March 2015

Draft Environmental Assessment

Additional Sand Sources

HURRICANE AND STORM DAMAGE REDUCTION PROJECT
LIDO KEY, SARASOTA COUNTY, FLORIDA

U.S. Army Corps
of Engineers
JACKSONVILLE DISTRICT

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LIDO KEY, SARASOTA COUNTY, FLORIDA

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1 PROJECT PURPOSE AND NEED

1.1 PROJECT AUTHORIZATION

The U.S. Army Corps of Engineers, Jacksonville District (USACE) has prepared this Draft Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) to evaluate alternative sources of sand for the Hurricane and Storm Damage Reduction (HSDR) Project at Lido Key, Sarasota County, Florida project ("Lido Key"). The beach erosion control project was authorized for Lido Key by Section 101 of the River and Harbor Act of 1970. The project provided for initial restoration and periodic nourishment for 1.56 miles of shoreline. The City of Sarasota completed the northern half of the project in 1970 with no Federal participation. The Federally authorized project was never completed and was de-authorized by Section 1001(b) of the Water Resources Development Act of 1986 and reauthorized by Section 364(2) of the Water Resources Development Act of 1999. The Water Resources Development Act of 2007 directed the Secretary to construct the project substantially in accordance with the Chief of Engineers report dated December 22, 2004, which is based on an October 2002 feasibility report, updated with an addendum in 2004.

The environmental effects of sand placement at Lido Key are covered in the 2004 Sarasota Lido Key HSDR Feasibility Study (the Feasibility Study) and Environmental Assessment (EA) and are incorporated by reference. This document will update the prior evaluation of sand sources based on new information.

1.2 PROJECT LOCATION AND DESCRIPTION

The project is located in Sarasota County on the Gulf Coast of Florida about 45 miles south of downtown Tampa and 20 miles southeast of the mouth of Tampa Bay. Lido Key is approximately 2.5 miles in length and lies entirely within the corporate limits of the City of Sarasota. New Pass separates Lido Key from Longboat Key to the north and Big Sarasota Pass (BSP) separates Lido Key from Siesta Key to the south (Figure 1).

1.2.1 SAND PLACEMENT

The sand placement location and proposed groins are described in detail in the 2002 Feasibility Study (with 2004 Addendum). The project includes sand placement of an 80-foot beach berm and an additional advanced nourishment section averaging 96-feet wide (for a total of 176 feet) over 1.56 miles of shoreline with a groin field at the southern limits of the project. Periodic nourishment is to be accomplished at 5-year intervals for 50 years of Federal participation. The design for the sand placement has not changed since the 2004 Addendum, and the Federally authorized project has not yet been constructed.

