August 2017

Supplemental Environmental Assessment

Beach Erosion Control Project

Pinellas County, Florida

U.S. Army Corps
of Engineers
JACKSONVILLE
DISTRICT

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US Army Corps of Engineers
JACKSONVILLE DISTRICT

FINDING OF NO SIGNIFICANT IMPACT

PINELLAS COUNTY
BEACH EROSION CONTROL PROJECT

PINELLAS COUNTY, FLORIDA

The U.S. Army Corps of Engineers, Jacksonville District (Corps), has prepared a Supplemental Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969, as amended (NEPA), and the White House's Council on Environmental Quality regulations to assess the environmental effects of dredging beach compatible sand from the Egmont Shoals (just north of the Tampa Harbor Federal Navigation Channel and east of Mullet Key) or the following inlets and their associated ebb shoals: Clearwater Pass, Johns Pass, Blind Pass, and Pass-a-Grille. The sand will be placed along the shorelines of Pinellas County to protect upland infrastructure and to restore beach habitats.

The Supplemental EA evaluates the effects of both the Preferred Alternative and the No Action Alternative. Past analyses conducted pursuant to NEPA evaluated other alternatives that are no longer considered to be viable for this project, including a number of offshore sand sources.

I have reviewed the Supplemental EA for the Preferred Alternative. This Finding incorporates by reference all discussions and conclusions contained in the Supplemental EA enclosed hereto. Based on the information analyzed in the Supplemental EA, which reflects pertinent information obtained from agencies having jurisdiction by law and/or special expertise, I conclude that the Preferred Alternative will not significantly affect the quality of the human environment and does not require an Environmental Impact Statement. Reasons for this conclusion are, in summary:

a. The Preferred Alternative is in compliance with the Endangered Species Act of 1973, as amended. The U.S. Fish and Wildlife Service's (USFWS) *Statewide Programmatic Biological Opinion for Shore Protection Activities along the Coast of Florida* (SPBO; revised March 13, 2015) and the *Piping Plover Programmatic Biological Opinion* (P3BO; issued May 22, 2013) apply to this project. The USFWS concurred with the Corps' determination that the Preferred Alternative "may affect, but is not likely to adversely affect" threatened piping plover in a letter dated August 7, 2017. The USFWS also determined that the project may adversely affect the threatened rufa red knot, and provided a biological opinion in their August 7, 2017 letter. The Corps determined that the project may adversely affect sea turtles in the water if a hopper

dredge is utilized for project construction. In this case, the National Marine Fisheries Service's (NMFS) *Gulf of Mexico Regional Biological Opinion* (GRBO; issued November 19, 2003; revised June 24, 2005 and January 9, 2007) applies to this project.

b. All applicable water quality standards will be met during project construction. The State of Florida issued Water Quality Certification in the form of Joint Coastal Permits from the Florida Department of Environmental Protection (FDEP) dated July 13, 2017 (Permit Nos. 0238664-008-JN and 0221569-017-JN), and July 26, 2017 (Permit No. 0270453-004-JN).

c. The State of Florida has concurred with the Corps' determined that the proposed project is consistent with the Florida Coastal Zone Management Program through the issuance of the FDEP Joint Coastal Permits referenced above.

d. The Preferred Alternative has been coordinated with the Florida State Historic Preservation Officer and the appropriate federally recognized Tribes in accordance with the National Historic Preservation Act and consideration given under the NEPA. Coordination will be completed prior to project construction.

e. The proposed project has been evaluated pursuant to the Migratory Bird Treaty Act. The Jacksonville District's Migratory Bird Protection procedures will be implemented for this project. These procedures have been coordinated with the USFWS and the State of Florida.

f. Benefits to the public will include the restoration of habitat for protected species and other wildlife; protection of upland structures from storm damage; and enhanced opportunity for recreation.

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 placement activities will occur within the authorized and permitted template;
- Water-based activities will follow standard sea turtle protection measures and the terms and conditions of the NMFS GRBO;
- Water quality shall be protected by adherence to the State of Florida water quality criteria for the Boca Ciega Bay and Pinellas County Aquatic Preserves;
- Dredged material placement will comply with the shoreline protection measure conditions of the SPBO and the P3BO issued by the USFWS; and
- Any water-based activity would follow standard manatee protection measures.

In view of the above and the attached Supplemental EA, 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. This Finding of No Significant Impact incorporates by reference all discussions and conclusions contained in the EA enclosed herewith.

Jason A. Kirk, P.E.
Colonel, U.S. Army
District Commander

10 AUG 2017
Date

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SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
ON
BEACH EROSION CONTROL PROJECT
PINELLAS COUNTY, FLORIDA

1 PROJECT PURPOSE AND NEED 1-1

1.1 PROJECT AUTHORITY 1-1

1.2 PROJECT LOCATION 1-1

1.3 PROJECT NEED OR OPPORTUNITY 1-2

1.4 AGENCY GOAL OR OBJECTIVE 1-3

1.5 RELATED DOCUMENTS 1-3

1.6 DECISIONS TO BE MADE 1-4

1.7 SCOPING AND ISSUES 1-4

1.7.1 ISSUES EVALUATED IN DETAIL 1-4

1.7.2 ISSUES ELIMINATED FROM DETAILED ANALYSIS 1-4

1.8 PERMITS, LICENSES, AND ENTITLEMENTS 1-4

2 ALTERNATIVES 2-1

2.1 DESCRIPTION OF ALTERNATIVES 2-1

2.1.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE) 2-2

2.1.2 NO ACTION ALTERNATIVE 2-4

2.2 ISSUES AND BASIS FOR CHOICE 2-4

2.3 PREFERRED ALTERNATIVE 2-4

2.4 DREDGING METHODOLOGIES 2-5

2.5 ALTERNATIVES ELIMINATED FROM DETAILED EVALUATION 2-5

2.6 COMPARISON OF ALTERNATIVES 2-5

2.7 MITIGATION 2-11

3 AFFECTED ENVIRONMENT 3-1

3.1 GENERAL ENVIRONMENTAL SETTING 3-1

3.1.1 SEDIMENT CHARACTERISTICS 3-1

3.2 FISH AND WILDLIFE RESOURCES 3-2

3.2.1 MIGRATORY BIRDS 3-2

3.2.2 FISH RESOURCES 3-2

3.2.3 MARINE MAMMALS 3-3

3.3 THREATENED AND ENDANGERED SPECIES 3-3

3.3.1 SEA TURTLES 3-4

3.3.1.1 Nesting Habitat 3-4

3.3.1.2 Offshore Habitat 3-5

3.3.2 FLORIDA MANATEE 3-5

3.3.3 PIPING PLOVER 3-7

3.3.4 RUFA RED KNOT 3-8

3.3.5 GULF STURGEON 3-10

3.4 ESSENTIAL FISH HABITAT 3-11

3.4.1 HARDGROUNDS 3-13

3.4.2 SUBMERGED AQUATIC VEGETATION 3-14

3.5 COASTAL BARRIER RESOURCES 3-17

3.6 WATER QUALITY 3-19

3.7 CULTURAL, HISTORIC, AND ARCHEOLOGICAL RESOURCES 3-19

3.9 HAZARDOUS, TOXIC AND RADIOACTIVE WASTE 3-22

3.10 AIR QUALITY....3-22

3.11 NOISE....3-23

3.12 AESTHETIC RESOURCES....3-23

3.13 RECREATION RESOURCES....3-23

3.14 NAVIGATION....3-23

4 ENVIRONMENTAL EFFECTS....4-1

4.1 GENERAL ENVIRONMENTAL EFFECTS....4-1

4.2 FISH AND WILDLIFE RESOURCES....4-1

4.2.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE)....4-1

4.2.1.1 Migratory Birds....4-1

4.2.1.2 Fisheries Resources....4-2

4.2.1.3 Marine Mammals....4-2

4.2.2 NO ACTION ALTERNATIVE (STATUS QUO)....4-2

4.3 THREATENED AND ENDANGERED SPECIES....4-3

4.3.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE)....4-3

4.3.1.1 Sea Turtles....4-3

4.3.1.1.1 Nesting Habitat....4-3

4.3.1.1.2 Offshore Habitat....4-4

4.3.1.2 Florida Manatee....4-4

4.3.1.3 Piping Plover and Rufa Red Knot....4-4

4.3.1.4 Gulf Sturgeon....4-5

4.3.2 NO ACTION ALTERNATIVE (STATUS QUO)....4-5

4.4 ESSENTIAL FISH HABITAT ASSESSMENT....4-5

4.4.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE)....4-5

4.4.2 NO ACTION ALTERNATIVE....4-6

4.5 COASTAL BARRIER RESOURCES....4-6

4.5.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE)....4-6

4.5.2 NO ACTION ALTERNATIVE....4-7

4.6 WATER QUALITY 4-7
4.6.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE) 4-7
4.6.2 NO ACTION ALTERNATIVE 4-7

4.9 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE 4-12
4.9.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE) 4-12
4.9.2 NO ACTION ALTERNATIVE 4-13

4.10 AIR QUALITY 4-13
4.10.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE) 4-13
4.10.2 NO ACTION ALTERNATIVE 4-13

4.11 NOISE 4-13
4.11.1 SAND PLACEMENT USING A COMBINATION OF SAND SOURCES (PREFERRED ALTERNATIVE) 4-13
4.11.2 NO ACTION ALTERNATIVE 4-15

4.12 AESTHETIC RESOURCES 4-15

4.13 RECREATION RESOURCES 4-15

4.14 NAVIGATION 4-15

4.15 PUBLIC SAFETY 4-15

4.16 NATURAL OR DEPLETABLE RESOURCES 4-15

4.17 CUMULATIVE EFFECTS 4-16

4.18 SEA LEVEL CHANGE 4-20

4.19 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES 4-20
4.19.1 IRREVERSIBLE 4-20
4.19.2 IRRETRIEVABLE 4-20

4.20 UNCERTAIN, UNIQUE, OR UNKNOWN RISKS 4-21

4.21 ENVIRONMENTAL COMMITMENTS 4-21
4.21.2 PROTECTION OF FISH AND WILDLIFE RESOURCES 4-21

5 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS 5-1

5.1 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 5-1

5.2 ENDANGERED SPECIES ACT OF 1973.....5-1

5.3 FISH AND WILDLIFE COORDINATION ACT OF 1958.....5-1

5.4 NATIONAL HISTORIC PRESERVATION ACT OF 1966 (INTER ALIA) 5-1

5.5 CLEAN WATER ACT OF 1972.....5-2

5.6 CLEAN AIR ACT OF 1972.....5-2

5.7 COASTAL ZONE MANAGEMENT ACT OF 1972.....5-3

5.8 FARMLAND PROTECTION POLICY ACT OF 1981 (7 U.S.C. §4201 *ET. SEQ.)*.....5-3

5.9 WILD AND SCENIC RIVER ACT OF 1968 (28 U.S.C. §1271 *ET. SEQ.*).....5-3

5.10 MARINE MAMMAL PROTECTION ACT OF 1972 (16 U.S.C. §1361 *ET. SEQ.*).....5-4

5.11 ESTUARY PROTECTION ACT OF 1968 5-4

5.12 FEDERAL WATER PROJECT RECREATION ACT 5-4

5.13 SUBMERGED LANDS ACT OF 1953.....5-4

5.14 COASTAL BARRIER RESOURCES ACT AND COASTAL BARRIER IMPROVEMENT ACT OF 1990 5-4

5.15 RIVERS AND HARBORS ACT OF 1899 (33 U.S.C. §400 *ET. SEQ.*).....5-5

5.16 ANADROMOUS FISH CONSERVATION ACT (16 U.S.C. §§757A-757G) 5-5

5.17 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT.....5-5

5.18 MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT.....5-6

5.19 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT 5-6

5.20 UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES ACT OF 1970. 5-6

5.21 E.O. 11990, PROTECTION OF WETLANDS 5-6

5.22 E.O. 11988, FLOOD PLAIN MANAGEMENT 5-7

5.23 E.O. 12898, ENVIRONMENTAL JUSTICE 5-7

5.24 E.O. 13045, DISPARATE RISKS INVOLVING CHILDREN 5-7

5.25 E.O. 13112, INVASIVE SPECIES 5-8

5.26 E.O. 13186, MIGRATORY BIRDS 5-8

6 LIST OF PREPARERS 6-1

6.1 PREPARERS 6-1

6.2 REVIEWERS 6-1

7 PUBLIC INVOLVEMENT 7-1

7.1 SCOPING AND SUPPLEMENTAL EA 7-1

7.2 AGENCY COORDINATION 7-1

7.3 LIST OF RECIPIENTS 7-1

7.4 COMMENTS RECEIVED AND RESPONSES 7-1

8 REFERENCES 8-1

9 INDEX 9-1

APPENDIX A - SECTION 404(B) EVALUATION

APPENDIX B – COASTAL ZONE MANAGEMENT CONSISTENCY DETERMINATION

APPENDIX C – PERTINENT CORRESPONDENCE

APPENDIX D – MAILING LIST

LIST OF FIGURES

Figure 1. Project Vicinity Map. 1-2

Figure 2. Typical beach placement areas and the proposed sand sources associated with the "Sand Placement with a Combination of Sand Sources" Alternative. 2-4

Figure 3. Important Manatee Areas in the Project Vicinity. 3-6

Figure 4. Manatee Critical Habitat in the project area. 3-7

Figure 5. Piping plover critical habitat in the project vicinity. 3-8

Figure 6. Rufa red knot abundance in the project area. 3-9

Figure 7. Average rufa red knot counts in the project area by week from 1900-2017. 3-10

Figure 8. Benthic Resource Study Areas of Blind Pass and Johns Pass (Dial Cordy, 2009). 3-15

Figure 9. Benthic Resources in Blind Pass (Dial Cordy, 2009). 3-16

Figure 10. Benthic Resources in Johns Pass (Dial Cordy, 2009). 3-17

Figure 11. Coastal Barrier Resource System Units in the project area. 3-18

Figure 12. Outstanding Florida Waters in the project area. 3-19

LIST OF TABLES

Table 1: Summary of Direct and Indirect Effects. 2-7

Table 2. Threatened and Endangered Species that may potentially be found within the Project Area. 3-3

Table 3. Sea turtle nests by species for the Pinellas County shoreline from 2007 to 2016. 3-4

Table 4. Summary of EFH Designation for the Pinellas County Beach Erosion Control Project... 3-12

Table 5. Summary of cumulative effects. 4-18

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

Beach Erosion Control Project
Pinellas County, Florida

1 PROJECT PURPOSE AND NEED

1.1 PROJECT AUTHORITY

The beach erosion control project for Pinellas County, Florida, extends along 25 miles (40 kilometers) of barrier islands. Beach nourishment provides storm protection to residences and infrastructure along various Pinellas County barrier islands, and was authorized under the River and Harbor Act of 1966. Participation under this Act was extended for 50 years by the Water Resources Development Act of 1986. The Act provides for the restoration of 5,000 feet (1,515 meters (m)) of eroded shoreline on Clearwater Beach Island, 49,000 feet (14,848 m) of shoreline on Sand Key, 9,200 feet (2,728 m) on Treasure Island, 5,600 feet (1,697 m) on Long Key, and periodic nourishment as necessary. In addition, authorization under the 1986 Act includes construction of 600 feet (182 m) of revetment and a breakwater at Long Key, rehabilitation of the north groin at Johns Pass, and breakwaters along Sand Key.

1.2 PROJECT LOCATION

The project includes five barrier islands in Pinellas County, Florida, north of Tampa Bay: Mullet Key, Long Key, Treasure Island, Sand Key, and Clearwater Beach Island. These islands are elongate and parallel to the Gulf Coast of Pinellas County in a north-to-south string (**Figure 1**). While the authorized project encompasses the entire Pinellas County shoreline, sand placement has historically occurred only on portions of Long Key, Treasure Island, and Sand Key.

The next nourishment event is proposed to occur on the beaches of Sand Key, Treasure Island, and Long Key. Sand placement will occur along approximately 9.3 miles of shoreline between Florida Department of Environmental Protection (FDEP) Reference Monuments (R-monuments) R-56 and R-109. The only portion of shoreline that has not previously been constructed is located between R-107 and R-109. Sand placement activities typically occur in a targeted manner at the locations experiencing the most significant erosion. However, this Supplemental EA analyzes the effects of beach placement using the proposed sand sources for the authorized area that includes the entire Pinellas County shoreline. Placement could occur in any location where extensive erosion is observed, and the borrow source may be variable for each nourishment event.

1.3 PROJECT NEED OR OPPORTUNITY

Shoreline erosion and a lowered beach profile caused by storms, wave action, and currents are a serious concern to Pinellas County. The combination of receding shorelines and decreasing beach profiles increases the vulnerability of people and their property to storm damage. These conditions also reduce the shorelines' appeal for recreational use.

This project has been evaluated in a number of previous planning documents (see Section 1.5). This analysis updates the evaluation of the alternatives pursuant to the National Environmental Policy Act (NEPA) for the Pinellas County Beach Erosion Control Project (PCBECP). The planning objective remains the same: to identify the least environmentally damaging methods to provide efficient, economical, and effective shoreline erosion control, to restore and maintain the aesthetic and recreational appeal of shorelines, and to protect private, public, and commercial property against coastal storm damage.

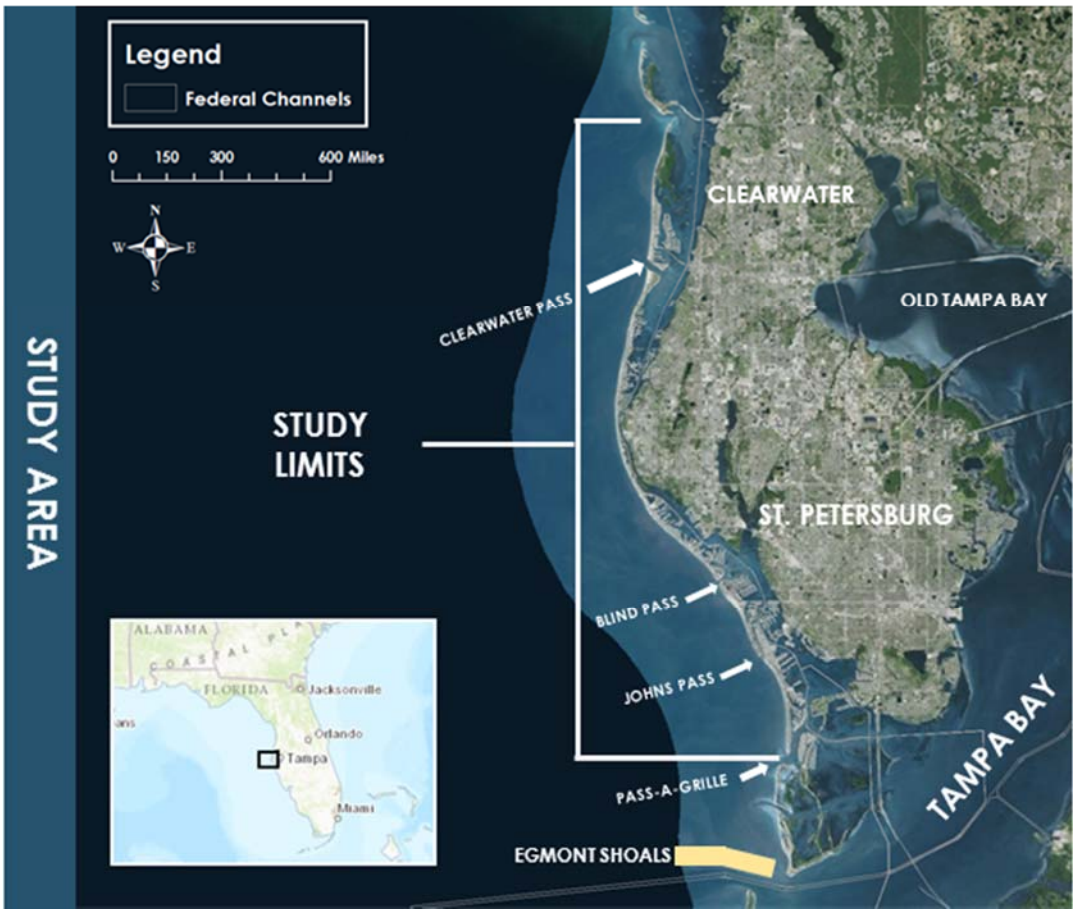

Figure 1. Project Vicinity Map.

1.4 AGENCY GOAL OR OBJECTIVE

The goal of this project is to restore the historical recreational carrying capacity and tourism amenities of the Pinellas County shorelines, and to protect existing upland structures from shoreline erosion associated with typical wave conditions and high frequency storm events. The objective is to accomplish this goal in the most economical and resource-efficient manner possible, incorporating regional sediment management principles to conserve sand resources.

1.5 RELATED DOCUMENTS

The following is a list of related documents:

a) Report of the Chief of Engineers, Department of the Army for Pinellas County Beach Erosion Control Study, Pinellas County, Florida, with Report of the Board of Engineers for Rivers and Harbors. 14 September 1966.

b) Beach Erosion Control Project Review Study and Environmental Impact Statement for Pinellas County, Florida. USACE. July 1984 (Revised December 1984).

c) Limited Re-evaluation Report and Environmental Summary for Pinellas County, Florida Beach Erosion Control Project. USACE. April 1994 (Revised August 1994).

d) Pinellas County, Florida Beach Erosion Control Project Feature Design Memorandum Northern Treasure Island. USACE. April 1995.

e) Pinellas County, Florida Beach Erosion Control Project 1st Renourishment Sand Key Segment Design Memorandum with Environmental Assessment. USACE. November 1996 (Revised March 1997).

f) Environmental Assessment, Maintenance Dredging, Johns Pass, Pinellas County, Florida. USACE. 2002.

g) Pinellas County, Florida Beach Erosion Control Project, 1st Renourishmend Sand Key Segment, Beach Performance Monitoring Report. USACE. August 2003.

h) Rehabilitation Effort for the Pinellas County Shore Protection Project Long Key Segment, Florida Project Information Report and Environmental Assessment. USACE. 2006.

i) Final Environmental Assessment, Beach Restoration Project, Treasure Island and Long Key, Pinellas County, Florida. USACE. 2009.

j) Final Supplemental Environmental Assessment, Supplemental Sand Source for Sand Key Beach Renourishment, Pinellas County Beach Erosion Control Project, Pinellas County, Florida. USACE. 2011.

1.6 DECISIONS TO BE MADE

This Supplemental Environmental Assessment (EA) will evaluate whether to restore Pinellas County beaches pursuant to the goals outlined in Section 1.4, and if so, to evaluate alternatives to accomplish that goal.

1.7 SCOPING AND ISSUES

1.7.1 Issues Evaluated in Detail

The following issues were identified be relevant to the proposed action during previous project scoping and appropriate for detailed evaluation:

1. Fish and Wildlife Resources;
2. Threatened and Endangered Species;
3. Essential Fish Habitat;
4. Coastal Barrier Resources;
5. Water Quality;
6. Cultural, Historic, and Archaeological Resources;
7. Native Americans;
8. Hazardous, Toxic and Radioactive Waste;
9. Air Quality;
10. Noise;
11. Aesthetic Resources;
12. Recreation Resources; and
13. Navigation.

1.7.2 Issues Eliminated from Detailed Analysis

There were no issues originally considered that were determined to be unimportant or irrelevant to the proposed action.

1.8 PERMITS, LICENSES, AND ENTITLEMENTS

The following state permits were issued in accordance with Section 401 of the Clean Water Act of 1977:

- Florida Department of Environmental Protection (FDEP) Permit Nos. 0238664-003-EE and 0238664-004-BE were *de minimis* exemptions granted to Pinellas County in 2008 and 2009 for the collection of offshore geotechnical vibracores.
- FDEP issued Permit 0270453-001-JC and 0270453-002-BV to the U.S. Army Corps of Engineers (USACE) for Johns Pass Maintenance Dredging with placement on Treasure Island on March 29, 2010, which expires on March 29, 2020.
- On July 6, 2011, FDEP issued Permit No. 0238664-001-JC to USACE to nourish 8.7 miles (14.0 km) of beach on Sand Key. The project included two beach fill segments from R-56 to R-66 and from 85 feet north of R-71A to R-107. A one-mile gap between the segments (from R-66 to R-71A) was not filled. The project was authorized to occur multiple times, on an as-needed basis, with the first event requiring approximately 1,017,000 cubic yards (cy) of beach-compatible sand.
- FDEP Variance No. 0238664-002-EV was granted to USACE on July 6, 2011, in association with Permit No. 0238664-001-JC. The variance authorized an expanded turbidity mixing zone that extends 150 meters offshore (or 300 meters offshore if there is no nearshore hardbottom) and up to 1,500 meters downcurrent from the point of discharge at the beach placement site.
- On April 18, 2012, the FDEP issued Permit Modification No. 0238664-005-JN to include a dune feature in the Sand Key Beach Nourishment template between four feet south of R-60 and 182 feet south of R-61A. The dune required an additional 2,000 cy of beach compatible sediment from the previously authorized borrow site.
- On October 26, 2012, the FDEP issued Permit Modification No. 0238664-006-JN to USACE to revise the Sand Key Beach Nourishment Permit. The modification extended the fill template from R-107 to R-108, along the dry beach only.
- FDEP Permit Modification No. 0238664-007-JN, issued on November 27, 2012, adds the Egmont Shoal East Borrow Area as a sand source to the Sand Key segment of the project.
- FDEP Permit Modification No. 0238664-008-JN, issued on December 16, 2016 to USACE and Pinellas County, adds Pinellas County as a Co-Permittee for beach nourishment at Sand Key, removes borrow area 'L' from the project description, removes the dune feature previously constructed at R-60 from the project description, and includes the location and the deeper authorized dredge depths of the Egmont Shoal East borrow area.
- FDEP Permit Modification No. 0270453-003-JN, issued on December 15, 2016 to USACE and Pinellas County, adds Pinellas County as a Co-Permittee for the maintenance dredging of Johns Pass and extends the permit duration until 2025.

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2 ALTERNATIVES

The alternatives section is the heart of this EA. This section describes in detail the no-action alternative, the proposed action, and other reasonable alternatives that were studied in detail. Then based on the information and analysis presented in the sections on the Affected Environment and the Probable Effects, this section presents the beneficial and adverse environmental effects of all alternatives in comparative form, providing a clear basis for choice among the options for the decision-maker and the public.

2.1 DESCRIPTION OF ALTERNATIVES

This section contains the various alternatives considered for this project. The 1984 *Beach Erosion Control Project Review Study and Environmental Impact Statement for Pinellas County, Florida* initially considered a wide variety of both nonstructural and structural alternatives for the project. The initial alternatives are listed below, and those considered as intermediate alternatives are shown in italics. The intermediate alternatives were those that passed the initial screening, and were carried forward for more detailed analysis.

Nonstructural Alternatives

NS-1, No Action;
NS-2, Rezoning of beach area;
NS-3, Modification of building codes;
NS-4, Construction setback line;
NS-5, Moratorium on construction;
NS-6, Flood insurance;
NS-7, Evacuation planning;
NS-8, Establish a no-growth program;
NS-9, Condemnation of land and structures; and
NS-10, Various combinations of above.

Structural Alternatives

S-1, Beach revetment;
S-2, Beach fill with periodic nourishment;
S-3, Beach fill with periodic nourishment stabilized by offshore breakwaters;
S-4, Beach nourishment with maintenance material from adjacent inlets;
S-5, Beach fill with periodic nourishment stabilized by groins;
S-6, Seawalls;
S-7, Beach fill with periodic nourishment and hurricane surge protection - sand dune;

S-8, Beach fill with periodic nourishment and hurricane surge protection project stabilized by offshore breakwaters;
S-9, Stabilization of beaches and dunes by vegetation;
S-10, Relocation of structures;
S-11, Flood proofing of structures; and
S-12, Various combinations of above.

From the intermediate alternatives described above, the No Action plan, the non-structural combination plan, and beach fill with periodic nourishment were developed in detail and analyzed in the 1984 Environmental Impact Statement.

Subsequent reports and NEPA documents focused on the sand sources used for future nourishment. The 1997 *PCBECP 1st Renourishment Sand Key Segment Design Memorandum with Environmental Assessment* analyzed the preferred alternative from the 1984 report, and included the use of Egmont Shoals as a sand source for the project. In an effort to find more economical sand sources than Egmont Shoals, the 2003 *Environmental Assessment of Alternative Sand Source Utilization for the PCBECP* evaluated the use of nine offshore areas and four ebb tidal shoals as potential borrow areas (sand sources) to be used in lieu of or in addition to the Egmont Channel Shoal area. The 2009 *Final Environmental Assessment, Beach Restoration Project, Treasure Island and Long Key, Pinellas County, Florida,* included the Johns Pass and Blind Pass navigation channels as sand sources, and expanded the location of the ebb tidal shoals associated with these inlets. Finally, the 2011 *Final Supplemental Environmental Assessment, Supplemental Sand Source for Sand Key Beach Renourishment, Pinellas County Beach Erosion Control Project, Pinellas County, Florida* conducted an assessment of an alternate offshore sand source, Borrow Area L, which was depleted during the most recent nourishment of Sand Key.

The past reports summarized above are incorporated into this assessment by reference.

2.1.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

The Preferred Alternative would dredge material from a combination of sand sources based on the availability of material. The sand sources include Egmont Shoals, Clearwater Pass, Johns Pass, Blind Pass, and Pass-a-Grille Inlet (see **Figure 1**). Sand could be obtained from both the navigational channels and from the ebb shoals of the inlets discussed.

Targeted nourishment will occur on beaches of Sand Key, Treasure Island, and Long Key. Sand Key nourishment will occur approximately 9.3 miles between FDEP Reference Monuments R-56 and R-109. Although it is part of the authorized project, the portion of shoreline from R-66 to R-71 is not typically included in the nourishment of Sand Key due to lack of public access; however, this area could be included if appropriate access and parking were provided. The portion of Sand Key between R-107 and R-125 has not yet been constructed and was not analyzed as part of the

1997 EA. On the northern segment of Treasure Island, nourishment would occur between R-126 and 400 feet south of R-128, and from R-136 to R-142. The Upham Beach segment of Long Key would receive sand from R-144 to R-148. Although these locations represent the areas that most typically require nourishment, this Supplemental EA analyzes the effects of beach placement using the proposed sand sources for the authorized area that includes the entire Pinellas County shoreline. Placement could occur in any location where extensive erosion is observed, and the borrow source may be variable for each nourishment event.

The beach quality borrow material from Johns Pass would be placed on Treasure Island and the beach quality borrow material from Blind Pass would be placed on Upham Beach, Long Key. Egmont Shoals would be used for all other sand requirements, including the placement at Sand Key. Volumes placed and the exact location of placement may vary based on the extent of erosion and availability of funds at the time of construction. Sand will be placed to fill the authorized beach template, which includes a design berm of 40 feet with between two and five years of advanced nourishment. The design elevation is six feet above mean low water. For areas with extensive nearshore hardbottoms, material may be placed above the mean high water line only to avoid effects to these resources. The periodic nourishment interval is estimated to be an average of five years.

Figure 2. Typical beach placement areas and the proposed sand sources associated with the "Sand Placement with a Combination of Sand Sources" Alternative. Note that the areas indicated above are those that are most erosive and typically require nourishment; however, all Pinellas County shorelines are included in this project area.

2.1.2 No Action Alternative

The No Action Alternative would result in no alteration to the current beach conditions. Under the No Action Alternative, recreational beach widths would continue to erode and eventually threaten habitable structures.

2.2 ISSUES AND BASIS FOR CHOICE

The Alternatives were evaluated based on the issues outlined in Section 2.6. The Preferred Alternative was selected due to its ability to meet the project's goals and objectives, outlined in Section 1.4.

2.3 PREFERRED ALTERNATIVE

Sand Placement Using a Combination of Sand Sources is the Preferred Alternative.

2.4 DREDGING METHODOLOGIES

The USACE does not normally specify the type of dredging equipment to be used. This is generally left to dredging industry to offer the most appropriate and competitive equipment available at the time. Never-the-less, certain types of dredging equipment are normally considered more appropriate depending on the type of material, the depth of access to the disposal or placement site, the amount of material, the distance to the disposal or placement site, the wave-energy environment, etc. This project has used both a hydraulic cutterhead dredge and a hopper dredge during previous nourishment events. A more detailed description of types of dredging equipment and their characteristics can be found in Engineer Manual, EM 1110-2-5025, *Engineering and Design - Dredging and Dredged Material Disposal*. This Engineer Manual is available on the internet at http://www.usace.army.mil/publications/eng-manuals/em1110-2-5025/toc.htm.

2.5 ALTERNATIVES ELIMINATED FROM DETAILED EVALUATION

Since the project's initial authorization, a number of offshore sand sources have been identified in previous NEPA analysis listed in Section 1.5. Several were subsequently used during previous nourishment events and no longer contain sufficient volumes of sand for future nourishment events. These shoals will not be considered as sand sources in this Supplemental EA.

2.6 COMPARISON OF ALTERNATIVES

Table 1 includes the alternatives considered and summarizes the major features and consequences of the Preferred and No Action alternatives. Refer to Section 4.0, Environmental Effects for a more detailed discussion of the potential effects of the alternatives analyzed.

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Table 1: Summary of Direct and Indirect Effects.

ALTERNATIVE ENVIRONMENTAL FACTOR	Sand Placement using a Combination of Sand Sources (Preferred Alternative)	No Action Alternative
GENERAL ENVIRONMENTAL SETTING	Long-term (5-10 years) changes in bottom bathymetry at the sand source locations. Native beach sediments would be maintained with only minor variations in shell content and color.	Extensive erosion along Pinellas County shorelines. No change to the bottom bathymetry or the nearshore habitats.
THREATENED AND ENDANGERED SPECIES	Temporary effects to manatees and sea turtles (if a hopper dredge is used) during project construction. Declines in sea turtle nesting for one to two years post-nourishment. Temporary effects to piping plover and red knot foraging habitat. Appropriate measures would be implemented to ensure the safety and protection of these species. The project would not adversely modify manatee critical habitat.	Declines in sea turtle nesting if shorelines are hardened with seawalls and jetties as a result of ongoing erosion.
FISH AND WILDLIFE RESOURCES	Temporary effects to fish and benthic invertebrates during project construction. Temporary effects to nesting shore birds (if constructed during the summer months). Beneficial effects to resting, foraging and nesting habitats	No adverse effects are expected.
ESSENTIAL FISH HABITAT (including hardgrounds and seagrasses)	Temporary effects to benthic invertebrates in the water column during dredging activities. No effects to submerged aquatic vegetation. Nearshore hardground communities were mitigated in the areas previously constructed. Material between R107-R125 would be placed above the Mean High Water Line (MHWL) to avoid effects to nearshore hardground communities in this region. Surveys will be conducted prior to nourishment to locate pipeline corridors that will avoid effects to nearshore hardgrounds.	Ephemeral nearshore hardbottom exposure may be more stable with increasing beach erosion.

