Park. For NEPA disclosure, the EPA recommends the USACE discuss the expected route that the trucks will take. The EPA also recommends the USACE discuss the number of trucks, duration of truck-haul and time of day that the trucks will transport the sand to the storage location within the Draft NEPA document. The EPA also recommends the trucks avoid residential neighborhoods as much as possible.

Noise: As discussed above, the EPA recommends the USACE discuss any noise related impacts associated with the truck-haul transport of the sand to the temporary storage area within the draft NEPA document. The EPA also recommend that the routes of the truck-haul avoid residential neighborhoods and sensitive communities such as children and elderly communities.

Air Quality: As discussed above, the EPA recommends the USACE discuss any air quality (i.e., mobile source air toxics) related impacts associated with the truck-haul transport of the sand to the temporary storage area within the draft NEPA document. Additionally, the EPA recommends that the discussion include air quality impacts to sensitive communities such as the elderly and children. The EPA also recommends the USACE avoid transportation routes that are near these communities.

Environmental Justice (EJ): Also related to the previous comments, the EPA recommends the USACE disclose any impacts to EJ communities especially related to increases in truck traffic through low income, minority communities. An increase in truck traffic through EJ communities could increase health impacts associated with air quality (i.e., MSATs) and noise.

Wetlands: The EPA recommends the USACE disclose any impacts (if any) related to wetlands. The EPA recommends the USACE avoid and minimize impacts to wetlands and mitigate wetland impacts according to Clean Water Act Section 404(b)(1) Guidelines and related regulations.

Please contact me at the contact info below should you have questions.

Thanks,

Jamie

Jamie Higgins

National Environmental Policy Act (NEPA) Program Office

Resource Conservation Restoration Division

Region 4, Environmental Protection Agency

61 Forsyth Street, SW

Atlanta, GA 30303

404-562-9681

-----Original Message-----
From: Pace Wilber - NOAA Federal [mailto:pace.wilber@noaa.gov]
Sent: Wednesday, November 21, 2018 12:21 PM
To: Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US) <Wendy.S.Dauberman-Zerby@usace.army.mil>
Subject: [Non-DoD Source] NMFS scoping comments for the Brevard County CSRM Mid-Reach Segment

Hello Wendy.

NOAA’s National Marine Fisheries Service (NMFS) reviewed the notice dated October 22, 2018, requesting general comments on the proposed construction of a temporary stockpile of offshore-dredged sand landward of the MHWL between FDEP Monuments R-138.5 and R-141. Sand that is hydraulically placed by hopper dredge to the temporary beach stockpile would be subsequently transferred by truck and placed

along the Congressionally-authorized Mid-Reach Segment of the Brevard County Hurricane and Storm Damage Reduction Project. The source of the sand would be a borrow area designated in various permitting and NEPA documents as Canaveral Shoals II. The NMFS understands the supplemental NEPA document the District and BOEM are preparing is limited to the creation and use of the stockpile and will reevaluate neither the dredging of Canaveral Shoals II nor the placing of sand within the Mid-Reach Segment.

Given this limited focus, the NMFS recommends the supplemental NEPA assessment examine the potential for sand leakage during transfer to the stockpile (including dewatering), whether that leakage could affect hardbottom habitat, and measures the Jacksonville District will take to prevent sand leakage. The NMFS also recommends the supplemental NEPA assessment discuss measures to manage the stockpile while it is in place and during loading of the dump trucks.

Thank you for the opportunity to provide comments. Please direct related correspondence to me at 219 Ft Johnson Road, Charleston, South Carolina, 29412. I also may be reached by telephone at 843-469-9926. or by e-mail at Pace.Wilber@noaa.gov <mailto:Pace.Wilber@noaa.gov>

--

Pace Wilber, Ph.D.
HCD Atlantic Branch Supervisor
NOAA Fisheries Service
219 Ft Johnson Road
Charleston, SC 29412

843-460-9926 <----Office Number
843-568-4184 <----Office Cell Number
Pace.Wilber@noaa.gov <mailto:Pace.Wilber@noaa.gov>

-----Original Message-----
From: Chris Chinault [mailto:cchinault@indialantic.com]
Sent: Wednesday, October 24, 2018 12:31 PM
To: Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US) <Wendy.S.Dauberman-Zerby@usace.army.mil>
Subject: [Non-DoD Source] Shore Protection Project--South Reach

I am in receipt of the Corps plan to permit the trucking of sand from the mid-reach to Spessard Holland Park. Since the trucking will be along SR-A1A (I assume) and that is right through the Town of Indialantic, can you please advise as to the plan for hauling—i.e. number of trucks per day that will travel from the mid-reach to Spessard Holland, the times of day that the trucks will be travelling north and/or south along SR-A1A, the days of the week that the trucks

will be hauling on SR-A1A, and the length of time that trucking will occur (recognizing that the project is expected to start in November 2019). Christopher W. Chinault, Town Manager, Town of Indialantic.

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

District Engineer
Cocoa, USACE
400 High Point Drive, Suite 600
Cocoa, Florida 32926

November 21, 2018

RE: DHR Project File No.: 2018-5486 Received by DHR: October 26, 2018
Project Name: *Spessard Holland Beach Park*
County: Brevard

To Whom It May Concern:

The Florida State Historic Preservation Officer reviewed the referenced project for possible effects on historic properties listed, or eligible for listing, on the *National Register of Historic Places*. The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties*.

It is the opinion of this office that the proposed project is unlikely to affect historic properties. However, unexpected finds may occur during ground disturbing activities, and we request that the permit, if issued, should include the following special condition regarding inadvertent discoveries:

- If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, *Florida Statutes*.

If you have any questions, please contact Rachel Thompson, Historic Preservationist, by email at *Rachel.Thompson@dos.myflorida.com*, or by telephone at 850.245.6453 or 800.847.7278.

Sincerely,

For
Timothy A Parsons, Ph.D.
Director, Division of Historical Resources
& State Historic Preservation Officer

Division of Historical Resources
R.A. Gray Building • 500 South Bronough Street• Tallahassee, Florida 32399
850.245.6300 • 850.245.6436 (Fax) FLHeritage.com

TOWN OF INDIALANTIC
216 Fifth Avenue, Indialantic, Florida 32903
321-729-2242 Fax 321-984-3867

November 16, 2018

Ms. Wendy Dauberman
Department of the Army
Corps of Engineers, Jacksonville District
701 San Marco Boulevard
Jacksonville, FL 32207-8915

Dear Ms. Dauberman:

We appreciate being made aware of plans to stockpile offshore-dredged sand between the two major areas of Spessard Holland North Park and Spessard Holland South Park. The Town supports the efforts of the Corps to help replenish beach sand to protect that property which lies to the east of SR-A1A.

The Town offers no comments regarding the location at which offshore-dredged sand will be stockpiled. However, the Town does raise a concern with regard to the amount of truck traffic and the frequency of that truck traffic as those trucks travel on SR-A1A south of US-192/SR-500. This portion of SR-A1A within the Town of Indialantic is primarily a residential area. Bordering on both sides of this State highway are condominiums, townhomes, and single-family residential structures.

We request that you minimize the truck traffic and what traffic that does exist is limited to daylight hours.

Very truly,

Christopher W. Chinault
Town Manager

Natural Resources Management Department
2725 Judge Fran Jamieson Way
Building A, Room 219
Viera, Florida 32940

BOARD OF COUNTY COMMISSIONERS

TO: Wendy Dauberman, Biologist
U.S. Army Corps of Engineers
Planning Division, Environmental Branch
701 San Marco Blvd.
Jacksonville, FL 33207

DATE: January 14, 2019

SUBJECT: Proposed Beach Stockpile for Mid-Reach Storm Damage Reduction Project

Dear Ms. Dauberman,

I would like to affirm that Brevard County is wholly supportive of the Corps' proposal to create a stockpile of sand along the less developed areas of Spessard Holland Park (approx. R138.5 to R141) for transfer to the Mid Reach shoreline. The County has previously authorized placement of dredge sand within Spessard Holland Park as part of the South Reach shore protection project and also placed upland sand in the southern area of Spessard Holland Park for emergency dune restoration projects. Placement of sand in this area, including the stockpiled sand and that residual volume left at the park after stockpile relocation, will provide public benefit. The proposed action will reduce overall project costs and increase efficient use of dredge equipment mobilized to the project, reduce use of upland sand resources and associated impacts of overland truck-haul, and improve assurance of sand fill quality through use of historically proven sediment resources from the project's offshore borrow areas.

The shoreline park land where the stockpile is proposed is entirely owned by Brevard County. State approval for placement of sand on submerged land is expected through a modification to our South Reach Joint Coastal Permit (JCP). A permit modification request for this work has been submitted to the State. Based on our experience placing sand on this shoreline, we expect the JCP modification request for the stockpile work to be supported by the State.

Thank you for considering this innovative plan to reduce project costs and infuse additional offshore sand into the Brevard coastal system.

Regards,

Mike McGarry
Program Manager
Beaches, Boating & Waterways
Brevard County

Main Line (321) 633-2016 • Stormwater/Illicit Discharge Hotline (321) 633-2011
Fax (321) 633-2029 • Website: Brevard fl.gov/NaturalResources

Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US)

From: Pace Wilber - NOAA Federal <pace.wilber@noaa.gov>
Sent: Friday, March 29, 2019 2:01 PM
To: Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] NMFS no objection for Proposed Sand Stockpile Area, Brevard County Shore Protection Project Mid-Reach Segment

Hello Wendy.

NOAA's National Marine Fisheries Service (NMFS) reviewed the Supplemental EA for the proposed sand stockpile area the Jacksonville District would use for the Brevard County Shore Protection Project Mid-Reach Segment. Based on the information in the Supplemental EA, the proposed stockpile area would occur in the vicinity of essential fish habitat (EFH) designated by the South Atlantic Fishery Management Council, Mid-Atlantic Fishery Management Council, or the NMFS. The NMFS anticipates any adverse effects occurring from using the stockpile area to NOAA trust resources would be minimal. Consequently, the NMFS offers no EFH conservation recommendations pursuant to the Magnuson-Stevens Fishery Conservation and Management Act and no recommendations under the Fish and Wildlife Coordination Act. Please let me know if additional information from the NMFS is needed or if the District's plan for using the stockpile changes and the District concludes those changes may affect EFH.