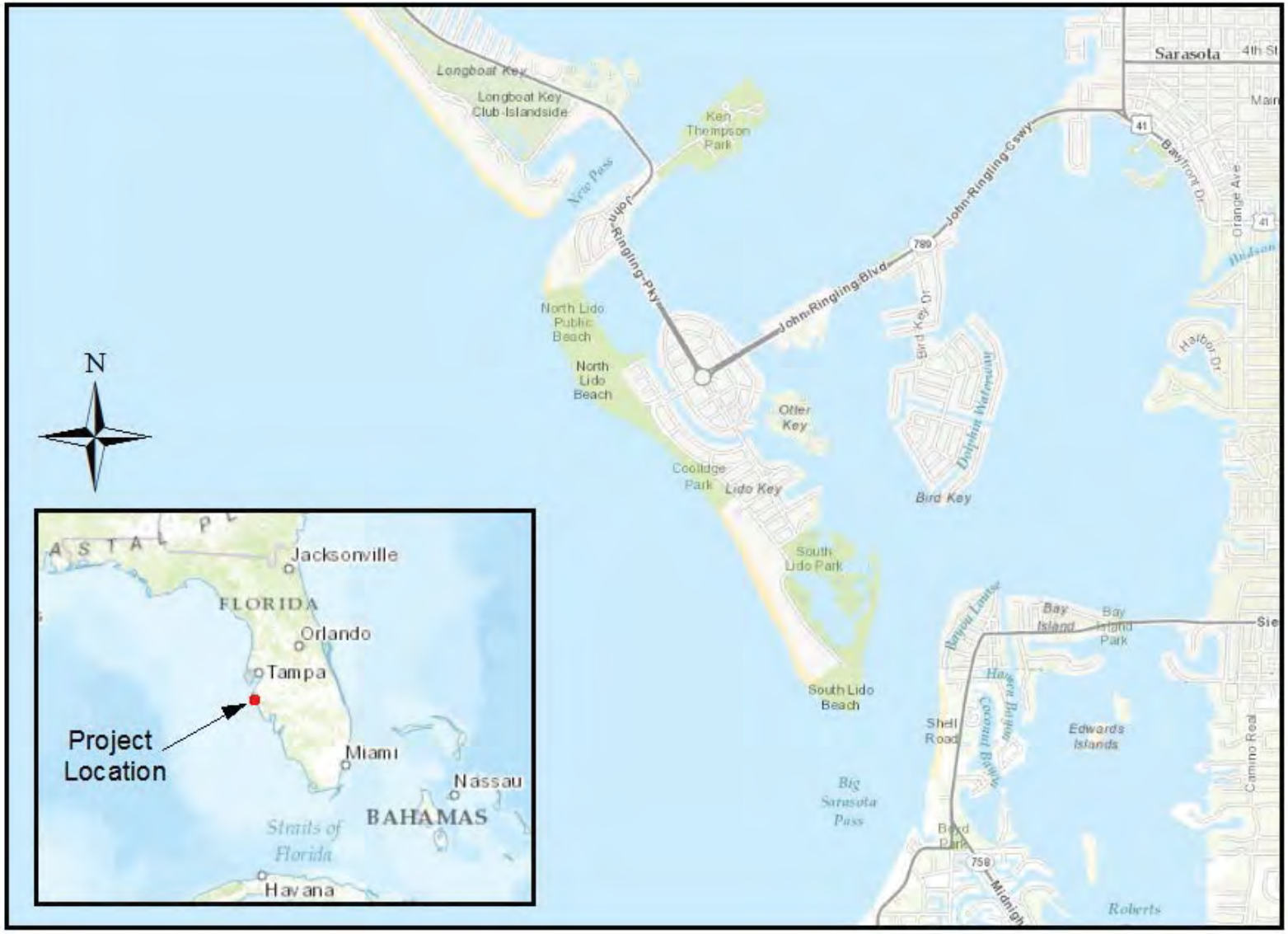

Figure 1. Project Location Map.

1.2.2 GROIN FEATURES

Three groin features were originally included in the project in the Feasibility Report: a northern structure located near survey monument R-42.5 and extending 320 feet seaward; a middle structure 1400 feet south of the northern structure (near R-43) and extending 440 feet seaward; and a terminal groin structure 800 feet south of the middle structure (near BSP) and extending 650 feet seaward. Specific design parameters of these features are discussed in detail in Appendix A of the 2002/2004 Feasibility Study. The groin features were determined to be necessary to hold placed sand on Lido Key, and to lengthen the time required between sand placement events.

USACE re-examined the design of the proposed groins in 2014 to investigate the possibility of constructing shorter groin structures. A primary goal during this effort was to maintain at least the minimum required 80-foot width of shoreline (the design berm) along southern Lido Key. This has proven difficult without the use of stabilizing structures (especially between R-42 and R-44; see Figure 2). The purpose of the northern and middle groins is to maintain a stable 80-foot wide beach berm along these more erosive areas of Lido Key.

Figure 2. Minimum required shoreline positions along southern Lido Key.

The alongshore positions of the proposed groins are shown in Figure 3. In the original design as presented in the 2002/2004 Feasibility Report, the lengths of the northern and middle groins were given as 320 and 440 feet, respectively. As a result of the re-analysis of the groins in 2014, the lengths were reduced to 170 feet and 345 feet respectively, with no significant loss of performance anticipated. Additional notable characteristics of the groins are that the structures are intended to accumulate sand from the immediate vicinity of the shoreline only.

To confine the effects of the structures to the nearshore system, all groin construction should be contained within the active nearshore profile. Due to their minimized lengths and increased porosity, these structures would have minimal impact on littoral processes along southern Lido Key, and would create minimal downdrift effects (USACE, 2014c).

Figure 3. South Lido Key groin field. Recommended structure lengths are taken from the Feasibility Study (FS) and the 2014 reanalysis of the structures.

The original purpose of the southern, or terminal, groin as formulated in the 2002/2004 Feasibility Report was to stabilize the southern tip of Lido Key. This would be accomplished by impounding a large volume of material to the north of this 650-foot long structure to guard against excessive downdrift erosion that could be caused by the much longer northern and middle groins that were recommended in that report. Since the northern and middle groins have been reduced in length and increased in permeability, a much greater rate of sand bypassing will occur southward past these structures. The greater supply of sand provided to the southern end of Lido Key reduces the need for the terminal structure.

In addition, the southern tip of the island has proven highly stable in recent years, and this stability is expected to continue following construction of the groins and beach fill placement. The ongoing renourishment of Lido Key as a result of the HSDR project will maintain the stability of this area into the future, without the addition of the terminal structure. The pre-

project littoral processes along the south end of the island will continue largely uninterrupted after project construction. Material will be allowed to bypass the northern and middle groins to nourish the Gulf shoreline, and will also be allowed to flow freely around the southern tip of the island to nourish the bay-side shoreline inside BSP. A portion of this material will ultimately be transported into the BSP shoal system, as presently occurs. Continuation of these natural processes should promote a stable, and possibly slightly accretionary, shoreline along the southern end of the island.