ALTERNATIVE ENVIRONMENTAL FACTOR	**Sand Placement using a Combination of Sand Sources (Preferred Alternative)**	**No Action Alternative**
COASTAL BARRIER RESOURCES	No change to coastal barrier resources, as this area is heavily developed.	No adverse effects are anticipated.
WATER QUALITY	Temporary increase in turbidity during dredging and placement activities.	No adverse effects are anticipated.
AIR QUALITY	Temporary, localized decrease in air quality due to the operation of the construction equipment.	No adverse effects are anticipated.
HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE	No adverse effects are anticipated.	No adverse effects are anticipated.
NOISE	Temporary increase in noise levels in the vicinity of the construction equipment.	No adverse effects are anticipated.
AESTHETIC RESOURCES	Temporary decrease in the aesthetic value of the shoreline and nearshore areas due to construction equipment and the sand movement during project construction.	Gradual decline in beach aesthetics as the shoreline erodes and the beach system is replaced with hardened structures.
RECREATION RESOURCES	Temporary decrease in the availability of nearshore region by recreational boaters and divers; temporary effects to beachgoers during beach placement.	Long term decline in recreational uses of the beach as it erodes and is replaced with hardened structures.

ALTERNATIVE ENVIRONMENTAL FACTOR	Sand Placement using a Combination of Sand Sources (Preferred Alternative)	No Action Alternative
NAVIGATION	Temporary decrease in the availability of the nearshore region for use by vessels; long term benefit to the navigable capacity of passes if they are used as sand sources.	Long term decline in the navigable capacity of the passes if they are not dredged.
CULTURAL RESOURCES AND HISTORIC PROPERTIES	No effect. Avoidance buffers will be applied to identified targets. Additional cultural resource surveys and consultation may be required.	No effect.

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2.7 MITIGATION

Mitigation for any adverse effects to hardbottom habitats associated with the PCBECP will be based on pre-construction hardbottoms surveys conducted of the pipeline corridors to map and assess conditions present in the construction area. New adverse effects to hardbottom resources will be mitigated by the placement of artificial reefs similar to those used for mitigation in prior projects within Pinellas County. Pinellas County has an organized artificial reef program which uses concrete and limestone boulders for the creation of artificial reefs. The artificial reefs will be created as necessary and placed to provide similar habitat to the habitat that was lost. It is proposed that these reefs will be monitored twice a year (seasonally) for two years for recruitment and their overall success at providing similar habitat. FDEP, USACE, and Pinellas County will agree upon the details of the monitoring plan prior to implementation. See also Sections **Error! Reference source not found.** and 0.

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3 AFFECTED ENVIRONMENT

The Affected Environment section succinctly 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 affect or 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 baseline conditions for determining the environmental effects of the preferred alternative.

3.1 GENERAL ENVIRONMENTAL SETTING

The project area is on the coast of the Gulf of Mexico in Pinellas County, Florida. Pinellas County has a subtropical climate with an average annual rainfall of 53 inches (134 centimeters (cm)) per year. Damaging storms with winds up to hurricane strength can occur throughout the year. Seven elongated, low-profile barrier islands or keys roughly parallel the mainland. The beaches along these barrier islands are subject to very dynamic conditions and are eroding at varying rates by waves, winds, and currents.

Waves are influenced by wind direction, and wind direction in this region is more often from the east. The estimated mean wave height off Sand Key is 0.33 to 1.15 feet (10 to 35 cm) and the spring-tidal range in this area is less than 3.00 feet (100 cm) (Hine *et al*., 2003). The longshore current created by waves breaking at an angle to the shore is the main current that affects the surf zone. Longshore currents are responsible for sand transport along the coast. The net southerly drift rate along Pinellas County is estimated to range from 10,000 cy of sand per year at the northern end to 50,000 cy of sand per year at the southern end.

3.1.1 Sediment Characteristics

Material on Pinellas County beaches consists of poorly graded, fine-grained quartz sand with a mean grain size of 0.20 millimeters (mm), an average carbonate content of 22 percent, and an average silt content of 1.3 percent (USACE, 2011). The composite mean grain size of the sediments within the Egmont Shoal Borrow Area ranges from 0.17 to 0.42 mm. These grain sizes are compatible with the sediment grain sizes historically found along the beaches at Sand Key, which range from 0.19 to 0.29 mm. The total percentage of fine sediments found within the core samples was less than seven percent.

3.2 FISH AND WILDLIFE RESOURCES

This section contains a brief description of the fish and wildlife found in the vicinity of the Pinellas County shoreline.

3.2.1 Migratory Birds

More than 70 species of birds have been observed in the Gulf of Mexico and the coastal regions of southwest Florida during studies from 1996 to 2005 (Davis 1996; Davis *et al.* 2000; Avent 2004; Russell 2005). Bird species observed in the Gulf are predominantly trans-migrant shorebirds, wading birds, and waterfowl. Federal regulatory protection of most birds falls under the Migratory Bird Treaty Act (MBTA; 16 U.S.C. §§703-712) and the Endangered Species Act (ESA; 16 U.S.C. §1538). Birds protected under the MBTA include members of the seabird guild, which represents a wide range of species dependent on the resources of the pelagic zone in the Gulf of Mexico. Much of their time is spent in or over water and they are capable of staying far from land for long periods. Most of these birds have adaptive salt glands that allow them to regulate the salt content in their blood (Ehrlich *et al.* 1988). Most species in this guild are colonial nesters that leave the nest to venture far from natal areas. Some seabirds spend significant portions of their life cycle offshore and may occur in the project area, such as the magnificent frigatebird (*Fregata magnificens*), greater shearwater (*Puffinus gravis*), sooty shearwater (*P. grisseus*), Audubon's shearwater (*P. lherminieri*), manx shearwater (*P. puffiinus*), masked booby (*Sula dactylatra*), northern gannet (*Morus bassanus*), Wilson's storm-petrel (*Oceanites oceanicus*), and band-rumped storm-petrel (*Oceanodrama castro*). Gulls and terns, pelicans, and cormorants divide their time more or less equally between offshore and coastal waters (Ehrlich *et al.* 1988) and may occur in the project area.

The west Florida coast serves as a principal route of the Atlantic Flyway for more than 60 migratory landbird species. Many of the birds that breed east of the Allegheny Mountains move southward in fall, through northwestern Florida, crossing the Gulf to the coastal regions of central Mexico where they follow a land route for the remainder of the journey to Cuba or South America (Lincoln *et al.* 1998). Many of the migrants that could pass through the project area are unlikely to stop except to rest on a dredge or boat during migration. Under this condition, all are protected by the MBTA.

3.2.2 Fish Resources

The fish species most frequently observed while diving on artificial and natural nearshore hardbottom off Sand Key were sheepshead *(Archosargus probatocephalus)*, gag grouper *(Mycteroperca microlepus)*, and sand perch *(Diplectrum formosum)*. Grey snapper *(Lutjanus griseus)* and spottail pinfish *(Diplodus holbrooki)* were also frequently seen (CP&E 2007). Other species observed included belted sand fish *(Serranus subligarius)*, black seabass *(Centropristis*

striata), hogfish *(Lachnolaimus maximus)*, lined seahorse *(Hippocampus erectus)*, and snook *(Centropomus undecimalis)*.

Otter trawl sampling over Outer Continental Shelf (OCS) borrow areas off Siesta Key and Sanibel Island (approximately 58.2 to 65.3 miles south of Tampa Bay) in 2005 and 2006 (Zarillo *et al*. 2008) collected 2,317 fishes from 59 taxa. The most abundant demersal fish species collected were barred searobin *(Prionotus martis)*, leopard searobin *(P. scitulus)*, sand seabass *(Diplectrum formosum)*, juvenile grunts (Haemulidae), and twospot flounder *(Bothus robinsi)*. Common pelagic species included Atlantic bumper *(Chloroscombrus chrysurus)* and Atlantic thread herring *(Opisthonema oglinum)*. Abundant macroinvertebrates included iridescent swimming crab *(Portunus gibbesii)*, five-notched sand dollar *(Encope michelini)*, white shrimp *(Litopenaeus setiferus)*, pink shrimp *(Farfantepenaeus duorarum)*, and blotched swimming crab *(P. spinimanus)*.

The West Florida Shelf is an important spawning and larval nursery ground for many taxa of fishes (Houde and Chitty 1976; Lyczkowski-Shultz *et al.* 2004). Ichthyoplankton sampling collected 621 fish larvae over OCS borrow areas off Siesta Key and Sanibel Island south of Borrow Area L (Zarillo *et al*. 2008). Larval gobies and striped anchovy *(Anchoa hepsetus)* were most abundant in the ichthyoplankton samples.

3.2.3 Marine Mammals

The marine mammals of the Gulf of Mexico are represented by members of the taxonomic order Cetacea, which is divided into the suborders Mysticeti (i.e., baleen whales) and Odontoceti (i.e., toothed whales), as well as the order Sirenia, which includes the manatee. Within the Gulf of Mexico, there are 28 species of cetaceans (seven mysticete and 21 odontocete species) and one sirenian species, the manatee (Jefferson *et al.* 1992; Davis *et al.* 2000). Bottlenose dolphins (*Tursiops truncatus)* and Atlantic spotted dolphins (*Stenella frontalis*) are common in shallow Gulf waters [up to 656 feet (200 m) deep; Würsig, Jefferson, and Schmidly, 2000]. The Florida manatee is discussed further in Section 3.3.

3.3 THREATENED AND ENDANGERED SPECIES

Table 2 lists protected species located in the project area.

Table 2. Threatened and Endangered Species that may potentially be found within the Project Area.

Common Name	Scientific Name	ESA Status
Loggerhead Turtle	*Caretta caretta*	Threatened
Green Turtle	*Chelonia mydas*	Threatened
Kemp's Ridley Turtle	*Lepidochelys kempii*	Endangered

Common Name	Scientific Name	ESA Status
Hawksbill Turtle	*Eretmochelys imbricata*	Endangered
Leatherback Turtle	*Dermochelys coriacea*	Endangered
Florida Manatee	*Trichechus manatus latirostris*	Threatened
Piping Plover (wintering)	*Charadrius melodus*	Threatened
Red Knot (wintering)	*Calidris canutus rufa*	Threatened
Gulf Sturgeon	*Acipenser oxyrhynchus desotoi*	Threatened

3.3.1 SEA TURTLES

Loggerhead (*Caretta caretta*), green (*Chelonia mydas*), Kemp's ridley (*Lepidochelys kempii*), and hawksbill (*Eretmochelys imbricata*) turtles occur in and around Pinellas County (Meylan *et al*., 1998). The leatherback (*Dermochelys coriacea*) turtle is also reported to occur in waters offshore of Pinellas County (USFWS, 2010). Most sea turtles in the Tampa Bay area are loggerheads (Meylan *et al*., 1998). The loggerhead and green are federally listed as threatened; the other turtle species are listed as endangered.

3.3.1.1 Nesting Habitat

Loggerheads regularly nest on Pinellas County beaches (**Table 3**). Greens, Kemp's ridleys, and hawksbills are infrequent nesters on county beaches as well. The U.S. Fish and Wildlife Service (USFWS) designated terrestrial critical habitat for the loggerhead turtle in 2014. There is no loggerhead terrestrial critical habitat located in the project area.

Table 3. Sea turtle nests by species for the Pinellas County shoreline from 2007 to 2016. Data is courtesy of the FWC/FWRI Statewide Nesting Beach Survey Program Database as of May 23, 2017.

Year	County	Loggerhead Nest	Green Turtle Nest	Leatherback Nest	Hawksbill Nest	Kemp's Ridley Nest
2007	Pinellas	78	0	0	0	1
2008	Pinellas	196	0	0	0	0
2009	Pinellas	212	0	0	0	0
2010	Pinellas	153	1	0	0	0
2011	Pinellas	159	0	0	0	2
2012	Pinellas	316	0	0	0	0
2013	Pinellas	385	1	0	0	0
2014	Pinellas	363	0	0	0	0

Year	County	Loggerhead Nest	Green Turtle Nest	Leatherback Nest	Hawksbill Nest	Kemp's Ridley Nest
2015	Pinellas	420	0	0	0	1
2016	Pinellas	498	0	0	0	3

3.3.1.2 Offshore Habitat

National Marine Fisheries Service (NMFS) designated marine critical habitat for the loggerhead turtle in 2014. There is no loggerhead marine critical habitat located in the project area.

3.3.2 Florida Manatee

The Florida manatee (*Trichechus manatus latirostris*) is known to occur in the project vicinity. There is an Important Manatee Area designated at Pass-a-Grille Inlet and in the backbay areas east of Treasure Island and Long Key (see **Figure 3**). The closest manatee critical habitat is located in the Manatee River, near the south bank of the mouth of Tampa Bay (see **Figure 4**).

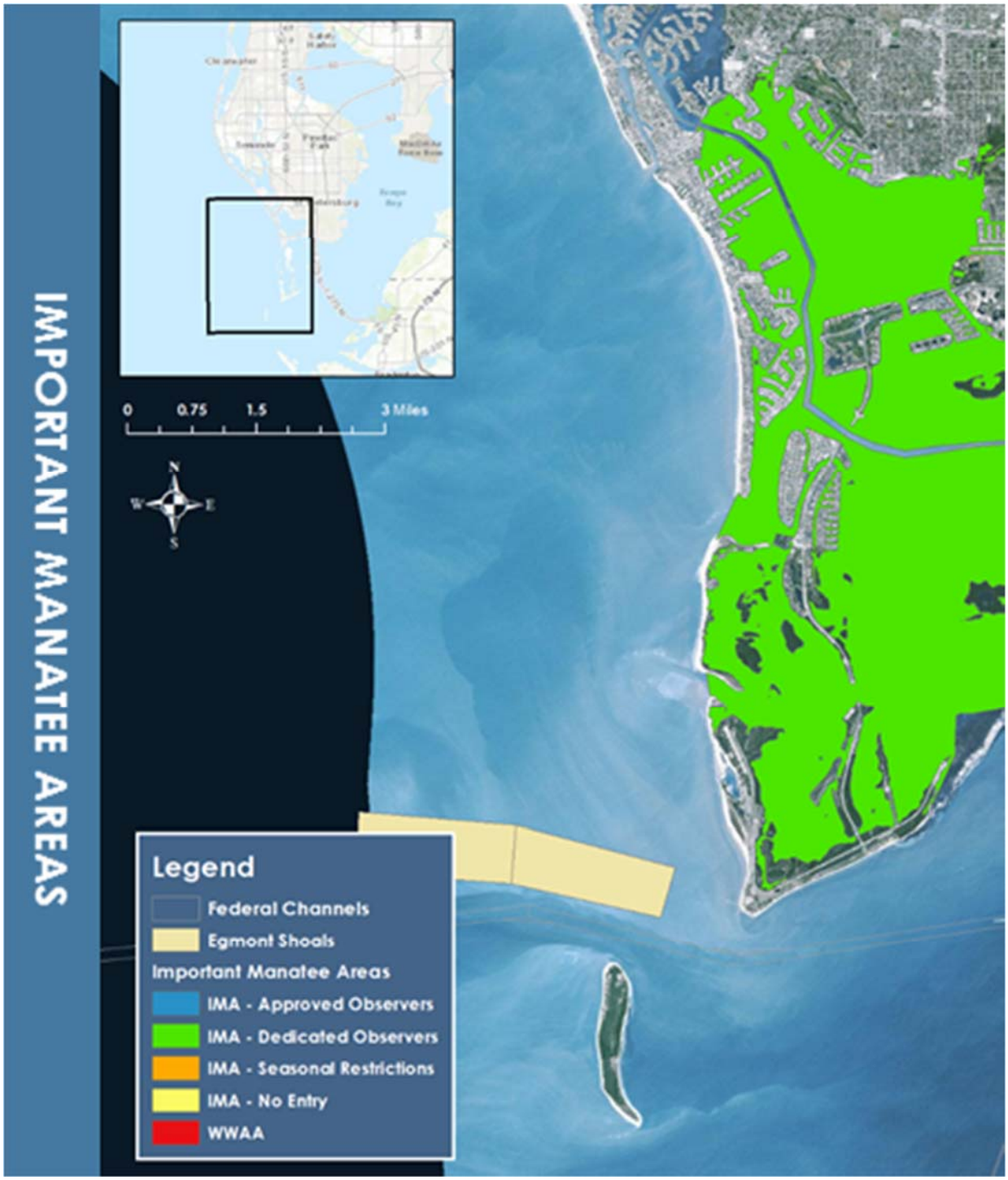

Figure 3. Important Manatee Areas in the Project Vicinity.

Figure 4. Manatee Critical Habitat in the project area.

3.3.3 Piping Plover

Piping plovers (*Charadrius melodus*) regularly over-winter along Gulf Coast beaches. While piping plover designated critical habitat is located to the north and to the south of the project area, there is no designated critical habitat within the project limits (see Figure 5).

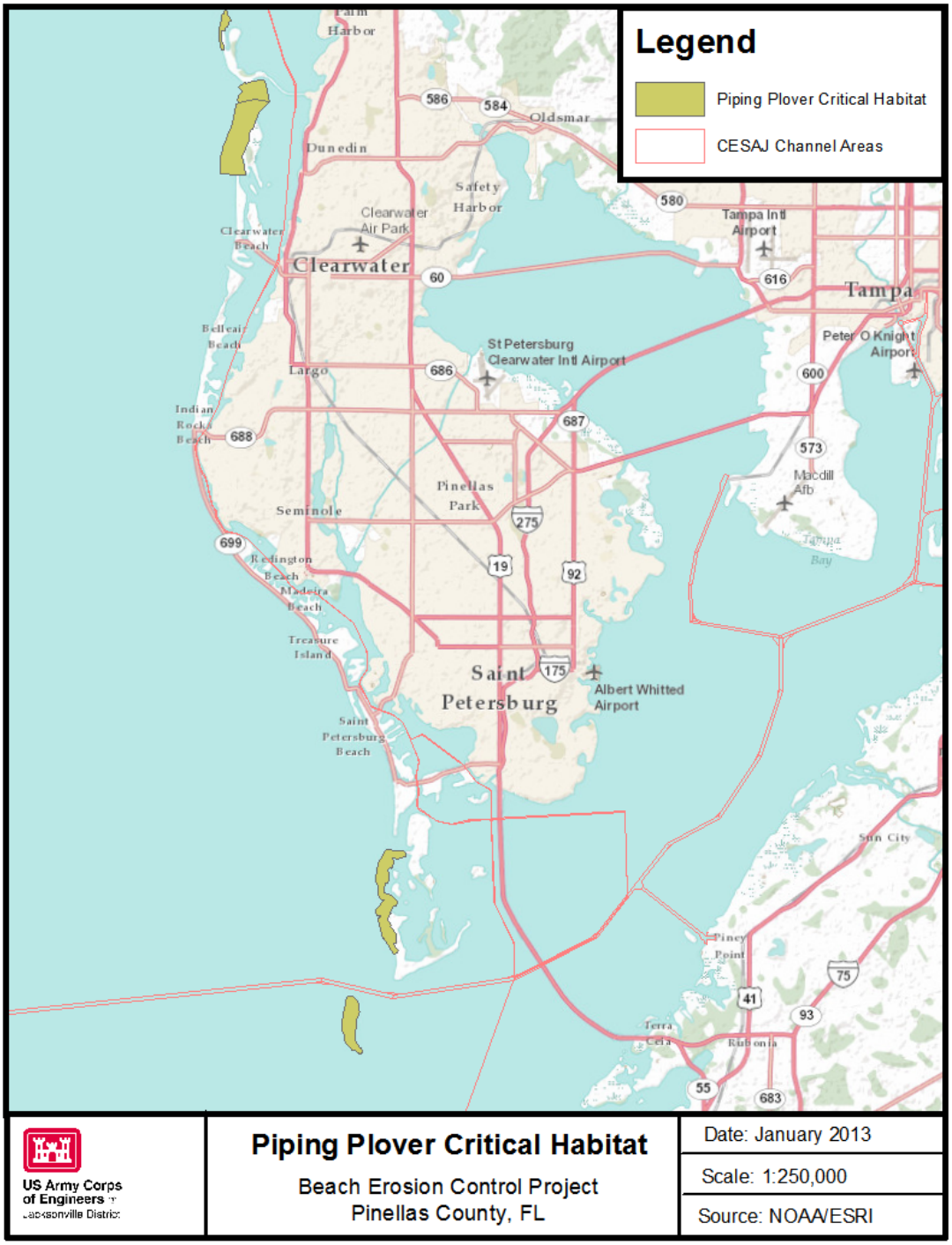

Figure 5. Piping plover critical habitat in the project vicinity.

3.3.4 Rufa Red Knot

The Gulf Coast of Florida, and Pinellas County in particular, is one of the most important wintering sites for the *rufa* subspecies of the red knot (*Calidris canutus rufa*). The red knot nests in the

summers in Canada and the Great Lakes region, and winters in South America. Some individuals overwinter along the Gulf Coast, and others use it as a stopover location to build their energy stores for the remainder of the migration to points further south.

The red knot was listed as a threatened species under the Endangered Species Act in 2014. Although critical habitat has not yet been designated for the species, the project area contains suitable habitat for the red knot. Data from the eBird database indicate that they are most often found along the Pinellas County beaches from mid-July through the fall months, but can occur with regularity through the winter until mid-May (Sullivan *et al.,* 2009; see Figure 6 and Figure 7).

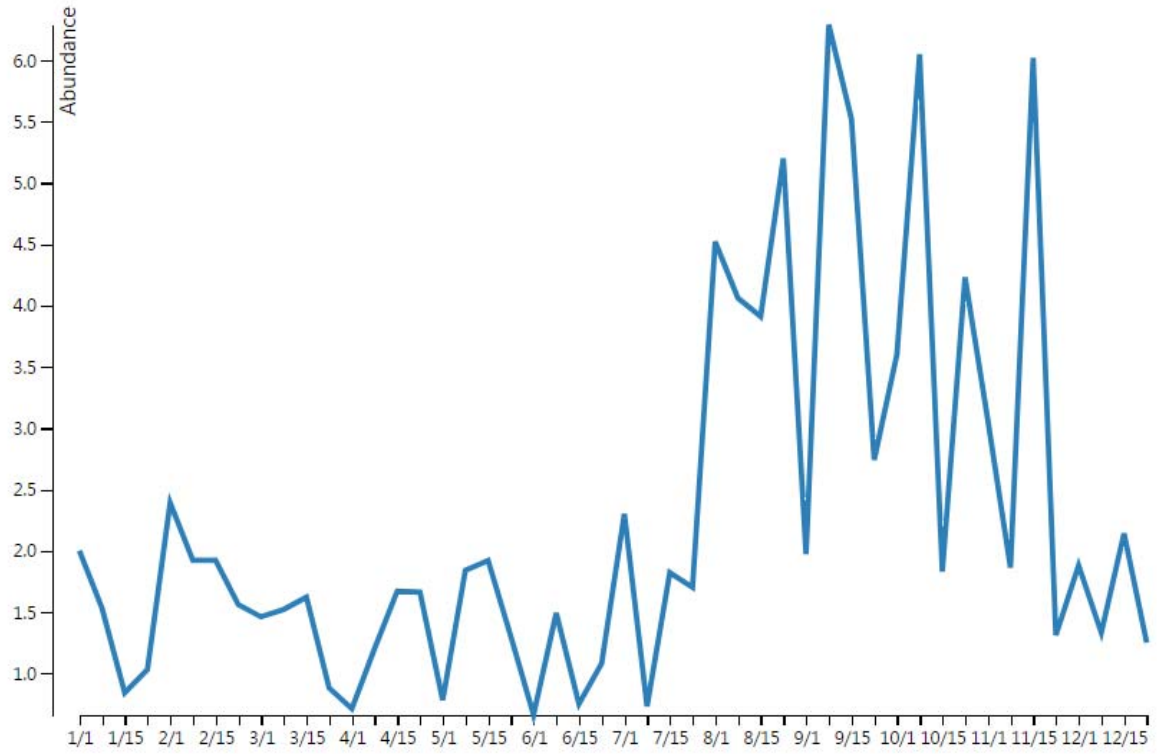

Figure 6. Rufa red knot abundance in the project area. Abundance is the average number of birds reported on all checklists within a specified date range and region. Image provided by eBird (www.ebird.org) and created May 25, 2017.

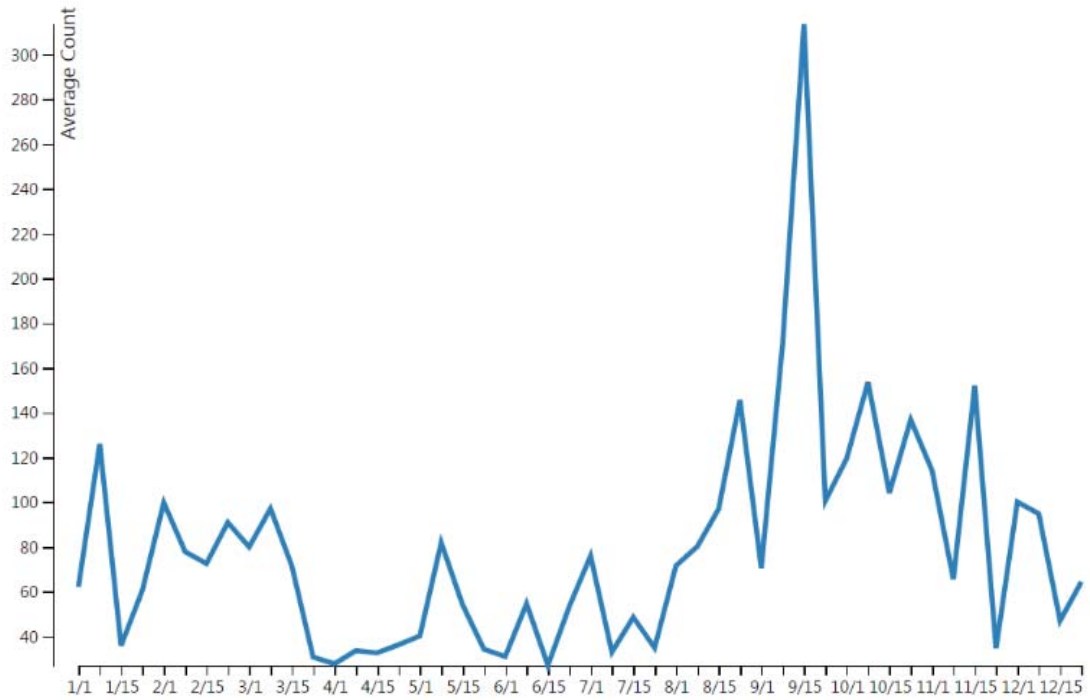

Figure 7. Average rufa red knot counts in the project area by week from 1900-2017. "Average Count" is the average number of birds seen on eBird checklists with a positive observation for the species within a specified date range and region. Image provided by eBird (www.ebird.org) and created May 25, 2017.

3.3.5 Gulf Sturgeon

The Gulf sturgeon (*Acipenser oxyrinchus desotoi*) is a geographically distinct subspecies of the Atlantic sturgeon (*Acipenser oxyrinchus).* The Gulf sturgeon is anadromous and inhabits Gulf of Mexico watersheds. During the warm months, sturgeon live in coastal rivers from Louisiana to Florida; in cooler months, sturgeon are found in the Gulf of Mexico, bays, and estuaries. Sub-adults and adults spend approximately eight to nine months of each year in rivers and three to four months during the winter in estuaries or the Gulf of Mexico. Sturgeon younger than two years old may remain year-round in rivers and estuaries and not enter Gulf waters (USFWS and GSMFC 1995). Mud bottoms, sand bottoms, and seagrass areas appear to be important habitats for this species.

Gulf sturgeon may not be sexually mature until 8 or 12 years of age for females and seven to nine years old for males. Adult sturgeon spawn during the spring in freshwater and migrate to marine and estuarine waters in the fall. Spawning may only occur in specific rivers. Sturgeon are bottom feeders and typically feed on macroinvertebrates, including brachiopods, mollusks, worms, and crustaceans. Sturgeon do not appear to forage in the rivers and only feed in estuaries and the Gulf of Mexico (NOAA 2010). Gulf sturgeon critical habitat is located between the eastern portion of Lake Pontchartrain in Louisiana and Suwannee Sound in Florida. This project location is not within the critical habitat designated for Gulf sturgeon. Gulf sturgeon have been reported

sporadically in Pinellas County and nearby areas; however, this is the southern limits of their typical habitat. In 1992, a Gulf sturgeon was caught one mile west of Redington Beach on Sand Key. In 1987, a female sturgeon was caught in Tampa Bay near Pinellas Point (USFWS and GSMFC 1995).

3.4 ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA; 16 U.S.C. §801 *et.* Seq.) (PL 104-208) outlines the Secretary of Commerce and Fishery Management Council authority and responsibilities for the protection of essential fish habitat (EFH). The Act specifies that each Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act. EFH is defined in the Act as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." 50 C.F.R. Part 600, Subpart J establishes guidelines to assist the Regional Fishery Management Councils and the Secretary in the description and identification of EFH in fishery management plans (FMPs), including identification of adverse effects from both fishing and non-fishing activities on EFH, and identification of actions required to conserve and enhance EFH. The regulation promotes the protection, conservation, and enhancement of EFH. The definition of EFH may include habitat for individual species or an assemblage of species; whichever is appropriate within each FMP.

Pursuant to the MSFCMA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), the Gulf of Mexico Fisheries Management Council (GMFMC, 1998) has designated marine areas of non-vegetated bottoms, live bottoms (i.e., hardbottoms), and water columns within the study area as EFH. This Supplemental EA is prepared consistent with the Finding between USACE Jacksonville District and NMFS Southeast Regional Office regarding the coordination of EFH consultation requirements with NEPA (NMFS, 1999).

Essential Fish Habitat in the project area is summarized in this section. The project areas is designated as EFH for 31 species or species groups as discussed in the 2011 EA (USACE, 2011; see Table 4). The managed species include coral and four species of crustaceans from the *Shrimp Fishery Management Plan*, the *Stone Crab Fishery Management Plan,* and the *Spiny Lobster Fishery Management Plan,* as wells as 27 species of fishes from the *Red Drum*, *Reef Fish*, *Coastal Migratory*, and *Highly Migratory Fishery Management Plans*. The Gulf of Mexico Fisheries Management Council (GMFMC, 1998) has designated marine areas of non-vegetated bottoms, live bottoms, and water columns within the study area as EFH.

Table 4. Summary of EFH Designation for the Pinellas County Beach Erosion Control Project.

Species	Scientific Name	Young of Year or Neonate	Juveniles	Adults
Coral Species		X	X	X
Shrimp Fishery				
brown shrimp	*Farfantepenaeus aztecus*	X	X	X
pink shrimp	*F. duorarum*	X	X	X
Stone Crab Fishery				
Florida stone crab	*Menippe mercenaria*	X	X	X
Spiny Lobster Fishery				
spiny lobster	*Panulirus argus*	X	X	X
Red Drum Fishery				
red drum	*Sciaenops ocellatus*	X	X	X
Reef Fish Fishery				
gag grouper	*Mycteroperca microlepis*	X	X	X
gray snapper	*Lutjanus griseus*	X	X	X
gray triggerfish	*Balistes capriscus*	X	X	X
greater amberjack	*Seriola dumerili*	X	X	X
lane snapper	*L. synagris*	X	X	X
lesser amberjack	*S. fasciata*	X	X	X
red grouper	*Epinephelus morio*	X	X	X
red snapper	*L. campechanus*	X	X	X
scamp grouper	*M. phenax*	X	X	X
yellowtail snapper	*Ocyurus chrysurus*	X	X	X
Coastal Migratory Pelagic Fishery				
bluefish	*Pomatomus saltatrix*			X
dolphin	*Coryphaena hippurus*			X
cobia	*Rachycentron canadum*	X	X	X
king mackerel	*Scomberomorus cavalla*	X	X	X
little tunny	*Euthynnus alletteratus*	X	X	X
Spanish mackerel	*S. maculatus*	X	X	X
Highly Migratory Pelagic Fishery				
blacknose shark	*Carcharinus acronotus*			X
blacktip shark	*C. limbatus*	X	X	X
bonnethead shark	*Sphyrna tiburo*		X	
bull shark	*C. leucas*	X	X	X
great hammerhead shark	*S. mokarran*			X
lemon shark	*Negaprion brevirostris*		X	X
sandbar shark	*C. plumbeus*	X	X	X
spinner shark	*C. brevipinna*	X		

Species	Scientific Name	Young of Year or Neonate	Juveniles	Adults
nurse shark	*Ginglymostoma cirratum*		X	X
tiger shark	*Galeocerdo cuvieri*		X	

No Habitat Areas of Particular Concern are located within or near the project site.

3.4.1 Hardgrounds

Hardgrounds provide substrate for benthic organisms, crevices where organisms can seek protection, and foraging habitat for a number of aquatic species. Hardgrounds can be of various types, artificial or natural, such as reefs, with high and/or low relief, and can be of any shape. Hardgrounds in the nearshore waters of Sand Key generally consists of mixed benthic communities of epifaunal organisms such as algae, sponges, octocorals, stony corals, hydroids, anemones, barnacles, bryozoans, decapods crustaceans, and gastropods. Many of these organisms are attached directly to the substrate.

Indian Shores, the majority of Indian Rocks Beach, Redington Shores, and North Redington Beach were nourished as part of the initial construction. Sidescan sonar surveys of these areas were conducted in 1991, 1993, and 1995-1996 following the initial construction. Estimates from the 1991 and 1993 sidescan sonar surveys indicated extensive hardground presence inside the anticipated equilibrium toe-of-fill for the first nourishment of this area; however, subsequent field verification and comparison with the updated surveys conducted in 1995-1996 indicated that there was an error in the interpretation of the surveys. The studies concluded that there were high relief hardgrounds at the southern end of the project at R-104 (relief up to 3½ and 4 feet). In the vicinity of Indian Rocks Beach at R-83, the divers verified the medium relief hardgrounds with relief up to 2½ feet. This suggested that these areas recruited well after previous nourishments.

Using the corrected estimates derived from the sidescan sonar survey performed in September 1996, estimated hardgrounds within the toe-of-equilibrium along the previously nourished portion of Sand Key prior to the second nourishment was approximately 7.9 acres, which included 0.1 acres for areas of new construction at Indian Rocks Beach and 7.8 acres for areas that had been previously constructed.

The 1995-1996 sidescan sonar surveys also showed scattered hardgrounds in the Clearwater Beach and Belleair Beach portions of the project area. Subsequent groundtruthing efforts conducted by USACE and FDEP biologists did not observe hardground communities during field surveys in these areas. The field biologists concluded that these areas comprised ephemeral hardgrounds with one foot of relief or less, and mitigation was not required.