Thanks,
Pace

--

Pace Wilber, Ph.D.
HCD Atlantic Branch Supervisor
NOAA Fisheries Service
219 Ft Johnson Road
Charleston, SC 29412

843-460-9926 <----Office Number
843-568-4184 <----Office Cell Number
Pace.Wilber@noaa.gov <mailto:Pace.Wilber@noaa.gov>

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

May 9, 2019

Brevard County
c/o Mike McGarry
2725 Judge Fran Jamieson Way
Building A
Viera, Florida 32940

c/o

Kevin R. Bodge, Ph.D., P.E.
Olsen Associates, Inc.
4438 Herschel Street
Jacksonville, Florida 32210

Permit Modification No. 0137212-017-JN
Permit No. 0137212-016-JC, Brevard County
Brevard County Shore Protection Project; South Reach

Your request to modify Permit No. 0137212-016-JC was received on February 14, 2019 and has been reviewed by Florida Department of Environmental Protection (Department) staff. The proposed permit modification is to authorize construction of a temporary sand stockpile at the southern end of the project area and to revise the turbidity sampling protocol.

Background

On June 12, 2017, the Department issued Permit No. **0137212-016-JC** to Brevard County to authorize periodic nourishment of the beach and dune along approximately 3.8 miles of shoreline in Brevard County, between Department range monuments R-118.3 and R-139, using beach-compatible material dredged from two offshore borrow areas (Canaveral Shoals I and II). This permit renewed a beach nourishment project previously authorized under Permit No. 0137212-005-JC. The renewed permit featured a beach fill template with a construction berm elevation of +8.7 feet NAVD88 and a variable berm width up to 80 feet, with a 1V:35H foreslope from the berm crest to +6.7 feet NAVD88 and a 1V:15H slope seaward thereof to the intersection with the existing seabed.

For additional background, please see the ***CONSOLIDATED NOTICE OF INTENT TO ISSUE JOINT COASTAL PERMIT AND AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS*** for Permit No. 0137212-005-JC at the following website:

ftp://ftp.dep.state.fl.us/pub/ENV-PRMT/brevard/issued/0137212_Brevard_County_Shore_Protection_Project/005-JC/Intent/

Justification and Staff Assessment

Sand Stockpile Construction

The Brevard County Shore Protection Project is separated into 3 distinct permits based on reaches: North Reach, Mid Reach and South Reach. According to an analysis by the Army Corps of Engineers (Corps), relocating the authorized, but never constructed, stockpile from the Mid Reach segment to the South Reach segment would provide a more cost-effective and efficient means of storing and hauling materials for nourishment of both segments. On March 13, 2019, the Department issued a modification to the Brevard County Mid Reach Restoration Project, DEP File No. 0254479-001-JC, to remove the authorized sand stockpile from the southern end of that project area. This is the associated modification of the South Reach permit to formally authorize this stockpile relocation.

No changes to the Sediment QA/QC plan or construction schedule are proposed for this modification, and there are no nearshore hardbottom resources located along or near the proposed stockpile location. The Department finds that the relocation of the sand stockpile from the Mid Reach segment to the South Reach segment is therefore not anticipated to increase the potential for project-related impacts to nearshore hardbottom resources. The permit will therefore be modified to authorize construction of the sand stockpile at the southern end of the South Reach project area.

Turbidity Monitoring Revisions

Permit number 0137212-016-JC requires that compliance turbidity samples taken at the Beach Nourishment site be taken within 50 meters of the shoreline when a visible turbidity plume is not present. The 50-meter limit presents a potential safety hazard for turbidity monitors, as the distance is too far and too deep for access via wading, and too close to shore for safe boat operation. Removing the 50-meter limit for turbidity sampling at the Beach site when plumes are absent would provide a safe distance for boat operation and would be consistent with the uniform 150-meter mixing zone authorized for all other compliance turbidity samples in the permit.

Department staff have reviewed the modification request and have determined that the 50-meter limit for compliance turbidity samples at the beach site is more restrictive than the more commonly-used 150-meter allowance for beach placement projects. Increasing the offshore limit to 150 meters for compliance turbidity samples at the beach site will provide a safer operating environment for sampling personnel and is not anticipated to increase the potential for project-related impacts to nearshore hardbottom resources. Specific Condition 30 will be modified accordingly.

Fish and Wildlife Monitoring Qualifications
Following recommendations from the Florida Fish and Wildlife Conservation Commission (FWC), the Department also took the opportunity to update Specific Condition 4 with recent FWC guidelines for fish and wildlife monitoring qualifications.

North Reach Nearshore Disposal and Sand Rehandling Area
The Department also took the opportunity to update Specific Condition 29 to clarify the quality assurance and placement protocols for dredged material and to authorize usage of the North Reach Nearshore Disposal Sand Rehandling Area.

The project description shall be revised as follows (~~strikethroughs~~ are deletions, underlines are additions):

> This permit authorizes periodic beach and dune nourishment along approximately 3.8 miles of the Atlantic Ocean shoreline in Brevard County, between Department reference monuments R-118.3 and R-141 ~~R-139~~ using two borrow sources, Canaveral Shoals I and II. Each nourishment event will involve placement of approximately 750,000 cubic yards of dredged, breach-compatible material onto beach locations within the permitted template.
>
> The dune feature will have a minimum construction crest elevation of +12 feet NAVD'88 and a landward slope of approximately 1 vertical (V): 2 horizontal (H) terminating at the landward limit of vegetation. The dune feature will slope seaward from approximately 1V: 1.5H to 1V:4H to the existing beach berm elevation of +8.7 feet NAVD'88. The upper flat portion of the beach berm, constructed at a maximum elevation of +8.7 feet NAVD'88, will have a variable length of up to approximately 80 feet. Seaward thereof, the construction berm will slope seaward at approximately 1V:35H to and elevation of +6.7 feet, thence sloping at approximately 1V:15H to the intersection with the existing seabed.
>
> The project also includes the construction of a temporary sand stockpile seaward of the existing dune vegetation line, with a crest elevation of up to approximately +20 ft NAVD (plus nominal vertical tolerance) and a width of approximately 77-ft. The residual beach profile sand fill, after placement and transfer of the sand stockpile, shall be a berm of elevation +6.7 ft NAVD, sloping seaward at 1V:40H to elevation +5.2 ft NAVD at the seaward toe of the sand stockpile, thence sloping seaward at 1V:12H to intersection with the ambient seabed, with nominal vertical tolerances for construction allowance assumed throughout.
>
> The authorized activity also includes use of the 2,450 by 4,500 foot South Reach Nearshore Disposal and Sand Rehandling Area (SR-NDSRA) and the approximately 3,400 by 10,000 foot North Reach Nearshore Disposal and Sand Rehandling Area (NR-NDSRA). The SR-NDSRA and NR-NDSRA may be used to stockpile beach compatible material dredged from the authorized borrow areas, which would then be subsequently

dredged and placed onto the beach. Material dredged from either borrow area that does not meet the standards for beach compatibility, as described by the attached Sediment QA/QC plan, will be deposited into the Canaveral Ocean Dredged Material Disposal Site (ODMDS).

The Activity Location shall be revised as follows (~~strikethroughs~~ are deletions, underlines are additions):

The project is located in Brevard County, Sections 25, 30, and 31, Township 27 South, Range 38 East; Sections 5, 6, 7, and 8 Township 28 South, Range 38 East; within the Atlantic Ocean, Class III Waters. The temporary sand stockpile will be constructed along 2,090 feet of shoreline at the south end of the project area, between R-138.5 and R-140.8, with residual (post-stockpile) beach fill extending another 214 feet to R-141. Canaveral Shoals Borrow Areas I and II are located approximately 1.6 miles east-southeast and 4.5 miles east-southeast of Cape Canaveral, respectively. Canaveral Shoals Borrow Area II is in federal waters. The SR-NDSRA is centrally located along the project area between R-126 and R-130.5, approximately 2,900 ft. from the shoreline, between the -38 ft. and -48 ft. NAVD'88 contours. The ODMDS is located approximately 5.6 miles offshore within Federal Waters, east of Cocoa Beach.

The specific conditions shall be revised as follows (~~strikethroughs~~ are deletions, underlines are additions):

4. No work shall be conducted under this permit until the Permittee has received a written notice to proceed from the Department for each event. At least 30 days prior to the requested date of issuance of the notice to proceed, the Permittee shall submit a written request for a Notice to Proceed along with the following items for review and approval by the Department:

   a. An electronic copy of detailed ***final construction plans and specifications*** for all authorized activities. The plans and specifications must be consistent with the project description of this permit and the attached permit drawings, and shall also be certified by a professional engineer (P.E.), who is registered in the State of Florida. The Permittee shall point out any deviations from the Project Description of this permit (as stated above) or the approved permit drawings (attached to this permit), and any significant changes would require a permit modification. The plans and specifications shall include a description of the dredging and construction methods to be utilized and drawings and surveys that show all biological resources and work spaces (e.g., anchoring areas, pipeline corridors, staging areas, boat access corridors, etc.) to be used for this project.

   b. ***Turbidity monitoring qualifications***: In order to assure that turbidity levels do not exceed the compliance standards established in this permit, construction at the project site shall be monitored closely by an independent third party with formal

training in water quality monitoring and professional experience in turbidity monitoring for coastal construction projects. Also, an individual familiar with beach construction techniques and turbidity monitoring shall be present at all times when fill material is discharged on the beach. This individual shall have authority to alter construction techniques or shut down the dredging or beach construction operations if turbidity levels exceed the compliance standards established in this permit. The names and qualifications of those individuals performing these functions, along with 24-hour contact information, shall be submitted for approval;

c. A ***Scope of Work*** for the turbidity monitoring to ensure that the right equipment is available to conduct the monitoring correctly at any location, and under any condition;

d. The terms, conditions and provisions of the required Public Easement (Instrument No. 30166, BOT File No. 050219523) for the Canaveral Shoals I borrow area shall be met. The Notice to Proceed shall not be issued and construction of this activity engaging the Public Easement areas shall not commence on sovereign submerged lands, title to which is held by the Board of Trustees, until all easement documents have been executed to the satisfaction of the Department.

e. Documentation from the U.S. Fish and Wildlife Service (FWS) that this work will be covered under a Statewide Programmatic **Biological Opinion** or a Biological Opinions (BO) issued for construction on this project site. If the BO contains conditions that are not already contained herein, the permit shall be modified to include those additional conditions.

f. Fish & Wildlife Monitoring Qualifications: To ensure that individuals conducting monitoring of fish and wildlife resources have appropriate qualifications, the Permittee shall provide documentation demonstrating expertise/experience in surveying the types of resources that are present in the project. The Department and the Florida Fish and Wildlife Conservation Commission (FWC) will review this information for confirmation that the monitors are capable of meeting the requirements in Specific Conditions 14.b. This documentation shall include the following:

   i. *Marine Turtle Protection:* A list of the names and FWC permit numbers for the Marine Turtle Permit Holders.

   ii. *Shorebird Protection:* A list of Bird Monitors with their contact information, summary of qualifications including bird identification skills, and avian survey experience, proposed locations of shorebird survey routes, and the locations of travel routes.

g. Documentation that the ***Erosion Control Line*** extension has been executed and

recorded in the County Records

29. The disposal location of dredged material from the access lane of Canaveral Shoals Borrow Area I shall be determined by the depth of cut. Beach quality material (defined in Rule 62B-41.007(2)(j), F.A.C.) dredged from above -25.0 ft. NAVD'88 may be placed directly within the Beach Fill Area. Material dredged from between elevations -25.0 ft and -30.3 ft. containing less than 5% fines may be placed directly within the Beach Fill Area. Material dredged from between elevations -25.0 and -30.3 ft containing less than 20% fines shall be placed within the NR-NDSRA or alternatively within the SR-NDSRA. Material dredged from between elevations -25.0 ft and -30.3 ft. containing greater than 20% fines shall be placed in the Canaveral Ocean Dredged Material Disposal Site (ODMDS). During construction, an on-site inspector with training in the determination of sediment characteristics will evaluate the suitability of dredged material with less than 20% fines for beach placement, nearshore disposal, and/or ~~vs.~~ ocean disposal.