Since the risk of potential damages along the southernmost end of Lido Key has been greatly reduced as a result of the 2014 groin redesign effort, construction of the terminal groin may be deferred. Monitoring will occur along the southern Lido Key shoreline following construction of the beach fill and northern two groins, and construction of the terminal groin would proceed only if it is proven necessary in the future. The final recommended plan is shown in Figure 4.

Figure 4. Final recommended plan showing the locations of the two groins and proposed beach fill at the southern portion of the island.

1.2.3 SAND SOURCES

More detailed surveys of the previously considered offshore sand sources determined that the sediment there does not meet current Florida Department of Environmental Protection (FDEP) regulations. Therefore, USACE is reconsidering sand sources for this project. There are two sites currently proposed for this project. BSP is located in the ebb shoal adjacent to and within

the BSP channel immediately offshore the south end of Lido Key (see Figure 1). In addition, material dredged from the New Pass navigational channel will continue to be utilized for the project in accordance with agreements in place between the City of Sarasota and the Town of Longboat Key.

Figure 5. Map showing the beach fill and groin field limits, as well as the BSP and New Pass sand source locations.

1.3 NEED FOR PROPOSED ACTION

The coastline of Sarasota County consists of coastal barrier islands separated from the mainland by shallow tidal lagoons. Problems in this area consist of beach erosion and shoreline recession, which are resulting in property damage to coastal development. Erosion and shoreline recession at Lido Key was exacerbated by various storms that affected the region including Tropical Storm Bonnie (2004), Hurricane Charley (2004), Hurricane Frances (2004), Hurricane Ivan (2004), Hurricane Jeanne (2004), and Tropical Storm Debby (2012).

Facts relevant to the beach fill design of the project addressed in the 2004 EA have not changed. However, surveys conducted of the offshore sand sources after the preparation of the Feasibility Study and Addendum indicated that the sand from these areas would not meet the Florida Department of Environmental Protection (FDEP) criteria outlined in 628-41.007, F.A.C. Accordingly, a subsequent sand search was conducted to identify other offshore sources, but no compatible offshore sand was identified within an economically feasible distance of Lido Key.

1.4 DECISION TO BE MADE

The decision to be made by the Federal government is to select a sand source for the Lido Key HSDR project. Sand placement and the groin features were discussed in the 2002 Feasibility Study and EA. Results from the previous analysis are incorporated into this document by reference. The sand placement has not changed since the previous analysis. However, the use of New Pass, BSP, or their ebb shoals was not analyzed in the 2002 EA. In addition, further analysis of the groin features has occurred since the 2002 Feasibility Study and EA. Results of this analysis and the proposed changes to the groin features are discussed in Section 1.2.2, and effects of the groin features and the use of New Pass, BSP, and their ebb shoals are discussed in Section 4.

1.5 REQUIRED PERMITS

The City of Sarasota and USACE will apply jointly for water quality certification (WQC) under Section 401 of the Clean Water Act in the form of a Joint Coastal Permit (JCP) from the FDEP to cover the proposed action. Issuance of the permit will also constitute state concurrence that the project is consistent with the Florida Coastal Management Program. Please also refer to Section 5.0 for additional discussion regarding compliance with environmental laws and regulations.

1.6 PREVIOUS NEPA DOCUMENTS

Environmental documents related to this project include the *Sarasota Lido Key Hurricane Storm Damage Reduction Project Feasibility Study and Environmental Assessment*, October, 2002, with Addendum of April 2004. This EA is "tiered" off of the 2002 EA; a FONSI was signed for the 2002 EA on September 17, 2002. As described in the integrated Feasibility Study and EA, the project details are:

- Project length (ft) = 8,280 (FDEP Monument R-35 to R-43)

- Design berm elevation - +5 Ft NGVD; 80-ft design berm over 1.6 miles
- Approximately 460,000 cubic yards (cy) of design and 615,000 cy of advance material (1,075,000 cy)
- Three offshore sand sources were delineated
- 5-year nourishment interval over 50-year life
- 615,000 cy required for each renourishment
- Three groins are part of the project along the southern portion
- Initial Estimated Construction cost = $22,708,000 (cost share of 62.4% / 37.6%)

The 2002 (amended 2004) Feasibility Study and EA did not include either the New Pass shoal or BSP sand sources. Although sediment from the dredging of the New Pass Federal Navigation Channel has been placed at Lido Key in the past, this action was done under a regulatory permit by the local governments [Permit SAJ-1999-3508 (IP-MN)-2008; Permit SAJ-2014-02347]. The quantity from New Pass alone is not sufficient to meet the HSDR project goals of protecting upland structures.

1.7 SCOPING AND ISSUES

A Scoping Notice was sent to agencies, non-governmental organizations, and stakeholders on June 19, 2014, requesting comments and concerns relevant to project implementation and alternative sand sources. Two scoping meetings were held at the Sarasota City Hall on July 23, 2014, to provide further opportunity for comment.