In 2007, Coastal Planning & Engineering, Inc. (CPE), marine biologists collected and reviewed historic nearshore and offshore hardbottom mapping data as well as previous studies of the Sand Key segment of the project area. Data were evaluated to determine if a baseline condition could be established and applied to future project activities, and if any effects to benthic resources have occurred. Significant discrepancies in historic data were also evaluated to determine if the presence or absence of resources is due to previous project construction effects, natural sand movement and the ephemeral nature of the resource, or inconsistencies in remote sensing surveys. In addition, a quantitative comparison of benthic resource exposure changes between the 2005 *in situ* hardbottom edge mapping and the 2007 *in situ* hardbottom edge mapping conducted by CPE marine biologists was made to investigate the possibility of more recent and verifiable project effects (Craft, Suthard, and Kruempel, 2007).

Dial Cordy and Associates (2009) conducted a benthic resources survey of the Blind Pass and Johns Pass sand source locations (see Figure 8 for study area), and did not identify any hardbottom communities during these surveys.

The Egmont Shoals sand source does not contain any hardground habitat.

3.4.2 Submerged Aquatic Vegetation

Benthic resource surveys of Blind Pass and Johns Pass were conducted prior to nourishment at Treasure Island and Long Key in 2010 (Dial Cordy, 2009). Shoal grass (*Halodule wrightii*) was identified in the Intracoastal Waterway (ICWW), east of the Blind Pass entrance. The location of seagrasses was in shallow water (<1 m) landward of the current channel side slopes. No seagrasses were documented along channel side slopes or within the channels.

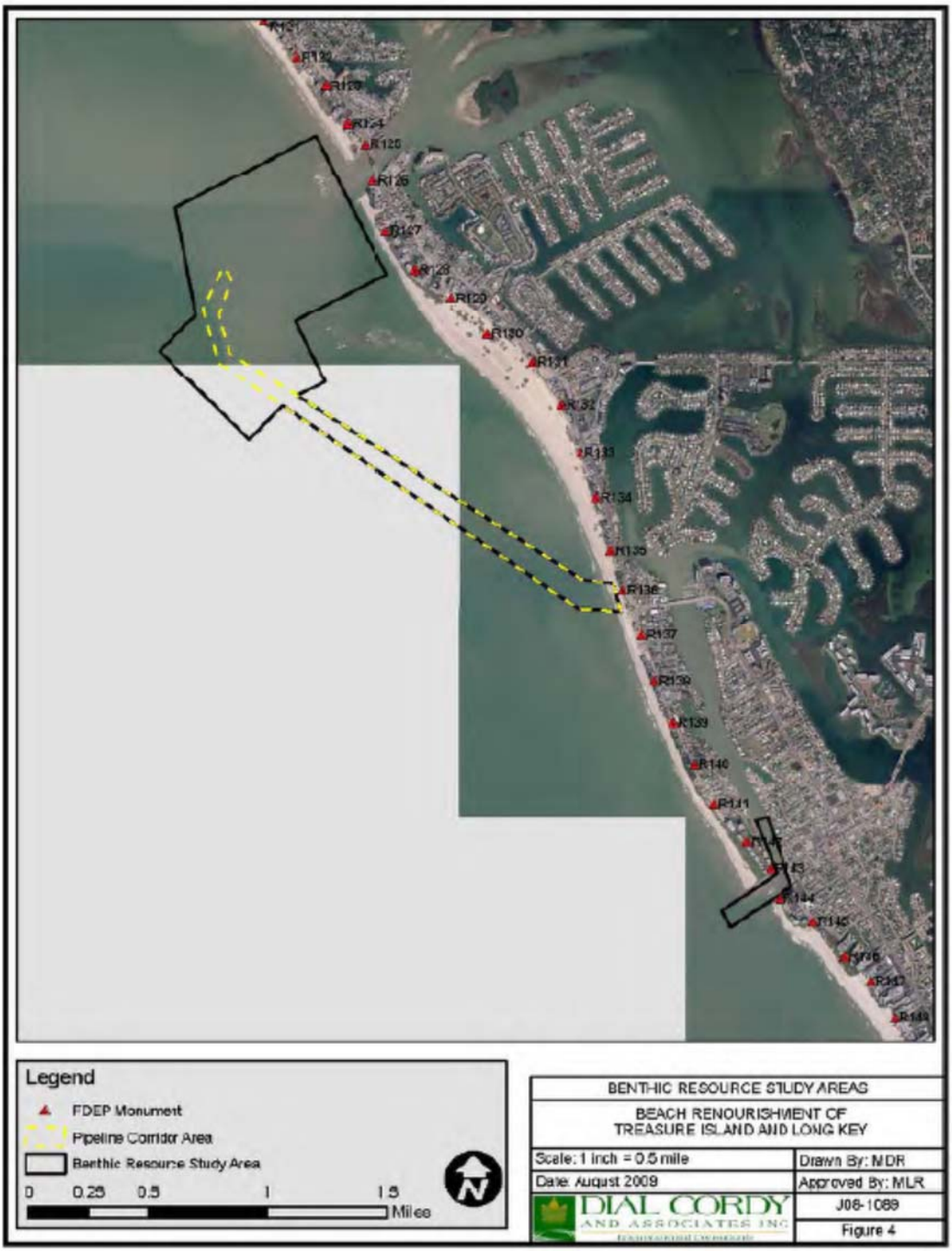

Figure 8. Benthic Resource Study Areas of Blind Pass and Johns Pass (Dial Cordy, 2009).

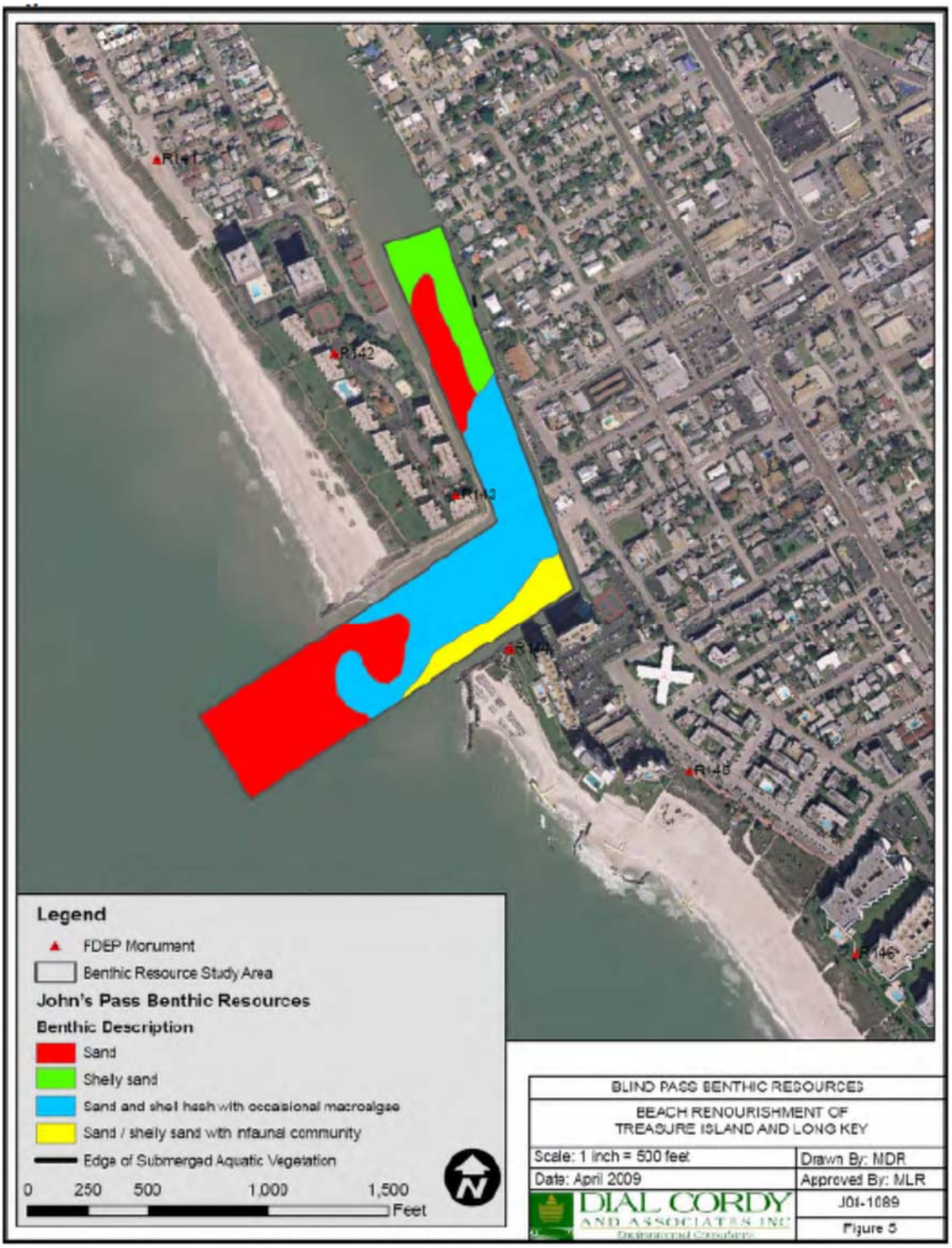

Figure 9. Benthic Resources in Blind Pass (Dial Cordy, 2009).

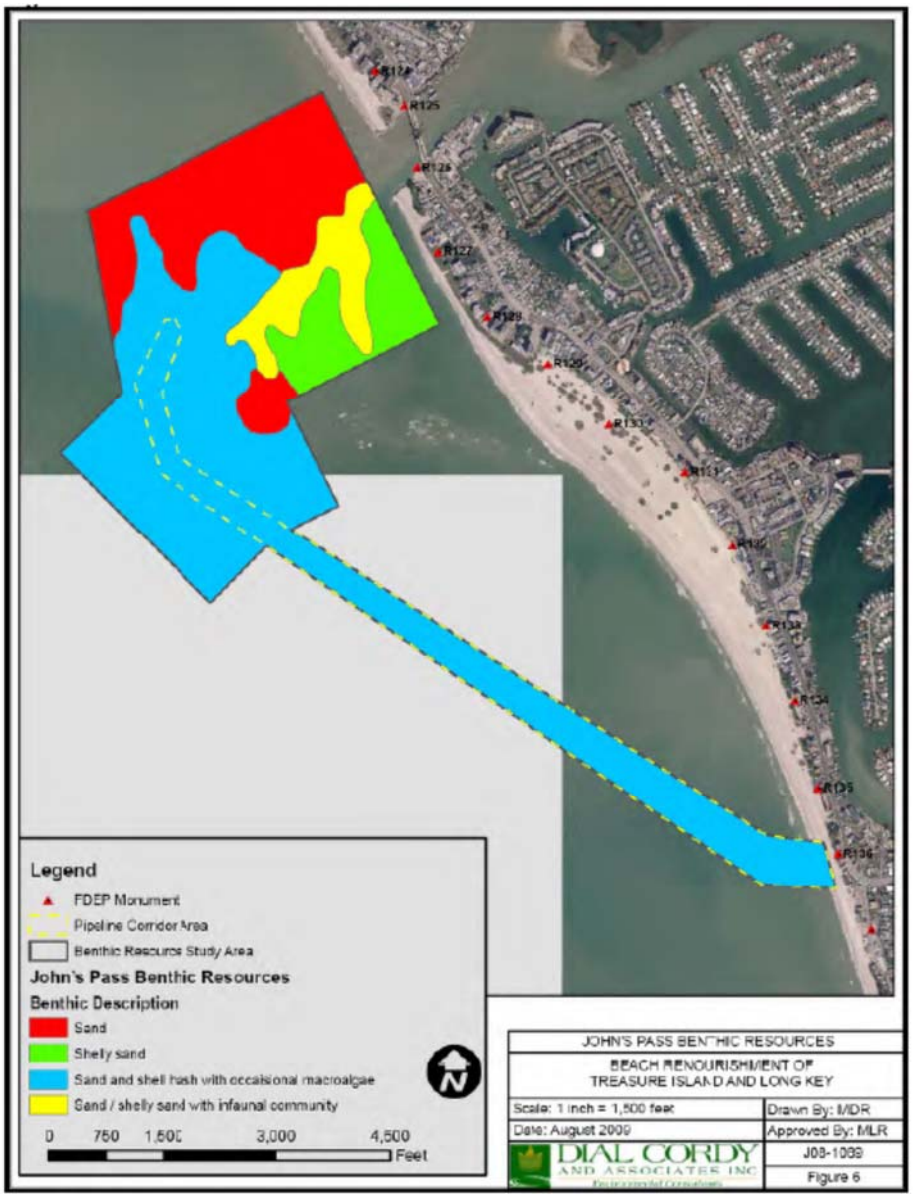

Figure 10. Benthic Resources in Johns Pass (Dial Cordy, 2009).

3.5 COASTAL BARRIER RESOURCES

The Coastal Barrier Resources Act (CBRA) of 1982 (16 U.S.C. §3501 *et. seq.*) and the Coastal Barrier Improvement Act (CBIA) of 1990 (PL 101-591) limit Federally-subsidized development within the CBRA Units to limit the loss of human life by discouraging development in high risk areas, to reduce wasteful expenditures of Federal resources, and to protect the natural resources associated with coastal barriers. CBIA provides development goals for undeveloped coastal property held in public ownership, including wildlife refuges, parks, and other lands set aside for

conservation ("otherwise protected areas," or OPAs). These public lands are excluded from most of the CBRA restrictions, although they are prohibited from receiving federal flood insurance for new structures.

There are two Coastal Barrier Resource System (CBRS) units located in the project area: the Reefs Unit (P24/P24P), and the Sand Key Unit (FL-85P). Mullet Key (P24P) and the Sand Key Unit (FL-85P) are "Otherwise Protected Areas," and federal funds are only limited in this area for flood insurance. The shoreline of Shell Key (P24) is not an Otherwise Protected Area, and typical restrictions pursuant to the Coastal Barrier Resources Act apply (see **Figure 11**).

Figure 11. Coastal Barrier Resource System Units in the project area.

3.6 WATER QUALITY

The State of Florida lists the majority of the waters in the project area as Class III, which is suitable for recreation and the propagation and management of fish and wildlife. Portions of the project area are located within the Pinellas County Aquatic Preserve, which is state-designated as an Outstanding Florida Water (OFW; **Figure 12**).

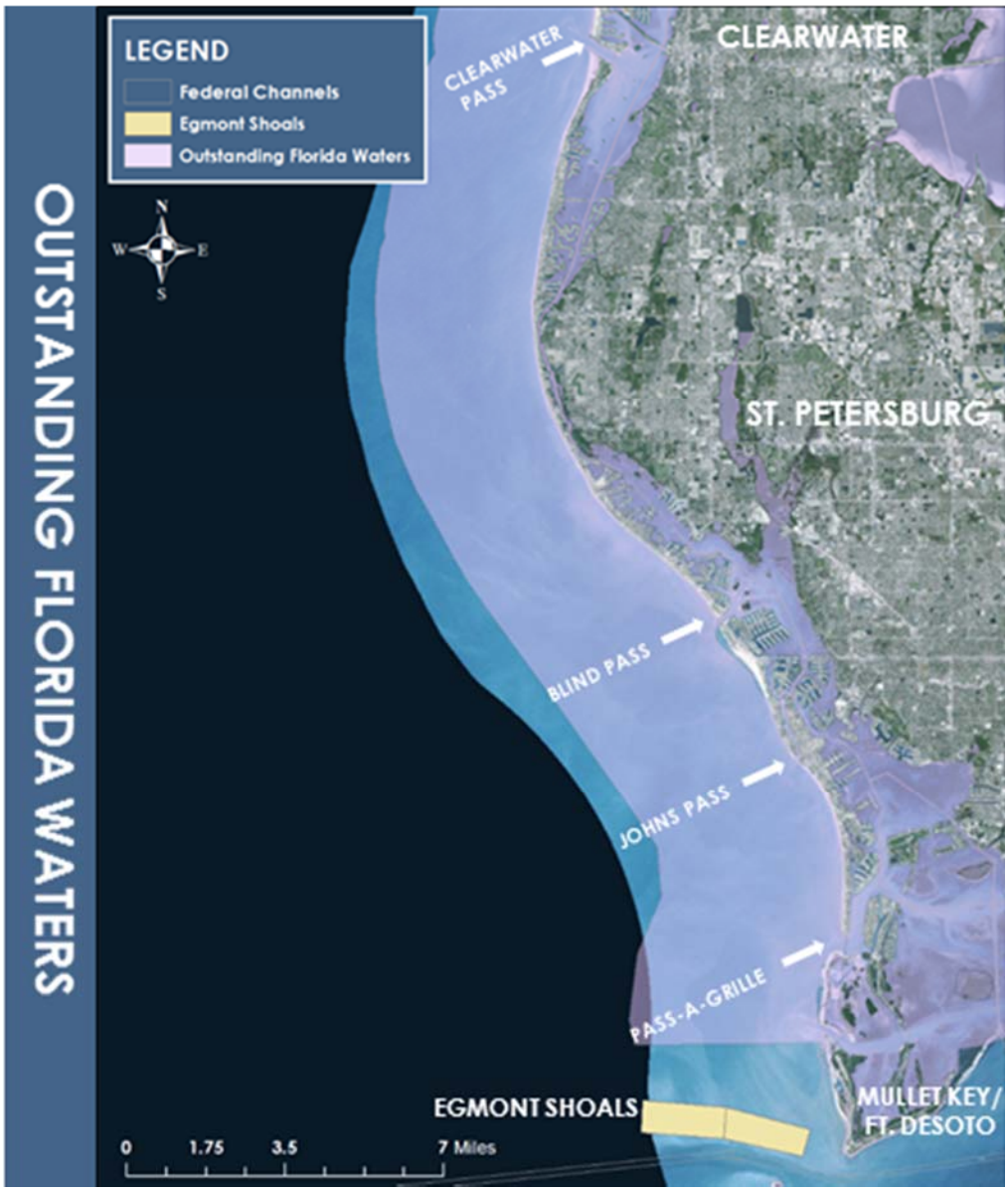

Figure 12. Outstanding Florida Waters in the project area.

3.7 CULTURAL, HISTORIC, AND ARCHEOLOGICAL RESOURCES

The coastal areas of Pinellas County, including the nearby Tampa Bay, have been subject to nearly five centuries of European seafaring activity, and have accommodated prehistoric occupation

supporting a rich diversity of cultures and environmentally adaptive settlement for over 10,000 years. This dynamic history is manifest in the material culture represented by the plethora of submerged and terrestrial archaeological sites that have already been discovered, or have yet to be discovered in the county. These cultural resources include shipwrecks, prehistoric camps and villages, historical buildings and residences, and other anthropogenic modifications in the cultural landscape and environment that constitute the archaeological record of this coastal region of Florida.

The earliest prehistoric inhabitants in the area were Paleo-Indian hunters and gatherers. These were the earliest populations to inhabit the Americas from the terminal Pleistocene epoch to the early Holocene. These peoples were known to share a pan-hemispheric cultural system, exhibiting remarkable similarities in cultural traits with other groups of this period that appear throughout North and South America. The Paleo-Indians thrived in a climate significantly cooler and drier than the present. They are characterized as consisting of highly mobile bands of large-game hunters utilizing lanceolate projectiles ranging from skillfully fluted to unfluted varieties. The subsistence strategy of the Paleo-Indian Period gave way to new Archaic Period strategies that were increasingly dependent on agriculture. The Archaic traditions eventually developed into the unique cultural affiliations identified temporally as Orange, Manasota, Weeden Island, and Safety Harbor.

The earliest recorded historic maritime activity in the vicinity of Pinellas County dates to 1528 when Panfilio de Narvaez, the sixth governor of *La Florida*, landed near present day Tampa Bay. Upon learning the presence of *Apalachee*, a village identified by the local indigenous population to be adorned with gold, he and 400 men set out to find the place. After searching for eight years, only the notable Cabeza de Vaca and three other men survived the treacherous Narvaez expedition. The following decade, Hernando de Soto formed another exploration, arriving in the Tampa Bay area and marching across the Southeast with similar outcome. Other expeditions in the vicinity were missionary and treasure-seeking endeavors, but none met with success. In 1763, the Spanish relinquished control of Florida to the British in a settlement following the Seven Years War. The Spanish again regained control after the British lost the Revolutionary War in 1783 before finally ceding Florida to the United States in 1819. Fort Harrison, named for President William Henry Harrison, was constructed in the Clearwater area in 1841.

Throughout the past, many shipwrecks that have been known to have been lost in the vicinity of Pinellas County. Considering the extensive, maritime-related history of the Tampa Bay region, much attention has been given to the archaeological and historical resources of the coastal areas. Archival research and cultural resource surveys have been conducted off the Pinellas County shoreline, portions of the ICWW, and within several coastal inlets. The majority of the surveys were conducted for USACE-related projects.

Among the earliest submerged cultural resources investigations conducted along the coastal area of Pinellas County was a study performed by Espey, Huston & Associates, Inc. (EHA) for the Pinellas County Board of Commissioners' Department of Public Works. This investigation was documented in their report (Gearhart 1998) entitled: *Marine Magnetometer Survey of a Proposed Sand Borrow Site and Sand Transfer Site, Indian Rocks Beach Nourishment Project, Pinellas County, Florida.* In 1988, EHA conducted a magnetometer survey of a proposed sand borrow site (Area A), located on the north edge of Egmont Channel and 2.5 miles west of Mullet Key, and a sand transfer site (Area B), located three miles due west of Indian Rocks Beach, both proposed for nourishing the beach at Indian Rocks, Pinellas County, Florida. The survey identified 47 anomalies in Area A and nine anomalies in Area B, 38 of which the U.S. Environmental Protection Agency (USEPA) recommended as potentially significant. No historic shipwrecks were identified in the vicinity of Area B; although two historic vessels, the *Mary Jane* (1863) and the *Hester* (1911), were reported as historically lost in the general vicinity near Clearwater. Anomalies identified in Area A were estimated to represent up to 23 historic vessels, possibly originating from 10 historic seafaring vessels known to have operated in the vicinity of Area A from as early as 1819 to 1925 (Gearhart 1988).

In 2004, Pan-American Consultants, Inc. (PCI), under contract to USACE, investigated 34 potentially significant targets of the 47 previously identified by EHA in Area A and recorded two historically significant shipwreck sites. PCI's report (Krivor 2005) entitled: *Diver Evaluations of 34 Targets in the Egmont Shoals Borrow Area, Pinellas County, Florida,* was conducted in the aftermath of damages resulting from hurricanes in 2004. Of the 34 anomalies investigated by PCI, 26 were either identified as modern debris, were no longer extant at their original coordinates, or were too small and isolated to warrant additional investigation. The remaining eight anomalies were recommended for avoidance. Two of the anomalies are historic shipwrecks eligible for nomination to the National Register of Historic Places; one is the USS *Narcissus* Civil War Union tugboat, and another is an ocean-going sailing vessel. A third anomaly was identified as the remains of a modern shrimp trawler.

Johns Pass has been used for both commercial and recreational maritime navigation as early as 1848, which provides for the potential presence of historic watercraft. A cultural resource investigation conducted in 1999 discovered seven magnetic anomalies that were determined to be modern debris and not of historic significance by the Florida Department of State, Division of Historical Resources (Hall 2000a).

Blind Pass has been migrating to the south since the opening of Johns Pass in 1848. Blind Pass is open to recreational boat traffic and, as a result, is a potential source for cultural resources. A diver identification and evaluation study was conducted at Blind Pass in 1999 (Hall 2000b). The results of this survey showed no evidence of cultural resources.

A cultural resource study was conducted in April 2009 for USACE within the Johns Pass and Blind Pass proposed borrow areas (Burns 2009). A total of 521 magnetic anomalies, four side scan sonar anomalies, and no sub-bottom profile anomalies were found in the Johns Pass and Blind Pass borrow area surveys. None of the anomalies exhibited characteristics of submerged cultural resources.

3.8 NATIVE AMERICANS

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 region in the past and their descendants continue to live within the State of Florida and throughout the United States. Pursuant to Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. §306101 *et. seq.*) obligations regarding USACE Trust Responsibilities to federally-recognized Native American Tribes, and in consideration of the Burial Resources Agreement between USACE and the Seminole Tribe of Florida, prior consultation on the project has not indicated any historic use of the project area. Consultation is ongoing with Native American tribes having ancestral ties to this region, including the Seminole Tribe of Florida, the Seminole Nation of Oklahoma, and the Miccosukee Tribe of Indians of Florida.

3.9 HAZARDOUS, TOXIC AND RADIOACTIVE WASTE

The coastline within the project area is located adjacent to predominantly residential, commercial, and recreational areas. The project area contains high-energy littoral zones and the materials used for nourishment contain particles with large grain sizes that do not normally absorb contaminants.

In 1993, a collision of tanker barges resulted in the discharge of approximately 330,000 gallons of #6 fuel oil and 32,000 gallons of Jet A, diesel, and gasoline oil into lower Tampa Bay. Some of the fuel oil sank and formed mats on submerged sediments in Blind Pass. The National Oceanic and Atmospheric Administration (NOAA) conducted a study to characterize the spatial distribution of petroleum hydrocarbons within and just outside Blind Pass. The levels of hydrocarbons found in the sediments during this study were below the levels considered by NOAA and FDEP to be hazardous according to their informal sediment quality guidelines. No other sources of pollutants or contaminants have been identified within the construction or disposal areas (Featherstone, 2008).

3.10 AIR QUALITY

Air quality in Pinellas County is good due to the presence of either on or off shore breezes. A review of USEPA data indicates that Pinellas is in attainment status for all of the criteria pollutants.

3.11 NOISE

Ambient noise levels in the project area are low to moderate. The major noise producing sources are breaking surf and adjacent residential and resort areas.

3.12 AESTHETIC RESOURCES

Pinellas County possesses visually pleasing attributes, including the waters and beaches of the Gulf of Mexico. The county is developed along the majority of its length.

3.13 RECREATION RESOURCES

Pinellas County is a heavily populated county and a major tourist destination. Approximately 6.35 million tourists had overnight visits to the St. Petersburg-Clearwater area in 2016, with an economic impact so $9.73 billion (St. Petersburg-Clearwater, 2017). Beaches that can be accessed by the general public are heavily used year-round. Beaches adjacent to condominiums, apartments, and hotels may have more restricted use. The waters offshore of Pinellas County are used for swimming, fishing, scuba diving, and boating.

3.14 NAVIGATION

Recreational and commercial navigation and fishing commonly occur along the waterways and offshore of Pinellas County. On the bay side of many barrier islands such as Sand Key are numerous marinas and boat launch facilities that are utilized year round. Federally maintained navigational channels in Pinellas County include Clearwater Pass and Johns Pass (located on either end of Sand Key), Pass-a-Grille Channel, the entrance channel to Tampa Bay, and the ICWW.

Navigation in the project area is generally limited to small craft. These include watercraft used for commercial enterprises (e.g., deep-sea fishing and other charters) and recreational activities (fishing, sailing, jet skiing, pleasure boating, etc.). The nearby Port of Tampa is the largest tonnage cargo port in Florida; numerous cargo vessels and cruise ships use that shipping channel.

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 a summary of effects. The following includes anticipated changes to the existing environment including direct, indirect, and cumulative effects.

4.1 GENERAL ENVIRONMENTAL EFFECTS

The environmental effects associated with the Preferred Alternative are primarily temporary in nature, and most affected resources would return to pre-construction conditions either immediately after dredging (with respect to resources such as aesthetics and noise) or within one or two years (with respect to sea turtle nesting and benthic resources). However, dredging inlets and altering the shoreline has the potential to change how sediment transport occurs regionally.

4.2 FISH AND WILDLIFE RESOURCES

4.2.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

4.2.1.1 Migratory Birds

Shorebird activity includes feeding, resting, and over-wintering. Some species also nest along the shoreline. Migratory shorebirds may be affected by human disturbance, domestic animals (dogs and cats), and wildlife (raccoons, foxes, predatory birds, territorial birds, ghost crabs, fire ants, etc.). While most of these disturbances to migratory shorebirds are not the result of beach placement, some temporary effects to nesting and wintering birds may occur.

The dredging activity may attract some seabirds to the area. Activities such as exploring for oil have been shown to attract large numbers of seabirds to an area, possibly because of an increase in food availability as bottom sediments are stirred up by drilling, potentially resulting in an algal bloom, and attracting species preyed on by seabirds (Tasker *et al.* 1986; Herron Baird 1990). Similar processes may occur during the initial stages of dredging and placement of sand on the beach. In addition, some species groups, notably gulls, are attracted by increases in shipping activity, especially at the low speeds associated with dredging (Garthe and Hüppop 1999; Skov and Durinck 2001; Christensen *et al.* 2003).

Vision has been shown to be an important component in the foraging activity of a number of seabird species (Essink 1999; Garthe *et al.* 2000; Gaston 2004; Thaxter *et al.* 2010). As a result, water clarity may play an important role in the foraging success of these, and other, species. Therefore, it is likely that the changes to water clarity resulting from the suspension of sediments during dredging operations and the placement of sediment on the beach would negatively affect

the foraging capabilities of some species. However, the impact of increases in turbidity is likely to be dependent (both in scale and spatial extent) on initial background levels (Cook 2010).

Measures taken during beach placement to reduce adverse effects to migratory shorebirds include monitoring daily for shorebird nests during construction and establishing buffer zones around the nest to protect them from construction activities. Beneficial effects of beach nourishment include the protection and maintenance of foraging, resting and nesting habitat for these and other species.

4.2.1.2 Fisheries Resources

Some of the possible short-term and localized effects of dredging any of the proposed sand sources on fish and macroinvertebrates include entrainment of organisms during dredge operation; behavioral alterations due to sound, light, and structure; increased turbidity and sedimentation; and changes to the soft bottom bathymetry in the shoal area during dredging. These effects may also occur in the nearshore areas adjacent to the sand placement area. Similar nearby undisturbed habitat could serve as a refuge for mobile organisms during dredging and provide recruitment following dredging. Long-term effects can include reduction of food supply, mortality of eggs and larvae, and changes in habitat. Many of the fish species found in the area feed on invertebrate infauna or epifauna, and dredging may affect the food supply of some of these species temporarily.

The very small size of the areas likely to be dredged relative to the large geographic ranges of transitory fishes indicates that dredging material for beach nourishment would have very little impact on the fish populations (Virginia Institute of Marine Science 2000). Effects of sand dredging and placement are not only short term, but also localized. Similar undisturbed habitat is adjacent to the sand sources and the placement areas.

4.2.1.3 Marine Mammals

Dredging and placement are not likely to affect marine mammal species. Any minor impact due to dredging activity at the proposed sand source locations would be temporary in nature. Vessels associated with the dredging activities are slow moving, and are not likely to strike marine mammals. Measures to protect the Florida manatee are outlined in Sections 4.3.1.2 and 4.21.

4.2.2 NO ACTION ALTERNATIVE (STATUS QUO)

Intertidal foraging habitat for migratory birds would remain relatively constant, although shifting spatially as the beach eroded. Fisheries resources and marine mammals would not be affected by the No Action Alternative.

4.3 THREATENED AND ENDANGERED SPECIES

4.3.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

4.3.1.1 Sea Turtles

4.3.1.1.1 Nesting Habitat

As the preferred alternative proposes to place sand on the beach, USACE has determined that it may affect nesting sea turtles.

Typically, nesting outcomes for sea turtles are adversely impacted during the first one to two years following construction, but they return to pre-construction conditions after the placed sediment equilibrates and the shoreline returns to a more natural slope. The construction of a wider beach ensures that sufficient beach habitat is available for female turtles to nest following the initial one to two year equilibration period, and nests are less likely to be washed out during large storm events. There are a number of potential effects to nesting sea turtles that may occur if there are changes in the beach sediment characteristics following nourishment. Scarp development could hinder turtles from accessing suitable nesting habitat. Sand compaction could make excavating a nest difficult. Changes in sand color or sand chemistry could affect the viability and sex ratio of a clutch (Mrosovsky and Provancha, 1989; Hays *et al*., 2001; Wood and Bjorndal, 2000).

FDEP places strict requirements on the quality of the sediment placed on Florida beaches. To minimize these potential effects, geotechnical surveys were conducted to identify sand that is suitable for placement at this site. The sand grain size and color must meet specific criteria to prevent compaction and to help ensure its acceptability by nesting turtles. Post-construction surveys will monitor for the presence of scarps and tilling will be conducted if scarps or compaction occur. With the inclusion of these measures to survey, monitor, and mitigate possible sediment effects associated with the project, the effects outlined above are unlikely to occur.

USACE has determined that sand placement activities associated with the project fall within the scope of the USFWS Statewide Programmatic Biological Opinion (SPBO; USFWS, 2015). USACE has coordinated with USFWS in a letter dated November 22, 2016, and will finalize coordination prior to completing the NEPA process.

4.3.1.1.2 Offshore Habitat

If a hopper dredge is used for the dredging operations, potential effects to sea turtles could occur [NMFS Gulf of Mexico Regional Biological Opinion (GRBO) (November 19, 2003; Revision No 1, June 24, 2005; Revision No. 2, January 9, 2007]. Dredging may adversely effect sea turtles due to entrainment, foraging and resting habitat disturbance, noise disruption, and injury from dredges and support vessels.

To minimize the risk to sea turtles, standard sea turtle protection conditions will be implemented such as deflector dragheads, inflow screens, and/or monitoring of the operation. No significant hardbottom or seagrass resources were located within the boundaries of the sand source locations that would serve as an attractant for sea turtles. The project will adhere to all turtle safety precautions outlined in the GRBO, as well as implement the NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions during project construction.

4.3.1.2 Florida Manatee

Manatees typically use nearshore waters for migration and their movements may be affected by the presence of the construction equipment. USACE and its contractors will abide by the Standard Manatee Conditions for In-Water Work (FFWCC, 2011) to ensure no adverse effects to any manatee that may venture into the project area during construction activities. By incorporation of this protocol, USACE believes that the project may affect, but is not likely to adversely affect, the Florida manatee.

4.3.1.3 Piping Plover and Rufa Red Knot

USACE determined that the project includes areas identified to be Optimal Piping Plover Areas. Therefore, USACE has determined that placing sediment at Pinellas County beaches may affect the piping plover. Although USFWS has not designated critical habitat for the rufa red knot, Pinellas County is known to provide important habitat for this species. The Final Rule listing the rufa red knot, published December 11, 2014, notes that "beach nourishment can be beneficial or detrimental to red knot habitat, though any negative effects are mostly considered to be short-term (79 FR 73707)." Due to the potential for short term adverse effects to the red knot, USACE has determined that the project may affect this species.

USACE has determined that the minimization measures, Reasonable and Prudent Measures, and Terms and Conditions in the USFWS Piping Plover Programmatic Biological Opinion (P^3BO; May 22, 2013) are applicable to the project, and has requested concurrence from USFWS in a letter dated November 22, 2016. In this letter, USACE also requested formal consultation for the rufa red knot, which was listed after the issuance of the P^3BO. The proposed action will not adversely modify critical habitat for the piping plover.

4.3.1.4 Gulf Sturgeon

Due to the ability of sturgeon to avoid the dredging and construction activities, USACE determined that the project may affect, but is not likely to adversely affect, the Gulf sturgeon. Any effects on this species are anticipated to be so insignificant as to be discountable.