30. Water Quality- Turbidity shall be monitored as follows:

Units: Nephelometric Turbidity Units (NTUs)
Dredging at Canaveral Shoals I Borrow Site and/or the SR-NDSRA:

Frequency: Every 6 hours, or, if a hopper dredge is used then approximately midway through each fill cycle while the dredge is actively dewatering or discharging overflow, during daylight hours only.

Background: 300 meters from the dredge in the opposite direction of the prevailing current flow. Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom, clearly outside the influence of any artificially generated turbidity plume.

Compliance: Samples shall be collected no more than 150 meters downcurrent from the dredge, in the densest portion of any visible turbidity plume. Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom.

Beach Nourishment Site:

Frequency: Once every 6 hours during a beach disposal operation, during daylight hours only.

Background: At least 300 meters up-current from the point where discharge water is re-entering waters of the State (discharge point), clearly outside of the influence of any turbid plume, during daylight hours only. Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom, clearly outside the influence of any artificially generated turbidity plume. Samples shall be collected at the same distance offshore as the compliance station.

Compliance: Samples shall be collected no more than 150 meters downcurrent from the discharge point within the densest portion of any visible turbidity plume caused by the construction activities. ~~If a plume is not visible, the samples shall be collected 50 m from the shoreline.~~ Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom. *Note: If the plume flows parallel to the shoreline, the densest portion of the plume may be close to shore, in shallow water. In that case, it may be necessary to access the sampling location from the shore, in water that is too shallow for a boat. See Diagram 1.*

Disposal at the NDSRA:

Frequency: Approximately every 6 hours between 15 and 30 minutes after disposal of a barge load of material during daylight hours only.

Background: 300 meters from the disposal barge in the opposite direction of the prevailing current flow, clearly outside the influence of any turbid plume. Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom.

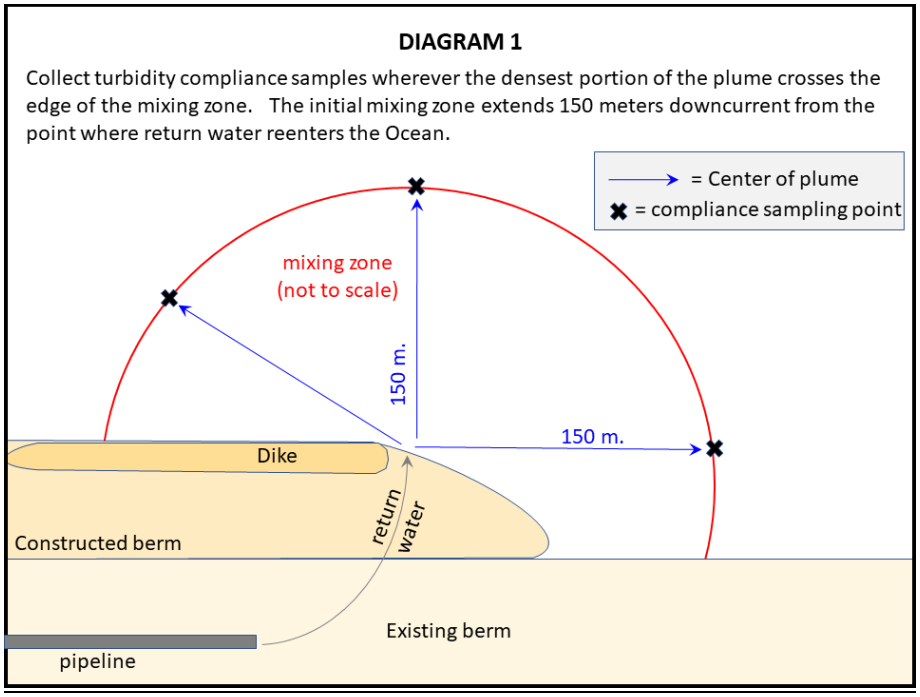
Compliance: No more than 150 meters downcurrent from the barge, in the densest portion of any visible turbidity plume. Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom.

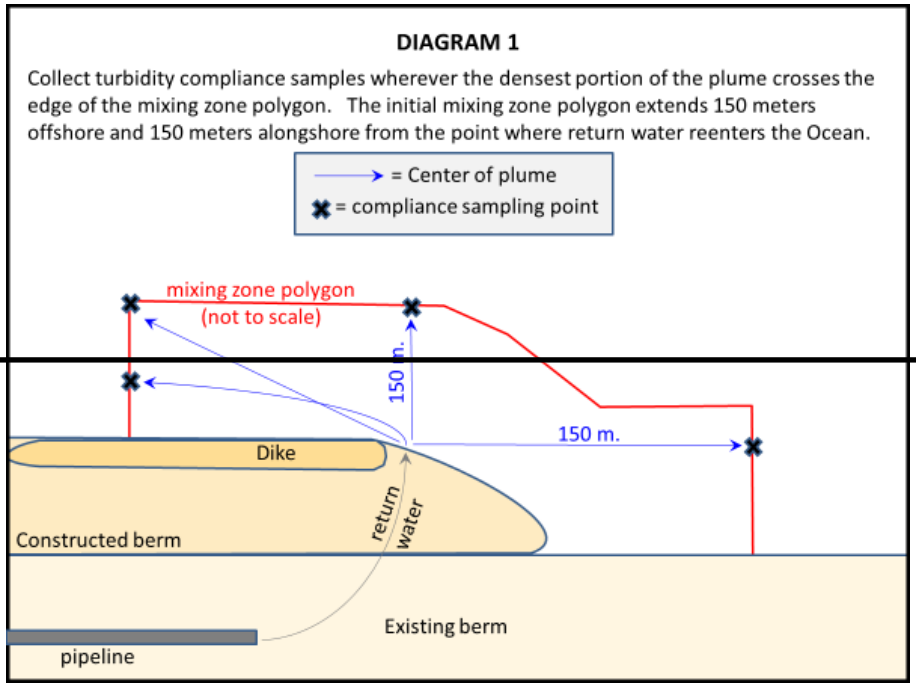
Nearshore Placement Site, using Rainbow Discharge (i.e., Surface Spray):

Frequency: At least two (2) times for each discharge episode, starting approximately 10 to 20 minutes after rainbow discharge begins (once the turbidity plume reaches the edge of the mixing zone), and again every 20 minutes until discharge has ceased, plus at least one measurement AFTER rainbow discharge has ceased.

Background: At least 300 meters from the disposal barge or hopper dredge in the opposite direction of the prevailing current flow, clearly outside the influence of any turbid plume. Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom.

Compliance: No more than 150 meters downcurrent from the barge or hopper dredge, in the densest portion of any visible turbidity plume. Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom.





Calibration: The instruments used to measure turbidity shall be fully calibrated with primary standards within one month of the commencement of the project, and at least once a month throughout the project. Calibration with secondary standards shall be verified each morning prior to use, after each time the instrument is turned on, and after field sampling using two secondary turbidity "standards" that that bracket the anticipated turbidity samples. If the post-sampling calibration value deviates more than 8% from the

previous calibration value, results shall be reported as estimated and a description of the problem shall be included in the field notes.

Analysis of turbidity samples shall be performed in compliance with DEP-SOP-001/01 FT 1600 Field Measurement of Turbidity: http://publicfiles.dep.state.fl.us/dear/sas/sopdoc/2008sops/ft1600.pdf

If the turbidity monitoring protocol specified above prevents the collection of accurate data, the person in charge of the turbidity monitoring shall contact the JCP Compliance Officer to establish a more appropriate protocol. Once approved in writing by the Department, the new protocol shall be implemented through an administrative permit modification.

The set of approved permit drawings shall be revised as follows:

Sheets 1 and 2 of the Approved Permit Drawings (November 1, 2016) shall be replaced by Sheets 1 and 2 of the Revised Permit Drawings (Approved March 15, 2019).

Sheets 3 and 4 of the Revised Permit Drawings (Approved March 15, 2019) shall be added to the permit.

After thorough review of your application, staff finds that the proposed modification is not expected to adversely affect water quality or be contrary to the public interest. Staff has also determined that the proposed alteration does not increase the potential for adverse impact on the coastal system, public beach access seaward of the mean high water line or nesting marine turtles and hatchlings and their habitat, and that the proposed alteration does not reduce the design adequacy of the project. Since the proposed modification is not expected to result in any adverse environmental impact or water quality degradation, the **permit is hereby modified** as stated above. By copy of this letter and the attached drawings, we are notifying all necessary parties of the modification.

This letter of approval does not alter the **June 12, 2032** expiration date of the permit. The only Specific Conditions of the permit that are altered by this modification are those stated above. This letter and the attached drawings must be attached to the original permit.

This permit is hereby modified unless a sufficient petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, Florida Statutes (F.S.), as provided below. The procedures for petitioning for a hearing are set forth below. Mediation under Section 120.573, F.S., is not available for this proceeding.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition
In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time
Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000 before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation
Mediation is not available in this proceeding.

Judicial Review
Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

If you have any questions regarding this matter, please contact Zach Boudreau by email at William.Boudreau@FloridaDEP.gov or by telephone at (850) 245-7585.

EXECUTION AND CLERKING:

Executed in Tallahassee, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

_____
Gregory W. Garis
Program Administrator
Beaches, Inlets and Ports Program
Division of Water Resource Management

Attachments:
Sediment QA/QC Plan (Approved March 2019)
Revised Permit Drawings (Approved March 2019)

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this permit and all attachments were sent on the filing date below to the following listed persons:

cc:	Ivana Kenny-Carmola, DWRM	Vladimir Kosmynin, DWRM
	Jennifer Steele, DWRM	Zachary Westfall, DWRM
	Bob Brantly, DWRM	Denise Rach, FWC
	Peter Bacopoulos, DWRM	Mary Duncan, FWC
	Brendan Biggs, DWRM	Roxane Dow, DWRM
	Jennifer Peterson, DWRM	JCP Compliance

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

_____ _____
Clerk **Date**

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

March 13, 2019

Brevard County
c/o Mike McGarry
2725 Judge Fran Jamieson Way
Building A
Viera, Florida 32940

and

Kevin R. Bodge, Ph.D., P.E.
Olsen Associates, Inc.
4438 Herschel Street
Jacksonville, Florida 32210

Permit Modification No. 0254479-005-JN
Permit No. 0254479-001-JC, Brevard County
Mid-Reach Beach Restoration Project

Your request to modify Permit No. 0254479-001-JC was received on December 5, 2018 and has been reviewed by Florida Department of Environmental Protection (Department) staff. The proposed permit modification is to remove the proposed sand stockpile at the southern end of the project area, remove the requirements for stormwater outfall improvements, and to revise the permit description, permit drawings, fill template and Specific Conditions to align the permit with the Brevard County Federal Shore Protection Project.