As a result of the initial project scoping, the following environmental issues were identified to be relevant to the proposed action and appropriate for detailed evaluation:

a. Ebb Shoal Morphology and Regional Sediment Transport
b. Fish and Wildlife Resources, including Protected Species
c. Sediment Compatibility
d. Water Quality
e. Essential Fish Habitat (EFH)
f. Coastal Barrier Resources
g. Cultural, Historic, and Archeological Resources
h. Navigation
i. Recreation
j. Air Quality
k. Noise

2 ALTERNATIVES

The Alternatives section is the heart of the Environmental Assessment. This section describes in detail the no-action alternative, the proposed action, and other reasonable alternatives that were studied in detail. This section is based on the information and analyses presented in the sections on the Affected Environment and the Environmental Effects, and it presents the beneficial and adverse environmental effects of all alternatives in comparative form to provide a clear basis for choice among the options for the decision maker and the public.

2.1 DESCRIPTION OF ALTERNATIVES

Alternatives being considered include no action and the use of the following sand sources for the Lido Key HSDR Project: the BSP ebb shoal; the New Pass Federal navigation channel; offshore sand sources; and upland sand sources.

2.1.1 BIG SARASOTA PASS (BSP) EBB SHOAL

In 2010, Sarasota County released their *Comprehensive Inlet Management Plan, Big Sarasota Pass and New Pass System* (the *Plan).* One element of the *Plan's* "Potential Sand Management Recommendations" was to consider back-passing sand from the New Pass and BSP ebb shoals to updrift beaches. The *Plan* recommended further investigation into the alternative of mining roughly 850,000 cubic yards of sand from a sand source along the northwestern edge of the BSP ebb shoal in a "generally meandering geometry, roughly between the minus 7 foot and minus 12 foot contours" for placement at Lido Key. In 2013-2014, USACE evaluated ten alternatives using the ebb shoal of BSP as a sand source. The draft report, *Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project,* was released on June 11, 2014 (available on the USACE website at http://www.saj.usace.army.mil/About/DivisionsOffices/Pianning/EnvironmentaiBranch/EnvironmentalDocuments.aspx). The report will be finalized following the public comment period on the Draft EA.

The BSP ebb shoal is adjacent to the south end of Lido Key in and immediately abutting BSP near the southwest end of the project area. USACE modeled numerous dredging configurations of the BSP to examine potential change resulting from the various mining scenarios. These alternatives were developed from the *Sarasota County Comprehensive Inlet Management Program, Big Pass and New Pass Management Alternatives* (Coastal Technology Corp., 2008; see Figure 6).