4.3.2 NO ACTION ALTERNATIVE (STATUS QUO)

The no-action alternative would result in continuing beach erosion, which would eventually result in a hardened shoreline to protect infrastructure. This would adversely affect sea turtle nesting habitat, and may impact piping plover and red knot as these species compete for the remaining beach area with humans. Intertidal foraging habitat area would remain relatively constant, although it would shift spatially as the beach eroded.

4.4 ESSENTIAL FISH HABITAT ASSESSMENT

The project description is in Section 2. Section 3.4 describes the "existing conditions" of EFH, federally managed fisheries, and associate species such as major prey species, including affected life history stages. The following subsections describe the individual and cumulative effects of the proposed action(s) and alternatives on EFH, federally managed fisheries, and associate species such as major prey species, including affected life history stages.

4.4.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

Marine areas of non-vegetated bottoms, live bottoms, and water columns within the study area have been designated as EFH. The water column is used for foraging, spawning, and migration. Effects to the water column may have localized effects on marine species. Injury or entrainment due to dredging would most likely affect demersal species (those living close to the sea floor) and less mobile species, such as shellfish. Dredging may temporarily affect feeding success of managed species and their prey due to turbidity and loss of benthic organisms; however, adjacent similar habitat is available for feeding. Other potential adverse effects include: behavioral alterations due to sound, light, and structure; increased turbidity and sedimentation; changes to soft bottom bathymetry in the borrow area during dredging; and temporary loss of prey items and foraging habitat.

Water quality concerns are of particular importance in the maintenance of this habitat. During dredging, resuspended materials may interfere with the diversity and concentration of phytoplankton and zooplankton, and therefore could affect foraging success and patterns of schooling fishes and other grazers that comprise prey for managed species. Foraging patterns would be expected to return to normal at the end of dredging activities.

Effects benthic infaunal and epifaunal communities would be considered relatively minimal when examined on a spatial scale. Infaunal communities in particular have very high reproductive potential and recruitment. Adjacent areas that have not been impacted would most likely be the primary source of recruitment to the impacted areas. Studies have shown a relatively short recovery time for infaunal communities following dredging. Succession of post-dredging infaunal communities should begin within days following dredging. This initial settlement usually consists of pelagic larval recruits settling within the impact area. Later recruitment from adjacent non-impacted areas will be more gradual and involves species which are less opportunistic. It is highly likely that infaunal communities would most likely be re-established within one to two years after dredging ends (Vivan, Domenico, and Almeida, 2009).

Surveys will be conducted along any proposed pipeline corridors just prior to mobilizing the pipeline to ensure corridors are situated in a manner that avoids any impact to nearshore hardbottom communities. Any effects to hardbottom/livebottom resources within the pipeline and staging areas from dredging equipment placement would be determined from the before and after construction surveys, and mitigation in the form of artificial reef creation will be performed as necessary.

No direct effects to seagrasses are anticipated to occur since all occurrences of seagrasses are outside of the dredging footprint. Seagrass beds are temporally and spatially ephemeral. In areas such as Blind Pass where seagrasses have been known to occur, pre-construction seagrass surveys will be conducted to document the extent of beds immediately before construction.

4.4.2 NO ACTION ALTERNATIVE

Increased erosion in the project area could expose additional ephemeral nearshore hardbottom habitat as sand erodes and the shoreline moves landward, resulting in a beneficial effect on this resource. The No Action Alternative would have no adverse effect on essential fish habitat in the project area.

4.5 COASTAL BARRIER RESOURCES

4.5.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

The proposed project does not include the construction of structures that would require Federal Flood Insurance; therefore, Federal expenditures for the proposed project are not restricted in Units FL-85P or P24P. Therefore, neither the Preferred Alternative nor the No Action Alternative would affect these two Otherwise Protected Areas. CBRS Unit P24 (Shell Key) is not an Otherwise Protected Area, and the limitations on expenditures at this location may apply. Further consultation with USFWS would occur prior to any placement of material on Shell Key to ensure

that the proposed work was consistent with the goals of the CBRA. Please see also Section 3.5 and Figure 11.

4.5.2 No Action Alternative

The No Action Alternative will have no effect on Coastal Barrier Resources System units.

4.6 WATER QUALITY

4.6.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

Construction operations would produce temporary minor changes in water quality at both the dredge site and in the nearshore region of the placement site. Turbidity levels would be elevated above normal during operations within the mixing zone. Visible plumes at the water surface are expected in the immediate vicinity of the operation. Elevated turbidity levels are expected to dissipate rapidly, returning to background levels in a short period. The USACE contractor will implement a spill contingency plan for hazardous, toxic, or petroleum material. No long term adverse impact on water quality is expected to occur as a result of the Preferred Alternative.

4.6.2 No Action Alternative

The No Action Alternative will have no effect on water quality in the project area.

4.7 CULTURAL RESOURCES AND HISTORIC PROPERTIES

4.7.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

The Preferred Alternative includes shoreline sand placement occurring on beaches of Sand Key, Treasure Island, and Long Key. Typically, nourishment activities are required at Sand Key along approximately 9.3 miles of shoreline from FDEP Reference Monuments R-56 and R-109. Treasure Island and Long Key nourishment typically occurs from FDEP Monuments R-126A to R-146. Because this Supplemental EA analyzes the effects of beach placement using the proposed sand sources for the authorized area that includes the entire Pinellas County shoreline, and placement could occur in any location where extensive erosion is observed, all of the Pinellas County shoreline placement areas are generally considered to be a protective measure along areas previously subject to sand placement, preventing erosion and degradation of any known and unknown cultural resources or historic properties. In 2013, a Finding of No Significant Impact (FONSI) incorporated three EAs (1997, 2003, and 2009) by reference, which were conducted for the proposed beach nourishment of the Federally-authorized Pinellas County Beach Erosion Control Project. The scope of the FONSI included the use of dredged sand from the Egmont Shoals ebb shoal and placed sand on Treasure Island from FDEP Reference Monuments R-126 to

R-128 and from R-136 to R-141. On Long Key, the FONSI included placement from R-144 to R-148 and from R-160 to R-165.

The Preferred Alternative described in this Supplemental EA would dredge material from a combination of sand sources based on the availability of material. The sand sources include Egmont Shoals, Clearwater Pass, Johns Pass, Blind Pass, and Pass-a-Grille Inlet. Sand could be obtained from both the navigational channels and from the ebb shoals of the inlets. Maintenance dredging of the Federal channels would have no effect to cultural resources listed or eligible for listing in the National Register of Historic Places (NRHP). Previously, two side scan targets were identified as a barge in the Upham pipeline corridor and as a pleasure vessel within the Sunshine pipeline corridor during diver resources investigations conducted by Atkins, North America, Inc. for Weeks Marine, Inc. These investigations were submitted on May 20, 2014 for the Flood Control and Coastal Emergency Erosion Control Project, Treasure Island and Long Key segments. Adverse effects to these vessels will be avoided by maintaining a 300-foot buffer surrounding each resource.

Egmont Shoals (Sand Source)

USACE has taken into account various surveys and consultations conducted in the past on this project area. The last time these project areas were restored was in 2010 for Treasure Island (DHR File No. 2009-03433) and in 2006 for Treasure Island and Long Key (DHR File No. 2006-4951). The sand source associated with these placement areas is Egmont Shoals. USACE's earliest consultation on record for use of this ebb shoal dates to 1989 (DHR File No. 892562), and it was recently re-consulted on in 2006. The sand source was designed to have both a western and an eastern portion, and it has been subjected to multiple archaeological assessments. Both areas have been utilized for re-nourishment activities, with buffers utilized to protect significant resources on the western half. On the eastern half, diver investigations indicated that no known significant targets were present. The eastern portion of Egmont Shoals is specifically designed at this time to avoid use of the sand source area that is currently associated with the Underwater Archaeological Preserve containing the USS *Narcissus*. Finally, USACE has reviewed the current dredge areas and determined that each of the past federal undertakings associated with the borrow area and placements areas have not encountered any cultural materials.

Use of the eastern portion of the Egmont Shoals sand source for nourishing eroded beaches of Pinellas County will have no effect on historic properties eligible for inclusion in the National Register of Historic Places. USACE has reviewed the current dredge areas and determined that each of the past federal undertakings associated with this sand source and the placements areas have not encountered any cultural materials. Moreover, two Florida State Historic Preservation Officer (SHPO) letters (DHR No. 2002-5430, and DHR No. 2003-2216) dated April 4, 2003 and August 4, 2003, and a more recent letter (DHR No. 2013-02689) dated July 3, 2013, have

concurred with the determination of no effect for use of the eastern half of Egmont Shoal sand source for subsequent beach placement of material along Pinellas County Beaches.

Clearwater Pass (Sand Source)

Clearwater Pass has been previously dredged and the material has been placed in an upland area as well as in adjacent areas along the Gulf Intracoastal Waterway where islands were formed. Certain areas of the Pass develop shoals and impede the navigable capacity of the channel. In January 2002, an EA was produced for routine maintenance dredging of the Federal channel and beach placement of the material. Subsequently, the FONSI was signed on January 22, 2002. Prior archival research revealed no recorded historic resources within the project area. In a letter (DHR No. 2001-4093) dated June 15, 2001, SHPO reviewed the Clearwater Pass project (Public Notice No. PN-CO-CLW-252) referencing an earlier letter issued on June 24, 1991 indicating that no further cultural resource investigations were required to meet the requirements of the NHPA and maintaining that determination. Maintenance dredging of the Federal channel would have no effect to cultural resources listed or eligible for listing in the NRHP; however, use of sand sources outside the Federal navigation channel or within the associated ebb shoals may require additional cultural resources surveys, a professional cultural resources monitor, and additional consultation with the SHPO and appropriate federally-recognized tribes prior to any action to ensure historic properties are not adversely affected. Moreover, anomalies of interest would be avoided or buffered, and additional surveys may be required.

Johns Pass, Pass-a-Grille and Blind Pass (Sand Source)

In July of 1999, Mid-Atlantic Technology and Environmental Research, Inc. (M-AT/ER) conducted an investigation of a sand source location at Blind Pass, and of two sand source locations at Pass-a-Grille Inlet. In their report (Hall, 2001c) entitled: *Submerged Cultural Resources Remote Sensing Survey of Blind Pass and Pass-a-Grille Borrow Areas, Pinellas County, Florida,* the remote sensing survey resulted in the identification of seven remote sensing anomalies in the Blind Pass sand source location and nine anomalies in the two Pass-a-Grill sand source areas. At Blind Pass, five targets (BP-A, C, E, G, and H) demonstrated magnetic anomaly characteristics associated with potentially significant submerged cultural resources. At the two Pass-a-Grille sand source areas, three targets (N-PGrille-C and S-PGrille-D and S-PGrille-G) also demonstrated characteristics identified as potentially significant. Additional diver identification and evaluation of the five potentially significant submerged cultural resources at Blind Pass were investigated by M-AT/ER in August of 1999. All of the five magnetic anomalies (Targets BP-A, C, E, G, and H) were identified as modern debris ineligible for inclusion in the National Register of Historic Places. In a letter (DHR No. 2001-5819) dated July 30, 2001, the SHPO concurred with the determination. In two letters (DHR No. 2002-5430, and DHR No. 2003-2216) dated April 4, 2003 and August 4, 2003, the SHPO reviewed the report (Watts, 2003) entitled: *Remote Sensing Survey of Pass-a-Grille Channel Borrow Area and Archaeological Diver Identification and Evaluation of Three Targets*

near Pass-a-Grill Channel and Five Targets at Egmont Channel Borrow Area, Pinellas County, Florida, and concurred with the determination that Targets N-PGrille-C, S-PGrille-D, and S-PGrille-G, in the Pass-a-Grille sand source areas, and five targets at Egmont Shoals did not possess signature characteristics indicative of potentially significant submerged cultural resources.

In May and July of 1999, M-AT/ER conducted a literature search and remote sensing survey of the ebb tide shoal in Johns Pass navigation channel in Pinellas County, Florida. In their report (Hall, 2000d) entitled: *Submerged Cultural Resources Remote Sensing Survey of Johns Pass Navigation Channel, Pinellas County,* the remote sensing survey resulted in the identification of 15 magnetic anomalies. None of the magnetic anomalies had an associated acoustic signature. Seven targets were identified as potentially significant. In a letter (DHR No. 2000-06210) dated August 7, 2001, the Florida SHPO concurred with M-AT/ER's recommendation of significance. In August of 1999, M-AT/ER conducted additional diver identification of the seven targets identifying all as modern debris and ineligible for inclusion in the Nation Register of Historic Places. In letters (DHR No. 2000-5820 and DHR No. 2001-08376) dated August 7, 2001 and October 9, 2001, the SHPO concurred with these determinations. In April 2009, Southeastern Archaeological Research, Inc. (SEARCH) conducted an archaeological and historical underwater remote sensing survey of the proposed Johns Pass and Blind Pass dredging areas. In their report entitled: *Submerged Cultural Resources Assessment Survey of Johns Pass and Blind Pass, Pinellas County, Florida,* SEARCH identified 521 magnetic anomalies and four side scan sonar anomalies within the surveyed areas during the investigation. In a letter (DHR No. 2009-03433) dated July 13, 2009, the Florida SHPO concurred that none of these anomalies appeared to have potential to represent significant cultural resources.

In summary, the placement of sand typically occurs on beaches of Sand Key, Treasure Island, and Long Key. Sand placement at Treasure Island and Long Key typically occurs from FDEP Monuments R-126A to R-128, R-136 to R-142, and R-144 to R-146. Sand placement at Sand Key typically occurs from R-56 to R-66 and from R-71 to R-107. When sand placement occurs from R-107 to R-109, activity is typically conducted above the MHWL to avoid effects to nearshore hardbottoms. With the exception of the placement area from R-108 to R-109, all of these areas have been nourished with material placement in the past. Based on the absence of cultural resources and recurrent nature of material placement, USACE has reviewed the placement of sand between these FDEP Monuments and has determined no effect will occur to cultural resources eligible for inclusion in the NRHP. USACE has also reviewed the area between R-108 to R-109 for cultural resources. Given the disturbed nature and context of this placement area and the absence of archaeological sites recorded at the Florida Master Site File, USACE has determined no effect will occur to cultural resources eligible for inclusion in the NRHP. Moreover, the placement of sand along these specific areas is regarded as a protective measure, preventing erosion and degradation of any known and unknown cultural resources or historic properties. All other beach placement areas addressed in this EA may require additional cultural resources

surveys, a professional cultural resources monitor, and/or further consultation with the SHPO and appropriate Federally-recognized tribes prior to any action to ensure historic properties are not adversely affected.

The Preferred Alternative would dredge material from a combination of sand sources based on the availability of material. These sand sources include Egmont Shoals, Johns Pass, Blind Pass, Pass-a-Grille, and Clearwater Pass Inlets. Due to the recurrent nature and disturbed context of these channel inlets, USACE has determined that sand obtained in the navigational channels from the maintenance dredging of all of these inlets to have no effect to cultural resources listed or eligible for listing in the NRHP.

With the exception of the ebb shoals of Clearwater Pass and the western portion of the previously surveyed Egmont Shoals, sand source areas including the eastern portion of Egmont Shoals, and the ebb shoals of Johns Pass, Blind Pass, and Pass-a-Grille have been previously subject to cultural resources surveys (DHR No. 2000-5820; DHR No. 2000-06210; DHR No. 2001-4093; DHR No. 2001-5819; DHR No. 2001-08376; DHR No. 2002-5430; DHR No. 2003-2216; DHR No. 2009-03433; and DHR No. 2013-02689). All potentially significant targets identified as a result of these surveys were investigated and determined ineligible for inclusion in the NRHP. Therefore, USACE has determined that the utilization of these areas will have no effect to cultural resources eligible for inclusion in the NRHP. The Clearwater Pass ebb shoal has not been subject to previous archaeological surveys; therefore, the dredging of any areas not contained within the existing Federal channel at Clearwater Pass would require additional cultural resources surveys, a professional cultural resources monitor, and/or further consultation with the SHPO and appropriate Federally-recognized tribes prior to any action to ensure historic properties are not adversely affected. Only the eastern portion of the previously surveyed Egmont Shoals has been determined to have no effect on cultural resources eligible for inclusion in the NRHP. The eastern portion Egmont Shoals has been previously utilized as a sand source and is designed to avoid the use of the western portion that is currently associated with the Underwater Archaeological Preserve containing the USS Narcissus.

Previously, two side scan targets were identified as a barge in the Upham pipeline corridor and a pleasure vessel within the Sunshine pipeline corridor during diver resources investigations conducted by Atkins, North America, Inc. for Weeks Marine, Inc. The results of the investigations were submitted on May 20, 2014 for the Flood Control and Coastal Emergency Erosion Control Project, Treasure Island and Long Key segments. Adverse effects to these vessels will be avoided by maintaining a 300-foot buffer surrounding each resource.

As discussed in Section 3: Affected Environment, substantial cultural resources work and investigations have been conducted throughout various portions of the project area. Previous consultation with the Florida SHPO and the appropriate Federally-recognized tribes on recurrent maintenance dredging of the inlets and the use of the previously surveyed eastern portion of

Egmont shoals and the ebb shoals of Johns Pass, Blind Pass, and Pass-a-Grille, has indicated that the Preferred Alternative will have no effect on cultural resources listed or eligible for listing in the NRHP. In accordance with Section 106 of the NHPA, as amended, and its implementing regulations (36 CFR Part 800), consultation on the current action was initiated by letter on June 15, 2017 (Appendix C). Consultation for this EA has been initiated and is ongoing with the Florida SHPO and appropriate Federally-recognized tribes, and consultation will be concluded prior to project implementation.

4.7.1 No Action Alternative

The No Action Alternative would have no effect to cultural resources listed or eligible for listing in the NRHP. Without the placement of dredged material along Sand Key, Treasure Island, and Long Key, historic properties may be subject to continued erosional effects.

4.8 NATIVE AMERICANS

4.8.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

No portion of the Preferred Alternative is located within or adjacent to known Native American-owned lands, reservation lands, or Traditional Cultural Properties. Consultation is ongoing with Native American tribes having ancestral ties to this region, including the Seminole Tribe of Florida, the Seminole Nation of Oklahoma, and the Miccosukee Tribe of Indians of Florida. Pursuant to Section 106 of the NHPA, obligations regarding the USACE's Trust Responsibilities to federally-recognized Native American Tribes, and in consideration of the Burial Resources Agreement between USACE and the Seminole Tribe of Florida, consultation with the appropriate federally-recognized tribes on the Proposed Action was initiated by letter on June 15, 2017 (Appendix C). Consultation with the appropriate Federally-recognized tribes in ongoing and will be completed prior to project construction.

4.8.2 No Action Alternative

The No Action Alternative will have no effect on Native American groups.

4.9 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

4.9.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

Although there is a 1993 documented oil spill in the vicinity of Blind Pass, surveys following the spill have not documented the presence of any contamination in this area. Dredging is not anticipated to encounter contaminants in any of the sand source locations.

Accidental spills and releases of waste/fuel, although remote, are possible. The USACE Contractor will implement measures to prevent oil, fuel, or other hazardous substances from entering the air or water. All wastes and refuse generated by project construction would be removed and properly disposed. The USACE contractor will implement a spill contingency plan for hazardous, toxic, or petroleum material. Compliance with USEPA Vessel General Permits would be ensured, as applicable.

4.9.2 No Action Alternative

The No Action Alternative will have no effect on hazardous, toxic, or radioactive waste in the project area.

4.10 AIR QUALITY

4.10.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

The project is exempt from the Clean Air Act (CAA) conformity requirements because it is located in a Federal attainment area [FAC 62-204.340 (1-4)]. The State of Florida does not regulate emissions from off-road equipment or marine vessels (FDEP, 2012); however, it can be assumed that insignificant emissions will be produced by the dredge and construction equipment.

4.10.2 No Action Alternative

The No Action Alternative would have no effect on the air quality of the region.

4.11 NOISE

4.11.1 Sand Placement using a Combination of Sand Sources (Preferred Alternative)

Dredging noise can affect marine mammals, sea turtles, and fishes. Possible effects of dredging noise can vary depending on a variety of internal and external factors, and can be divided into masking (obscuring of sounds of interest by interfering sounds, generally at similar frequencies), response, discomfort, hearing loss, and injury (MALSF, 2009). Deeper water operations may propagate sound over greater distances than those in confined nearshore areas (Hildebrandt, 2004).

Dredging to extract sand produces broadband and continuous sound, mainly at lower frequencies. The little available data indicate that dredging is not as noisy as seismic surveys, pile driving, and sonar; however, it is louder than most shipping, operating, offshore wind turbines, and drilling (MALSF, 2009). Noise associated with dredging activities can be placed into five categories:

1. Collection noise – The noise generated from the collection of material from the sea-floor; for example, the scraping of the buckets on a bucket ladder dredge or the operation of the drag head. This noise is dependent on the structure of the sea floor and the type of dredge used.

2. Pump noise – The noise from the pump driving the suction through the pipe.

3. Transport noise – The noise of the material being lifted from the sea floor to the dredge and pumped through a pipeline to the beach. For trailing suction hopper and cutter suction dredges, this would be the noise of the material as it passes up the suction pipe. For clamshell dredges, it would be the sound of the crane dropping/lifting the bucket.

4. Deposition noise – This noise is associated with the placement of the material within the barge or hopper.

5. Ship/machinery noise – The noise associated with the dredging ship itself. For stationary dredges, the primary source will be the onboard machinery. Mobile dredges will also have propeller and thruster noise (MALSF, 2009).

Field investigations have been undertaken to characterize underwater sounds typical of bucket, hydraulic cutterhead, and hopper dredging operations (Dickerson *et al.,* 2001). Preliminary findings indicate that cutterhead dredging operations are relatively quiet as compared to other dredging operations in aquatic environments. Hopper dredges produce somewhat more intense sounds similar to those generated by vessels of comparable size. Bucket dredges create a more complex spectrum of sounds, very different than either cutterhead or hopper dredges. Hopper dredge noises consist of a combination of sounds emitted from two relatively continuous sources: engine and propeller noise similar to that of large commercial vessels, and sounds of dragheads moving in contact with the substrate. The intensity, periodicity, and spectra of emitted sounds differ greatly among dredge types. Components of underwater sounds produced by each type are influenced by a host of factors including substrate type, geomorphology of the waterway, site-specific hydrodynamic conditions, equipment maintenance status, and skill of the dredge plant operator (Dickerson *et al.,* 2001).

Noise generated by the dredge may minimally impact those living on the beaches during project construction, but will likely not be too noticeable over ambient noise of wind and waves. Noise generated on the beaches by equipment placing the dredged material will be relatively low level and will be of a short duration. Construction equipment such as booster pumps will be properly maintained to minimize effects of noise. Once dredging and beach placement have concluded, noise levels will drop back to background levels for the beach area. Since the increases to the current level of noise as a result of this project will be localized and minor, there will only be a

temporary reduction in aesthetics and no expectation of adverse effects to the environment as a result of construction-related noise.

4.11.2 No Action Alternative

The No Action Alternative will not have any effect on noise levels in the project area.

4.12 AESTHETIC RESOURCES

The aesthetics in the project area would be temporarily impacted due to the construction equipment located on the beach. However, the long-term aesthetics of the area would be generally improved due to the beach habitat that would be maintained by the project. The No Action Alternative would reduce aesthetics due to loss of beach habitat.

4.13 RECREATION RESOURCES

Recreational uses would increase with the Preferred Alternative due to the increased opportunity for uses such as sunbathing, walking, surfing, and other recreational activities common in beach environments. Recreational opportunities for beachgoers would decrease in the No Action Alternative as the shoreline became eroded and was hardened (in the extreme circumstance).

4.14 NAVIGATION

Navigation in the small passes would be improved with the Preferred Alternative if sediment is removed for placement on the adjacent beaches. Similarly, these passes may become shoaled in the No Action Alternative and cause a negative impact on navigation.

4.15 PUBLIC SAFETY

During dredging, the area immediately around the dredge, pipeline, and placement area may be hazardous due to the presence of equipment. The beach placement area will be appropriately marked to prevent the public's entrance into the area. Service boat traffic will be increased during construction. Construction conditions necessitate a higher level of vigilance on the part of the boating public, but these effects are expected to be minor in nature and will be temporary, occurring only during the dredging period, which is expected to take about ten months.

4.16 NATURAL OR DEPLETABLE RESOURCES

Sand is a natural and depletable resource. Using sand from the proposed sand sources will deplete the sand at those sites in the short-term. However, sediment associated with inlet systems will typically recharge at a higher rate than offshore resources. The sand sources for the

Pinellas County project are all associated with inlet systems and receive sediment as a result of alongshore sediment transport. The sand sources would likely recover over the long-term.

4.17 CUMULATIVE EFFECTS

Cumulative effects are defined in 40 CFR §1508.7 as those effects that result 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. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

Table 5 summarizes the impact of 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), as well as the future condition with any reasonable alternatives (or range of alternatives).

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Table 5. Summary of cumulative effects.

	Past (baseline condition)	Present (existing condition)	Future without project	Future with Proposed Action
Sand Resources	Offshore sediments have been more abundant in the past; inlet sediments are used intermittently for placement on County beaches	Offshore sand resources are becoming depleted with use for beach placement and state sediment quality restrictions; ebb shoal sediments (especially at Egmont Shoals) are abundant as sediment accumulates from alongshore transport	Beaches may erode at a greater rate; material from navigational channels could be dredged for beach placement due to their generally renewable nature; seawalls may be required to protect upland structures	Pinellas County beaches would be wider with the placement of sediment
Protected Species	More abundant and widespread prior to development	Individuals of some species becoming increasingly rare; habitat shrinking; coastal species already impacted by Pinellas County sand placement activities; erosion can cause a decline in habitat	Beach habitat continues to shrink; no impact to hardground or seagrass resources; fisheries stocks and habitat may be impacted by anthropogenic activities	Individuals may be affected by dredging and placement activities; coastal habitat is sustained for life of project
Water Quality	Pristine prior to development; increasing recreational usage and the development of the Pinellas County shoreline may have caused some decline in water quality over the past 30 years	Some degradation due to anthropogenic actions	No change to present condition; no known projects in the vicinity that would cause a decline in water quality	Temporary increases in local turbidity due to construction; no long-term change
Cultural Resources and Historic Properties	Cultural resources have been degraded or lost due to development, private collecting, erosion, and other factors.	Education and enforcement of relevant laws have helped conserve cultural resources.	Beach placement areas may continue to erode and adversely affect cultural resources. Other factors, such as sea level rise, may increase erosion and impact some cultural resources.	Sand placement using a combination of sand sources (proposed action) would have no effect on cultural resources. Anomalies of interest would be avoided or buffered, and additional surveys and consultation with the Florida SHPO and appropriate federally-recognized tribes may be required. Other factors, such as sea level rise, may increase erosion and impact some cultural resources.

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4.18 SEA LEVEL CHANGE

Engineering Technical Letter (ETL) 1100-2-1 recommends beginning a sea level rise evaluation by first understanding the strategic decision context, or "what's the decision to be made and how will a potential acceleration in sea level rise impact that decision." Although Pinellas County's infrastructure is indeed vulnerable to sea level rise, the Pinellas County BEC is an already authorized project well into its 50 year period of Federal participation. This report is not a decision document, and is intended to analyze the effect on the human environment of the various alternatives considered. No changes to the authorized project are proposed as part of this EA. When considering the project purpose of protecting upland infrastructure, the Recommended Plan greater meets this purpose over the No Action alternative with an increase in sea level over the remaining period of Federal participation. The renourishment interval has consistently been approximately five years since the beginning of Federal participation in the project in 1985. The sand fill template for this project is tied to a tidal datum which has risen with rising sea level, meaning the berm height has also been increased accordingly. Even though sea level is rising in this region, the volume of sand placed on the beach per year has stabilized, and in certain areas, has been decreasing as the beach profile has stabilized over the life of the project. Sea level has risen at a relatively slow rate, however a re-evaluation of the project should be conducted if significant changes in eustatic sea levels do occur.

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. One example of an irreversible commitment might be the mining of a mineral resource. The use of sand from the proposed sand sources would, for all practical purposes, irreversibly deplete the suitable sand reserves in the short-term. However, the ebb shoals proposed as sand sources are expected to reestablish following dredging.

4.19.2 IRRETRIEVABLE

An irretrievable commitment of resources is one in which, due to decisions to mandate the resource for another purpose, opportunities to use or enjoy the resources as they presently exist are lost for a period of time. An example of an irretrievable loss might be where a type of vegetation is lost due to road construction. As littoral drift restores the sand volumes in the ebb shoals over time, the Preferred Alternative would not result in an irretrievable commitment of resources.

4.20 UNCERTAIN, UNIQUE, OR UNKNOWN RISKS

The USACE has completed numerous sand placement projects throughout the country, including past projects in Pinellas County and other counties along the Gulf Coast of Florida. USACE projects allow for adaptive management through extensive monitoring following placement. If monitoring shows any change in coastal dynamics from what was anticipated, future sand placement events can be modified to address any concerns.

4.21 ENVIRONMENTAL COMMITMENTS

USACE, its Contractors, and Pinellas County commit to avoiding, minimizing, or mitigating for adverse effects during construction activities. Environmental commitments resulting from agency comments, public concerns, laws, regulations, and permit requirements will be summarized in Section 7.4 of the Final EA and included in the contract specifications as appropriate.

4.21.1 Cultural Resources

An unexpected cultural resources finds clause would be implemented. Anomalies of interest would be avoided or buffered, and additional surveys and/or monitoring may be required. Consultation will continue with the Florida SHPO and the appropriate federally recognized tribes and will be completed prior to the commencement of any activities associated with this Supplemental EA.

4.21.2 Protection of Fish and Wildlife Resources

As required by the project's contract specifications, the Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. The following measures will be implemented:

- Species that require specific attention along with measures for their protection shall be listed in the Contractor's Environmental Protection Plan prior to the beginning of construction operation.

- The Contractor shall inform their personnel of the potential presence of sea turtles in the project area, their endangered status, the need for precautionary measures, and the Endangered Species Act prohibition on taking sea turtles and other threatened or endangered species.

- The dredging and placement areas will be monitored by the dredge personnel, USACE dredge inspectors, and sea turtle monitors for the presence of sea turtles.

- To minimize adverse effects to sea turtles due to lighting, the Contractor will be required to use shielded low pressure sodium lights as security lighting within the construction area as long as they meet the Contractor's requirements pursuant to the Occupational Safety and Health Administration.

- NMFS will be notified immediately should the take of a sea turtle occur.

- To avoid impact to cultural resources, buffer zones with a 250-foot radius will be established around each anomaly.

- The Contractor will monitor turbidity at both the dredging overflow and beach placement sites. Should monitoring reveal turbidity levels above State standards, work will be suspended until turbidity levels return to within State standards.

- Pipelines will be placed only in approved areas, and vessel anchoring will be permitted in sandy areas only to avoid adverse effects to hardground resources.

To ensure the contractor and their personnel are aware of the potential presence of the manatee in the project area, their endangered status, and the need for precautionary measures, the contract specifications will include the Standard Manatee Conditions for In-Water Work (FWC, 2011):

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 in the immediate area 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, if used, 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 shutdown 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 1-888-404-3922. Collision and/or injury should also be reported to the USFWS in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com

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. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Manatees* must be posted. 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 in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.

5 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

5.1 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

This Supplemental EA was prepared to document the effects of this project, and it will be subject to public review and comment for a 30-day period. This public coordination and environmental assessment complies with the intent of NEPA. The project is in compliance with the National Environmental Policy Act of 1969, as amended, 42 U.S.C. §4321, *et seq*. (P.L. 91-190).

5.2 ENDANGERED SPECIES ACT OF 1973

This project is in compliance with the Endangered Species Act of 1973, as amended, 16 U.S.C. §1531, *et seq*. (P.L. 93-205). This project falls under the scope of the NMFS November 19, 2003 GRBO (as amended in 2005 and 2007) for federally listed marine species. No additional coordination is required with NOAA Fisheries for these species.

USACE has determined that the sand placement activities associated with this project fall within the scope of the USFWS SPBO (2015) and P^3BO (2013), and USFWS concurred with this determination in a letter dated August 7, 2017. In addition, the USFWS provided their biological opinion and an incidental take statement for the rufa red knot in their August 7, 2017 letter. This document is included in Appendix C – Pertinent Correspondence.

5.3 FISH AND WILDLIFE COORDINATION ACT OF 1958

This project has been coordinated with USFWS during the original feasibility study process. A final Coordination Act Report dated November 4, 1996, was submitted by the USFWS. Additional coordination with the USFWS will be conducted as part of their review under the Endangered Species Act. This project is in full compliance with the Act.

5.4 NATIONAL HISTORIC PRESERVATION ACT OF 1966 (INTER ALIA)

The Preferred Alternative is in compliance with Section 106 of the NHPA, as amended. As part of the requirements and consultation process contained within the NHPA implementing regulations of 36 CFR 800, this project is also in compliance through ongoing consultation with the Archaeological and Historic Preservation Act, as amended (16 U.S.C. §§469-469c) (PL 93-291), Archaeological and 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). Consultation with the Florida SHPO, the Miccosukee Tribe of Indians of Florida, the Seminole Nation of Oklahoma, and the Seminole Tribe of Florida was initiated in a letter dated June 15, 2017 (Appendix C). Consultation will be concluded prior to project implementation. The proposed action shall be in compliance with the goals of this Act upon completion of coordination as stated above.

5.5 CLEAN WATER ACT OF 1972

USACE obtained Section 401 (33 U.S.C. §1341) water quality certification from the FDEP through the issuance of the following permits in association with this project:

- Permit No. 0270453-003-JN (issued December 15, 2016; John's Pass Maintenance Dredging)
- Permit No. 0221569-016-JN (issued December 16, 2016; Treasure Island and Long Key Beach Nourishment)
- Permit No. 0238664-008-JN (issued December 16, 2016; Sand Key)
- Permit No. 0238664-009-JN (issued July 13, 2017; Sand Key)
- Permit No. 0221569-017-JN (issued July 13, 2017; Treasure Island and Long Key Beach Nourishment)
- Permit No. 0270453-004-JN (issued July 26, 2017; John's Pass Maintenance Dredging)

All State water quality requirements will be met during project construction. A Section 404(b) [33 U.S.C. §1344(b)] evaluation is included in this report as Appendix A.

Tampa Bay is designated as an "estuary of national significance" as part of the National Estuary Program, authorized by section 320 of the Clean Water Act in 1987 (33 U.S.C. §1330). The project will not adversely impact the Tampa Bay ecosystem. Therefore, the project is in compliance with this Act.

5.6 CLEAN AIR ACT OF 1972

The short-term effects from construction equipment associated with the project would not significantly effect air quality. Air quality permits would not be required for this project. Pinellas County is designated as an attainment area for federal air quality standards under the CAA. Because the project is located within an attainment area, USEPA's General Conformity Rule to implement Section 176(c) of the CAA [42 U.S.C. §7506(c)] does not apply and a conformity determination is not required.