Background

On December 30, 2009, the Department issued Permit No. **0254479-001-JC** to Brevard County authorizing the placement of approximately 900,000 cubic yards of beach-quality material from two borrow areas (Canaveral Shoals I and II) along 7.6 miles of shoreline in Brevard County. The project was expected to impact approximately 2.95 acres of nearshore hardbottom habitat. As mitigation for these impacts, the permit required construction of 4.8 acres of articulated reef.

For additional background, please see the ***CONSOLIDATED NOTICE OF INTENT TO ISSUE JOINT COASTAL PERMIT AND AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS*** for Permit No. 0254479-001-JC at the following website:

ftp://ftp.dep.state.fl.us/pub/ENV-PRMT/brevard/issued/0254479_Brevard_Mid-Reach_Beach_Restoration/001-JC/Intent/Intent%20(12-22-08).pdf

On December 13, 2010, the Department issued Permit Modification No. **0254479-002-JN**, to authorize additional improvements to the stormwater outfall systems that discharge onto the beach at Conova Beach Park and Howard E. Futch Memorial Park. This work represented continued implementation of the *Summary of Brevard County Beach Outfalls: Existing Conditions and Proposed Plan of Improvements*, otherwise known as the "Outfall Plan".

On August 4, 2014, the Department granted a statutory time extension under the provisions of Section 46 of Chapter 2014-218 Laws of Florida (House Bill 7023). The extension was filed as Permit Modification No. **0254479-003-JN** and extended the permit expiration date to December 30, 2016.

On July 14, 2016, the Department issued Permit Modification No. **0254479-004-JN** to extend the permit duration to 15 years, as afforded by Rule 62B-49.011(1)(a), F.A.C. This modification extended the expiration date to December 30, 2024.

Justification and Staff Assessment

Since issuance of Permit No. 0254479-001-JC, the Army Corps of Engineers (Corps) formulated the Mid-Reach Segment of the Brevard County Federal Shore Protection Project. This federal project conformed with the nearshore rock impacts, and nearshore reef mitigation requirements of Permit No. 0254479-001-JC, but included an alternate off-beach stockpile location and a more uniform, modest-scale beach fill template. This modification will align Permit No. 0254479-001-JC with the Federal Project.

Southern Stockpile Removal
Permit No. 0254479-001-JC authorized a temporary stockpile of dredged material at the southern end of the project, between R-111 and R-118.3(in the area known as Mid-Reach). This material was to be used for subsequent nourishment, via truck haul, of the northern 6.4 miles of the project shoreline between R-75.4 and R-110. As of the date of this modification application, no construction events have taken place under this permit (No. 0254479-001-JC) and both the Permittee and the CORPs have identified logistical issues with the on-beach stockpile. In order to provide a more cost-effective and efficient means of storing and hauling materials for nourishment of both the Mid and South Reach Segments, the Permittee proposes to relocate the stockpile to the southern end of the South Reach Segment (under separate authorization).

The Department finds that the deletion of the stockpile in Permit 0254479-001-JC is not anticipated to increase the potential for project-related impacts to nearshore hardbottom resources. Consequently, the permit description has been modified accordingly.

Note: Authorization of a stockpile location on the southern end of the South Reach segment will require modification of permit No. 0137212-016-JC. The application for Modification No. 0137212-017-JN is currently under review.

Fill Template Revision
In order to ensure that current or future beach fill activity does not exceed the already-permitted potential acreage impacts to nearshore rock resources, the Permittee has reduced and spatially defined the maximum seaward extent of the template for nourishment of the Mid Reach shoreline. The revised template is designed to minimize the potential for impacts to the nearshore hardbottom resources along the low-tide shoreline of the project area, and is intended to approximately replicate the average existing, maximum natural beach profile width observed over the previous ten years, with a limited allowance for advance beach nourishment. Because the proposed revisions to the fill template were specifically designed to minimize the impact area of this project, the Department does not anticipate any additional impacts to hardbottom resources and the permit description has been modified accordingly.

Sediment Sources
Permit No. 0254479-001-JC also authorized the use of supplementary sand from approved upland sand sources by reference in the Sediment QA/QC plan (approved May 15, 2008), but the Project Description did not reference these upland sources. The Project Description will therefore be revised for clarity. Additionally, the Sediment QA/QC plan shall be updated to a more recent format.

Removal of Stormwater Outfall Improvement Requirements
The Permittee provided the Department with an updated status report to demonstrate that the stormwater outfall improvements required by Permit No. 0254479-001-JC have been satisfactorily implemented. The stormwater outfall improvement and reporting requirements are therefore no longer necessary for this permit and shall be removed.

Easement Requirement
Permit modification 0254479-004-JN extended the permit duration to 15 years, as afforded by Rule 62B-49.011(1)(a), F.A.C. As part of this modification, Specific Condition 45 was added to require a public easement for use of the borrow areas for durations in excess of 5 years, as required by Chapter 253.77, F.S. This public easement requirement applies only to Canaveral Shoals Borrow Area I, as Canaveral Shoals Borrow Area II is in federal waters. As written, however, Specific Condition 45 does not distinguish between the two borrow areas. Specific Condition 45 will therefore be revised for clarity.

The project description shall be revised as follows (~~strikethroughs~~ are deletions, <u>underlines</u> are additions):

> The project is to place approximately ~~900,000~~ <u>650,000</u> cubic yards of beach-quality material from two borrow areas (Canaveral Shoals I and II) <u>and/or approved</u>

upland sources along ~~7.6~~ 7.8 miles of shoreline in Brevard County within specified construction template limits between FDEP reference monuments R-75.4 and R-118.3, by mechanical (non-hydraulic) means.

Placement of beach fill shall be within the construction template specified on Sheets 2 and 3 of the Permit Drawings plus 0.5 ft. vertical tolerance for construction activities. From R-75.4 to R-83, beach fill will be placed to the dune face at crest elevation +14.6 ft above NAVD (or to match existing dune elevation) and 5 to 20 ft width, thence sloping 1V(Vertical): 1.5H(Horizontal) to elevation +9.2 ft at the NAD'83 coordinate locations specified in the Permit Drawings, thence slightly sloping seaward across a berm width of between 26 and 35 feet to elevation +8.7 ft, thence sloping seaward at 1V:6V until intersecting with the existing beach. From R-83 to R-118.3, beach fill will be placed to the dune face at crest elevation +14.6 ft above NAVD (or to match existing dune elevation) and 5 to 20 ft width, thence sloping 1V:1.5H to elevation +11.4 ft, thence sloping 1V:8H to elevation +9.2 ft at the NAD'83 coordinate locations specified in the Permit Drawings, thence slightly sloping seaward across a berm width of between 16.5 and 56.5 feet to elevation +8.7 ft, thence sloping seaward at 1V:8H along R-83 to R-109 or 1V:10H along R-109 to R-118.3, until intersecting with the existing beach.

Beach fill placement of sand dredged from the Canaveral Shoals I or II offshore borrow areas may be sourced from sand stockpiles of separately permitted dredged-sand placement areas. Near beach quality sand dredged from the Canaveral Shoals I access lane may be placed in the existing Brevard County North Reach Nearshore Disposal & Sand Rehandling Area (NDSRA).

~~Approximately 600,000 cubic yards of beach fill will be hydraulically placed between FDEP reference monuments R-110 to R-118.7, including a 1,240-foot taper from R-110 to R-111 and a 400-foot taper from R-118.3 to R-118.7 that overlaps with the South Reach project area. The design template for this section starts from the 12.6-foot NGVD (11.2-foot NAVD) elevation intercept on the existing beach profile and extends seaward to create a horizontal dune crest approximately 10 feet wide with a seaward slope of 1:2.5 (vertical:horizontal). This leads down to a berm that is level at an elevation of 10.6 feet NGVD for approximately 50 feet and then slopes slightly seaward at 1:67 (vertical:horizontal) for an additional 100 feet to an elevation of 9.1 feet NGVD. Finally, the construction profile is extended at a slope of 1:15 (vertical:horizontal) to the existing profile intercept in the water.~~

~~The remaining 300,000 cubic yards will be temporarily placed as a stockpile between R-111 and R-118.3 and then subsequently transferred by truck to the northern 6.2-miles of Mid-Reach, between FDEP reference monuments R-75.4 and R-110. The design template for this section starts from the 15-foot (NGVD) elevation intercept on the existing beach profile and extends seaward to create a horizontal dune crest varying~~

~~between 5 and 20 feet wide with a seaward slope of 1:2 (vertical:horizontal). This leads to a berm that is level at a 10.6 foot (NGVD) elevation with the berm width varying between 0 and 15 feet and then slopes slightly seaward at 1:8 (vertical:horizontal) to mean low water (MLW), which is equal to -1.9 feet NGVD and -3.3 feet NAVD in the project area. The truck haul fill template is designed with an average volume of nine (9) cubic yards per foot alongshore and above MLW.~~

The project is expected to impact approximately 2.95 acres of nearshore hardbottom habitat. As mitigation for these impacts, the Permittee will construct 4.8 acres of articulated reef.

~~To reduce stormwater discharge onto the beach, the project also includes installation of a perforated stormwater exfiltration pipe and associated junction boxes landward of the dune system and seaward of the Coastal Construction Control Line at Canova Beach Park (R-105) and Howard E. Futch Memorial Park (R-109.2). At Howard Futch Park, a new tee riser may also be installed at the seaward end of the beach outfall. Installation of the Canova and Futch stormwater improvements are also subject to DEP Permit Nos. 05-0298831-001 and 05-298832-001, respectively. Maintenance of the systems is provided for under these two separate permits.~~

The Activity Location shall be revised as follows (~~strikethroughs~~ are deletions, <u>underlines</u> are additions):

The beach restoration project extends between DEP reference monuments R-75.4 and <u>R-118.3</u> ~~R-118.7~~, comprising portions of the municipal shorelines of Satellite Beach, Indian Harbour, the City of Melbourne, and other unincorporated areas of Brevard County, Sections 23, 26, 35 and 36, Township 26 South, Range 37 East, Sections 1, 12, 13 and 24, Township 27 South, Range 37 East, and Sections 19 and 30, Township 27 South, Range 38 East, Atlantic Ocean, Class III Waters. The borrow areas are located offshore, 1.6 and 4.5 miles east-southeast of Port Canaveral, which is located at DEP reference monument R-1, Brevard County, Atlantic Ocean, Class III Waters. The artificial reef site is located immediately offshore of the southern portion of the proposed restoration area.