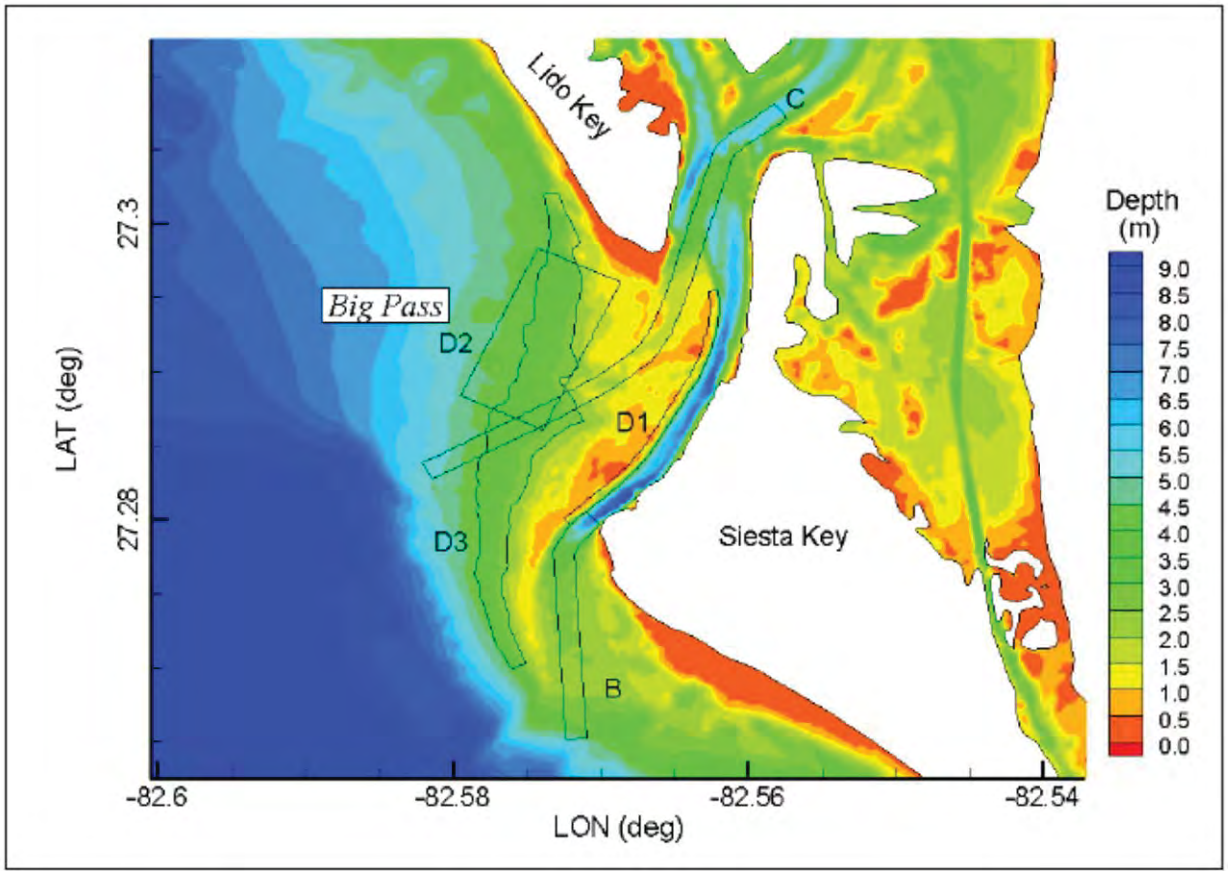

Figure 6. Alternatives developed from the Inlet Management Plan (Coastal Technology Corp., 2008).

The alternatives shown in Figure 6 were tested using the Coastal Modeling System (CMS). CMS is an integrated 2D numerical modeling system for simulating waves, currents, water levels, sediment transport, and morphology change at coastal inlets and entrances. Emphasis of the CMS is on navigation channel performance and sediment exchange between the inlet and adjacent beaches (USACE, 2014). The modeling was conducted to screen those alternatives that would be unacceptable in terms of the following four criteria:

1) The response and evolution of the inlet and ebb shoal morphology as a function of mining the ebb shoal at BSP;
2) Changes to the wave climate as a function of modified bathymetry at the dredge site;
3) Response of the ebb tide channel (navigation channel) due to the evolution of the inlet complex morphology; and
4) Changes in sediment transport pathways that exchange sediments between the ebb shoal and adjacent beaches.

The modeling effort identified two configurations that did not have adverse effects based on the above criteria: Alternative D3*-C-B and Alternative D3**-B.

Please note that for either of these alternatives, material would be dredged as needed. It is possible that not all areas of the chosen alternative would be dredged during a placement event. The effects discussed resulting from each alternative are based on dredging the entire proposed template; dredging less than the maximum template would result in incrementally less effects.

2.1.1.1 Alternative D3*-C-B – Preferred Alternative

Alternative D3*-C-B refers to contour dredging (or dredging along a bathymetric contour) Cut D3 north of Cut C, dredging the extension of the existing channel (Cut B), and dredging the ephemeral channel (Cut C). All dredging would be conducted to a depth of 12 feet mean low water (MLW). The boundaries of Cut D3 were modified from their original shape to only include the portion north of Cut C. The model showed that dredging all of Cut D3, which originally included an area south of Cut C) would increase wave energy from the Gulf of Mexico to the northern shoreline of Siesta Key relative to the No Action Alternative. By removing the portion south of Cut C, the Alternative does not have adverse effects. This alternative has been chosen as the preferred alternative as the primary sand source for the Lido Key Hurricane and Storm Damage Reduction Federal project. The preferred alternative includes the use of any available beach-quality sediment from the New Pass Federal Navigation Channel and its associated ebb shoal as a supplement to this sand source.

2.1.1.2 Alternative D3**-B

Alternative D3**-B refers to contour dredging Cut D3 north of Cut C to a depth of 14 feet MLW, and dredging the extension of the existing channel (Cut B) to a depth of 12 feet MLW. Based on the modeling conducted by USACE, Alternative D3**-B did not appreciably increase wave energy and did not change existing sediment transport pathways.

2.1.1.3 Other Dredge Alternatives Not Carried Forward

Other dredge alternatives were evaluated and modeled, but were subsequently removed from consideration due to adverse effects based on the four criteria outlined in Section 2.1.1. These effects are described in detail in the modeling study (Appendix G), but a summary of these effects are included here:

- Cut D1 – would increase energy to the northern interior shoreline of Siesta Key
- Cut D2 – had a geometry that did not follow a natural depth contour (box cut)
- Cut D3 (southern portion) – would increase wave energy to the northern beaches of Siesta Key that front the Gulf of Mexico