This project was coordinated with USEPA during the public comment period, and USACE did not receive any comments from them. The project is in compliance with Section 309 of the Act (42 U.S.C. §7609).

5.7 COASTAL ZONE MANAGEMENT ACT OF 1972

A federal consistency determination in accordance with 15 CFR Part 930, Subpart C is included in this report as Appendix B. USACE has determined that the project is consistent with the Florida Coastal Management Plan (FCMP) concerning acquisition of Water Quality Certifications and other state authorizations. The Supplemental EA and Section 404 (b)(1) Evaluation have been submitted to the state in lieu of a summary of environmental effects to show consistency with the FCMP.

The state's final concurrence of the project's consistency with the FCMP was determined during the environmental permitting process, in accordance with the 2006 Interagency Coordination Agreement. The FDEP issued the following permits in association with this project:

- Permit No. 0270453-003-JN (issued December 15, 2016; John's Pass Maintenance Dredging)
- Permit No. 0221569-016-JN (issued December 16, 2016; Treasure Island and Long Key Beach Nourishment)
- Permit No. 0238664-008-JN (issued December 16, 2016; Sand Key)
- Permit No. 0238664-009-JN (issued July 13, 2017; Sand Key)
- Permit No. 0221569-017-JN (issued July 13, 2017; Treasure Island and Long Key Beach Nourishment)
- Permit No. 0270453-004-JN (issued July 26, 2017; John's Pass Maintenance Dredging)

This project is in compliance with this Act.

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

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

5.9 WILD AND SCENIC RIVER ACT OF 1968 (28 U.S.C. §1271 *ET. SEQ.*)

No designated Wild and Scenic river reaches would be affected by project related activities. This project is in compliance with this Act.

5.10 MARINE MAMMAL PROTECTION ACT OF 1972 (16 U.S.C. §1361 *ET. SEQ.*)

USACE does not anticipate the take of any marine mammal during any activities associated with the project. Should a hopper dredge be utilized, a trained, government-certified sea turtle and marine mammal observer will be stationed on the dredge during all water-related construction activities. Appropriate actions will be taken to avoid adverse effects to marine mammal species during project construction (see also Sections 4.2.1.3 and 4.3.1.2). Therefore, this project is in compliance with this Act.

5.11 ESTUARY PROTECTION ACT OF 1968

In the Estuary Protection Act of 1968 (16 U.S.C. §§1221-26), Congress declared that "many estuaries in the United States are rich in a variety of natural, commercial, and other resources, including environmental natural beauty, and are of immediate and potential value to the present and future generations of Americans." This Act is intended to protect, conserve, and restore estuaries in balance with developing them to further the growth and development of the Nation. USACE has considered the importance of estuaries in its planning, and there will be no long-term effects to the Tampa Bay ecosystem. This project is consistent with the purposes of this Act.

5.12 FEDERAL WATER PROJECT RECREATION ACT

The principles of the Federal Water Project Recreation Act, as amended (16 U.S.C. §460l-12 *et seq*.) (P.L. 89-72) do not apply to this project.

5.13 SUBMERGED LANDS ACT OF 1953

The project would occur on submerged lands of the State of Florida. The project has been coordinated with the State and is in compliance with the act.

5.14 COASTAL BARRIER RESOURCES ACT AND COASTAL BARRIER IMPROVEMENT ACT OF 1990

The CBRA and CBIA limit Federally subsidized development within the CBRA units to limit the loss of human life by discouraging development in high risk areas, to reduce wasteful expenditures of Federal resources, and to protect the natural resources associated with coastal barriers. CBIA provides development goals for undeveloped coastal property held in public ownership, including wildlife refuges, parks, and other lands set aside for conservation ("otherwise protected areas," or OPAs). These public lands are excluded from most of the CBRA restrictions, although they are prohibited from receiving Federal Flood Insurance for new structures.

Federal monies can be spent within the CBRA units for certain activities, including (1) projects for the study, management, protection, and enhancement of fish and wildlife resources and habitats; (2) establishment of navigation aids; (3) projects funded under the Land and Water Conservation Fund Act of 1965; (4) scientific research; (5) assistance for emergency actions essential to saving lives and the protection of property and the public health and safety, if preferred pursuant to the Disaster Relief Emergency Assistance Act and the National Flood Insurance Act and are necessary to alleviate the emergency; (6) maintenance, repair, or reconstruction, but not expansion, of publically owned or publically operated roads, structures, or facilities; (7) nonstructural projects for shoreline stabilization that are designed to mimic, enhance, or restore a natural stabilization system; (8) any use or facility necessary for the exploration, extraction, or transportation of energy resources; (9) maintenance or construction of improvements of existing federal navigation channels, including the disposal of dredge materials related to such projects; and (10) military activities essential to national security.

There are two CBIA OPAs in the project vicinity (see **Figure 11**). The proposed project does not include the construction of structures that would require Federal Flood Insurance in the area designated as an "otherwise protected area" pursuant to the CBIA; therefore, Federal expenditures for the proposed project are not restricted in this area. USACE coordinated with the USFWS concerning the CBIA units in the project area, and will confirm that the project is in compliance with the Act prior to project construction.

5.15 RIVERS AND HARBORS ACT OF 1899 (33 U.S.C. §400 *ET. SEQ.*)

The proposed work would temporarily obstruct navigable waters of the United States. The proposed action was subject to the public notice, public hearing, and other evaluations normally conducted for activities subject to the Act. The project is in compliance with this Act.

5.16 ANADROMOUS FISH CONSERVATION ACT (16 U.S.C. §§757A-757G)

This Act authorizes the Secretaries of the Interior and Commerce to enter into cooperative agreements with the States and other non-Federal interests for conservation, development, and enhancement of anadromous fish and to contribute up to 50 percent as the Federal share of the cost of carrying out such agreements. As this project is not receiving funding for these purposes, this Act does not apply.

5.17 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT

Migratory birds would be minimally affected by dredging at the proposed sand source locations. Temporary displacement of shorebirds utilizing the sand placement area would also occur. The

USACE will include our standard migratory bird protection requirements in the project plans and specifications and will require the Contractor to abide by those requirements. Nourishment activities at the beach placement site will be monitored at dawn or dusk daily during the nesting season to protect nesting migratory birds. If nesting activities occur within the construction area, appropriate buffers will be placed around nests to ensure their protection (see also Sections 3.2, 3.3, 4.2, and 4.3 of this document). The project is in compliance with these Acts.

5.18 MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT

The term "dumping" as defined in the Act (33 U.S.C. §1402) 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 Act does not apply to this project. The disposal activities addressed in this EA have been evaluated under Section 404 of the Clean Water Act (see Appendix A).

5.19 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Pursuant to the 1999 Finding between USACE and NMFS, USACE's Notice of Availability of this Supplemental EA initiates USACE's consultation under the MSFCMA. USACE will respond to any NMFS comments on the Supplemental EA prior to finalizing the document. The project is in compliance with the Act.

5.20 UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES ACT OF 1970.

The purpose of 42 U.S.C. §4601 *et. seq.* (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. This project does not involve any real property acquisition or displacement of property owners or tenants. Therefore, this Act is not relevant to this project.

5.21 E.O. 11990, PROTECTION OF WETLANDS

No wetlands would be affected by project activities. This project is in compliance with the goals of this EO.

5.22 E.O. 11988, FLOOD PLAIN MANAGEMENT

To comply with EO 11988, the policy of USACE is to formulate projects that, to the extent possible, avoid or minimize adverse effects associated with the use of the floodplain and avoid inducing development in the floodplain unless there is no practicable alternative. No activities associated with this project are located within a floodplain, which is defined by EO 11988 as an "area which has a one percent or greater chance of flooding in any given year." The project shoreline is significantly developed, and further development is unlikely.

Beach erosion control projects are inherently located in coastal areas, and are often located in Coastal High Hazard Areas (CHHA) based on the problems the project is seeking to alleviate. The primary objective of the Pinellas County Beach Erosion Control Project is to reduce infrastructure damage. There is no practicable alternative that could be located outside of the CHHA that would achieve this objective. In fact, the need for protection of the infrastructure located along this CHHA shoreline is the reason it was authorized by Congress.

For the reasons stated above, the project is in compliance with EO 11988, Floodplain Management.

5.23 E.O. 12898, ENVIRONMENTAL JUSTICE

On February 11, 1994, the President of the United States issued EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The EO mandates that each federal agency make environmental justice 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.

Any potential adverse effects of the proposed action would be more likely to affect those of higher socioeconomic status, such as large watercraft owners or those living in the coastal area surrounding the project. Beneficial effects of the project, including a wider, more sustainable public beach would benefit all members of the public who are able to obtain transportation to access the beach. The areas proposed for nourishment have sufficient public access and parking, and the only area that does not have sufficient access is excluded from placement. There are no disproportionate adverse effects to minority or low income populations resulting from the implementation of the project.

5.24 E.O. 13045, DISPARATE RISKS INVOLVING CHILDREN

On April 21, 1997, the President of the United States issued EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. The EO mandates that each federal agency make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure that its policies, programs, activities, and standards

address disproportionate risks to children that result from environmental health risks or safety risks.

As the proposed action does not affect children disproportionately from other members of the population, the proposed action would not increase any environmental health or safety risks to children.

5.25 E.O. 13112, INVASIVE SPECIES

The proposed action will require the mobilization of dredge equipment from other geographical regions. Dredge equipment has the potential to transport species from one region to another, introducing them to new habitats where they are able to out-compete native species. The benefits of the proposed project outweigh the risks associated with the very slight potential for introducing non-native species to this region. The action takes place primarily in Gulf waters, minimizing risk to more sheltered coastal habitats.

5.26 E.O. 13186, MIGRATORY BIRDS

This EO requires, among other things, a Memorandum of Understanding (MOU) between the Federal Agency and the USFWS concerning migratory birds. Neither the Department of Defense MOU nor the USACE Draft MOU clearly address migratory birds on lands not owned or controlled by USACE. For many USACE 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 are described in a section above on the MBTA.

6 LIST OF PREPARERS

6.1 PREPARERS

This Environmental Assessment was prepared by the following USACE personnel:

Aubree G. Hershorin, Ph.D.	Ecologist
Marc Tiemann	Archeologist

6.2 REVIEWERS

This Environmental Assessment was reviewed by the following USACE personnel:

Jason Spinning	Biologist
Terri Jordan-Sellers	Biologist
Gina Paduano Ralph, Ph.D.	Biologist
Meredith Moreno	Archeologist

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7 PUBLIC INVOLVEMENT

7.1 SCOPING AND SUPPLEMENTAL EA

This Supplemental EA and the Proposed Finding of No Significant Impact was made available to the public for a 28-day comment period. Comments received are included in Appendix C, Pertinent Correspondence, and responses are provided in Section 7.4.

7.2 AGENCY COORDINATION

This proposed project was coordinated with the following agencies prior to finalizing the NEPA process: USFWS Service, NMFS, USEPA, Florida State Clearinghouse, Florida SHPO, and the FDEP. Correspondence with these agencies is included in Appendix C.

7.3 LIST OF RECIPIENTS

A summary of the parties who received copies of the Notice of Availability of the Draft Supplemental EA and the Draft FONSI is included in Appendix D. A complete list of all addresses is on file at the USACE, Jacksonville District, and will be made available upon request.

7.4 COMMENTS RECEIVED AND RESPONSES

USACE received comments from the Seminole Tribe of Florida, a concerned member of the public, and the Council of Original Miccosukee Simanolee Nation Aboriginal People.

The Seminole Tribe of Florida had concerns that dredging Egmont Shoals would impact sediment transport to Egmont Key and further exacerbate erosion at the island. USACE responded that the shoals are located north of a deep draft navigation channel, and the navigation channel is presumed to be a sink for material moving from the north to the south in this area. Therefore, very little, if any, material is bypassed around/through the navigation channel. Changes to the wave field as a result of sediment removal (which subsequently affects sediment transport in the coastal zone), there are very few wave origination angles that cross the borrow area and head towards Egmont Key. Those that do are very limited in fetch due to the presence of land (Mullet Key, Shell Key, Long Key, Treasure Island, and Sand Key), and therefore are limited in potential wave energy. Any changes to the wave field approaching Egmont Key are expected to be limited to the immediate vicinity of the borrow area, and insignificant due to the low wave energy potential for the wave directions of concern.

Mr. Allen Stewart provided comments regarding (1) the potential discovery of archeological evidence related to the cultures of Aboriginal Indigenous People; (2) the local government's plan

for responding to climate change; and (3) the proposed long-term monitoring associated with the project. Responses to each of these comments is provided below:

(1) USACE maintains an "inadvertent discoveries policy." Pursuant to this policy, all work would stop should archaeological materials be identified during construction, and consultation would be reinitiated with the State Historic Preservation Office and with the appropriate Federally-recognized tribes.

(2) Federal authorization and funding associated with this project is not contingent on the local sponsor providing a comprehensive plan for the community to adapt to sea level rise. A discussion on sea level change is included in Section 4.18.

(3) While conducting periodic bioassays is beyond the scope of this project, comprehensive turbidity monitoring is conducted during all beach placement activities. Turbidity monitoring will ensure that no significant impacts occur to water quality. Coarse-grained sediment, such as that used for beach placement, falls out of suspension in a relatively short time-frame (minutes to hours). Therefore, no long-term effects on water quality are anticipated.

    USACE has conducted programmatic consultations for beach nourishment projects with the USFWS that outline protection measures and monitoring requirements for Federally-protected species. For this project, long-term monitoring of sea turtle nesting will occur for three years post-construction, and monitoring of Federally-protected shorebird species will occur for two years post-construction. Similar monitoring requirements have been in place for at least the last decade for other beach nourishment activities throughout the state, and the results of this monitoring have informed the effects analysis included in Section 4 of this EA.

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples provided comments on the draft EA (with the USACE response following each comment) addressing the need to consult with the Seminole and Miccosukee Tribes; a request to provide a 300-ft buffer around any discovered Aboriginal Indigenous Human Being Remains and/or their Belongings; comments on the significance of the project to species using the beach and nearshore habitats; and comments on whether this type of project is an appropriate use of federal funding over projects with the goals of addressing climate change and protecting wildlife and natural ecosystems. The Council expressed their disagreement with the project because of the significant impacts it will have on the environment.

In response to the Council's comments, USACE consulted with the appropriate, Federally-recognized tribes on this project pursuant to Federal laws and regulations. USACE maintains an "inadvertent discoveries policy." Pursuant to this policy, all work would stop should archaeological materials be identified during construction, and consultation would be reinitiated

with the State Historic Preservation Office and with the appropriate Federally-recognized tribes. USACE has documented the concerns expressed regarding the species and natural systems that would be affected by the proposed action, and has addressed and mitigated these concerns to the extent allowable by the applicable Federal laws.

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9 INDEX

AESTHETIC RESOURCES 33
Aesthetics 10, 34, 48, 4, 6
Affected Environment 6, 13, 45
AFFECTED ENVIRONMENT 13
AGENCY COORDINATION 65
Air Quality 4, 10, 47, 57, 4
AIR QUALITY 32, 46
Algae 23, 4
Alternative6, 7, 8, 9, 13, 34, 36, 38, 39, 40, 41, 44, 45, 46, 47, 48, 49, 52, 56, 61, 7
Alternatives 1, 3, 6, 7, 8, 13, 34, 38, 50
ALTERNATIVES 6
Archeological 29, 66, 1
Archeologist 64
Artificial Reef 12, 39, 60, 1
Benefit 11, 61, 62
Benthic 9, 23, 24, 34, 38, 39, 68, 3, 1
Berm 6, 3
biological opinion 56
Biological Opinion 36, 37, 5
Biologist 64
Birds 9, 14, 20, 21, 34, 60, 63, 66, 5
Borrow Area 15, 31, 38, 42, 52, 3
Breakwaters 1
Buffer Zone 35, 53
Clean Water Act 4, 57, 60, 7
Climate 13, 30
Coastal Barrier Resources 4, 27, 40, 59
COASTAL BARRIER RESOURCES 27, 40
COASTAL ZONE MANAGEMENT CONSISTENCY 1
Comments 52, 61, 65
COMMENTS RECEIVED 65
Compaction 36
COMPARISON OF ALTERNATIVES 8
Conservation Commission 54, 3
Consultation11, 22, 32, 38, 40, 41, 42, 44, 45, 46, 51, 56, 61
Contamination 46
Coordination 56, 58, 3
Coordination Act 56
Coral 22
Countyi, 1, 2, 3, 4, 6, 7, 9, 13, 14, 15, 16, 20, 21, 22, 28, 29, 30, 31, 32, 33, 37, 40, 42, 43, 49, 51, 52, 57, 61, 66, 67, 68, 1, 2, 5, 1
critical habitat 9, 16, 19, 20, 21, 37, 38, 5, 7
Critical Habitat 19
cultural resources 53
Cultural Resources29, 30, 31, 40, 41, 42, 43, 44, 45, 51, 53, 67
CUMULATIVE IMPACTS 49
DECISIONS TO BE MADE 3
Deflector Draghead 37
Department of Environmental Protection 4, 57, 65, 68
Dunes 1
EA6, 8, 22, 24, 40, 41, 44, 45, 52, 53, 56, 57, 60, 61, 65
Economic 2
Effect 11, 39, 40, 41, 42, 44, 45, 46, 47, 48, 51, 66, 4, 1, 2
EFH 21, 22, 38
Endangered 3, 14, 20, 53, 54, 56, 5, 7
enhance 22
Enhance 22, 59, 3
Environmental Assessment i, 3, 4, 22, 41, 42, 64
ENVIRONMENTAL COMMITMENTS 52
ENVIRONMENTAL EFFECTS 34
EPA 31, 46, 57

Erosion i, 1, 2, 3, 6, 9, 22, 38, 39, 41, 44, 45, 51, 61, 67, 1, 2, 3, 5, 1, 4
essential fish habitat 21, 39
Essential Fish Habitat 3, 22, 38
ESSENTIAL FISH HABITAT assessment 38
Exchange 5
farmland 58
Farmland 58
Federal 14, 21, 27, 40, 41, 42, 44, 46, 59, 60, 61, 62, 63
Fish 9, 14, 15, 21, 28, 35, 53, 59, 60, 68, 7, 1
Fish and Wildlife 3, 53, 54, 56, 65, 3
FISH AND WILDLIFE RESOURCES 14, 34
GENERAL ENVIRONMENTAL EFFECTS 34
GENERAL ENVIRONMENTAL SETTING 13
habitat 21, 37
Habitat 9, 12, 16, 19, 20, 21, 22, 23, 25, 35, 36, 37, 38, 39, 48, 51, 2, 3
Hardgrounds 9, 24
Hazardous 32, 40, 46, 49
HAZARDOUS, TOXIC AND RADIOACTIVE WASTE 32
HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE 46
Health 53, 62
Historic 4, 29, 31, 32, 40, 42, 43, 45, 51, 56, 6, 2
Historic Preservation 32, 45, 56, 2
HISTORIC PROPERTIES 29
impact 53
Impact 3, 33, 35, 37, 38, 39, 40, 41, 48, 49, 50, 51, 53, 57, 65, 67, 4, 5, 6, 2, 4
income 62
Income 62
Infrastructure 1, 38, 61, 1
IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES 52
LIST OF PREPARERS 64
LIST OF REVIEWERS 64
Location 6, 20, 21, 25, 40, 41, 42, 54, 1, 2
Loggerhead Sea Turtle 16
Long-Term Productivity 15, 35, 66, 67
Magnetic Anomaly 43
Manatee 9, 15, 16, 35, 37, 54, 55
migratory bird 36, 60, 63
Migratory Bird 14, 34, 60, 63
Mitigate 9, 12, 36, 3
Mitigation 12, 1
MITIGATION 12
monitoring 53
Monitoring 12, 35, 37, 52, 53
National Environmental Policy Act 1, 56
National Marine Fisheries Service 22, 53, 56, 65
NATIVE AMERICANS 32
NATURAL OR DEPLETABLE RESOURCES 49
NAVIGATION 33
Need 53, 54, 62
NEPA 1, 22, 37, 56, 65
Nesting 9, 34, 36, 60, 67, 5
No Action 7, 9, 36, 39, 40, 45, 46, 47, 48, 49
NOAA 21, 32, 56, 68
Noise 4, 47, 48, 66
NOISE 33, 47
Nourishment 1, 6, 7, 8, 9, 24, 35, 37, 40, 41, 60, 62, 1, 2, 3, 6, 7, 1
Offshore 4, 8, 14, 16, 24, 33, 47, 49, 51, 61, 66
Oil 32, 34, 46, 67, 68, 4
PERMITS, LICENSES, AND ENTITLEMENTS 4
Petroleum 32, 40, 46, 4
Physical Effects 3
Pipeline Corridor 9, 39, 41, 45
Pipelines 2
Preservation 56, 1
PROJECT LOCATION 1
PROJECT NEED OR OPPORTUNITY 1
PROJECT PURPOSE AND NEED 1
Protected Species 51

Public Hearing 60
PUBLIC INVOLVEMENT 65
Purpose 1
Real Estate 63
Recreation 4, 28, 59, 6
RECREATION 49
RECREATION RESOURCES 33
Reef 12
Regional Biological Opinion 37, 56
RELATED ENVIRONMENTAL DOCUMENTS 2
Relocation 5
renourishment 32
Renourishment 6, 7, 24, 25, 32, 36, 40, 1, 2
resources 52
Resources2, 3, 4, 7, 10, 12, 13, 14, 24, 26, 27, 29, 30, 31, 32, 34, 35, 36, 37, 39, 41, 42, 43, 44, 45, 46, 48, 49, 50, 51, 52, 53, 56, 58, 59, 67, 68, 1, 2, 3, 4
Response 47, 65
restoration 1
Restoration 3, 66
Restore 1, 2, 3, 58, 59
safety 37
Safety 9, 37, 59, 62, 1
Scoping 68
SCOPING AND ISSUES 3
Sea Grass 21, 37, 39, 51
Sea Turtle Nesting 9, 34, 38, 67, 2
Section 401 4, 57
Section 404 57, 60
SECTION 404(B) EVALUATION v, 1
Sediment 2, 5, 13, 32, 34, 35, 36, 37, 49, 51, 3
Sedimentation 35, 38
SHPO 42, 43, 44, 45, 51, 53, 57, 65
Side Scan Sonar 31, 43
Silt13
Sponges 23
State 28, 31, 32, 46, 53, 57, 59, 65, 66, 4, 6, 7, 1, 2, 3, 4
State Historic Preservation 2
Summary 3, 9, 22, 51
Threatened 3, 15, 5
THREATENED AND ENDANGERED SPECIES 36
THREATENED AND ENDANGERED SPECIES 15
Tilling 36
Transfer 30, 3
Turbidity 4, 10, 35, 38, 40, 51, 53, 54, 3, 4, 5
turtle 15, 16, 37, 53, 58, 68, 5
Turtle 15, 16, 37, 53, 58, 68, 5
U.S. Army Corps of Engineers 66
U.S. Environmental Protection Agency 32, 65
U.S. Fish and Wildlife Service 54, 56, 65, 68
Unique 30, 58, 1
Upland 2, 42, 51
Vegetation 9, 52
WATER QUALITY 28
Water Quality Certification 57
Water Resources 1, 3
Waterway 30, 33, 42
wildlife 14, 27, 28, 34, 53, 59, 7, 1

APPENDIX A - SECTION 404(B) EVALUATION

PINELLAS COUNTY BEACH EROSION CONTROL PROJECT

Pinellas County, Florida

SECTION 404(b) EVALUATION

I. PROJECT DESCRIPTION

A. Location

The project is located in Pinellas County on the Gulf Coast of Florida. The project includes five barrier islands: Clearwater Beach Island, Sand Key, Treasure Island, Long Key, and Mullet Key. These islands are elongate and parallel to the Gulf Coast of Pinellas County in a north-to-south string.

B. General Description

The proposed work consists of dredging shoal material from the ebb shoals of Clearwater Pass, Johns Pass, Blind Pass, Pass-a-Grille, and Egmont Shoals, and placing that material onto the beaches of Pinellas County. The majority of the Pinellas County shoreline has already received fill material, and most erosional areas require nourishment every five to seven years.

C. Authority and Purpose

The beach erosion control project for Pinellas County, Florida, extends along 25 miles (40 km) of barrier islands. Beach nourishment provides storm protection to residences and infrastructure along various Pinellas County barrier islands, and was authorized under the River and Harbor Act of 1966. Participation under this Act was extended for 50 years by the Water Resources Development Act of 1986. The Act provides for the restoration of 5,000 feet (1,515 m) of eroded shoreline on Clearwater Beach Island, 49,000 feet (14,848 m) of shoreline on Sand Key, 9,200 feet (2,728 m) on Treasure Island, 5,600 feet (1,697 m) on Long Key, and periodic nourishment as necessary. In addition, authorization under the 1986 Act includes construction of 600 feet (182 m) of revetment and a breakwater at Long Key, rehabilitation of the north groin at Johns Pass, and breakwaters along Sand Key.

D. General Description of Dredged or Fill Material

1) General Characteristics of Material

The fill material is predominately fine quartz sand with varying amounts of whole and broken shell.

2) Quantity of Material

At least 12,000,000 cy of material is present within the proposed sand source locations.

3) Source of Material

The fill material will come from Egmont Shoals, or from the following navigation channels and their associated ebb shoals: Clearwater Pass, Johns Pass, Blind Pass, and Pass-a-Grille.

E. Description of the Proposed Discharge Site

1) Location and Size

Fill material will be placed along the beaches of Pinellas County. The specific locations may include both previously nourished areas, as well as areas that have not previously been nourished as part of this project. The length of each nourishment event will depend on the scale of the project and the extent of the erosion in the project area at the time of construction, but nourishment events associated with this project are typically between nine and 12 miles in length.

2) Type of Site

The disposal site will be an eroded, sandy recreational beach.

3) Type of Habitat

The project site will be a currently eroding carbonate and quartz sand beach and the nearshore habitat within the depth of closure for the placed material. The sand source locations are characterized by sandy bottoms.

4) Timing and Duration of Discharge

Dredging and disposal timing and duration will vary depending on the extent of erosion on Pinellas County beaches and the availability of project funds.

F. Description of Disposal Method

Material will be excavated using a hopper or cutter-suction dredge attached to a spider barge, which will distribute the material through pipelines to the placement area in a slurry. Grading will be performed at the beach to achieve the construction profile.

II. FACTUAL DETERMINATION

A. Physical Substrate Determination

1) Substrate Elevation and Slope

Top elevation of the construction beach fill will consistent with past projects, with a top elevation averaging approximately 6.0 feet MLW. The equilibrium profile for the beach fill will vary along the project beach depending on wave/current distribution of the fill material. Generally, the equilibrium berm width will be less than the constructed width with a flatter slope from the berm to the existing bottom.

2) Sediment Type

The sediment is predominantly fine quartz sand with varying amounts of shell. Average grain size for composite samples from all borrow areas was 0.29 mm.

3) Dredge/Fill Material Movement

The fill material will be subject to erosion by waves with the net movement of fill material to the south.

4) Physical Effects on Benthos

The fill will bury some benthic organisms. Most organisms in this high energy wave ecosystem are adapted for existence in an area with considerable substrate movement, and they will be able to burrow up through the fill material. Recolonization generally occurs within a year. Benthic organisms associated with nearshore hardground areas that are covered will be lost; however, the existing hardbottom habitats are ephemeral and have already experienced effects from and recovery following previous beach nourishment projects. Areas with extensive nearshore hardbottom habitats that have not previously been mitigated will explore using truck hauled sand from adjacent segments and placing material above the MHWL.

B. Water Circulation, Fluctuation and Salinity Determination.

1) Water

The placement of fill on the beach will increase turbidity in the nearshore area. Because the immediate nearshore area is a high energy system and subject to naturally-occurring elevated turbidity, increases due to the project will not be significant. Fill placement will have no long-term or significant effects, 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 alongshore current can be either northerly or southerly depending on the locations. Placement of the fill on the beach will have no effect on the currents.

3) Normal Water Level Fluctuations and Salinity Gradients

Tides in the project area are semi-diurnal mixed. The mean range of tides in the project area is 2.6 feet (0.8m) and the spring range is 3.0 feet (0.9m). Wind set-up (piling up of water on the shoreline) has significantly more effect on seasonal and long-term water fluctuations than astronomical tides. The project will have no adverse impact to these characteristics.

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 temporary increase in turbidity levels in the project are during discharge. Turbidity will be short term and localized, and no significant adverse effects are expected. State standards for turbidity will not be exceeded.

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

(a) Light Penetration. Light penetration will decrease during discharge in the immediate area where sand is being deposited on the beach. This effect will be temporary and will have no adverse impact on the environment.

(b) Dissolved Oxygen. Dissolved oxygen levels will not be altered significantly by this project due to high-energy wave action and associated adequate re-aeration rates.

(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 the 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. Primary productivity is not a recognized, significant phenomenon in the surf zone, where a temporary increased level of suspended particulates will occur. Elevated turbidity levels from resuspended beach fill may have some minor adverse impact on drifting autotrophic organisms in the immediate project area. It is anticipated that this will be a temporary and short-term phenomenon. Exposed intertidal rock provides a valuable attachment surface for photosynthetic algae. If these intertidal rock structures are permanently buried, these organisms and their ecological functions will be lost.

Because of nearshore water exchange from tidal and wind generated currents, it is probable that photosynthetic organisms are continuously carried into and out of the project area. Therefore, no long-term adverse effects are expected.

(b) Suspension/Filter Feeders. Beach fill material resuspended into the water column may contribute to the clogging of siphons of filter-feeders. This is expected to be a temporary and short-term condition. Because of high fecundity and turnover rates, rapid repopulation of these organisms is expected.

(c) Sight feeders. Elevated turbidity levels will have a short-term adverse impact on these organisms. However, these organisms are highly motile and are able to migrate into more favorable areas to fulfill their nutritional requirements.

D. Contaminant Determinations

Deposited shell and calcareous fill material is similar to the existing beach material in the surrounding area and will not introduce, relocate or increase contaminants in nearshore waters.

E. Aquatic Ecosystem and Organism Determinations

The fill material that will be placed on the beach will consist primarily of fine to medium grained sand-sized quartz that is similar enough to the existing substrate so that no effects are expected.

1) Endangered and Threatened Species

If a hopper dredge is used, the possibility of entraimnet of sea turtles and Gulf Sturgeon exists. This is minimized through the use of rigid deflectors on the dragheads and management of how the dragheads and utlilized. There will be no adverse effect to designated critical habitat for any threatened or endangered species Sea turtle nesting will most likely occur in the project area during the time dredging and beach disposal occurs. A nest relocation program will be implemented to discover, mark, and relocate these nests. All sea turtle nests discovered within the beach disposal area will be removed and relocated using the procedures outlined in the USFWS Statewide Programmatic Biological Opinion (issued May 22, 2013 and revised March 13, 2015).

2) *Other Wildlife*

Beach erosion along the Pinellas County shoreline is not expected to have a long-term significant adverse impact on wading birds or terrestrial foraging animals. These organisms are highly motile and actively seek favorable environmental conditions for foraging and resting.

F. Proposed Disposal Site Determinations

1) Mixing Zone Determination

The fill material will not cause unacceptable changes in the mixing zone 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.

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 may be temporarily impacted by the dredging of material and the placement of the material on the beach, but these effects should be minimal and no long-term effects are anticipated.

(c) Water Related Recreation. Water related recreation will be temporarily impacted during construction, but will be preserved and enhanced by the nourishment of the beach.

(d) Aesthetics. A temporary decrease in aesthetics will occur with the presence of earthmoving equipment. However, stabilizing the eroding beach will improve the aesthetics of the beach.

(e) Parks, National and Historic Monuments, National Seashores Wilderness Areas, Research Sites, and Similar Preserves. No designated sites are located in the project area.

G. Determination of Cumulative Effects on the Aquatic Ecosystem

There will be no cumulative effects that result in a major impairment of water quality of the existing aquatic ecosystem as a result of the placement of fill at the project site. Subsequent re-nourishment events will occur approximately every five to seven years. The impact of depositing material on the beach during these events will be minor. The project will not interfere with the productivity and water quality of the existing aquatic ecosystem.

H. Determination of Secondary Effects on the Aquatic Ecosystem.

No secondary effects are anticipated.

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 that meets the objectives of re-nourishment of the beach that does not involve placing fill into waters of the United States.

C. The discharge of fill materials will not cause or contribute to, after consideration of disposal site dilution and dispersion, 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 disposal of dredged material on the beach 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.

F. On the basis of the guidelines, the proposed disposal site for the discharge of dredged material is specified as complying with the requirement of these guidelines.

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APPENDIX B – COASTAL ZONE MANAGEMENT CONSISTENCY DETERMINATION

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FLORIDA COASTAL ZONE MANAGEMENT PROGRAM
FEDERAL CONSISTENCY EVALUATION PROCEDURES

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: Dredging of sand from the sand source locations and placing it on the beach for re-nourishment will not violate the intent of this chapter and meets all regulations therein. The proposed plans and information will be 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 work has been planned with the cooperation of the State and will be coordinated with the relevant agencies during the comment period.

3. Chapter 252, Disaster Preparation, Response, and Mitigation.

This chapter creates a State emergency management agency with 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: This chapter is not applicable to the nourishment of the Pinellas County Beach Erosion Control project.

4. Chapter 253, State Lands.

This chapter governs the management of submerged State lands and resources within State lands. This includes archeological and historic 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 project is intended to preserve beach resources, provide needed sea turtle nesting beaches, and comply with pertinent State regulations and the intent of this chapter.

5. Chapters 253, 259, 260, and 375, Land Acquisition.

These chapters authorize the State to acquire land to protect environmentally sensitive areas.

Response: The project would not have an adverse effect on environmentally sensitive lands, and does not interfere with the authority set forth in these chapters.

6. Chapter 258, State Parks and Aquatic Preserves.

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

Response: This project has no direct or indirect adverse impact on any state parks or preserves.

7. Chapter 267, Historic Preservation.

This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities.

Response: This project has been coordinated with the Florida State Historic Preservation Officer. Historic preservation compliance will be completed to meet all responsibilities under Chapter 267.

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: Economic contribution from the project area will not be compromised by this action. The dredging and beach fill project will encourage recreational use of the area, which is consistent with the goals of this chapter.

9. Chapters 334 and 339, Public Transportation.

These chapters authorize the planning and development of a safe, balanced, and efficient transportation system.

Response: There will be no effects to public transportation systems associated with this action.

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 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: Based upon the overall effects of this work, this project is consistent with the goals of this chapter.

11. Chapter 372, Living Land and Freshwater Resources.

This chapter establishes the Florida Fish and Wildlife Conservation 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: Coordination with the Florida Fish and Wildlife Conservation Commission during the permit process to obtain water quality certification from the state of Florida will determine if this action is consistent with State policies and practices as set forth in this chapter.