The specific conditions shall be revised as follows (~~strikethroughs~~ are deletions, <u>underlines</u> are additions):

3. No work shall be conducted under this permit until the Permittee has received a written **Notice to Proceed** from the Department. At least 30 days prior to the requested date of issuance of the notice to proceed, the Permittee shall submit the following for review and approval by the Department:

~~e. **Stormwater outfall improvement documentation**. Stormwater outfalls shall be improved to at least the Option 1 level† to reduce beach erosion and impacts to~~

~~water quality over time in accordance with the attached "Summary of Brevard County Beach Outfalls: Existing Conditions and Proposed Plan of Improvements" ("Outfall Plan") dated October 2, 2009. The Outfall Plan provides a proposed schedule for the completion of Option 1 improvements. As assurance that the Permittee is adhering to the Outfall Plan, the following information shall be submitted for the individual outfalls where improvements are imminent, underway or completed:~~

~~i. *District permits* and other significant correspondence from the DEP Central District Office relevant to any aspects of the stormwater outfall improvements permitted by that office; and,~~

~~ii. *Final plans and specifications*, including outfall design drawings, or as-built drawings of the completed improvements.~~

~~†See Brevard County Beach Outfalls Removal Feasibility Study" by Jones Edmunds, dated October 19, 2007 for the outfall design of Option 1.~~

40. **PHYSICAL MONITORING REQUIRED:**

~~d. The status of the existing seventeen (17) stormwater outfalls along the Mid Reach and adjacent South Reach shorelines, including description of improvements, visual assessment of physical conditions with representative photographs, shall be presented. Assessment of the outfall conditions will be conducted and reported on the same schedule as the post-construction beach profiles. The outfall assessment will include a statement, certified by a registered Engineer, that the completed outfall improvements conform with the Option 1 design criteria for stormwater treatment, as outlined in the "Brevard County Beach Outfalls Removal Feasibility Study" by Jones Edmunds, dated October 19, 2007, and/or will identify those features of the work that may not conform therewith, if applicable.~~

d.~~e.~~ The Permittee shall submit an engineering report~~, including the stormwater outfall assessment and the physical monitoring data~~ to the Department within 90 days following completion of the post-construction survey and each annual or biennial monitoring survey (i.e., at the post-construction, 1-year, 2-year, 3-year and 5-year intervals, then biennially while beach fill remains in the project area).

The report shall summarize and discuss the data, the performance of the beach fill project and identify erosion and accretion patterns within the monitored area. The volumetric change analysis will include computations for beach profile segments above MHWL and for profile segments below MHWL to the depth of closure. In addition, the report shall include a comparative review of project performance to

performance expectations and identification of adverse impacts attributable to the project.

Appendices shall include plots of survey profiles and graphical representations of volumetric and shoreline position changes for the monitoring area. Results shall be analyzed for patterns, trends, or changes between annual surveys and cumulatively since project construction.

45. This permit authorizes the activities described in Permit no. 0254779-001-JC and Modification No. 0254779-002-JN. If periodic nourishment is necessary, ~~a permit modification would be required to authorize additional nourishments and~~ a public easement would be required for continued use of the Canaveral Shoals I borrow area under this Permit.

The set of approved permit drawings shall be revised as follows:

The complete set of Approved Permit Drawings (24 Sheets, 7/31/2006) will be replaced with an updated set of Approved Permit Drawings (22 Sheets, 12/5/2018).

After thorough review of your application, staff finds that the proposed modification is not expected to adversely affect water quality or be contrary to the public interest. Staff has also determined that the proposed alteration does not increase the potential for adverse impact on the coastal system, public beach access seaward of the mean high water line or nesting marine turtles and hatchlings and their habitat, and that the proposed alteration does not reduce the design adequacy of the project. Since the proposed modification is not expected to result in any adverse environmental impact or water quality degradation, the **permit is hereby modified** as stated above. By copy of this letter and the attached drawings, we are notifying all necessary parties of the modification.

This letter of approval does not alter the **December 30, 2024** expiration date of the permit. This letter and the attached drawings must be attached to the original permit.

This permit is hereby modified unless a sufficient petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, Florida Statutes (F.S.), as provided below. The procedures for petitioning for a hearing are set forth below. Mediation under Section 120.573, F.S., is not available for this proceeding.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be

final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of publication of the notice or within 14 days of receipt of the written notice,

whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000 before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

If you have any questions regarding this matter, please contact Zach Boudreau by email at William.Boudreau@FloridaDEP.gov or by telephone at (850) 245-7585.

EXECUTION AND CLERKING:

Executed in Tallahassee, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

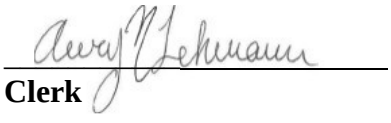
_____
Gregory W. Garis
Program Administrator
Beaches, Inlets and Ports Program
Division of Water Resource Management

Attachments: Approved Permit Drawings (22 Sheets, 12/5/2018)
Revised Sediment QA/QC Plan for Offshore sources (12/28/2018)
Revised Sediment QA/QC Plan for Upland sources (1/4/2019)

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this permit and all attachments were sent on the filing date below to the following listed persons:

cc: Ivana Kenny-Carmola, DWRM
Jennifer Steele, DWRM
Bob Brantly, DWRM
Peter Bacopoulos, DWRM
Brendan Biggs, DWRM
Jennifer Peterson, DWRM
Vladimir Kosmynin, DWRM
Denise Rach, FWC
Mary Duncan, FWC
Roxane Dow, DWRM
JCP Compliance

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk 03/13/2019 **Date**

United States Department of the Interior
U. S. FISH AND WILDLIFE SERVICE
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:

FWS Log No. 04EF1000-2019-I-0057

March 7, 2019

Jason J. Spinning
Environmental Branch
Jacksonville District Corps of Engineers
701 San Marco Boulevard
Jacksonville, Florida 32207-8915

Dear Mr. Spinning:

The U.S Fish and Wildlife Service (USFWS) has reviewed your correspondence dated January 23, 2019, and additional information provided by the applicant regarding the following project, and we submit the following comments in accordance with Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*).

The applicant seeks authorization to construct a newly proposed stockpiling area (located in the South Reach project area, R138.5 to R141) to be truck hauled and placed along the Mid-Reach project shoreline (R75.4 to R118.3) for the Brevard County Hurricane and Storm Damage Reduction Project. The stockpile area would be constructed seaward of the existing dune vegetation line within Spessard Park (R138.5 to R141). Beach compatible sand from Canaveral Shoals will be transported and placed within the stockpile area by hydraulic discharge from a hopper dredge. Stockpiled sand will then be truck hauled and placed along the Mid-Reach project shoreline (R75.4 to R118.3). Construction to stockpile, from initial construction to final unloading and grading, will be limited to 1 November through 30 April. Construction will occur 7 days per week 24 hours per day until completion. Material will be stockpiled and hauled away multiple times during a single season so that a volume greater than the stockpile's nominal estimated capacity of 97,000 cubic yards will be provided to the Mid-Reach. After use of the sand stockpile in a given season, a residual volume of approximately 45,000 cubic yards of sand will remain along the beach berm at the stockpile area, graded to the elevations and slopes of the adjacent nourished and natural beach conditions.

Potential impacts to the southeastern beach mouse (*Peromyscus polionotus niveiventris*) and nesting and hatching sea turtles [loggerhead (*Caretta caretta*); green (*Chelonia mydas*); leatherback (*Dermochelys coriacea*); hawksbill (*Eretmochelys imbricata*); and Kemp's ridley (*Lepidochelys kempii*)] are covered in the current Corps permit under the Statewide Programmatic Biological Opinion for sand placement activities in Florida (SPBO); proposed activities would be conducted in compliance with the 2015 update to the SPBO. Regarding potential impacts to the Florida Manatee (*Trichechus manatus latirostris*), the piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), and loggerhead turtle

designated critical habitat (LOGG-T-FL-07) the Corps made determinations of "may affect but not likely to adversely affect" and requested concurrence with these determinations.

Potential impacts to the piping plover are covered in the Programmatic Piping Plover Biological Opinion (P^3BO). Designated Critical Habitat or other optimal habitat, as defined in the P^3BO, is not present within the action area. Ebird citizen based bird observation database only contains limited sightings within the action area. Additionally, no piping plovers or red knots were observed in the proposed stockpile area during monitoring activities conducted through July 2018. For non-optimal piping plover habitat, the cover letter for the P^3BO states a "may affect but not likely to adversely affect" determination is appropriate if the nine Conservation Measures for non-optimal habitat set forth in the letter are implemented. Based on the habitat available in the project area and the low incidence of documented use by piping plovers, USFWS previously advised the Corps that surveys for shorebirds are not needed for this project.

For the red knot, the Corps determination was based on an assessment that use of the area was unlikely given the available habitat. The eBird database does not contain any sightings south of Indialantic and north of Sebastian Inlet since 1992. The Corps states it will apply the P^3BO Conservation Measures. And as with the piping plover, USFWS previously advised the Corps that surveys for shorebirds are not needed for this project.

Based on the preceding, the USFWS concurs that the project "may affect but is not likely to adversely affect" the piping plover and red knot provided the Conservation Measures from the cover letter for the P^3BO are implemented. However, as stated above, no surveys for shorebirds including piping plover and red knot are needed for this project.

The Corps will implement the FWC "Standard Manatee Conditions for In-Water Work" (2011) and additional minimization measures outlined in the SPBO Therefore, the Service concurs with the Corps' determination of "may affect, not likely to adversely affect" for the manatee.

Although this does not represent a biological opinion as described in Section 7 of the Act, it does fulfill the requirements of the Act and no further action is required. Reinitiation of consultation is required if modifications are made to the project that may adversely affect listed species or their habitats; if the applicant fails to comply with the permit conditions; if additional information involving potential effects to these or other listed species becomes available; or if take of manatees or other listed species occurs.

Thank you for your cooperation in the effort to conserve fish and wildlife resources. Should you have additional questions or require clarification regarding this letter, please contact Tina Nguyen by email at tina_nguyen@fws.gov or by phone at 904-731-3098.