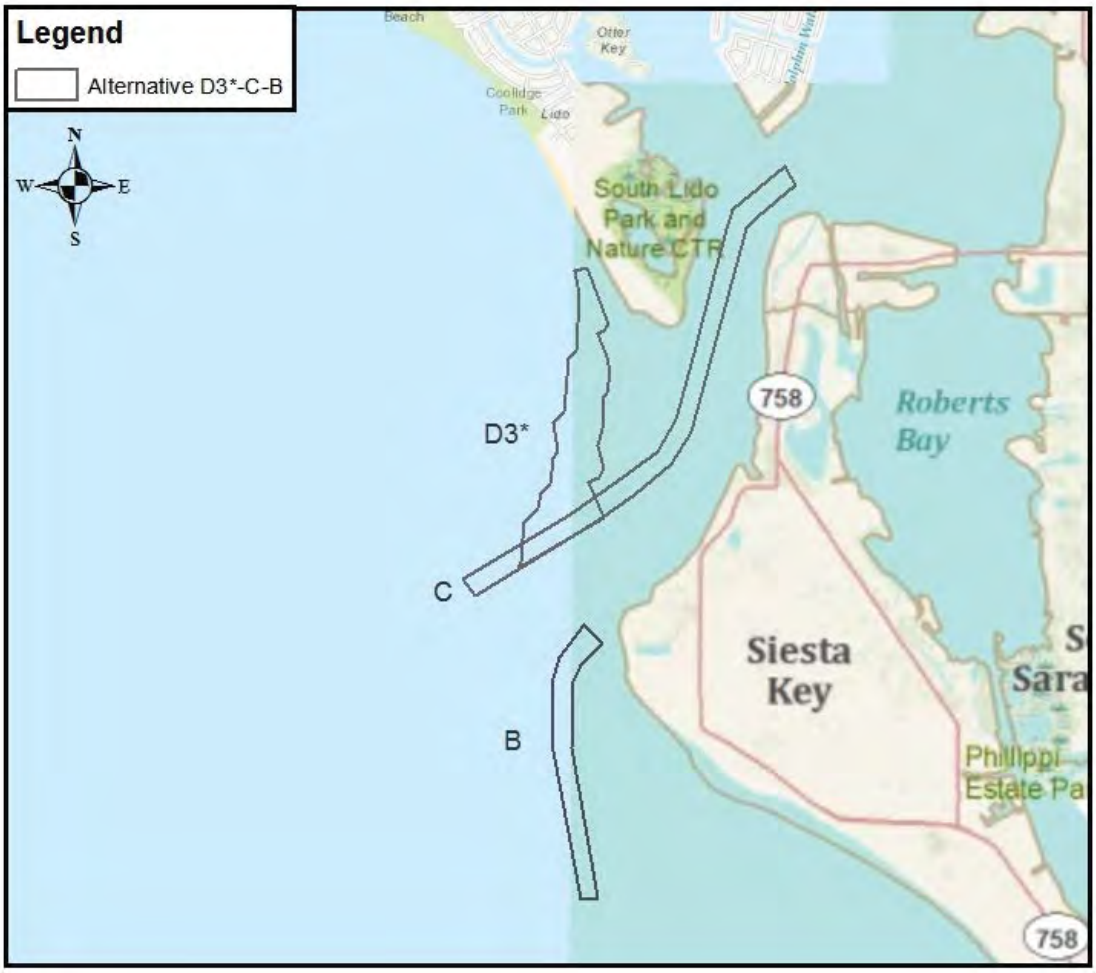

Figure 7. Location of Alternative D3*-C-B. Note that in this alternative, Cut D3* refers to Cut D3 being dredged to a depth of 12 feet MLW.

2.1.2 NEW PASS FEDERAL NAVIGATION CHANNEL AND EBB SHOAL

Maintenance dredged material from the Federal navigation project at New Pass and material from its associated ebb-tidal shoal has periodically been placed on Lido Key. This material is dredged to keep the navigation channel open, but this has not been sufficient to prevent the beaches of Lido Key from eroding. The City of Sarasota and the Town of Longboat Key have dredged both the channel and the ebb shoal to obtain material for Lido Key and Longboat Key. Material will continue to be placed according to agreements in place between the City of Sarasota and the Town of Longboat Key, but additional sand sources are required to protect infrastructure at Lido Key and to meet the purposes of this project.

Figure 8. Location of Alternative D3-B. Note that in this alternative, Cut D3** refers to Cut D3 being dredged to a depth of 14 feet MLW.**

2.1.3 OFFSHORE SAND SOURCES

Three offshore sand sources were originally identified in the Feasibility Study (LKBA 5, LKBA 6, and LKBA 7; see Figure 10). LKBA 5 is located 7.2 nautical miles offshore of Lido Key, LKBA 6 is 8.5 nautical miles offshore, and LKBA 7 is located 9.5 nautical miles offshore (see Section 2.1.4 of the 2002 EA for detailed discussions of these areas). Although the initial surveys conducted for the 2002 Feasibility Study indicated that all of these sources contained sediment with less than five percent silt content, additional core borings of the sediment and more detailed Preliminary Engineering and Design geotechnical analyses (typically conducted following the feasibility stage) determined the sediment to be unsuitable for placement on Lido Key due to its dark color, which is not compatible with the existing sediments at Lido Key.