12. Chapter 373, Water Resources.

This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

Response: This work does not involve water resources as described in 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: This action does not involve the transportation or discharging of pollutants. Environmental protection measures will be employed during construction and operation of the site to avoid inadvertent spills or other sources of pollution. Therefore, this action will be in compliance with this chapter.

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 work does not involve the exploration, drilling, or production of oil, gas, or other petroleum product; therefore, this Chapter is not applicable to the project.

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 work has been determined to be consistent with the intent 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 work would 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 FDEP.

Response: Water quality certification from the FDEP will be required for this project. No air pollution permits are required for the project. Effects of the operation of construction equipment on air quality will be minor and conform to State of Florida emission standards. Therefore, the work will comply with 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 on-site and on adjoining properties affected by the work. Particular attention will be given to work on or adjacent to agricultural lands.

Response: This work does not involve agricultural lands as described in this chapter.

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APPENDIX C - PERTINENT CORRESPONDENCE

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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

NOV 2 2 2016

Mr. Larry Williams, Director
U. S. Fish & Wildlife Service
North Florida Ecological Services Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517

Dear Mr. Williams:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) would like to initiate coordination with your office under the Programmatic Piping Plover Biological Opinion (P^3BO; 2013) and the Statewide Programmatic Biological Opinion (SPBO; 2015) for the proposed beach rehabilitation of the Sand Key segment, Pinellas County Coastal Storm Risk Management Project (Figure 1). Please note that this work would be performed due to significant damage caused by Hurricane Hermine. The Corps has determined that this hurricane meets the "extraordinary storm" criteria for Flood Control and Coastal Emergency (FCCE) rehabilitation. Due to this determination, the Corps respectfully requests an expedited review of this consultation.

The Corps proposes to reconstruct the full Sand Key construction template to the design level of protection. The full template construction would consist of the placement of 877,819 cy of beach quality material from Florida Department of Environmental Protection monuments (57 – 66; 72 – 107 [please see enclosed map]). The proposed sand borrow source for the work is Egmont Shoal, a large ebb-shoal complex north of the Tampa Bay entrance channel. This State approved borrow site is located approximately 18 miles south of the project area. Although the method of work will not be dictated to the contractor, it is assumed there would be mobilization and demobilization of a cutter suction dredge, spider barge configuration, un-loader, associated pipeline, and shore equipment. This is representative of the equipment that has been used historically. The total construction time for project completion is 195 days, including 40 days for mobilization/demobilization. The work is tentatively scheduled to begin in February 2017 and be completed in August 2017.

All terms and conditions within the SPBO shall be implemented. Additionally, the standard manatee protection measures would be imposed on all waterborne activities. The Corps has determined that the proposed activity may affect nesting sea turtles and may affect, but is not likely to adversely affect, the manatee. Critical habitat for these species does not occur within the project area.

Beach nourishment would not occur in "optimal" piping plover habitat as defined by the P^3BO. The Corps has determined that the proposed work may affect, but is not likely to adversely affect, the plover. The rufa red knot was Federally listed as threatened subsequent to the issuance of the P^3BO and the SPBO. Critical habitat has not been designated for the rufa red knot; however, Sand Key is known to provide important habitat for this species. As such, the Corps agrees to implement the Terms and Conditions (T&Cs) within the Incidental Take Statement of the P^3BO for the rufa red knot. Some modification will be necessary to the T&Cs, including a shortened pre-construction survey (less than 5 consecutive months) since the project is tentatively scheduled to begin in February 2017. The Corps will coordinate with the non-Federal sponsor in order to investigate the possibility of initiating the pre-construction survey as soon as possible. The Corps has determined that the proposed work may affect the rufa red knot. The Corps also looks forward to working with the U.S. Fish and Wildlife Service on future conservation measures or T&Cs that will provide additional protection for this species.

Should you determine that the proposed activity is not within the scope of the SPBO or the P^3BO, please consider this letter initiation of consultation pursuant to Section 7 of the Endangered Species Act. Due to the nature of this FCCE action, the Corps respectfully requests your assistance in completing this coordination within 15 days of receipt of this letter. If you have any questions, please contact Paul Stodola at 904-232-3271 or by email (Paul.E.Stodola@usace.army.mil).

Sincerely,

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

Enclosure

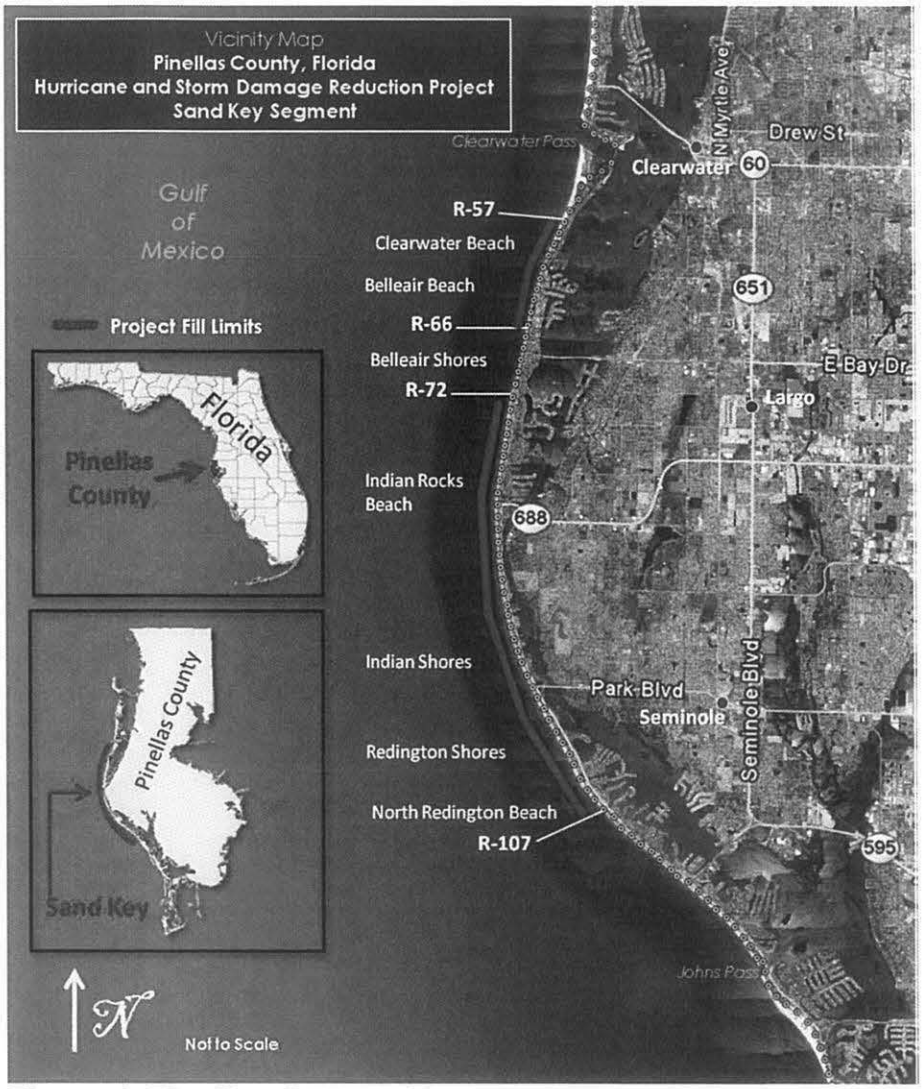

Figure 1. Pinellas County Shore Protection Project, Sand Key Segment Map

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

JUL 03 2017

Gulf Beaches Public Library
200 Municipal Drive
Madiera Beach, Florida 33708-1914

Dear Librarian:

Enclosed is a copy of the draft Environmental Assessment (EA) and proposed Finding of No Significant Impact (FONSI) for the Pinellas County Beach Erosion Control project in Pinellas County, Florida. The Preferred Alternative includes the use of material from the Egmont Shoals (just north of the Tampa Harbor Federal Navigation Channel and east of Mullet Key) or the following inlets and their associated ebb shoals: Clearwater Pass, Johns Pass, Blind Pass, and Pass-a-Grille. The beach-compatible sand will be placed along the shorelines of Pinellas County to protect upland infrastructure and to restore beach habitats.

This draft EA is being provided for public review pursuant to the National Environmental Policy Act and U.S. Army Corps of Engineers Regulation (33 CFR 230.11). We request that you make the copy available for public viewing in the reference section of your library for 21 days (July 31, 2017). After this time, the copy of the report may be disposed.

Thank you for your assistance in this matter. If you have any questions or need further information, please contact Dr. Aubree Hershorin at 904-232-2136 or via email at Aubree.G.Hershorin@usace.army.mil.

Sincerely,

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

Enclosure

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Boulevard
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

JUL 03 2017

TO WHOM IT MAY CONCERN:

Pursuant to the National Environmental Policy Act (NEPA) and U.S. Army Corps of Engineers (Corps) regulation (33 CFR 230.11), this letter constitutes the Notice of Availability of the proposed Finding of No Significant Impact (FONSI) and draft Supplemental Environmental Assessment (EA) of the Pinellas County Beach Erosion Control project in Pinellas County, Florida. The Preferred Alternative includes the use of material from the Egmont Shoals (just north of the Tampa Harbor Federal Navigation Channel and east of Mullet Key) or from the following inlets and their associated ebb shoals: Clearwater Pass, Johns Pass, Blind Pass, and Pass-a-Grille. The beach compatible sand will be placed along the shorelines of Pinellas County to protect upland infrastructure and to restore beach habitats.

The proposed FONSI and draft EA are available on the Corps' Environmental Documents webpage at the following link:

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

On that page, click on the "+" next to "Pinellas County," and scroll down to the Pinellas County Beach Erosion Control Project. The first row includes the documents associated with this Supplemental EA. There are three linked documents available for download and review: the Notice of Availability, the Draft FONSI, and the Draft Supplemental EA. A hard copy of the report is also available at the following library:

Gulf Beaches Public Library
200 Municipal Drive
Madiera Beach, Florida 33708-1914

We welcome your views and comments on the Draft Supplemental EA, as well as any information about resources and important features within the described project area. Please provide any email comments by **July 31, 2017** to Aubree.G.Hershorin@usace.army.mil.

Written comments may be mailed to:

U.S. Army Corps of Engineers
Jacksonville District
Planning and Policy Division, Environmental Branch
Attn: Aubree Hershorin, Ph.D.
P.O. Box 4970
Jacksonville, FL 32232-0019

Questions concerning the Pinellas County Beach Erosion Control project should be directed to Aubree Hershorin, Ph.D. at (904) 232-2136 or via e-mail at Aubree.G.Hershorin@usace.army.mil.

Sincerely,

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

Enclosure

From:	Mark Sramek - NOAA Federal
To:	Hershorin, Aubree G CIV USARMY CESAJ (US)
Subject:	Re: [Non-DoD Source] NOA and Proposed FONSI/Draft Supplemental Environmental Assessment of the Pinellas County Beach Erosion Control Project
Date:	Thursday, July 13, 2017 4:47:17 PM

NOAA's National Marine Fisheries Service, Southeast Region, Habitat Conservation Division, has reviewed additional information provided to our office via the electronic mail message dated July 12, 2017, (below) regarding the subject proposed Department of the Army project. Based upon our review of the information provided, we anticipate any adverse effects that might occur on marine and anadromous fishery resources would be minimal and, therefore, do not have any essential fish habitat conservation recommendations to offer regarding these activities at this time.

On Wed, Jul 12, 2017 at 4:26 PM, Hershorin, Aubree G CIV USARMY CESAJ (US) <Aubree.G.Hershorin@usace.army.mil <mailto:Aubree.G.Hershorin@usace.army.mil> > wrote:

Hi Mark,

I hope you had a relaxing vacation!

Yes, USACE would coordinate with NMFS-HCD in the event that unanticipated hardbottom habitat impacts occurred as a result of the proposed activities. Your agency would be advised of the impacts and we would consult on the proposed mitigation prior to implementation.

If you have any other questions/concerns, please do not hesitate to contact me.

Thanks,
Aubree

-----Original Message-----
From: Mark Sramek - NOAA Federal [mailto:mark.sramek@noaa.gov <mailto:mark.sramek@noaa.gov>]
Sent: Wednesday, July 12, 2017 2:48 PM
To: Hershorin, Aubree G CIV USARMY CESAJ (US) <Aubree.G.Hershorin@usace.army.mil <mailto:Aubree.G.Hershorin@usace.army.mil> >
Subject: [Non-DoD Source] NOA and Proposed FONSI/Draft Supplemental Environmental Assessment of the Pinellas County Beach Erosion Control Project

Hi Aubree,

I hope this email finds you well. In reviewing the subject EA and associated essential fish habitat assessment, proposed pipeline corridors avoid any nearshore hardbottom communities, pre-construction hardbottom monitoring will be conducted, and mitigation (artificial reef creation) would be performed if post-construction monitoring reveals hardbottom impacts have occurred. No direct/secondary submerged aquatic vegetation (SAV) impacts are expected because all SAV is well outside the project area.

Is your agency planning to coordinate with our agency in the event unanticipated hardbottom habitat impacts occur as a result of the proposed activities? We would like to evaluate the extent of impacts, habitat quantity and quality, as well as review conceptual mitigation and monitoring plan(s) in the event impacts to hardbottom habitats following project construction.

Thank you for your consideration of these comments,

From: State_Clearinghouse
To: Hershorin, Aubree G CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] SAI# FL201707208059
Date: Thursday, July 20, 2017 2:45:31 PM

To: Aubree Hershorin

Re: Florida State Clearinghouse Project Review

Project SAI#: FL201707208059C

Date Received: 07/12/17

Project Description: DEPARTMENT OF THE ARMY - DISTRICT CORPS OF ENGINEERS - FINDING OF NO SIGNIFICANT IMPACT (FONS!) AND DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (EA) OF THE PINELLAS COUNTY BEACH EROSION CONTROL PROJECT IN PINELLAS COUNTY, FLORIDA.

The Florida State Clearinghouse has received the above-referenced project and has forwarded it to the appropriate state agencies for review. Please refer to the State Application Identifier (SAI) number in all correspondence with the Florida State Clearinghouse regarding this project. Applicants should expect to receive their State Clearance Letter 30-60 days from the received date. Additional information can be found at Blockedhttp://dep.state.fl.us/secretary/oip/state_clearinghouse/manual2.htm <Blockedhttp://dep.state.fl.us/secretary/oip/state_clearinghouse/manual2.htm> .

Please submit all future project applications and correspondence by email to state.clearinghouse@dep.state.fl.us <mailto:state.clearinghouse@dep.state.fl.us> . If your submittal is too large to send via email or if you need other assistance, contact Chris Stahl at (850) 717-9076.

<Blockedhttp://survey.dep.state.fl.us/?refemail=State.Clearinghouse@dep.state.fl.us>

From:	Bradley Mueller
To:	Ralph, Gina P CIV USARMY CESAJ (US)
Cc:	Tiemann, Marc Auguste CIV USARMY CESAJ (US)
Subject:	[Non-DoD Source] Beach Erosion Control Project in Pinellas County, FLorida
Date:	Thursday, July 27, 2017 4:57:49 PM
Attachments:	image005.png image006.png

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE
AH-TAH-THI-KI MUSEUM

TRIBAL HISTORIC PRESERVATION OFFICE

SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM

30290 JOSIE BILLIE HIGHWAY
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CLEWISTON, FL 33440

THPO PHONE: (863) 983-6549
MUSEUM PHONE: (863) 902-1113
FAX: (863) 902-1117

THPO WEBSITE: WWW.STOFTHPO.COM
MUSEUM WEBSITE: WWW.AHTAHTHIKI.COM

TRIBAL OFFICERS

MARCELLUS W. OSCEOLA JR.
CHAIRMAN

MITCHELL CYPRESS
VICE CHAIRMAN

LAVONNE ROSE
SECRETARY

PETER A. HAHN
TREASURER

July 27, 2017

Ms. Gina Paduano Ralph, Ph.D.
Environmental Branch Chief, Planning and Policy Division
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Subject: Beach Erosion Control Project, Pinellas County, FL
THPO Compliance Tracking No.: 0029868

Dear Ms. Ralph,

Thank you for contacting the Seminole Tribe of Florida – Tribal Historic Preservation Office (STOF-THPO) regarding the Beach Erosion Control Project, Pinellas County, FL. The proposed undertaking does fall within the STOF Area of Interest. We have reviewed the documents you provided including supplemental information received by Mr. Marc Tiemann on July 27, 2017, and completed our project assessment pursuant to Section 106 of the National Historic Preservation Act as amended 2014, and its implementing authority, 36 CFR 800 in order to determine if the undertaking would affect any areas important to the Tribe. We concur with your determination of no historic properties affected and we have no objections to the project at this time. Please notify us if any archaeological, historical, or burial resources are inadvertently discovered during project implementation. Thank you and feel free to contact us with any questions or concerns.

Respectfully,

Bradley M. Mueller

Bradley M. Mueller, MA, Compliance Supervisor
STOF-THPO, Compliance Review Section
30290 Josie Billie Hwy, PMB 1004
Clewiston, FL 33440
Office: 863-983-6549 ext 12245
Email: bradleymueller@semtribe.com

From:	Tiemann, Marc Auguste CIV USARMY CESAJ (US)
To:	Bradley Mueller
Cc:	Hershorin, Aubree G CIV USARMY CESAJ (US)
Subject:	FW: question on dredging impact to Egmont Key (Pinellas Coun
Date:	Thursday, July 27, 2017 12:43:12 PM

Good afternoon Brad,

I investigated your question via phone call on Tuesday, July 25 regarding any impacts to Egmont Key as a result of dredging Egmont Shoals for the Pinellas County Beach Erosion Control Project. I received, and am forwarding the response from our USACE Coastal Design Section Chief. Please let me know if you need any additional information or have any questions.

Thank you,
Marc

Marc A. Tiemann, M.A., RPA
Archaeologist
Planning Division, Environmental Branch
USACE, Jacksonville District
701 San Marco Blvd.
Jacksonville, FL 32207

Phone: 904-232-1557
Email: marc.a.tiemann@usace.army.mil

-----Original Message-----
From: Hodgens, Kevin C CIV USARMY CESAJ (US)
Sent: Thursday, July 27, 2017 11:47 AM
To: Tiemann, Marc Auguste CIV USARMY CESAJ (US) <Marc.A.Tiemann@usace.army.mil>
Cc: Condon, Andrew J (Drew) CIV USARMY CESAJ (US) <Andrew.J.Condon@usace.army.mil>
Subject: question on dredging impact to Egmont Key

Marc,
Response to the question passed to me is below...
Will dredging Egmont Shoals impact sediment transport to Egmont Key, further exacerbating erosion there?
Given that the shoals are north of the (deep draft) navigation channel it is presumed that the navigation channel is a 100% sink for material moving N to S in the area. So very little, if any, material is bypassed around/through the navigation channel.

As far as changes to the wave field as a result of sediment removal (which subsequently affects sediment transport in the coastal zone), there are very few wave origination angles that cross the borrow area and head towards Egmont Key. Those that do are very limited in fetch due to the presence of land (Mullet Key, Shell Key, Long Key, Treasure Island, and Sand Key), and therefore are limited in potential wave energy. So any changes to the wave field approaching Egmont Key are expected to be limited to the immediate vicinity of the borrow area and insignificant due to the low wave energy potential for the wave directions of concern.

Let me know if you would like additional details.

Thanks,

Kevin Hodgens, P.E.

Chief, Coastal Design Section
USACE Jacksonville District

(o) 904-232-1533
(c) 904-607-1600

COUNCIL OF THE ORIGINAL MICCOSUKEE SIMANOLEE NATION

ABORIGINAL PEOPLES

August 1, 2017

Aubree G. Hershorin, Ph.D., Ecologist, USACE, Jacksonville District

Aubree.G.Hershorin@usace.army.mil

Marc A. Tiemann, Archeologist, USACE, Jacksonville District

marc.a.tiemann@usace.army.mil

Response to: Invitation to Comment: FONSI and Draft EA -- Pinellas County Beach Erosion Project in Pinellas County, Florida.

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples submits, here within, our formal comments concerning the above referenced Project.

With limited time, and no ability to meet face to face in consultation with the Project Manager, Archeologist, Ecologist, and other ACOE staff, we are therefore limited in our response.

We understand that Master Site File reviews were conducted in relationship to the Project Area, and that no known Aboriginal Indigenous Grounds were identified. Reference was made to communication with the Seminole Tribe and Miccosukee Tribe as having input indicating that they did not know of any archeological sites in the Project area. Paul Backhouse, and Fred Dayhoff are not Seminole or Miccosukee, and are not connected to our Grounds or the knowledge that is passed down from generation to generation, so we do not see that the Seminole Tribe or the Miccosukee Tribe was involved.

Due to the lack of formal, face to face consultation, and limited time to respond, we have attached the Council's Burial Polices, which gives guidance, in the event, during the course of this Project, that you discover Aboriginal Indigenous Human Being Remains and/or their Belongings.

You will note that we request that a 300 feet buffer be placed around Aboriginal Indigenous Grounds should any be discovered which is not unreasonable since you have afforded a 300 feet buffer to protect vessels.

It seems, to us, that this project is to ensure that tourists will have beaches to enjoy, and apartments and hotels will be protected. It is this type of limited concern that is causing the Natural Creations to disappear. They struggle every day to continue their way of Life given to them by the Creator. Every Creation has a right to live and raise their families the same as we do from the biggest to the smallest. We do not think that the Birds, the Fish, The Turtles, the Manatees, the Dolphins, or any other Natural Life within your Project area would agree with

your statement "No significant impact". They will experience significant impacts – decline in sea turtle nesting, impacts to piping plover and red knot foraging habitat, impacts to fish and benthic invertebrates, impacts to nesting shore birds and migratory birds, and impacts to marine mammals. Increased turbidity, decrease in air quality, increase in noise levels, and lights. may cause disorientation resulting in deaths. Therefore, we do not agree with this Project because of the adverse impacts it will have, and will continue to have on the Creator's (God's) Creations.

It is no longer appropriate to continue to place human recreational needs and structures before our voiceless neighbors' needs. They have already had their way of life threatened and taken away from them.

This is a costly project that goes on, and on, and on. every five years. Nature is constantly shifting and changing, and will continue to do so. To us, the Project funding should be used for more appropriate projects as realistically beginning to address climate change and ensuring realistic setbacks, and wildlife habitat and nesting protection, and establishing ways to live in harmony and balance with all life that do not continue to impact our waters, natural areas, and wildlife.

We have seen the people challenge the Creator's Law from generation to generation. You cannot overpower the Creator's Law. You are part of His Creation, and you are destroying yourselves. You need to stop and see what you are doing. The future is in the Mother Earth, the trees, the Air, the Water. If they are destroyed there is no nourishment for the future generations.

The whole Natural System of the Earth – the Air, the Water, the Trees, the Animals, the Fish, the Birds, underneath the Earth, the Oceans – is one Life System. It cannot be controlled. It controls us, and if mistreated, can fail us. **It is the Natural System that is holding the Earth together, and when we try to control he Natural System, it must protect itself and will come back on us.** If we honor the Natural System we can see the future, but if we do not there is no future.

We must move beyond our own comforts and pleasures. We must stop our damaging activities and begin working on restoring the natural environment for the future of all life. We must restore the Sacred in ourselves and include the Sacredness of All Life in our Discussions, Decisions and Actions. The Council does not agree with this Project because of the "Significant Impacts" it will have on the Creator's (God's) Creations.

Bobby C. Billie, One of the Clan Leaders and Spiritual Leaders

Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples

Contact Information: PO Box 1452 Lake Placid, FL 33862 Ancientrees@hotmail.com

Council of the Original Miccosukee Simanolee Nation
Aboriginal Peoples

Policies

Council of the Original Miccosukee Simanolee Nation's Aboriginal Peoples' Policies concerning the Rightful Protection of Aboriginal Indigenous Peoples' Village Sites, Ceremonial Sites, and Sacred (Holy) Burial Sites.

Aboriginal Indigenous Peoples' Village Sites, Ceremonial Sites, and Sacred (Holy) Burial Sites shall not be disturbed. There shall be no ground disturbing activities including archaeological studiers or research of any kind of these sites.

Our Village Sites, Ceremonial Sites, and Sacred (Holy) Burial Sites have been there from generation to generation harming no one, but when you disturb these sites, it will harm the human life and Cycle of Life. Therefore it is prohibited to disturb these sites. They must be left untouched.

Sacred (Holy) Burial Grounds

All remains, whether historic or prehistoric are our Ancient Relatives and must be rightfully respected and protected from any disturbance. When an inadvertent discovery occurs, all ground disturbing activities must immediately cease within a three hundred foot or more radius using the discovery as the center point. The burial shall be left interred and no action may be taken to disturb, examine or excavate the human burials. Aboriginal Indigenous Peoples must be notified immediately of the inadvertent discovery. They know what to do and will tell you what to do.

In the event, human remains have inadvertently been removed, upon proper evaluation and consultation with Aboriginal Indigenous Peoples, re-interment must take place immediately following removal, unless there are extenuating circumstances.

At no time may scientific studies of any kind including measurements be conducted or any photographs taken and funerary items must be treated with respect. They have been

placed with the human remains for essential reasons and should not be collected, removed or separated from the human remains.

Re-interments

The Spiritual Values of the Aboriginal Indigenous Peoples' Way of Life must be observed in dealing with human remains, funerary items, associated funerary items, animal artifacts, burials and/or the relocation and transfer of gravesites. Aboriginal Indigenous Law prevents the direct handling of human remains, funerary items, associated funerary items and animal artifacts. Therefore it is necessary that the person who removed the human remains be present at the re-interment to replace the human remains and items in the original gravesite or selected site under the direction of the Aboriginal Indigenous Spiritual Leader. Only certain Aboriginal Indigenous Peoples with *Specific Spiritual Knowledge* should be involved with re-interments. Individuals that walk on, disturb, or excavate burial sites must be warned that handling human remains or direct exposure to the site and exposure to burial items may affect their overall health in the immediate future or sometime during their lifetime.

Village and Ceremonial Sites

Our Village Sites and Ceremonial Sites have never been abandoned no matter how old. When you find an old village, they are our homes today as they were yesterday, but because of "keep out" signs, and so-called private ownership state and federal parks, etc., we cannot visit these areas like we used to do, and we ask that you respect these areas and leave them alone.

Construction or Ground Disturbing Activities Conducted in the Vicinity of Aboriginal Indigenous Peoples' Village Sites, Ceremonial Sites, and Sacred (Holy) Burial Sites

When engaging in construction or ground disturbing activities in the vicinity of known or suspected Aboriginal Indigenous Peoples' Village Sites, Ceremonial Sites, or Sacred (Holy) Burial Sites a three hundred foot or more buffer zone must be observed around the site to ensure adequate protection and sanctity of the site.

Underwater Disturbances of Aboriginal Indigenous Peoples' Sacred (Holy) Burial Sites

We have been saying the Spirits of the Land are connected to the People. Not very often Aboriginal Indigenous Peoples talk about Spirits of the Water. We do not disturb the Spirits of the Water. We respect them and that is how everything should remain. We think that is why most Aboriginal Indigenous Peoples have never talked about the Spirits of the Water, but we will say this, that has been disturbed throughout the country. We tell you: Do not disturb the Spirits of the Water. That means also Aboriginal Indigenous Peoples' resting places under the Water or Artifacts or other Belongings. We know who these Peoples are. They are our Ancestors and we tell you to respect them and leave them alone.

Aboriginal Indigenous Peoples' Rightful Right to Protect their Sacred (Holy) Burial Sites

Aboriginal Indigenous Peoples' must be consulted concerning any ground disturbing activities that shall take place in the vicinity of their Village Sites, Ceremonial Sites, and Sacred (Holy) Burial Sites. They must be consulted concerning any proposed direct disturbance of these sites prior to any disturbances taking place. This includes any proposed archaeological activities in the vicinity of these sites, and at no time may any archaeological activities take place at these sites. The sites are the responsibility of the Aboriginal Indigenous Peoples and it is their rightful right to advise what impact, if any, shall occur in the vicinity or on these sites. It is rightfully the right of the Aboriginal Indigenous Peoples to protect these sites and preserve the sanctity at their sites. They are the only ones with the knowledge to advise properly what can and cannot be done. Non-Indigenous People do not have this knowledge and do not have the right to determine what should or should not occur at these sites. It is up to the Aboriginal Indigenous Peoples to decide. They know what to do and will tell you what to do.

Bobby Billie

May 1997
Revised March 12, 2010
Revised December 19, 2012

Council of the Original Miccosukee Simanolee Nation
Aboriginal Peoples

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples, we would never touch or disturb white peoples' burials or any other peoples' burials: human remains or grave items. We do not dig up the human remains and grave items of white people or other people. We respect your graves. White people and other people need to respect our burials - Aboriginal Indigenous Peoples' human remains and belongings, and stop digging them up. Leave them alone.

Maybe archeologist should start digging up the white peoples' and other peoples' graves to feed and raise their kids because that is what they are doing to Aboriginal Indigenous Peoples' Sacred (Holy) Burial Grounds, Ceremonial Sites and Village Sites - Digging them up to make money to feed and raise their kids.

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples know it is not right what the white people or other people are doing to our Sacred (Holy) Burials, Ceremonial Sites and Village Sites. It is wrong what you are doing, and the Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples is getting more and more angry about the disturbances of our Grounds. You need to respect our Grounds and leave them alone.

Non-Indian people do not have a connection with our People and do not have the right to remove our People and their Belongings from their Burial Grounds or conduct reburials of our People.

So, no matter what kind of law you create on your own, giving you the right to disturb our Grounds, we still know it is wrong what you are doing, because the Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples has their own Law – The Natural Law – the Law of the Human Beings. The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples has carried the Natural Law from the beginning of the Creation of Life, and we are not going to change that, no matter what kind of law you come up with on your own.

Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples

Bobby C. Billie

April 3, 2010, Revised December 19, 2012.

COUNCIL OF THE ORIGINAL MICCOSUKEE SIMANOLEE NATION

ABORIGINAL PEOPLES

DOCUMENT

MAY 20, 2017

CULTURAL IDENTITY RIGHTS

LAND RIGHTS,

MINERAL RIGHTS, WATER RIGHTS, AIR RIGHTS

RIGHTS TO FREELY LIVE OUR ABORIGINAL INDIGENOUS WAY OF LIFE

CONTACT INFORMATION:

P.O. BOX 1452

LAKE PLACID, FLORIDA 33862

904-654-0200

Council of the Original Miccosukee Simanolee Nation

Aboriginal Peoples

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples is the same Sovereign Nation that is recognized by the United States of America. This recognition resulted in the establishment of the 1842 Agreement signed by President Polk. The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples has always maintained independence from the United States. We are not connected politically with the Seminole Tribe of Indians or Miccosukee Tribe of Indians. They have no right to speak on our behalf.

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples has been recognized by federal and state officials and by historians and anthropologists from historical times to the present.

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples, still hold onto our Aboriginal Indigenous Land Rights under the 1842 Agreement and Lands in Florida (*Echabonmic* – the original name for Florida) and beyond, as well as our customary use of our Aboriginal Indigenous Lands. We are not willing to exchange our Aboriginal Indigenous Lands for money or other agreements or participate in the Federal Bureau of Indian Affairs' programs. We are living in our own Aboriginal Indigenous Land (Indian Country/Indian District) following the Natural Law, created into us by the Creator (God) Himself at the beginning of the Creation of Life. We are the People that never gave up our Aboriginal Indigenous Land (Indian Land/Indian District), or our Mineral Rights or Water Rights or Air Rights or Any Rights that prevent us to live our Way of Life. We are the sole authority on our Way of Life.

1842 Agreement

**In the 1842 Agreement, the United States promised to henceforth leave the Simanolee People alone and respect their right to an area of land in Southwest Florida (Echabonmic) of about five million acres (Aboriginal Indigenous Land/Indian Land/Indian District).*

This Agreement, signed by President Polk, has never been changed and is still in effect today. Unauthorized encroachments by non-Indians led President Polk to sign an executive order, on May 19, 1845, to establish a twenty-five miles buffer zone (neutral zone) along the boundary of the Miccosukee Simanolee Nation's Aboriginal Indigenous Land (Indian Land/Indian District set aside by the 1842 Agreement). The neutral Zone was to be neither surveyed or settled.

In the 1700's and 1800's, we made an Agreement with the American people and the President of the United States, which says: You are not supposed to be disturbing our Land. You are not supposed to be moving into our Land, and you are not supposed to be surveying or selling our Land. You are not supposed to bring your law into our Land. And the American government said: If any of our people, American people come across the boundary, you turn them over to us, and we will take care of them, and if any Simanolee People come across the boundary, we will turn them over to you to take care of. Everything that was said at that time, we still hold on to it today to continue to pass it on to the next generation.

We didn't sign the Agreement in the early 1800's because it is easy to change the written papers. We only "shake hands", and with that we remember because it has been passed on from generation to generation to generation to this day, and nothing has changed towards that Agreement, since the time we "shake hands". The Agreement was not broken on our side – We honor our Words, and we Honor the "shake hands". But, the Agreement was broken on your side. (the American Peoples' side). You broke your own law.

Some of the words spoken at that time were documented on the papers by the American peoples' side, but also a lot of things were said beyond those papers and our Elders have passed those words on to us to pass on to the next generation. Our Elders said: *If you break your words, the boundary you created of the Agreement, we have a right to take the Land back under our hand again.*

The newcomers think they have a right moving onto our Aboriginal Indigenous Land, encroaching on our Aboriginal Indigenous Lands, but that is not what has been said at that time. Once you break that boundary, then we have a right to the Land beyond that boundary. That is what has been said, and that has never been changed. So, we have a right to do, what we want to do, in our own country, the one the newcomers call Florida and beyond because we still hold onto our Rights to the one you call Florida (*Echabonmic*) and beyond.

The United Nations

Declaration on the Rights of Indigenous Peoples

The United Nations Declaration on the Rights of Indigenous Peoples recognizes Indigenous Peoples and the urgent need to Respect and Protect the Inherent Rights of Indigenous Peoples, especially their Rights to their Lands, Territories and Resources and promotes the Rights of Indigenous Peoples affirmed in treaties, agreements, and other constructive arrangements with States, and recognizes that control by Indigenous People over development affecting them and their Lands and Resources will enable them to maintain and strengthen their institutions, cultures and traditions and to promote their development in accordance with their aspirations and needs.

The Miccosukee and Seminole Tribes Split from the Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples

The Seminole Tribe willingly chose to split from the Council of the Original Miccosukee Simanolee Nation and organize under the United States System of man-made Laws in 1957 and move onto federal reservations. The Miccosukee Tribe willingly chose to split from the Council of the Original Miccosukee Simanolee Nation and organize under the United States System of man-made Laws in 1962 and move onto a narrow strip of leased land on the South side of Tamiami Trail. Choosing the United States System of Government, the Tribes abandoned their traditional government and their old way of life.