Sincerely,

Jay B. Herrington
Field Supervisor

Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US)

From: Stahl, Chris <Chris.Stahl@dep.state.fl.us>
Sent: Friday, May 10, 2019 10:35 AM
To: Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US)
Cc: State_Clearinghouse
Subject: [Non-DoD Source] State_Clearance_Letter_For_FL201903138555C_SEIS and FONSI for a Proposed Sand Stockpiling Area for the Florida Shore Protection Project - Mid-Reach Segment, Brevard County, Florida

May 10, 2019

Wendy Dauberman-Zerby

United States Army Corps of Engineers

701 San Marco Boulevard

Jacksonville, Florida 32207-8175

RE: Department of Defense, Jacksonville District Corps of Engineers - Supplemental Environmental Impact Statement and Finding of No Significant Impact for a Proposed Sand Stockpiling Area for the Florida Shore Protection Project - Mid-Reach Segment, Brevard County, Florida

SAI# FL201903138555C

Dear Wendy:

Florida State Clearinghouse staff has reviewed the proposal under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

Based on the information submitted and minimal project impacts, the state has no objections to the subject project and, therefore, it is consistent with the Florida Coastal Management Program (FCMP). Thank you for the opportunity to

review the proposed project. If you have any questions or need further assistance, please don't hesitate to contact me at (850) 717-9076.

Sincerely,

Chris Stahl

Chris Stahl, Coordinator

Florida State Clearinghouse

Florida Department of Environmental Protection

3800 Commonwealth Blvd., M.S. 47

Tallahassee, FL 32399-2400

ph. (850) 717-9076

State.Clearinghouse@floridadep.gov <mailto:State.Clearinghouse@floridadep.gov>

<Blockedhttp://survey.dep.state.fl.us/?refemail=Chris.Stahl@dep.state.fl.us>

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8915

MAR 06 2019

Planning and Policy Division
Environmental Branch

Ms. Virginia Fay
NOAA Fisheries Service
Southeast Regional Office
263 13th Avenue South
Saint Petersburg, Florida 33701

Dear Ms. Fay:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is initiating Essential Fish Habitat (EFH) consultation for a proposed sand stockpiling area to be utilized for the congressionally authorized Brevard County, Florida Shore Protection Project Mid-Reach Segment (see attached location map). A Supplemental Environmental Assessment (SEA) and Proposed Finding of No Significant Impact (FONSI) has been generated for the stockpile area which would be seaward of the existing dune vegetation line within Spessard Park. Beach compatible sand from Canaveral Shoals will be transported and placed hydraulically within the stockpile area. Stockpiled sand will then be truck hauled and placed along the Mid-Reach project shoreline. Construction of the stockpile, from initial construction to final unloading and grading, will be limited annually to 1 November through 30 April. Construction will occur 7 days per week 24 hours per day until completion. Material will be stockpiled and hauled away multiple times during a single season so that a volume greater than the stockpile's nominal estimated capacity of 97,000 cubic yards will be provided to the Mid-Reach. After use of the sand stockpile in a given season, a residual volume of approximately 45,000 cubic yards of sand will remain along the beach berm at the stockpile area, relative to existing conditions, graded to the elevations and slopes of the adjacent nourished and natural beach conditions.

Pursuant to 50 CFR 600.920(g), an EFH assessment has been prepared and is being submitted for your review. The Corps' initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries along the East Coast of Florida. The SEA, which includes the EFH assessment, can be found at the following website. Click on Brevard County, then scroll down to Brevard County, Florida Shore Protection Project Mid-Reach Segment, Proposed Stockpile Area and click on SEA and/or Proposed FONSI.

http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx

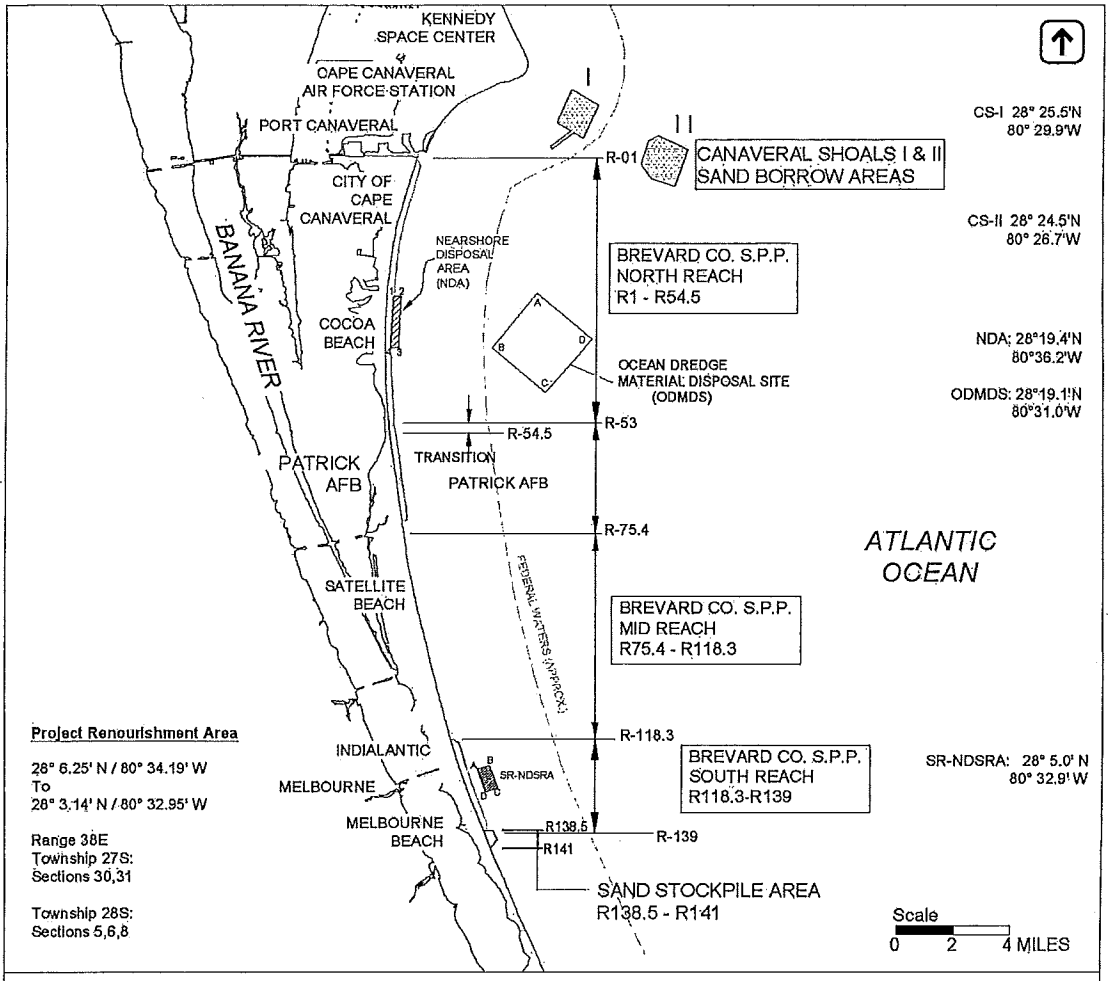
Please provide your response as specified in 50 CFR 600.920(e) (3). If you have questions or need additional information, please contact Miss Wendy Dauberman at 904-232-3206, or by email (wendy.s.dauberman-zerby@usace.army.mil).

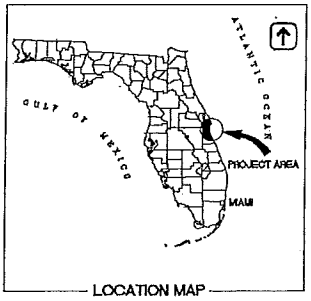
Sincerely,

Jason J. Spinning
Acting Chief, Environmental Branch

Cc:
Mr. Pace Wilber, NOAA Fisheries, 219 Fort Johnson Road, Charleston, SC 29412

LOCATION MAP: BREVARD COUNTY FLORIDA SHORE PROTECTION PROJECT, MID-REACH SEGMENT AND STOCKPILE AREA





LOCATION MAP

NDA - ft NAD83

	Easting	Northing
1	783,837	1,455,365
2	785,237	1,455,365
3	784,887	1,445,865
4	783,337	1,445,865

SR-NDSRA - ft NAD83

	Easting	Northing
1	799,826	1,365,093
2	802,136	1,365,907
3	803,636	1,361,664
4	801,326	1,360,850

NEARSHORE DISPOSAL AND SAND REHANDLING AREA (SR-NDSRA)

ODMDS - ft NAD83

	Easting	Northing
A	810,734	1,455,819
B	802,376	1,445,788
C	812,416	1,437,446
D	821,139	1,447,378

PERMIT DRAWINGS. NOT FOR CONSTRUCTION.

olsen associates, Inc.
2618 Herschel Street
Jacksonville, FL 32204
(904) 387-6114
COA No. 3491

BREVARD COUNTY, FL
SHORE PROTECTION PROJECT - SOUTH REACH

LOCATION MAP

DATE:	REVISION

DATE: 08/20/2018
DRAWN BY: ML
SHEET 1 OF 4

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

Mr. Shawn H. Zinszer
Regulatory Division
North Permits Branch
Cocoa Permits Section
400 High Point Drive
Cocoa, Florida 32926

May 15, 2019

RE: DHR Project File No.: 2015-0809-C, Received by DHR: May 6, 2019
Submerged Cultural Resources, Terrestrial Archaeological, and Magnetometer Surveys for the Mid-Reach Sand Stockpile, Brevard County, Florida

To Whom It May Concern:

Our office received and reviewed the above referenced project for possible effects on historic properties listed, or eligible for listing, on the *National Register of Historic Places* (NRHP). The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.*

Between February and April 2019, Panamerican Consultants, Inc., (PCI) conducted the above referenced terrestrial and remote sensing cultural resource assessment survey (CRAS) on behalf of U.S. Army Corps of Engineers (Corps). The area of potential effect (APE) included 3 acres of upland area, and 315 acres of near beach submerged bottomland and the adjacent beach. The upland area was subject to a Phase I survey, the submerged bottomland was surveyed utilizing a magnetometer, sidescan sonar, and a subbottom profiler, and the adjacent beach received a terrestrial magnetometer survey.

PCI encountered no cultural resources within the upland 3 acres of the APE.PCI documented three (3) clusters of targets, Cluster 1, Cluster 2 (USACE-0003), and Cluster 3 (USACE-0004), and relocated a previously documented historic cannon, MO2 (USACE-0005), during the remote sensing surveys. PCI tentatively identified Cluster 1 as a pipeline or submerged cable and left the decision of avoidance up to the Corps. PCI recommended Cluster 2 (USACE-0003), Cluster 3 (USACE-0004), and probable cannon MO2 (USACE-0005) as potentially significant and recommended avoidance of them with buffers of 250 feet, 175 feet, and 150 feet respectively. If potentially adverse project activities cannot avoid these three buffered area PCI recommends diver investigation and identification.