Coastal Planning & Engineering (CPE) conducted a desktop survey to locate potential sources of offshore material. They compiled a map with areas recommended for further evaluation (Figure 11; CPE, 2010). Using this information, USACE took core borings of three potential sand sources identified as having “moderate” potential for suitable material by CPE. These sites were located between nine and 17 miles offshore of Lido Key. Besides being a considerable

distance offshore, the sites were not found to contain suitable sand in sufficient quantities for use at Lido Key.

Figure 9. New Pass Sand Source Boundaries.

2.1.4 OTHER SAND SOURCES

The use of upland, aragonite, and other distant sources of sand are considerations for beach fill. However, their use is not feasible in this project due to the extensive cost of purchasing and transporting the materials. These sources will not be evaluated further in this EA.

2.1.5 NO ACTION ALTERNATIVE

The No Action Alternative will include the continued placement of material from New Pass and its ebb shoal when available. However, the quantities of sand available from New Pass are not sufficient to meet the goals of the project. There are no other economically feasible, compatible sand sources that contain sufficient volumes of sand for the Lido Key project.

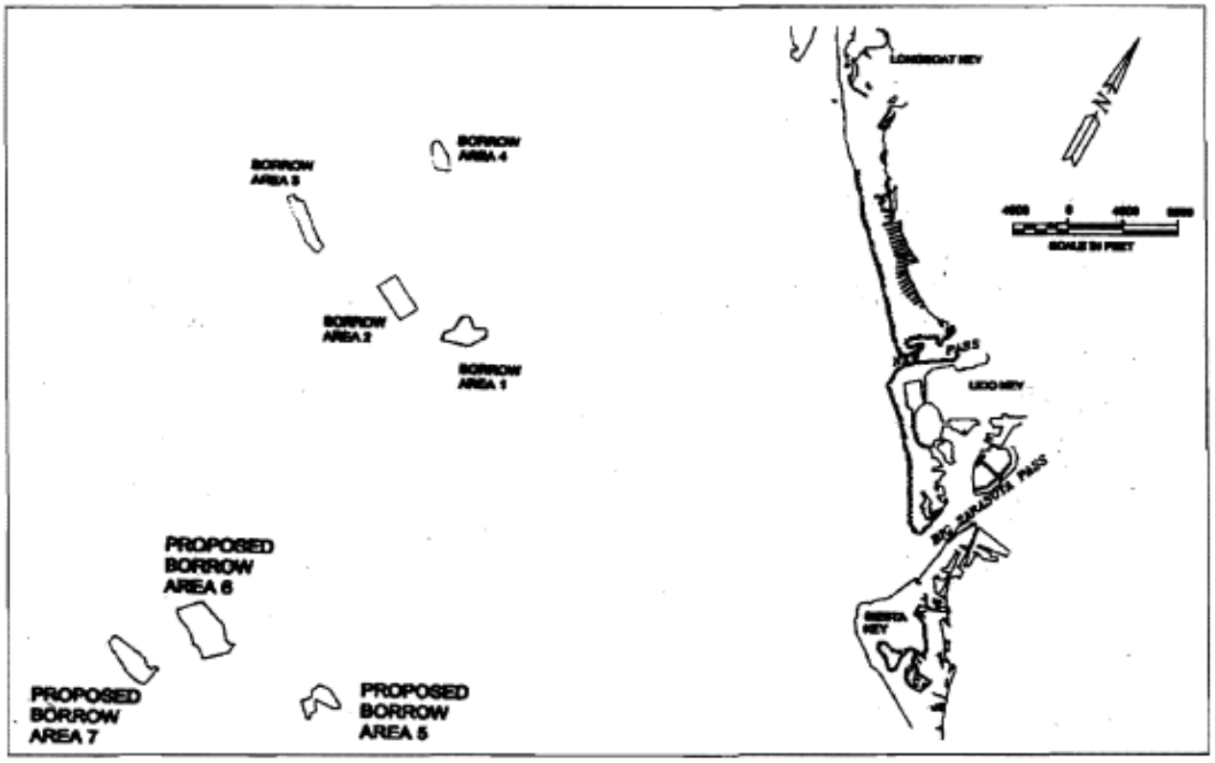

Figure 10. Offshore sand sources analyzed in the 2002 EA, specifically LKBA 5, LKBA 6, and LKBA 7 at the southern portion of the investigation area.