The Seminole Tribe of Indians and Miccosukee Tribe of Indians gave up their Aboriginal title to Lands and Natural Resources in the State of Florida through Land Claim Settlements, with the United States Federal Government and the State of Florida involving allocations of money, a land lease agreement with Everglades National Park, and use of additional lease lands in State Water Conservation Area 3 in South Florida.

Our Land is Not for Sale

In April 6 and 7, 1955, a Hearing was held in Simanolee Country pursuant to the Congressional resolution on termination of the Seminoles on Indian Affairs. (Hearing before the Sub-Committee on Indian Affairs of the Committee on Interior and Insular Affairs.) Hearing was focused on the need to preserve Simanolee Land Rights. Buffalo Tiger, interpreting for Jimmie Billie, (Bobby C. Billie's father), made this statement:

"Jimmie Billie say for his people, all we ask is for land and if people live on reservation want the money, they can go ahead and take the money. We are not going to fight against them. And we don't want those people fight against us. All we want is hunting land for our homes and our rights and to be Indians, and he likes the life to be Indian. That is what he wants, and that is what most of them want down there.

So, he says, if they want the money, they can go ahead and take the money and live on the reservation. If they want that, we are not going to bother them, and as long as they don't bother us on this side but he says you must recognize these people and us down here are two separate setups"

On September 17, 1954, Jimmie Billie, Ingraham Billie, (Bobby C. Billie's father and grandfather), and thirteen other individuals acting on behalf of the General Council of the Miccosukee Simanolee Nation filed a document entitled "Special Appearance and Motion to Quash" with the Indian Claims Commission that states their principal concern as follows:

"The Miccosukee Simanolee Nation has never authorized this claim, cannot be bound by the proceeding and has rights to lands in Florida (Echabonmic) *and beyond and we are not willing to exchange for money, nor surrender to a foreign government."*

Buckskin Agreement

On March 1, 1954, A delegation of the Miccosukee Simanolee Nation Independents Jimmy Billie (Bobby C. Billie's father), George Osceola, Buffalo Tiger, who was an interpreter, at that time, and Attorney Morton H. Silver delivered the Buckskin agreement to the President, at the U.S. Capitol in Washington, D.C.

"We have had for centuries, our own culture, our own customs, our own government, our own language, and our own way of life which is different from the government, the culture, the customs, the language and the way of life of the white man....."

We never Ceded our Lands. We have never been conquered.

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples have never given up our Lands, our Mineral Rights, Water Rights, Air Rights, and Rights to feely Hunt, Fish, gather Medicines and Herbs, and Materials for our Homes, and Plant our Gardens, and Build our Homes in our Aboriginal Indigenous Lands/territories/soil (Indian Land/Indian District or Any Right which prevents us from governing ourselves and living peacefully under the Natural Law, the Law of the Creator.

The Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples governs under the Creator's Law which is the Natural Law. We have never surrendered to the United States Government, a foreign government. We maintain our identity as Free Aboriginal Indigenous Peoples who follow the Clan System. We have the Right to live our Way of Life on our Aboriginal Indigenous Lands/territories/soil (Indian Land/Indian District). Lands in Florida (*Echabonmic*) and beyond which includes lands under the 1823 Moultrie Creek Treaty and the 1842/1845 Macomb Treaty and Worth Agreement.

We have the Right to Protect our Freedom and Freedom to Protect our Rights.

Bobby C. Billie 5-12-17

Bobby C. Billie Date

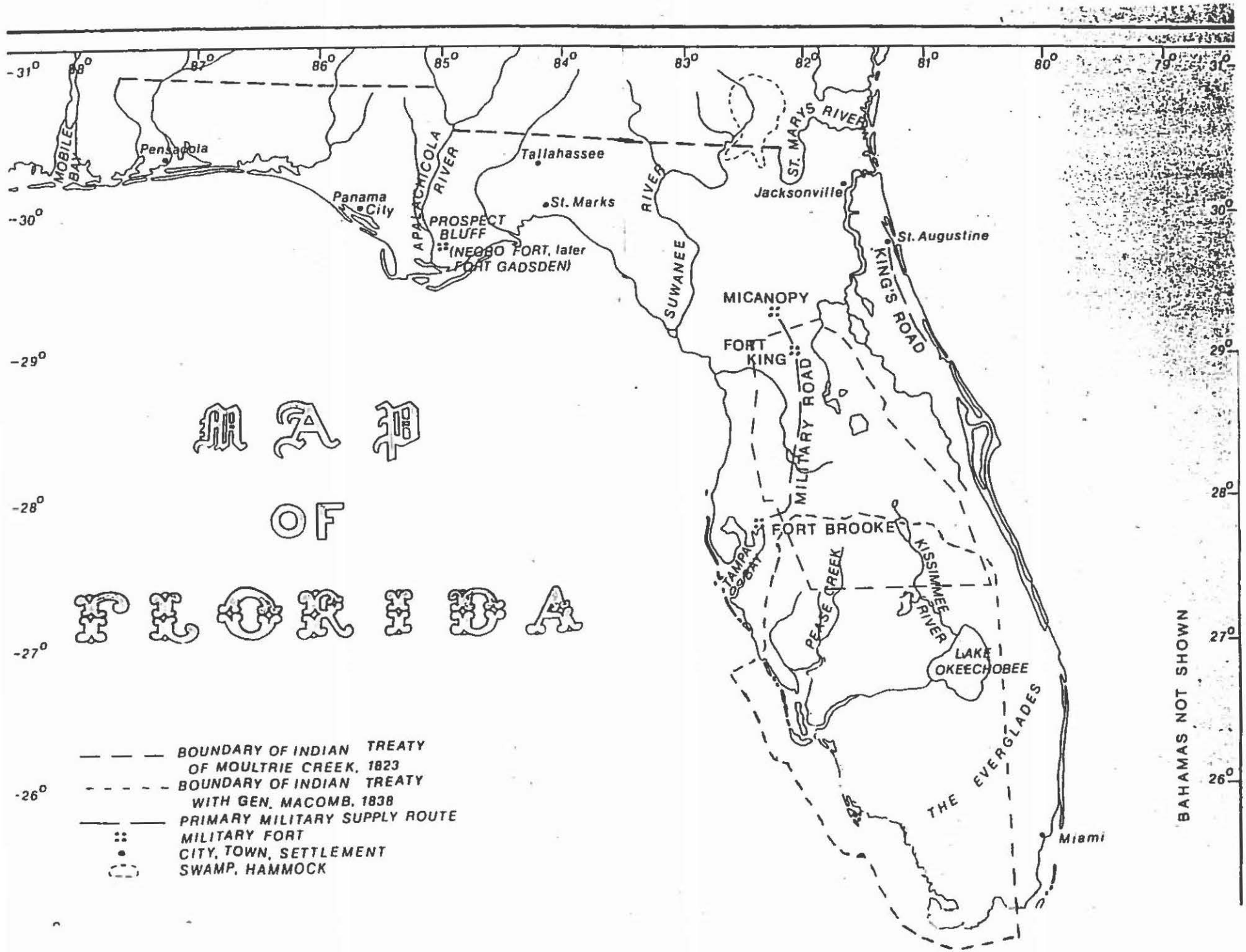
One of the Clan Leaders and Spiritual Leader

Council of the Original Miccosukee Simanolee Nation Aboriginal People

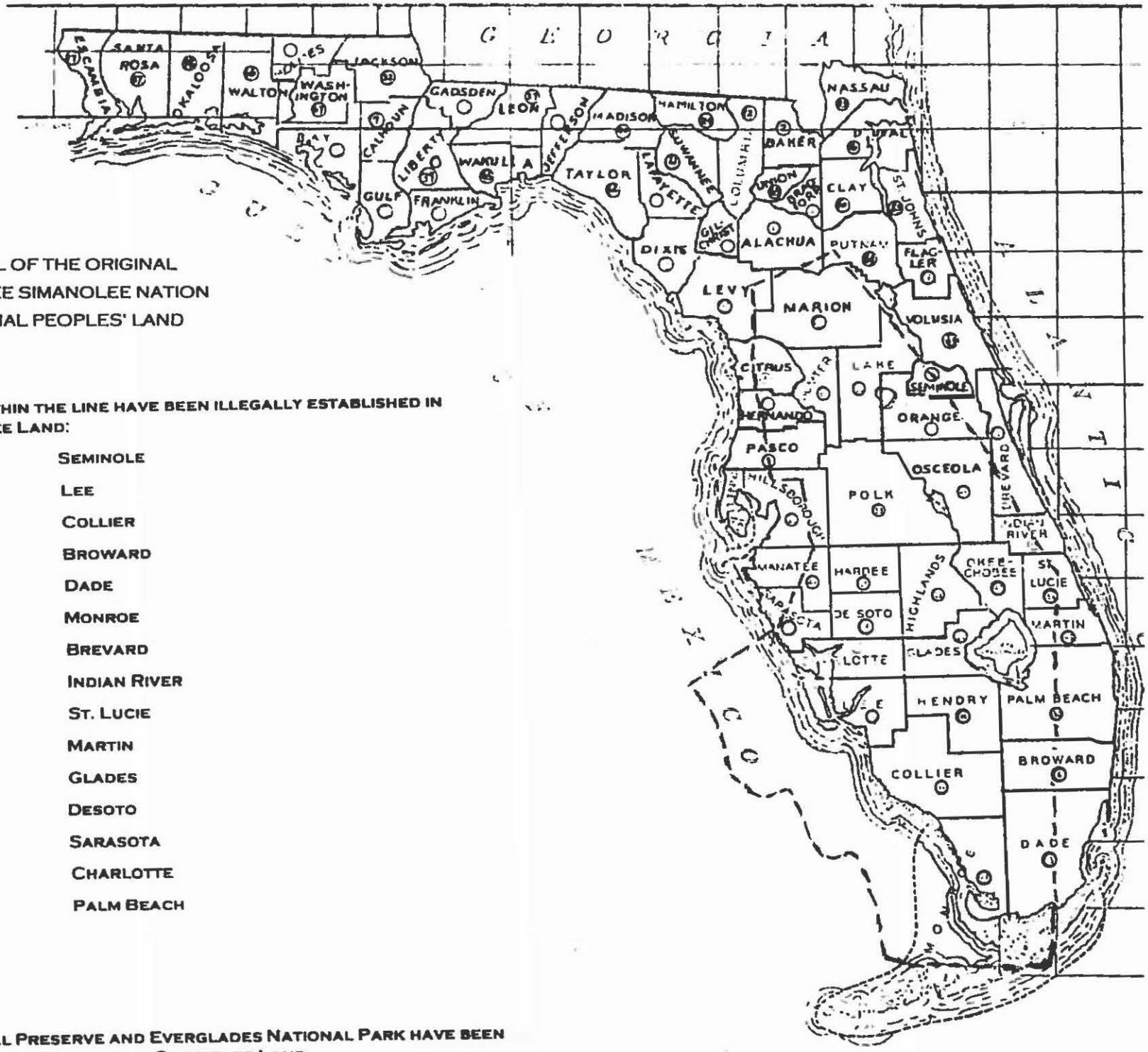
*Counties within the Council of the Original Miccosukee Simanolee Nation Aboriginal Peoples Aboriginal Indigenous Lands affirmed in the 1842 Agreement are: Collier County, Alachua, Putman, Levy, Marion, Citrus, Sumter, Lake, Hernando, Orange, Pasco, Osceola, Polk, Hillsborough, Manatee, Hardee, Highlands, Okeechobee, Hendry, Seminole, Lee, Broward, Dade, Monroe, Brevard, Indian River, St. Lucie, Martin, Glades, Desoto, Sarasota, Charlotte, Palm Beach.

*The word "Seminole" is a corruption of the word Simanolee which means "Wild people".

*Echabonmic – the Original Name of Florida before the newcomers invaded our Lands.


MAP OF FLORIDA
MOBILE BAY
Pensacola
Panama City
APALACHICOLA RIVER
PROSPECT BLUFF
(NEOBO FORT, later FORT GADSDEN)
Tallahassee
St. Marks
SUWANEE RIVER
ST. MARYS RIVER
Jacksonville
St. Augustine
KING'S ROAD
MICANOPY
FORT KING
MILITARY ROAD
FORT BROOKE
TAMPA BAY
PEASE CREEK
KISSIMMEE RIVER
LAKE OKEECHOBEE
THE EVERGLADES
Miami
BAHAMAS NOT SHOWN
BOUNDARY OF INDIAN TREATY OF MOULTRIE CREEK, 1823
BOUNDARY OF INDIAN TREATY WITH GEN. MACOMB, 1838
PRIMARY MILITARY SUPPLY ROUTE
MILITARY FORT
CITY, TOWN, SETTLEMENT
SWAMP, HAMMOCK

COUNCIL OF THE ORIGINAL
MICCOSUKEE SIMANOLEE NATION
ABORIGINAL PEOPLES' LAND



COUNTIES LOCATED WITHIN THE LINE HAVE BEEN ILLEGALLY ESTABLISHED IN MICCOSUKEE SIMANOLEE LAND:

ALACHUA	SEMINOLE
PUTNAM	LEE
LEVY	COLLIER
MARION	BROWARD
CITRUS	DADE
SUMTER	MONROE
LAKE	BREVARD
HERNANDO	INDIAN RIVER
ORANGE	ST. LUCIE
PASCO	MARTIN
OSCEOLA	GLADES
POLK	DESOTO
HILLSBOROUGH	SARASOTA
MANATEE	CHARLOTTE
HARDEE	PALM BEACH
HIGHLANDS	
OKEECHOBEE	
HENDRY	

BIG CYPRESS NATIONAL PRESERVE AND EVERGLADES NATIONAL PARK HAVE BEEN ILLEGALLY ESTABLISHED IN MICCOSUKEE SIMANOLEE LAND.

Xerox® WorkCentre® 7855
SMTP Transfer Report

Job Status: SUCCESS

Job has been transferred to the SMTP server.

Job Information

Device Name:	Xerox7855
Submission Date:	06/13/17
Submission Time:	01:41 PM
Images Scanned:	8
Size:	245039
Attachment Name:	Scanned from Home and Office Essentials.pdf
Format:	Image-Only PDF
Encrypted E-mail:	No

SMTP Server

Address:	smtp.comcast.net:587

Message Settings:

Subject:	Scanned from Home and Office Essent...
From:	jeanne@officesuppliesyouneed.com
Reply To:	jeanne@officesuppliesyouneed.com
To:	

1. ancientrees@hotmail.com

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E. Allen Stewart III P.E.
24149 Jolly Roger Blvd.
Punta Gorda, Florida 33955
352 615 7188

August 1, 2017

Aubrey Hershorin Ph.D.
U.S. Army Corps of Engineers
Jacksonville District
Planning and Policy Division
Environmental Branch
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Dr. Hershorin:

I have reviewed the documents of July 3, 2017 entitled "Proposed Findings of No Significant Impact Pinellas County, Beach Erosion Control Project, Pinellas County, Florida" and "Draft Supplemental Environmental Assessment Beach Erosion Control Project Pinellas County, Florida" and offer the following comments.

1. It is noted that no archeological evidence is indicated related to the cultures of Aboriginal Indigenous Peoples; although it appears no actual field investigations were conducted. I presume if during the work such evidence is found, construction will be terminated until the findings are properly classified and protected, and that all involved parties, including commenters as well as those representing Florida's Aboriginal Indigenous People have been notified and given opportunity to review the findings in the field and to offer comments and receive appropriate, comprehensive replies.
2. Beach enrichment is an on-going maintenance challenge in Florida. While natural currents and drift as well as storms naturally move coastal sediments, manmade efforts such as jetties, docks, groins, etc. often accelerate sediment transport. In a way we promote expenditure for beach enrichment, and it does seem to be a developing self-perpetuating industry perhaps somewhat similar to that satirized by Carl Hiaasen in his recent book "Razor Girl". Rising sea levels due to Global Climate Change of course will further exacerbate coastal erosion. I noticed some effort has been made within the Pinellas County Government to plan for rising sea levels, although I believe detailed plan development and implementation has not been completed. It would seem reasonable that funding and permitting of beach enrichment projects such as that referenced here should be conditioned upon more aggressive efforts to adjust to sea level rise, and that

the people of Florida should not pay the increasing bill for beach enrichment if the public and private sectors are not making a real effort to protect resources from rising sea levels. I did not see any detailed discussion of rising sea level issues or Global Climate Change in your assessment.

3. While it is not difficult to include statements that there is indication that there will be no significant impacts, it must be realized that our grasp of Systems Ecology is lacking, and that subtle but important changes can have profound long-term impacts—what is often called sensitivity to initial conditions. The presumption of no significant impacts therefore needs to be verified through a well-planned monitoring program, which could include periodic bioassays; water quality studies; benthic invertebrate and sediment analyses etc. I did not see where any such long term monitoring was included.

Thanks you for the opportunity to offer these comments, and for your timely response. I can be reached at 352 615 7188 or astewart24149@comcast.net.

Sincerely,

E. Allen Stewart III P.E.

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

Gina Paduano Ralph
Chief, Environmental Branch
Department of the Army
Jacksonville District Corps of Engineers
701 San Marco Boulevard
Jacksonville, Florida 32207-8175

August 3, 2017

RE: DHR Project File No.: 2010-3879, Received by DHR: July 29, 2017
Project: *Beach Erosion Control Project in Pinellas County, Florida*

Ms. Ralph:

This office reviewed the 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.

Based on the information provided, our office concurs with the Corps' determination that the proposed project will have no effect on historic properties, provided that project activities continue to take place in areas previously surveyed for cultural resources and reviewed by our office. As noted by the Corps, the use of areas that not previously surveyed for submerged cultural resources will require additional consultation with our office and may require additional cultural resource assessment surveys to ensure that cultural resources are not adversely affected by project activities. Additionally, the Corps will ensure avoidance of the two submerged vessels identified Upham and Sunshine pipeline corridor.

If you have any questions, please contact me by email at *Jason.Aldridge@dos.myflorida.com*, or by telephone at 850.245.6344 or 800.847.7278.

Sincerely,

Jason Aldridge

Jason Aldridge
Deputy State Historic Preservation Officer
for Compliance and Review

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. 04EF1000-2017-F-0070

August 7, 2017

Gina Paduano Ralph, Ph.D.
Chief, Environmental Branch
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232
(Attn. Aubree Hershorin)

Dear Dr. Ralph:

This letter transmits the U.S. Fish and Wildlife Service's (Service's) Biological Opinion, which is based on our review of the U.S. Army, Corps of Engineers' (Corps') proposed beach rehabilitation of the Pinellas County Coastal Storm Risk Management Project on Sand Key, Treasure Island, and Long Key in Pinellas County, Florida (Project). Our letter and Biological Opinion are provided in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

The Corps has determined that the proposed work "may affect and is likely to adversely affect" nesting sea turtles: the Northwest Atlantic Ocean Distinct Population Segment (NWAO DPS) of loggerhead sea turtle (*Caretta caretta*) (hereafter loggerhead); the green sea turtle (*Chelonia mydas*); the leatherback sea turtle (*Dermochelys coriacea*); the hawksbill sea turtle (*Eretmochelys imbricata*); and the Kemp's ridley sea turtle (*Lepidochelys kempii*). For the purposes of this document, the five identified sea turtle species will be referred to collectively as sea turtles. The Corps has requested that adverse impacts to the sea turtles be addressed under the Service's 2015 Statewide Programmatic Biological Opinion (2015-SPBO) (Service 2015). Critical habitat for sea turtles does not occur within or near the Project area, so none will be affected. The Corps also determined that the Project "may affect and is likely to adversely affect the *rufa* red knot (*Calidris canutus rufa*) (hereafter red knot). Critical habitat for the red knot has not been designated or proposed. In addition, the Corps has determined that the Project is in non-optimal habitat for the piping plover (*Charadrius melodus*), as described in the Service's 2013 Piping Plover Programmatic Biological Opinion (P3BO) (Service 2013), and since provisions of the P3BO will be met, the Project "may affect, but is not likely to adversely affect" the piping plover. The Corps has also concluded that, consistent with provisions of the 2015-SPBO, a determination of "may affect, not likely to adversely affect" is appropriate for the West Indian (Florida) manatee (*Trichechus manatus latirostris*) (hereafter manatee).

The following Biological Opinion is based on information provided by the Corp in a November 22, 2016, letter to the Service; a February 3, 2017, email to the Service and the accompanying report entitled Rehabilitation Effort for the Pinellas County Shore Protection Project at Sand Key,

Treasure Island and Long Key (Corps 2016); a Corps letter of July 5, 2017; phone and additional email correspondence between the Corps and the Service; and other sources of information. A complete administrative record of this consultation is on file at the Service's North Florida Ecological Services Office.

Consultation History

On October 25, 2016, the Corp emailed the Service a draft of a letter initiating consultation for the Project under the Act, with a request for Service comments. In the draft letter the Corps determined that the proposed work would be performed due to significant damage caused by Hurricane Hermine and that the hurricane met the "extraordinary storm" criteria for Flood Control and Coastal Emergency (FCCE) rehabilitation. The Corps proposed to construct all construction templates to the design level of protection from Florida Department of Environmental Protection (DEP) reference monument 57 (R- 57) to R-66 and R-70.5 to R-107. The draft letter included a determination that the Project would adversely affect sea turtles and would not adversely affect the piping plover, red knot, and the manatee.

In an October 26, 2016, email to the Corps, Service staff cited significant use of the Project area by red knots both prior to and following Hurricane Hermine, that a "may affect, not likely to adversely affect" determination for the red knot did not appear to be appropriate, and that formal consultation on impacts to the red knot would likely be needed. The Service also suggested that, if necessary, emergency consultation procedures under the Act could be applied.

Following internal discussion at the Corps, in an October 28, 2016, email to the Service, the Corps concurred that the proposed work may affect the red knot, proposed to incorporate conservation measures of the P3BO as they would relate to the red knot, and stated that it would work with the Service on additional measures as needed. Since the Project met the FCCE criteria, the Corps proposed to move forward with Project planning and, if necessary, conduct consultation concurrently with Project construction.

In a November 1, 2016, email to the Service the Corps acknowledged that the P3BO's "optimal habitat" measures, including Terms and Conditions (T&Cs), could be applied to the Project to benefit the red knot. The Corps also noted a tentative Project start of February 2017 and an estimated duration of 6 months. Under this scenario, T&C 8 of the P3BO (requiring at least 5 months of preconstruction shorebird surveys) would not be feasible.

In a November 22, 2016, letter to the Service the Corps initiated consultation under the Act for the proposed beach rehabilitation of the Sand Key segment of the Project, citing coverage under the SPBO and P3BO. Formal consultation for the red knot was also initiated at that time. Due to the emergency nature of the Project, the Corps requested expedited consultation.

A conference call of December 1, 2016, included representatives from the Corps, Service, and Pinellas County. At that point scheduled start of the Project had been delayed to "late summer at earliest." The Corps agreed to pursue a contract for shorebird surveys and jointly fund that effort with Pinellas County, the local sponsor.

A December 8, 2016, email from the Service to the Corps suggested details of shorebird surveys that would be required and discussed the educational signage requirement.

In December 14 and 19, 2016, emails to the Corps, the Service requested additional details on the Project beyond those provided in the November 22, 2016, letter.

A January 18, 2017, telephone discussion between the Service and Pinellas County included discussion of the Project boundaries, potential timing of the Project, and conservation measures that the County might adopt to benefit red knots, and other shorebirds and seabirds using Pinellas County beaches.

A February 3, 2017, email from the Corps to the Service transmitted the 2016 Project Information Report cited above.

A February 23, 2017, Service email to Pinellas County followed up on the January 18, 2017, discussion and provided suggestions of potential conservation measures the County might adopt. In an email response to the Service the same day, the County indicated that commitments would be discussed internally and with others that might be involved.

In a March 29, 2017, email to the Service, the Corps announced that a contract to begin pre-Project bird surveys had been finalized. A monitor would conduct surveys three times per month until May 15, 2017 and then again beginning on July 15, 2017.

In an April 5, 2017, email exchange with the Service, the Corps agreed to extend contracted bird surveys from 0.5 mile (mi) north of R-25 to 0.5 mi south of R-109 to address a County-proposed expansion of the Project area that would include R-107 to R-109 on Sand Key. This portion of the Project has not previously been nourished and a draft Environmental Assessment was prepared by the Corps.

In a May 26, 2017, email to the Service, the Corps confirmed what had been mentioned in a phone conversation the previous day, that the Project had received funding to include the Treasure Island and Long Key segments concurrently with the Sand Key portion. The Corps also proposed that the Treasure Island and Long Key segments be included in the shorebird monitoring contract.

In a June 15, 2017, email to the Service, the Corps provided shorebird survey results submitted by the contractor for April and May, 2017. Subsequent coordination between the Corps and the Service established parameters of an expanded and revised monitoring contract.

In a June 15, 2017, email to the Service, Pinellas County expressed willingness to support shorebird conservations measures. Their commitments are detailed as Conservation Measures in the Biological Opinion below.

A July 5, 2017, letter from the Corps to the Service provided updated Project information, including details relating to the Treasure Island and Long Key segments.

Applicability of the 2015-SPBO and P3BO

The Service has determined that the Project is appropriate to apply to the 2015-SPBO. Project area beaches are known to support sea turtle nesting, primarily by loggerheads. The minimization measures, Reasonable and Prudent Measures (RPMs), and T&Cs of the 2015-SPBO that are applicable to the Project must be followed for the sea turtles. RPMs and T&Cs under "A" in the 2015-SPBO, "sand placement from beach nourishment," apply. In addition, minimization measures for the manatee cited in the 2015-SPBO apply.

The Service has also determined that the Project is appropriate to apply to the P3BO as non-optimal habitat for the piping plover. Conservation Measures for non-optimal piping plover habitat as agreed to by the Corps in the development of the P3BO must be followed. A Corps commitment to follow the "optimal habitat" conditions of the P3BO, as they may apply to the red knot, is reflected in the Conservation Measures and T&Cs of the Biological Opinion.

Swimming Sea Turtles

The Service and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) share federal jurisdiction for sea turtles under the Act. The Service has responsibility for sea turtles on the nesting beaches and NMFS has jurisdiction for sea turtles in the marine environment. Please note that the provisions of the 2015-SPBO do not apply to sea turtles in the marine environment such as swimming juvenile and adult sea turtles. The 2015-SPBO only addresses activities that may impact nesting sea turtles, their nests and eggs, and hatchlings as they emerge from the nest and crawl to the sea. If applicable, you are required to consult with the NMFS on this Project. For further information on compliance with NMFS under the Act, please contact Ms. Rachel Sweeney, Chief of the Interagency Cooperation Branch by e-mail at rachel.sweeney@noaa.gov or by phone at 727-824-5312.

Concurrence with MANLAA Determinations

The Corps has determined that the proposed Project is not likely to affect the manatee and the piping plover. Based on the Corps' commitment to follow standard manatee protection measures as described in the 2015-SPBO that avoid potential impacts to the manatee, we concur with the Corps' determination that the Project "may affect, but is not likely to adversely affect" the manatee. Based on the Corps' commitment to follow conditions of the P3BO for non-optimal piping plover habitat, we concur with the Corps' determination that the Project "may affect, but is not likely to adversely affect" the piping plover.

Only the effects of the Project on the red knot will be addressed in the following Biological Opinion.

BIOLOGICAL OPINION

A Biological Opinion is the document that states the opinion of the Service as to whether a federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat (50 CFR §402.02). This

Biological Opinion addresses the impacts of the proposed Project on the red knot. It evaluates the effects of the proposed action, interrelated and interdependent actions, and cumulative effects relative to the status of the species to arrive at a Service opinion that the proposed action is or is not likely to jeopardize the species. "Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR§402.02). Only the question of jeopardy to the red knot is addressed in this Biological Opinion, since critical habitat has not been designated for the red knot. Should red knot critical habitat be designated within the action area in the future, reinitiation of consultation will be required prior to any further work under the Project that may affect red knot critical habitat.

DESCRIPTION OF THE PROPOSED ACTION

The proposed Pinellas Coastal Storm Risk Management Project would deposit approximately 1.5 million cubic yards (cy) of beach quality sediment on Sand Key, Treasure Island, and Long Key, Pinellas County, Florida. Federal participation in the Project is authorized for 50 years, until 2043. The Pinellas County Board of County Commissioners is the local sponsor.

The current action was previously proposed as only the rehabilitation of Sand Key segment due to significant damage caused by Hurricane Hermine. The Corps and the County proposed to reconstruct the full Sand Key construction template with Flood Control and Coastal Emergency (FCCE) funds paying for rehabilitation to the design level of protection, requiring an estimated 353,119 cy of sand, and to cost share to restore the advanced nourishment berm width, requiring an additional estimated 524,700 cy of sand (the planned nourishment volume required every 5 years). Sand Key was last nourished in 2012. Full template construction at Sand Key would entail placement of an estimated 877,819 cy of sand from R-56, the start of a 200-foot taper, to just north of R-66 (in Clearwater Beach and Belleair Beach) and from just north of R-71 to R-107, including a 250-foot taper (in Indian Rocks Beach, Indian Shores, Redington Shores, and North Redington Beach). Belleair Shores, R-66 to R-71, declined participation in the federal Project. The combined length of the two beach segments (approximately 1.8 mi and 7.0 mi) totals approximately 8.8 mi. The proposed sand source is Egmont Shoal, a large ebb shoal complex in the Gulf of Mexico approximately 18 mi south of the beach nourishment area and north of the Tampa Bay entrance channel. Although the method of work would not be dictated to the contractor, the previous two Sand Key renourishment efforts utilized a cutter suction dredge, spider barge pipeline configuration, unloader, associated pipeline, and shore equipment. Under this method, beach compatible material would be hydraulically dredged and transported by pipeline to the sand placement fill template. The dredged material would be placed as a slurry within a dike that would assist in containing the discharge effluent and allow time for sediments to drop out of suspension. Bulldozers would be used to construct a level beach berm 40 feet (ft) wide with an elevation of 6 ft above mean low water and extending waterward at a slope of 1 ft vertical to 30 ft horizontal to the intersection with the existing bottom.

In addition to original proposal, Sand Key R-107 to R-109, plus a 200-ft taper south of R-109 (about 0.5 mi), would be nourished via truck haul with placement above MHWL. On Treasure

Island (City of Treasure Island) R-126A to R-128, plus a 200-ft taper south of R-128 (about 0.4 mi), and R-136 to R-142 (about 1.2 mi) would receive sand dredged from the John's Pass navigation channel and ebb shoal, and as needed from the Egmont Shoal. On Long Key (St. Pete Beach) R-144 to R-146 (about 0.3 mi) would receive sand from Blind Pass navigation channel and ebb shoal, and as needed from the Egmont Shoal. The attached map shows the locations of proposed sand placement for the Project. With the addition of the Treasure Island and Long Key segments the total construction time for Project completion increased from 195 days estimated for Sand Key alone to 290 days, which includes the mobilization/demobilization period. The work is tentatively scheduled to begin in October 2017 and could be completed in August 2018.

Conservation Measures

To benefit the red knot, as well as the piping plover, other shorebirds, and seabirds, Pinellas County has expressed willingness to support the conservations measures in the County as stated below. Such measures support the County's strategic plan to "Practice Superior Environmental Stewardship" and, more specifically, Plan element 3.2: to "Preserve and manage environmental lands, beaches, parks, and historical assets."

1. Pinellas County is amenable in assisting the U.S. Fish & Wildlife Service (FWS) and Florida Fish and Wildlife Conservation Commission (FWC) in organizing a workshop on shorebirds and seabirds within the next year.

2. Pinellas County will work cooperatively with the FWS, FWC, other conservation partners, and the County's beach towns and cities to promote the wellbeing of federally-listed and state-listed shorebirds and seabirds.

Cooperative work efforts may include:

a. Public outreach to promote the Pinellas beaches for their wildlife and recreational value,

b. Support of existing County or municipal regulations and ordinances relevant to protecting shorebird habitats on locally owned public lands and enact additional countywide regulatory measures if applicable and appropriate,

c. Support efforts by participating "bird stewards," such as FWC and local Audubon Chapters, to minimize human disturbance to shorebirds, and

d. Participation in an annual meeting or conference call to coordinate conservation efforts with agencies and partners.

In the July 5, 2017, letter the Corps proposed to implement all applicable conservation measures, Reasonable and Prudent Measures (RPMs) and T&Cs outlined in the 2015-SPBO. Also, all P3BO measures dictated for non-optimal piping plover habitat will be employed, as they generally serve to avoid and minimize effects to the red knot as well.

In addition, the Corps committed to the following.

1. To monitor the extent of take, the Corps will survey for the occurrence of red knots within the Project area as follows:

a. Pre-construction surveys will be conducted three times per month for at least five months. Bimonthly (twice-monthly) surveys for red knots will be conducted in the beach placement areas and in any other beach or shoreline areas within or affected by the Project after five consecutive months of pre-construction surveys are completed.

b. Monitoring and reporting of red knot and other non-breeding shorebirds will be consistent with protocols and data sheet formats developed for the FWC non-breeding shorebird database. Since red knot occurrence may be limited and sporadic for some sites, twice monthly surveys may fail to accurately document their use of a site or Project impacts to favored habitat. Presence and abundance of more common shorebirds may act as surrogates for understanding Project impacts on the red knot. This is especially true of those species that feed in a similar manner, by probing the sand in the intertidal zone for invertebrate prey.

c. One of the monthly surveys will be initiated at dawn and completed within three hours to adequately assess the presence or absence of the species. If the entire Project location cannot be surveyed within this timeframe, the survey will be completed on subsequent, consecutive days until the entire Project area is surveyed.

d. As the active construction area is unlikely to support red knot usage, this area will not be surveyed; however, surveys will continue in the Project area that is not actively under construction during the construction period to assess the movement of the birds in response to construction activities.

e. The person(s) conducting the survey will demonstrate their qualifications and ability to identify shorebird species.

2. By July 31 of each year following the wintering bird surveys, a report regarding red knot and other shorebird occurrence shall be forwarded to the Service. In addition to providing wintering survey data through May 15 of the current year, a brief summary will address: any discernable trends in pre-construction, during construction, or post-construction beach use by feeding and roosting red knots; the location of any identified feeding or roosting areas of importance; and any significant sources of disturbance to red knots encountered. A final report covering the final year of shorebird monitoring will include conclusions reached regarding red knot distribution and abundance in the Project area prior to and after the Project.

3. If online entry is available, the annual wintering shorebird survey data will be entered into the FWC's on-line database (www.flshorebirddatabase.org).

The Corps also committed to arrange for placement of educational signs to be erected at locations of Pinellas County public beach access.

Action Area

The action area is defined as all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action. The Service identifies the action area for the Project to be the area receiving beach nourishment on Sand Key, Treasure Island and Long Key plus 0.5 mi north and south of each reach. An exception is where inlet jetties occur within the 0.5 mi. There the inlet jetty makes the end of the action area. The action area also includes the Egmont Shoal, John's Pass and Blind Pass dredge sites, any pipeline routes, beach access sites, and travel routes.