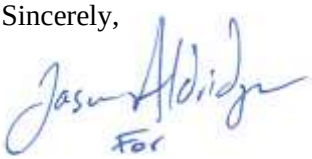
The Corps provided a summarization of the remaining areas of the APE which were not addressed in the above report. Of particular note are the five (5) previously recorded potential significant debris targets from the Space Program within the Canaveral Shoals II borrow area. These targets have been designated USACE-0006, 0007, 0008, 0009, and 0010, and the Corps will continue to maintain a 300-foot buffer around each of the targets. In summary, all of the APE has been subject to recurrent beach Renourishment and all of the Mid Reach Stockpile environmental study area has been surveyed for cultural resources. Based on the results of these surveys the

Corps recommends no dredging, spudding, or anchoring within 250 feet of USACE-0003, 175 feet of USACE-0004, 150 feet of USACE-0005, and 300 feet of targets USACE-0006 through USACE-0010. Based on the recurrent nature of the project, and contingent upon maintaining these buffers, the Corps has determined that dredging Canaveral Shoals II borrow area, and the placement of sand on the beaches at Patrick AFB, Brevard Mid Reach, Brevard South Reach, and the Mid Reach Stockpile area between R 55 and 142.5, and the removal of the failed concrete shore protection structure will have no adverse effect to historic properties listed or eligible for inclusion in the NRHP.

Based on the information provided, our office concurs with the Corps that, contingent upon maintaining the above defined buffers, the proposed project will have no adverse effect to historic properties listed or eligible for inclusion in the NRHP. Further, we find the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*.

If I can be of any further help, or if you have any questions about this letter, please contact Lindsay Rothrock at *Lindsay.Rothrock@dos.myflorida.com*.

Sincerely,



Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer

Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US)

From: Pace Wilber - NOAA Federal <pace.wilber@noaa.gov>
Sent: Friday, March 29, 2019 2:01 PM
To: Dauberman-Zerby, Wendy S CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] NMFS no objection for Proposed Sand Stockpile Area, Brevard County Shore Protection Project Mid-Reach Segment

Hello Wendy.

NOAA's National Marine Fisheries Service (NMFS) reviewed the Supplemental EA for the proposed sand stockpile area the Jacksonville District would use for the Brevard County Shore Protection Project Mid-Reach Segment. Based on the information in the Supplemental EA, the proposed stockpile area would occur in the vicinity of essential fish habitat (EFH) designated by the South Atlantic Fishery Management Council, Mid-Atlantic Fishery Management Council, or the NMFS. The NMFS anticipates any adverse effects occurring from using the stockpile area to NOAA trust resources would be minimal. Consequently, the NMFS offers no EFH conservation recommendations pursuant to the Magnuson-Stevens Fishery Conservation and Management Act and no recommendations under the Fish and Wildlife Coordination Act. Please let me know if additional information from the NMFS is needed or if the District's plan for using the stockpile changes and the District concludes those changes may affect EFH.

Thanks,
Pace

--

Pace Wilber, Ph.D.
HCD Atlantic Branch Supervisor
NOAA Fisheries Service
219 Ft Johnson Road
Charleston, SC 29412

843-460-9926 <----Office Number
843-568-4184 <----Office Cell Number
Pace.Wilber@noaa.gov <mailto:Pace.Wilber@noaa.gov>

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8915

JAN 23 2019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

Mr. Jay Herrington, Field Supervisor
U. S. Fish & Wildlife Service
North Florida Ecological Services Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517

Dear Mr. Herrington:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is hereby re-initiating coordination with your office under the Programmatic Piping Plover Biological Opinion (P^3BO; 2013) and the Statewide Programmatic Biological Opinion (SPBO; 2015) for the congressionally authorized Brevard County Hurricane and Storm Damage Reduction Project, Mid-Reach Segment, and the newly proposed sand stockpiling area (see attached location map). The stockpile area would be constructed seaward of the existing dune vegetation line within Spessard Park. Beach compatible sand from Canaveral Shoals will be transported and placed within the stockpile area by hydraulic discharge from a hopper dredge. Stockpiled sand will then be truck hauled and placed along the Mid-Reach project shoreline. Construction of the stockpile, from initial construction to final unloading and grading, will be limited to 1 November through 30 April. Construction will occur 7 days per week 24 hours per day until completion. Material will be stockpiled and hauled away multiple times during a single season so that a volume greater than the stockpile's nominal estimated capacity of 97,000 cubic yards will be provided to the Mid-Reach. After use of the sand stockpile in a given season, a residual volume of approximately 45,000 cubic yards of sand will remain along the beach berm at the stockpile area, relative to existing conditions, graded to the elevations and slopes of the adjacent nourished and natural beach conditions.

The Corps will abide by all terms and conditions within the SPBO and P^3BO. Standard Manatee Protection Measures would be imposed on activities in the water. The Corps has determined that the proposed activity may affect nesting sea turtles and may affect, but is not likely to adversely affect, manatee, piping plover and rufa red knot. In addition, the Corps has also determined that the proposed activity may affect, but is not likely to adversely affect, loggerhead turtle designated critical habitat (LOGG-T-FL-07). Protection measures for nesting sea turtles and piping plovers shall be incorporated into the project plans and specifications in compliance with the terms and conditions of the SPBO and P^3BO.

Red knots may occasionally use the project area during winter and migration periods. Because suitable habitat for the red knot and piping plover is similar, minimization measures for potential effects to red knots in non-optimal habitat will be incorporated into the project through the Corps' implementation of the P^3BO Conservation Measures.

Should you determine that the proposed activity is not within the scope of the SPBO and the P^3BO please consider this letter initiation of consultation pursuant to Section 7 of the Endangered Species Act of 1973, as amended. The Corps respectfully requests a response within 30 days of date of this letter. If you have any questions, please contact Wendy Dauberman at 904-232-3206 or by email (wendy.s.dauberman-zerby@usace.army.mil).

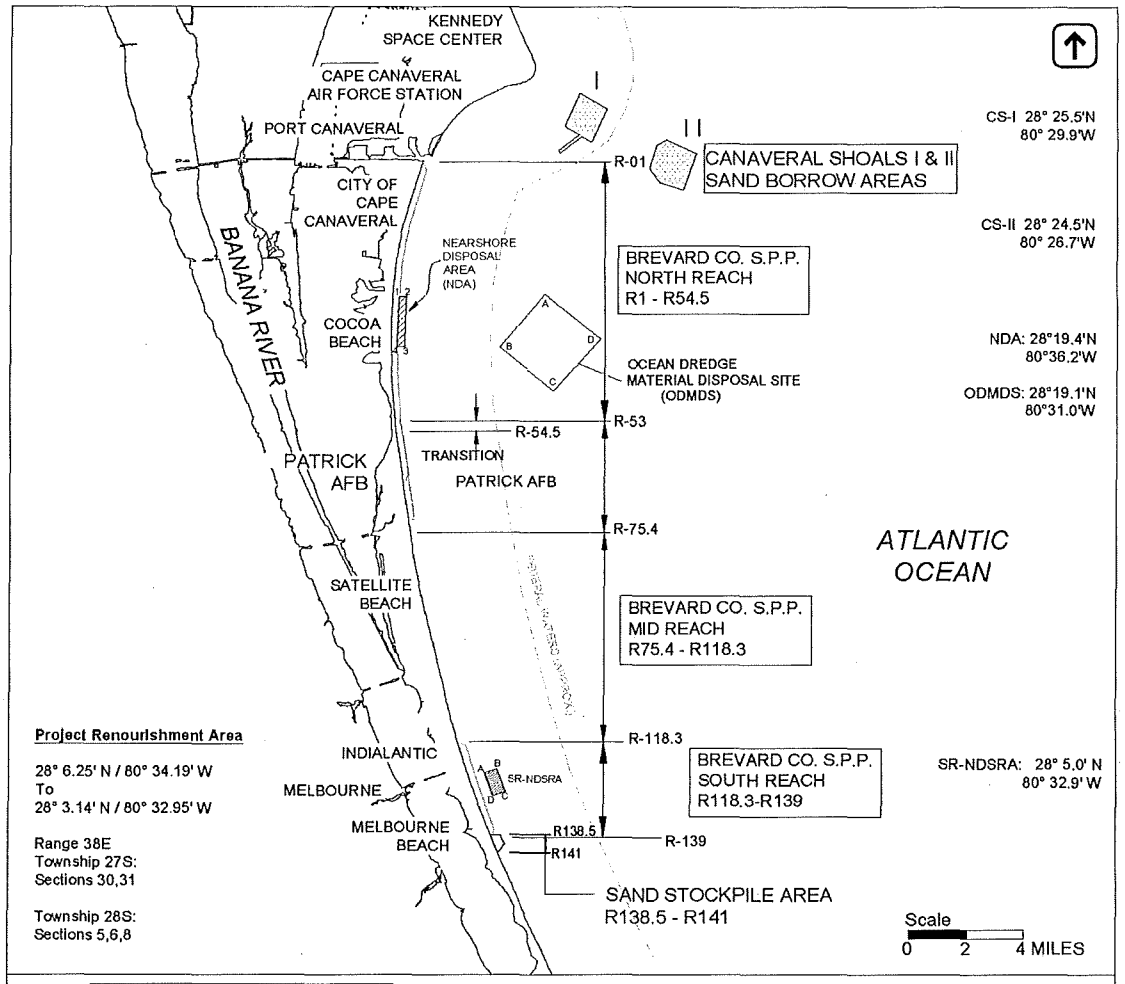
Sincerely,

Jason J. Spinning
Acting Chief, Environmental Branch

Enclosures

Cc: Annie Dziergowski, U.S. Fish & Wildlife Service, North Florida Ecological Services Field Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256

LOCATION MAP: BREVARD COUNTY MID-REACH SHORE PROTECTION PROJECT AND STOCKPILE AREA

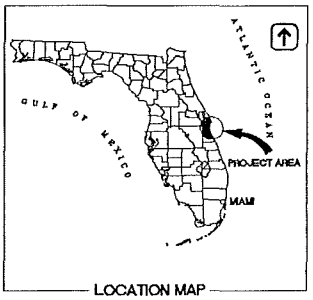


Project Renourishment Area

28° 6.25' N / 80° 34.19' W
To
28° 3.14' N / 80° 32.95' W

Range 38E
Township 27S:
Sections 30,31

Township 28S:
Sections 5,6,8



LOCATION MAP

NDA - ft NAD83

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SR-NDSRA - ft NAD83

	Easting	Northing
1	799,826	1,365,093
2	802,136	1,365,907
3	803,636	1,361,664
4	801,326	1,360,850

NEARSHORE DISPOSAL AND SAND REHANDLING AREA (SR-NDSRA)

ODMDS - ft NAD83

	Easting	Northing
A	810,734	1,455,819
B	802,376	1,445,788
C	812,416	1,437,446
D	821,139	1,447,378

PERMIT DRAWINGS. NOT FOR CONSTRUCTION.

olsen associates, inc.
2618 Herschel Street
Jacksonville, FL 32204
(904) 387-6114
COA No. 3491

BREVARD COUNTY, FL
SHORE PROTECTION PROJECT - SOUTH REACH

LOCATION MAP

DATE	REVISION

DATE: 08/20/2018
DRAWN BY: ML
SHEET 1 OF 4

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Attachment 3
Environmental Documents
Incorporated by Reference

- *1996. Feasibility Report with Final Environmental Impact Statement. Brevard County Shore Protection Study. US Army Corps of Engineers, Jacksonville District.*

    - This EIS described the affected environment in Brevard County, analyzed a suite of construction alternatives to mitigate storm damage risk, identified the preferred alternative (i.e., beach nourishment), and evaluated potential environmental impacts. The study recommended beach nourishment along two reaches: (1) North Reach and (2) South-Reach. Patrick Air Force Base (PAFB) removed the base segment from the study, and the Corps removed the Mid-Reach Segment from the recommended plan due to environmental concerns related to nearshore hard bottom impacts. The Corps modified the selected plan for placement of material on South Reach to avoid significant impacts to nearshore rock outcrops. The document did not analyze the use of OCS sand resources at CSII; however, it did consider borrow areas located approximately 2-3 mile offshore of Canaveral Bight and concluded that no significant impacts were anticipated. Dredging activities would result in short term recoverable impacts to benthic invertebrate communities and those would reestablish shortly after construction. Considering implementation of avoidance measures and anticipated quick recovery of offshore dredging impacts, the Corps did not identify unmitigated significant impacts.

- *1998. Environmental Assessment: Canaveral Shoals Borrow Area II. An Environmental Assessment of a Proposed Sand Borrow Area for the Purposes of Beach Nourishment in Brevard County, FL. Prepared by U.S. Army Corps of Engineers Jacksonville District. 15 December 1998.*

    - This EA evaluated potential environmental effects associated with long-term dredging of offshore borrow areas located at Canaveral Shoals to provide beach fill for the Brevard County Federal Shore Protection Project. This document supplemented the 1996 EIS. Following removal of the Mid-Reach segment from the scope of the Brevard County project, this document focused around initial construction and nourishment volumes to support the authorized North and South-Reach project segments.

- *1999. Limited Reevaluation Report, Brevard County, FL, Shore Protection Project. US Army Corps of Engineers, Jacksonville District.*

    - This document evaluated project refinements including an access lane to Canaveral Shoals Borrow Area I, two alternative borrow areas (CS II and Space Coast Shoals Borrow Areas), two nearshore disposal and sand re-

handling areas, and updated benefits, costs and cost sharing of the federal project.

- *2005. Environmental Assessment. Issuance of a Noncompetitive Lease for Canaveral Shoals II Sand and Gravel Borrow Area. Brevard County Beach Erosion Control Project and Memorandum of Agreement with Patrick Air Force Base for Canaveral Shoals II Sand and Gravel Borrow Area. Minerals Management Service. Herndon, VA.*

    - This EA, prepared by a predecessor to BOEM, evaluated the environmental effects associated with issuance of a noncompetitive lease for use of up to 2,350,000 cubic yards of OCS sand from the CS II Borrow Area. This document tiers from and supplements the environmental analyses contained within PAFB and USACE documents.

- *2011. Final Integrated General Reevaluation Report (GRR) and Supplemental Environmental Impact Statement (SEIS); Brevard County, FL; Hurricane and Storm Damage Reduction Project Mid-Reach Segment. U.S. Army Corps of Engineers Jacksonville District (August 2010 (Revised April 2011).*

    - The USACE 1996 EIS initially evaluated the Mid-Reach segment of the Brevard County Storm Damage Reduction project. However, the Corps removed the Mid-Reach segment from the selected plan due to environmental concerns associated with nearshore hard bottom burial. The Corps prepared a final integrated GRR and SEIS for the Mid-Reach segment in 2011 and signed a Record of Decision (ROD) on 8 September 2014.

      The SEIS specifically analyzes an initial fill volume of 655,000 CY, which is consistent with the volume proposed for initial construction of Mid-Reach in 2019 (i.e., 500,000 CY). The Corps analyzed the effects of dredging OCS sand resources from the CS II Borrow Area. The SEIS concludes that dredging activities within the OCS CS II borrow area would not result in significant impacts. Additionally, the SEIS concludes that dredging related effects at CS II are similar to effects previously analyzed in prior documents. Though dredging of Canaveral Shoals sand resources would adversely affect non-motile invertebrates, impacts would be limited to a relatively small area within the overall shoal complex and species inhabiting bottom areas adjacent to dredged furrows would provide a local recruitment stock. As these organisms are very fecund, the dredged site would quickly recolonize (i.e., within 1-3 seasons) and no long-term significant adverse impact on the surrounding environment would be expected. There are no new features or changes in project construction, or other known changes in environmental factors regarding dredging of the CS II borrow area, relative to that described in prior referenced NEPA documentation or prior construction activities.

Nearshore hard bottom impacts associated with the interconnected action of placing sediment on the beach was the primary planning consideration in the SEIS. The final array of alternatives included multiple beach nourishment designs, and the Corps incorporated all practicable means to avoid and/or minimize adverse effects to nearshore hard bottom. The Corps' selected plan included a smaller-scale beach fill design to minimize the total footprint of nearshore hard bottom impacts based on a multi-agency collaborative process. Additionally, the plan included temporary upland stockpile of offshore sand from CS II and subsequent truck-haul to the Mid-Reach mitigate the risk of sedimentation and burial impacts associated with hydraulic placement. The project design features mitigated nearshore hard bottom impacts to the maximum extent practicable; however, the analysis indicates that residual impacts could include burial and/or sedimentation of approximately 3.0 acres of existing nearshore rock hardgrounds. Recognizing these remaining unavoidable impacts, a significant component of the SEIS focused on developing a compensatory mitigation plan. The total mitigation quantity assumed a ratio of 1.6 mitigation acres required for every acre of natural rock impacted in accordance with Florida's Uniform Mitigation Assessment Method (UMAM). To compensate for this potential impact in advance of the project, the Corps completed construction of approximately 4.8 acres of nearshore hard bottom (reef). A comprehensive monitoring effort is ongoing to ensure adherence to required performance standards. Based on recent monitoring of the mitigation reef, the Corps concluded that the compensatory mitigation commitment outlined in the SEIS has been satisfied.

- *2012. Department of Army Record of Decision (3 August 2012) for Department of Army Permit SAJ-2005-08688, Section 10/404.*

    - In the interim of receiving federal appropriations to construct the authorized Mid-Reach project, Brevard County pursued a Section 10/404 permit through the Corps Regulatory Division to construct the project using non-federal funding. In association with this permit action, the Corps' Regulatory Division adopted the Corps Civil Works Final 2011 SEIS. The federal project superseded this locally funded and permitted construction event following federal appropriation of construction funds.

- *2012. Final Environmental Assessment for Beach Shoreline Protection at Patrick Air Force Base, FL. United States Air Force, 45th Space Wing PAFB, FL. Cooperating Agency: US Department of Interior Bureau of Ocean Energy Management. FONSI signed 27 February 2012*
- *2012. Finding of No Significant Impact for Use of Outer Continental Shelf Sand from Canaveral Shoals II in the Patrick Air Force Base, FL Beach Shoreline Protection Project. Bureau of Ocean Energy Management. FONSI Signed 17 May 2012.*

- The 45th Space Wing, in coordination with BOEM, prepared the 2012 EA to determine whether authorizing use of OCS sand from the CS II Borrow Area in support of the PAFB Shoreline Protection Project. BOEM independently reviewed the EA and determined that the potential impacts of the proposed action were adequately addressed. BOEM subsequently signed a FONSI on 17 May 2012. BOEM issued a two-year lease on 16 January 2013 for use of OCS sand from CS II for project construction. The 45th Space Wing did not proceed with construction of the project prior to expiration of the MOA on 16 January 2015 and requested a two-year extension. On 13 January 2015, in response to a request to renew the MOA, BOEM signed a Determination of NEPA Adequacy (DNA) that confirmed the existing 2012 NEPA documentation was still adequate. Again, the 45th Space Wing never executed construction associated with the initial request for use of OCS sand prior to the 16 January 2017 expiration date. Thus, another two-year extension was requested. BOEM prepared and signed another DNA on 8 January 2017 evaluating whether new circumstances or new information will or may result in significantly different environmental effects not previously analyzed before authorizing the second extension. The DNA included updated analyses pertaining to new listed species and critical habitat designations related to the Section 7 consultations. The DNA concluded that the EA, and supporting consultations, reasonably analyzed the direct, indirect, and cumulative social, economic, and environmental impacts of the PAFB Shoreline Protection Project and the effects would not be significant and no supplemental NEPA analysis was necessary.

- *2016. Final Environmental Assessment. Proposed Use of Upland Quarries as an Additional Source of Sand Brevard County, FL Hurricane and Storm Damage Reduction Project Mid-Reach Segment. U.S. Army Corps of Engineers. 4 August 2016.*

    - This EA provided additional information on the status of the Mid-Reach project. Considering the National Marine Fisheries Service's (NMFS) Essential Fish Habitat (EFH) related concerns associated with dredging of Canaveral Shoals and associated hydraulic placement impacts to nearshore hard bottom, NMFS encouraged the use of quarry sand instead of sand dredged from Canaveral Shoals. The EA consider the effects of the proposal to use sand sourced from commercial quarries to supplement that dredged from Canaveral Shoals.

- *2017. Issuance of a Negotiated Agreement for Use of Outer Continental Shelf Sand from Canaveral Shoals II in the Brevard County Shore Protection Project (North Reach and South-Reach); EA and FONSI. U.S. Department of the Interior Bureau of Ocean Energy Management (September 2017).*

- In 2005, 2009, and 2013 BOEM (previously the Minerals Management Service) prepared three additional EAs for incremental actions utilizing sediment from the CS II borrow area for construction of North- and South-Reaches in Brevard County, FL. The 2005, 2009, and 2013 EAs incorporated by reference the prior USACE and BOEM documents and were used by BOEM to support subsequent leasing decisions. The 2017 EA, prepared and led by BOEM, provided an updated evaluation of the potential environmental impacts associated with BOEM authorization for the use of up to 2,000,000 cubic yards (cy) of Outer Continental Shelf (OCS) sand from CS II. The purpose of this EA was to identify and review new information to determine if any resources should be re-evaluated or if the new information would alter prior effects determinations related to dredging of CS II. This 2017 EA provided further support and elaborated on the analyses and information presented in prior NEPA documents, and pursuant to 43 CFR part 46, concluded those analyses were still valid. Though the EA was specific to the North and South-Reach project areas, the analysis considered the same CS II Borrow Area proposed for the Mid-Reach and PAFB project segments.