STATUS OF THE SPECIES

Red Knot

The rufa red knot (*Calidris canutus rufa*) is a medium-sized shorebird about 9 to 11 inches (23 to 28 centimeters in length. The red knot migrates annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the Southeast United States, the Northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. During both the northbound (spring) and southbound (fall) migrations, red knots use key staging and stopover areas to rest and feed.

The primary threats to the red knot are from habitat loss and degradation due to sea level rise, shoreline stabilization, and Arctic warming; and reduced food availability and asynchronies in the annual cycle. Other threats are moderate in comparison to the primary threats; however, cumulatively, they could become significant when working in concert with the primary threats if they further reduce the species' resiliency. Such secondary threats include hunting, predation, human disturbance, harmful algal blooms, oil spills, and wind energy development, all of which affect red knots across their range. Although conservation efforts (*e.g.,* management of the horseshoe crab population and regulatory mechanisms for the species and its habitat) are being implemented in many areas of the red knot's range and reduce some threats, significant risks to the subspecies remain.

The November 2014 Rufa Red Knot Background Information and Threats Assessment (Service 2014), available online at http: www.fws.gov verobeach/StatusoftheSpecies.html, provides a thorough assessment of the rufa red knot biology and ecology, historical distribution and abundance, population surveys and estimates, and threats to its survival.

ENVIRONMENTAL BASELINE

Except in lands set aside as parks or conservation area, the Gulf Coast of Pinellas County generally has a high level of human development. Typically, barrier islands are comprised of sandy beaches backed by vegetated dunes; however, where the shoreline is heavily developed with private residences and beach resorts, erosion often narrows beaches. In some areas dune habitat is often narrow or nonexistent. Repeated beach nourishment projects are employed to protect property and to maintain recreational beaches. Public beach access and recreational use of beaches vary by site.

Status of the red knot within the action area

Wintering red knots are typically most abundant on the west coast of Florida from November through February, but variable numbers are present mid-July through mid-May. Summering birds are more rarely encountered. The Service's own red knot database (Service 2015) includes reports from the eBird database (eBird 2012), banded bird reports, data provided by the FWC, and records from other sources. Timing of maximum number reports suggest that some sites Florida's Gulf Coast support relatively large numbers of wintering red knots (in the 100s). Use by migratory knots (spring and fall) may augment these numbers. Red knots wintering well to the south, specifically those that winter in South America, largely bypass Florida's Gulf Coast during migration. It is largely undetermined where red knots that move through the Gulf Coast in fall and spring migration may winter.

Lack of regular surveys, apparent fluctuations in use by red knots, and inability at times to distinguish migrating birds (generally passing through July to October and March to May) from those that are over-wintering, make it difficult to estimate the number of red knots using the action area. Even in winter, there appears considerable variability in numbers of red knots from year to year and within year from month to month. Over the last 10 wintering seasons, (November 15 through February 15, a time when all red knot present are assumed to be wintering) the Service has 36 records of groups of 40 or more red knots being seen in the Project area. High winter numbers reported in the Project area include: 348 at R-92 on January 5, 2009; 400 at R-99 on December 9, 2015; and 406 at R-85 on February 1, 2016. Schwarzer (2011) studied red knots in the Tampa Bay area in winters of 2007 through 2010. One of her study areas spanned R-90 to R-104 on Sand Key. She concluded that R-97 to R-101 and R-102 to R-103.5 were core roosting areas for red knots. While Project area reports of wintering red knot numbers greater than 40 have come only from Sand Key, there are also records of red knot occurrence within Project beaches on Treasure Island and Long Key.

Conservation significance

Estimates of the wintering red knot populations in the southeastern U.S. and Florida vary greatly (see Service 2014, Population Dynamics). In the southeastern U.S. fewer than 4,000 red knots were counted incidentally in the International Piping Plover Census in 2011, a ground survey from Louisiana to Virginia. Because red knots were not the focus of the piping plover census, the level of surveyor effort to document red knots varied and red knot numbers were likely underestimated. The peninsular Florida wintering population appears to comprise a significant portion of the red knots wintering in the southeastern U.S. with Florida's central Gulf Coast a noted winter concentration area. Most, but not all observers in the 2016 International Piping Plover Census recorded totals of red knots seen during surveys. Peninsular Florida totaled 1,167 red knots reported with the majority (981 birds) on the Gulf Coast. Florida Mid-winter Coastal Bird Surveys reported statewide totals of 1,577 red knots in 2014, 2,256 in 2015, 942 in a somewhat reduced 2016 effort, and 1,566 red knots in 2017. Recent winter observations from the Project area suggest that, at times, up to 10 percent of the southeastern U.S wintering population and up to 25 percent of the Florida wintering populations may use the Project area in winter. There is little basis to suggest whether the Project area is an important stopover site for migrant red knots in spring and fall.

Factors affecting the red knot within the action area

Most of the proposed Project area is developed with private residences, beach resorts, and recreational beaches. Along developed shorelines, the extent of beach and dunes present between the shoreline and structures or seawalls varies greatly. Shorelines have seen substantial erosion and repeated beach nourishment efforts over many years. Beach width and shape at any one location and time is dependent on past beach nourishment projects, localized rates of erosion or accretion, season, and recent storms.

Like beach width, the extent and quality of red knot feeding and roosting habitat on beach sites varies over location and time. Beach nourishment temporarily creates wider beaches seaward of existing development, often augmenting the extent of usable red knot habitat where the beach has been lost due to erosion. Beach nourishment projects that may harm red knots through disturbance can also degrade habitat by smothering benthic invertebrates upon which the red knots feed, by altering the natural sediment composition, and by adversely modifying the beach profile. Provided that compatible sand is placed on beaches, the effects of beach nourishment projects to red knot habitat, both beneficial and detrimental, are typically temporary and relatively short in duration; however, if beach nourishment is carried out every few years in the same area, impacts become intermittent and the cumulative impacts on red knot habitat may be more substantial.

On Gulf Coast, low elevations and proximity to the coast make coastal red knot foraging and roosting habitats vulnerable to the effects of rising sea-level. Inundation of red knot habitat by rising seas can lead to permanent loss or modification of habitat waterward of structures, roads, and armored shoreline. Natural overwash and barrier island migration with sea-level rise are impeded by development, which prevents sand on Atlantic Coast beaches from washing west over the island and to the bay side. Instead, eroding sand is often deposited offshore. Without additional sand, bayside flats and shorelines often used by red knots become increasingly submerged with rising sea levels.

Beach nourishment allows expanded coastal development and redevelopment, which in turn brings an increase in human activities and sources of disturbance that may limit red knot use of beaches. On the Gulf Coast of Florida, chronic disturbance has been singled out as the greatest threat to migrating and wintering red knots (Niles et al. 2009). Recreational use of beaches, beach raking and cleaning, and off-road vehicles contribute to disturbance that red knots face while feeding or roosting.

EFFECTS OF THE ACTION

This section is an analysis of the beneficial, direct, and indirect effects of the proposed actions on migrating and wintering red knots within the action area. The analysis includes effects of interrelated and interdependent activities. An interrelated activity is an activity that is part of the proposed action and depends on the proposed action for its justification. An interdependent activity is an activity that does not have independent utility apart from the action under consultation.

Factors to be considered

Effects of the action may include: disturbance of feeding and roosting red knots in the construction area due to human and equipment presence, noise, vehicle movement, sand placement, contouring, and subsequent tilling as may be required under the 2015-SPBO; burying of intertidal benthic invertebrates resulting in loss of organisms on which the red knots feed; removal of wrack that red knots use for foraging and roosting; modification of beach habitat through changes to sediment composition and beach profile; and, increased recreational disturbance resulting from presence of enhanced, nourished beaches. These effects may hinder the ability of wintering red knots to recuperate from the migratory flight from their breeding grounds, survive through the winter, build fat reserves in preparation for migration back to the Arctic breeding grounds, and, once there, to reproduce successfully.

Proximity of the action

The Project occurs within and adjacent to habitat used by red knots for foraging and roosting.

Distribution

While all beaches to be nourished under the Project support red knot at times, available records, suggest that the area R-085 to R-105 appears to provide most significant support for wintering red knot. Other areas may be used less frequently, but available data may be biased by locations where past studies took place, by available public access, and by birder tendency to visit areas where birds have regularly been reported.

Timing

Beach nourishment activities could directly impact red knots at any time of year, with the possible exception of late May through mid-July when red knots are rarely present. Greatest potential for direct impacts would accompany Project construction taking place November 15 through February 15, when the maximum numbers of wintering red knots are present.

Nature of the effect

The effects of beach nourishment activities may change the feeding and roosting behavior of red knots wintering in or migrating through the action area; temporarily reduce foraging habitat; force them to seek alternate, potentially inferior habitat; and diminish their fitness, affecting survival and fecundity. Migratory red knots may bypass the area or linger for a shorter period, seeking more desirable migration stops.

Duration

The proposed Project is expected to take 290 days to complete, including mobilization and demobilization. Any one location would generally experience active construction for a much shorter period. While some direct effects from construction would be of relatively short duration, recovery of the intertidal benthic invertebrate community typically takes 6 months to 2 years to recover (Peterson *et al.* 2006). Changes in habitat, including sediment composition and beach

profile, in some instances may last for years. Therefore, the Project has the potential to impact red knots during multiple migration and wintering seasons.

Disturbance frequency

Sites would generally experience a single period of disturbance as filling proceeds along the beach. Travel and pipeline routes may have intermittent disturbance.

Disturbance intensity and severity

Intensity and severity of disturbance will be dependent somewhat on the location, but Project impacts would generally entail a complete reshaping of the beach profile. Some sand placement may be limited to highly eroded beaches that support less than optimal feeding or roosting habitat. Since red knots are considered fairly mobile when wintering and more so when migrating, availability of quality alternative habitat on undisturbed shorelines near the Project beaches may be significant. Conservation measures have been incorporated to minimize Project impacts at sand placement areas.

Analyses for effects of the action

Beneficial effects

Placement of compatible sand on beaches can enhance highly eroded beaches, increase beach width, and provide more roosting and loafing habitat for the red knot. Deposited sand would be reworked and redistributed through wind and wave action, and storm events. Natural processes working on the added sand may serve to maintain or enhance habitat features suitable for the red knot.

Direct effects

Direct effects are those direct or immediate effects of a Project on the species or its habitat. Actions authorized under the Project are not likely to directly kill red knots since the birds are highly mobile and can quickly move from areas of construction. Heavy machinery and equipment operating within the action area, placement of the dredge pipeline along the shoreline or on the beach, sand placement, and subsequent grading and tilling may directly affect migrating and wintering red knots in the action area through disruption of foraging and roosting. Construction windows extend through one red knot wintering season and part or all of multiple migration seasons.

Sand placement will result in burial and suffocation of intertidal benthic invertebrate prey of the red knot and loss of wrack areas favored for foraging and roosting. Time frames projected for benthic invertebrate recruitment and re-establishment following sand placement are from 6 months to 2 years, assuming the sand placed on beaches and the resulting beach profile is supportive of benthic invertebrates. Wrack will be restored over time as it is deposited on the beach by tides and wave action.

Disturbance and habitat alteration from construction activities may result in increased energy expenditure by red knots and reduced food availability. This in turn can contribute to decreased fitness, decreased survival rates, and decreased fecundity in the following breeding season.

Indirect effects

Indirect effects are those that are caused by or result from the proposed action, are later in time, and are reasonably certain to occur. Beach renourishment restores eroded beaches, making them increasingly attractive for human recreation. Recreational uses including swimming, sports activities, sunbathing, picnicking, and walking may adversely affect the red knot through disturbance. In Florida, the most immediate and tangible threat to migrating and wintering red knots is thought to be chronic disturbance while feeding and resting. Indirect effects could include decrease in red knot use of desirable habitat due to increased human disturbance (Niles et al. 2009). Conservation measures by federal, State or local entities, including educating the public on the effects of human disturbance on shorebirds, can help to reduce impacts.

Species response to the proposed action

The proposed Projects may occur in habitat used by migrating and wintering red knots most of the year. Construction is likely to occur when red knots are utilizing these beaches. During construction work red knots are likely to avoid or be flushed from foraging and roosting habitat. Habitat impacts resulting from beach nourishment may discourage red knots from using nourished beaches until food resources return. Increased human recreational use of nourished beaches may disturb red knots and discourage their use of otherwise favorable habitat.

It is unknown how far migrating and wintering red knots may be displaced due to disturbance or reduced food resources. Variability of red knot presence from year to year and within the winter season suggests use of alternate sites by wintering birds. Away from Project beach nourishment sites, nearby Gulf beaches are available for use by red knots. However, these beaches may provide less favorable habitat and may experience human recreational disturbance. Bayside locations may also provide alternative habitat, including foraging habitat at low tides on intertidal flats. Migrating red knots passing south or north through the Project area may choose alternate locations to feed or rest.

Cumulative effects

Cumulative effects include the effects of State, tribal, local, or private actions that are reasonably certain to occur in the action area. Florida's Atlantic Coastline is already extensively developed; however, it is reasonable to expect continued private development and redevelopment along these beaches. Given the available information concerning the effects of global climate change and the rate of sea level rise, it is reasonable to expect more frequent beach nourishment and shoreline stabilization actions along developed shorelines present in the action area. Some will have no federal nexus, but may be addressed under section 10 of the Act. We have not identified specific actions that meet the definition of cumulative effects as provided above.

CONCLUSION

The survival and recovery of the red knot is fundamentally dependent on the continued availability of sufficient appropriate habitat in their coastal migration and wintering ranges, where the species spends more than two-thirds of its annual cycle. While portions of the action area have been shown to support a number of wintering and migrating red knot, the approximately 11.2 mi of Gulf beaches within the action area represent a small fraction (less than 1 percent) of migratory and wintering habitat used by the red knot. The Project is not likely to directly kill any red knots since they are highly mobile and can move out of harm's way. Construction disturbance would alter normal red knot foraging and roosting behavior and result in increased energy expenditure by individuals at or near active construction areas. However, construction disturbance would affect only a small portion of the action area at any one time. Some wintering red knots will likely be displaced by disturbance or choose to relocate due to reduced food resources following beach nourishment. Most effects, both beneficial and detrimental, to migrating and wintering red knot habitat are anticipated to be temporary. Red knots may seek out alternate coastal habitat within, near, or far from the action area. Construction disturbance and temporary loss or reduction of red knot feeding habitat may affect survival, fitness, and fecundity of some red knots. Increased human recreational use and accompanying disturbance may follow beach nourishment. Conservation measures adopted by the Corps and Pinellas County would help reduce the potential impacts of the Project on red knots, including those impacts attributable to human disturbance. After reviewing the environmental baseline for the action area, the effects of the Project, and the cumulative effects, it is the Service's Biological Opinion that the Project, as proposed, is not likely to significantly affect the survival and recovery of the red knot and will, therefore, not jeopardize the continued existence of the species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with the T&Cs of this incidental take statement.

The measures described below are non-discretionary, and must be implemented by the Corps so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and implement

the T&Cs, or (2) fails to adhere to the T&Cs of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Corps or applicant must report the progress of the action and its impacts on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Amount or extent of take

Disturbance to the red knot and impacts to habitat would affect the ability of an undetermined number of red knots to find suitable foraging and roosting habitat during construction and for some time thereafter. Incidental take of red knots will be difficult to detect for the following reasons:

1. The number of red knots present within the action area and that may be impacted by the Project will be difficult to assess. Wintering red knot numbers vary from year to year and within years. Migrating red knot numbers are difficult to monitor since their presence is transitory and their occurrence overlaps with that of wintering birds, from which they cannot generally be differentiated.

2. Over-wintering survival will be difficult to determine because it is difficult to detect birds that do not survive. Red knots seen in winter at the proposed beach nourishment sites likely range beyond those immediate areas. Dead birds may be carried away by predators. If a carcass is found, cause of mortality may be difficult to determine. Survival rates could be impacted by a number of non-Project related factors.

3. Harassment to the level of harm may only be apparent away from the action area, in migration or on the breeding grounds as lowered survival, or resulting in reduced fitness and fecundity. All would be difficult to detect because of our inability to track individual birds from their wintering grounds to their breeding grounds.

The Service anticipates that directly or indirectly an unspecified number of red knots will be taken in the form of harm or harassment as the result of the proposed action because:

1. Red knots are known to migrate through and winter in the action area.

2. The placement of sand and associated actions will disturb red knots that are present and will temporarily degrade up to 11.2 mi of beach, that provides significant red knot feeding and roosting habitat, over multiple wintering and migration seasons.

3. Disturbance, and loss or degradation of foraging and roosting habitat, will result in decreased fitness and survival of wintering and migrating red knots during the non-breeding season.

4. Disturbance, and loss and degradation of foraging and roosting habitat will result in decreased fitness, survival, and fecundity of red knots during the subsequent Arctic breeding season.

The following surrogate for take of red knots can be utilized because disturbance and degradation of suitable habitat on beach placement sites would affect the ability of an unknown number of red knots to find foraging and roosting habitat throughout the migrating and wintering periods for the duration of the Project and until intertidal benthic invertebrate populations recover. The Service anticipates that, directly and indirectly, red knots using up to 11.2 mi of Gulf Coast beaches could be taken in the form of harm and harassment as a result of the proposed action.

Effect of Take

In the accompanying Biological Opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the red knot.

REASONABLE AND PRUDENT MEASURES

The Service believes the following RPMs are necessary and appropriate to monitor and minimize take of red knots during implementation of the Project. Note that some RPMs and implementing T&Cs that follow may be similar or identical to those required by the 2015-SPBO or the P3BO.

1. All sand placed on the beach or in the nearshore waters shall be compatible with the existing beach and will maintain the general character and functionality of the existing beach.

2. All derelict material or other debris shall be removed from the beach prior to any sand placement.

3. Measures shall be taken on and near the site of active beach nourishment to protect red knots and their habitats from construction activities.

4. Educational signage shall be erected to alert the public to issues regarding beach habitats and their support of listed species.

5. A meeting or conference call among appropriate agencies and parties shall be held prior to initiation of construction.

6. Pre- and post-Project red knot and shorebird monitoring shall be conducted, and results and analysis will be reported to the Service annually.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Corps shall comply with the following T&Cs, which implement the RPMs described above, and outline monitoring and reporting requirements. These T&Cs are nondiscretionary.

1. Only beach-compatible fill shall be placed on the beach or in any associated dune system. 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. If a variance is requested from FDEP, the Service must be contacted to discuss whether the variance is acceptable.

2. All derelict concrete, metal, and coastal armoring geotextile material, and other debris shall be removed from the beach to the maximum extent possible prior to any sand placement.

3. Red knot habitat (intertidal areas, unvegetated beaches, mud and sand flats, emergent shoals, spits) adjacent to or near construction areas, shall be avoided to the maximum extent practicable when staging and storing equipment, establishing access and travel corridors, and aligning pipelines.

4. Driving on the beach for construction shall be limited to the minimum necessary and, if outside the immediate beach nourishment area (for example, in cases where beach access is away from the active beach nourishment site), shall be within designated travel corridors, preferably established just above or just below the primary wrack line.

5. Predator-proof trash receptacles shall be installed and maintained during construction at all beach access points used for Project construction to minimize the potential for attracting predators of red knots and other shorebirds. Workers shall be briefed on the importance of not littering and keeping the action area trash and debris free.

6. Educational signs shall be installed at appropriate public access points within or near the Project area citing the importance of the beach habitat and wrack for red knots, piping plover and other shorebirds, and importance of minimizing human disturbance. If the Project area has a pet or dog regulation, the provisions of the regulation shall be included on or with the educational signs. Locations and content of signs must be approved in advance by the Service.

7. A meeting to discuss Project requirements for the red knot between representatives of the Service, Corps, FWC, the shorebird surveyor, and other species surveyors as appropriate shall be held prior to the commencement of construction for beach placement events. Note that a similar meeting is required under the 2015-SPBO. A conference call may be held instead of a meeting if agreed to by all parties. Notification of the meeting shall occur at least 10 business days prior to its occurrence. At the meeting the Corps shall confirm: 1) the Project location (including the FDEP Range Monuments and latitude and longitude coordinates); 2) Project details including linear feet of beach that will be affected, the actual fill templates, access points, staging areas, and pipeline routes; 3) anticipated date of commencement and anticipated duration of construction; and, 4) names and qualifications of personnel involved in red knot and shorebird surveys.

8. To monitor the extent of take, surveys of red knots and of other shorebirds are required as follows. Note the added details beyond the conservation measures proposed by the Corps (*in italics*).

a. Pre-construction *winter season (July 15 to May 15)* surveys will be conducted three times per month for at least five months. Bimonthly (twice-monthly) surveys for red knots will be conducted *thereafter and for 2 years following sand placement.* Surveys will include

the beach placement areas and any other beach or shoreline areas within or affected by the Project.

b. Monitoring and reporting of red knot and other non-breeding shorebirds will be consistent with protocols and data sheet formats developed for the FWC non-breeding shorebird database. Since red knot occurrence may be limited and sporadic for some sites, twice monthly surveys may fail to accurately document their use of a site or Project impacts to favored habitat. Presence and abundance of more common shorebirds may act as surrogates for understanding Project impacts on the red knot. This is especially true of those species that feed in a similar manner, by probing the sand in the intertidal zone for invertebrate prey.

c. One of the monthly surveys will be initiated at dawn *(or, during sea turtle nesting season, as soon as beach access is possible)* and completed within three hours *of dawn* to adequately assess the presence or absence of the species. If the entire Project area cannot be surveyed within this timeframe, the survey will be completed on subsequent, consecutive days until the entire Project area is surveyed.

d. As the active construction area is unlikely to support red knot usage, this area will not be surveyed; however, surveys will continue in all Project areas not actively under construction during the construction period to assess the movement of the birds in response to construction activities.

e. The person(s) conducting the survey will demonstrate their qualifications and ability to identify shorebird species.

9. By July 31 of each year following the wintering bird surveys, a report regarding red knot and other shorebird occurrence shall be forwarded to the Service. In addition to providing wintering survey data through May 15 of the current year, a brief summary will address: any discernable trends in pre-construction, during construction, or post-construction beach use by feeding and roosting red knots; the location of any identified feeding or roosting areas of importance; and any significant sources of disturbance to red knots encountered. A final report covering the final year of shorebird monitoring will include conclusions reached regarding red knot distribution and abundance in the action area prior to and after the Project.

10. If online entry is available, the annual wintering shorebird survey data will be entered into the FWC's on-line database (www.flshorebirddatabase.org). (*Note that at the date of this Biological Opinion only breeding bird data is being accepted.*)

11. Upon locating injured, sick, or dead red knot, initial notification should be made to FWC Wildlife Alert at 1-888-404-FWCC (3922) and the Service's North Florida Ecological Services Field Office at 904-731-3336. Care shall be taken in handling injured red knots to ensure effective treatment or care and in handling dead specimens to preserve biological materials in the best possible state for potential analysis into cause of death.

COORDINATION OF INCIDENTAL TAKE STATEMENT WITH THE MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA), as amended (16 U.S.C. 703 et. seq.) implements various treaties and conventions between the U.S., Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under the provisions of the MBTA, it is unlawful "by any means or manner to pursue, hunt, take, capture or kill any migratory bird except as permitted by regulations issued by the Service. The term "take" is not defined in the MBTA, but the Service has defined it by regulation to mean to pursue, hunt, shoot, wound, kill, trap, capture or collect any migratory bird, or any part, nest or egg or any migratory bird covered by the conventions or to attempt those activities.

All sand placement events have the potential to impact nesting shorebirds protected under the MBTA (16 U.S.C. 701 et seq.). In order to comply with the MBTA and address the potential for the Project to impact nesting shorebirds, the Corps shall comply with the FWC standard shorebird protection guidelines to protect against impacts to nesting shorebirds during implementation of the Project.

The Service will not refer the incidental take of red knots associated with permitted actions under the Project for prosecution under the MBTA, as amended (16 U.S.C. 703-712), if such take is in compliance with the T&Cs specified here.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. The Corps should work with the Service, FWC, local sponsors, and applicants to reduce human disturbance to red knots (e.g., placing symbolic fencing around important feeding or roosting areas, arranging for bird stewards where high human use and red knot important feeding or roosting habitat overlaps, encouraging enactment and enforcement of dog regulations, providing outreach materials regarding red knots and beach habitat, erecting appropriate signage at beach access points). Signage should highlight red knot life history, habitat requirements, and ways beach users can assist in red knot conservation.

2. The Corps should work with the Service and the FWC to develop best management practices for beach nourishment projects to benefit the red knot and piping plover. Where feasible, projects should include the creation of habitat features such as ephemeral tide pools, irregular shorelines, and extended flats to enhance feeding and roosting habitats.

3. The Corps should support scientific study of the effects of beach nourishment on intertidal benthic invertebrate prey upon which the red knot depends.

4. The Corps should avoid dredging submerged and emergent shoals, and other favored red knot habitat outside of navigation channels whenever possible to maintain natural inlet and beach dynamics that support shorebird habitat. Accreting sand spits, bars, and emergent shoals in and around inlets provide excellent foraging and roosting habitat for wintering red knots.

5. The Corps should work with the Service to improve monitoring and reporting compliance on beach nourishment projects.

In order for the Service to keep informed of actions minimizing or avoiding adverse effects, or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and if:

1. The amount or extent of incidental take is exceeded;

2. New information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Biological Opinion;

3. The agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this Biological Opinion; and,

4. A new species is listed or critical habitat designated that may be affected by the action.

In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Thank you for your cooperation in the effort to conserve and recover listed species. Should you have questions regarding this Biological Opinion or require clarification, please contact Peter Plage at 904-371-3085 or peter_plage@fws.gov.

Sincerely,

Heath Rao

Acting Jay B. Herrington
Field Supervisor

cc: USACE, Jacksonville (A. Hershorin)
FWC, Lakeland (N. Douglas, M. Parks)
FWC, Gainesville (J. Brush)
FWC, Tallahassee (R. Trindell)
FWS, Vero Beach (J. Howe)
FWS, Jacksonville (A. M. Lauritsen)

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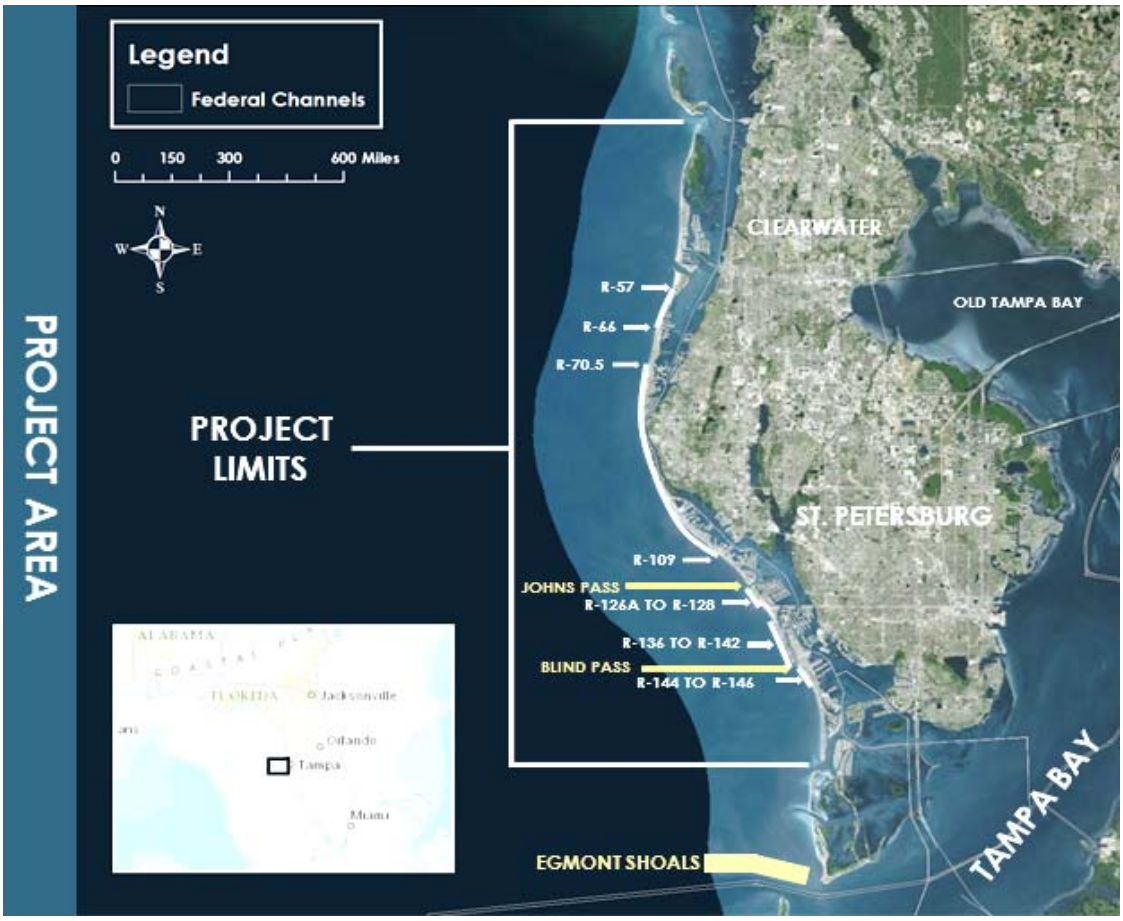
PROJECT AREA
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CLEARWATER
OLD TAMPA BAY
R-57
R-66
R-70.5
ST. PETERSBURG
R-109
JOHNS PASS
R-126A TO R-128
R-136 TO R-142
BLIND PASS
R-144 TO R-146
EGMONT SHOALS
TAMPA BAY
ALABAMA
FLORIDA
Jacksonville
Orlando
Tampa
Miami

APPENDIX D - MAILING LIST

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Mailing List - Pinellas County, Florida Beach Erosion Control Project

(Sent by email or hard copy as appropriate.)

Federal Agencies

DOI- Office of Environmental Policy and Compliance

- Loretta Sutton

National Park Service

- David Vela – Regional Director
- Canaveral National Seashore Superintendent's Office

NOAA/NMFS

    - Roy E. Crabtree, Ph.D. – Deputy Regional Administrator
- Protected Resource Division
    - David Bernhart
- Habitat Conservation Division
    - Mark Sramek
    - Pace Wilber – Atlantic Branch Supervisor
- Recreational Fisheries Branch
    - Office of Constituent Services
- Marine Mammal Conservation Division
    - Ken Hollingshead

OSAT International Cooperation

- Alberto Tamayo

Seventh Coast Guard District

- Commander (OAN)

SEC Federal Energy Road Commission

SEC Federal Maritime Commission

Tampa Bay National Estuary Program

- Lindsay Cross
- Holly Greening – Executive Director

U.S. Department of Agriculture – NRCS

U.S. Department of Commerce

- Wilbur Ross

U.S. Department of Housing and Urban Development

U.S. Environmental Protection Agency

- Environmental and Compliance Department
- Paul Gagliano – Region 4
- Richard Harvey – South Florida Office

U.S. Fish and Wildlife Service

- Regional Director
- Pete Plage
- Jay Herrington

U.S. Forest Service

- Southern Region Forester

U.S. Geological Survey

- Marge Davenport – Regional Director, Southeast (Acting)

U.S. House of Representatives

- Honorable Kathy Castor – District 14
- Honorable Charlie Crist – District 13

U.S. Senate

- Honorable Bill Nelson
- Honorable Marco Rubio

Tribal Nations

Muscogee (Creek) Nation

- James Williams – Manager, Environmental Services
- James Floyd – Principal Chief of Oklahoma

Miccosukee Tribe of Indians of Florida

- Fred Dayhoff – NAGPRA Representative
- Billy Cypress – Chairman
- Kevin Donaldson – Real Estate Services
- Gene Duncan – Water Resources Director

Porch Creek Indians

- Tribal Historic Preservation Officer –Environmental Department

Seminole Nation of Oklahoma

- Jennifer Johnson

Seminole Tribe of Florida

- Bradley M. Mueller – Compliance Supervisor
- Cherise Maples – Director of Environmental Resource Management
- Marcellus Osceola, Jr. - Chairman
- Paul Backhouse, Ph.D. – Tribal Historic Preservation Officer

Seminole Nation Aboriginal People

- Bobby C. Billie

State Agencies

Office of the Governor – The Capitol

- Gov. Rick Scott

Florida Coastal Management Program

Florida Cooperative Extension

- John Stevely

Florida Defenders of the Environment

Florida Department of Agriculture and Consumer Services

Florida Fish and Wildlife Conservation Commission

- Director of Imperiled Species Management
- Lisa Gregg – Division of Marine Fisheries Management
- Nancy Douglass – Migratory Bird Coordinator
- Robbin N. Trindell – Office of Environmental Services
- Thomas Graef – Regional Director, Southwest Region

Florida House of Representatives

- Honorable Kathleen Peters – District 69
- Honorable Larry Ahern – District 66

Florida Inland Navigation District

- Mark Crosley – Executive Director

Florida Senate

- Jeff Brandes – District 24
- Honorable Jack Latvala – District 16
- Honorable Darryl Rouson – District 19

Florida Shore and Beach Preservation Association

- Executive Director

Gulf of Mexico Fishery Council

- Chairperson

Office of Environmental Policy and Compliance – Atlanta Region

Tampa Bay Regional Planning Council

- Maya Burke

Tampa Bay Partnership

- Stuart Rogel – Executive Director

Tampa Bay Port Authority

- Chris Cooley – Environmental Affairs Director

Tampa Bay Pilots Association

WMNF-FM 88.5

WUSF

City/County Agencies

Board of County Commissioners – Pinellas County

Natural Resources Department Director

- Charles Hunsicker – Department Director

Department of Water and Navigation – Pinellas County

Department of Public Works – Pinellas County

Hillsborough County Environmental Protection Commission (HCEPC)

- Janet Dougherty – Executive Director

Pinellas County Courthouse

- BOCC

St. Petersburg Public Library

Non-Governmental Organizations

Florida Chapter

- Robert Dendick – The Nature Conservancy

Florida Defenders of the Environment

Florida Public Interest Research Group

Florida Wildlife Federation

National Resources Defense Council

- Michael Harty

National Wildlife Federation

- John Hammond – Regional Executive Director

NAGPRA

- Marsey Harjo – Representative

Reef Keeper International

Save the Manatee Club

- Anne Harvey Holbrooke – Staff Attorney
- Dr. Katie Tripp

Sea Turtle Conservancy

Sierra Club – Florida Regional Office

- Director

Seminole National Aboriginal People

- Bobby C. Billie

Seminole Nation of Oklahoma

- Jennifer Johnson

Tampa Audubon Society

- Mark Rachal and Ann Paul

Tampa Bay Watch, Inc.

- Peter Clark – Director

The Ocean Conservancy – South Atlantic Regional Office

- David White

Private Organizations

Florida Shore and Beach Preservation Association

- Executive Director

Property Owners Adjacent to Project

Available upon request.