2.2 ALTERNATIVES CARRIED FORWARD

The following potential alternatives for completing this project were carried forward through this analysis:

1. Big Sarasota Pass Ebb Shoal (BSP) – Alternative D3*-C-B
2. Big Sarasota Pass Ebb Shoal (BSP) – Alternative D3**-B
3. New Pass Federal Navigation Channel and Ebb Shoal
4. No Action

2.3 COMPARISON OF ALTERNATIVES

Table 1 lists the alternatives considered in this assessment, and summarizes the major features and consequences of the proposed action and the alternatives. The reader is reminded that the No Action Alternative includes the use of the New Pass Federal Navigation Channel and Ebb Shoal by the local governments, which is expected to continue to occur regardless of whether or not the BSP ebb shoal is used for the Federal project. Many of the impacts of dredging New Pass as a sand source for the Federal project are the same as dredging it as part of a local project. This EA evaluates the use of this sand by USACE as part of the Federally-funded project. Therefore, the effects of the New Pass Federal Navigation Channel and Ebb Shoal Alternative are identical to most of those of the No Action Alternative.

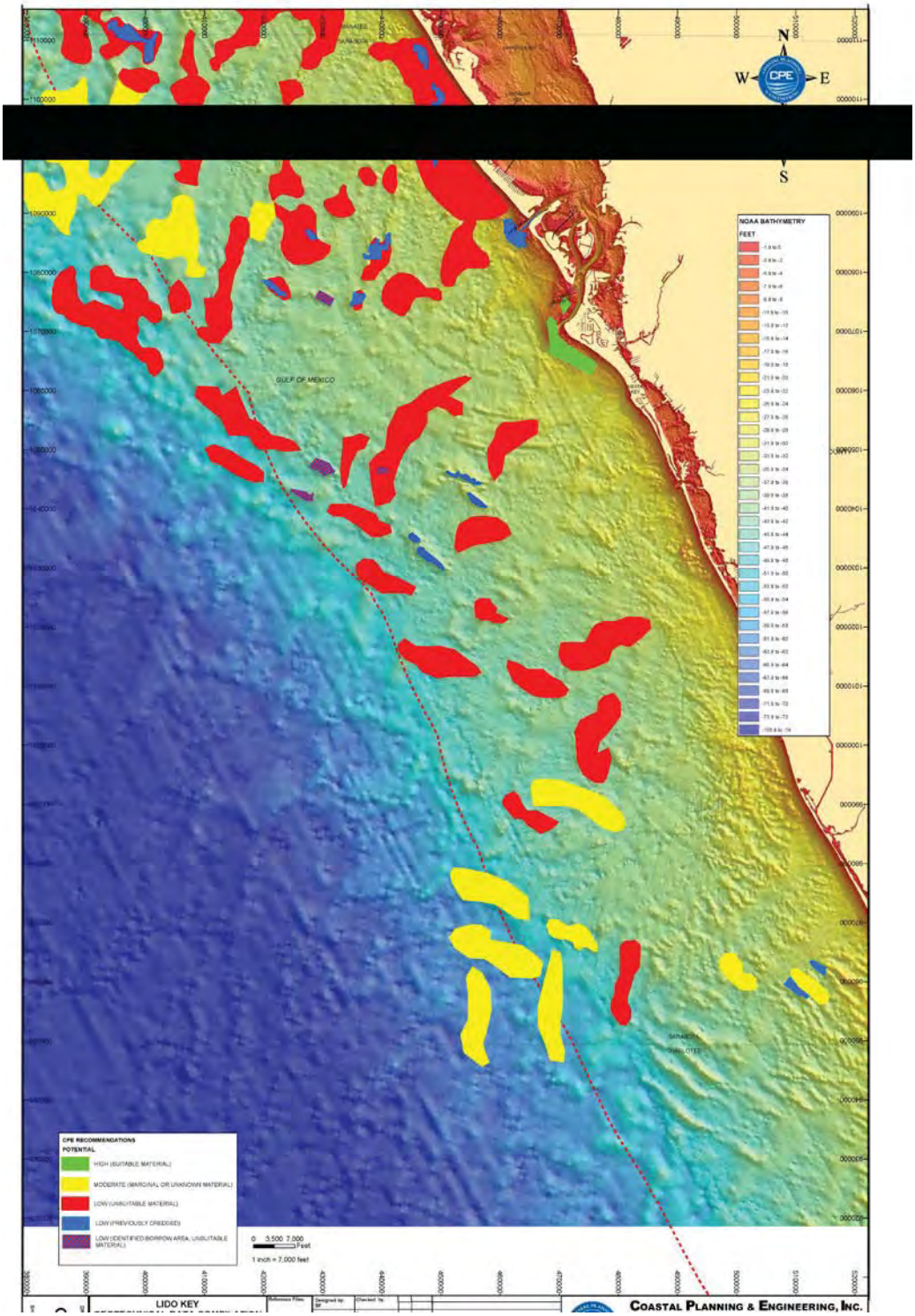

Figure 11. Potential sand sources recommended for further study in CPE geotechnical data compilation. Green indicates areas with high potential (suitable material); yellow areas indicate moderate potential (with marginal or unknown material); red areas have low suitability (unsuitable material); blue indicates areas previously dredged; and blue/red hatched indicates areas identified as sand sources but containing unsuitable material.

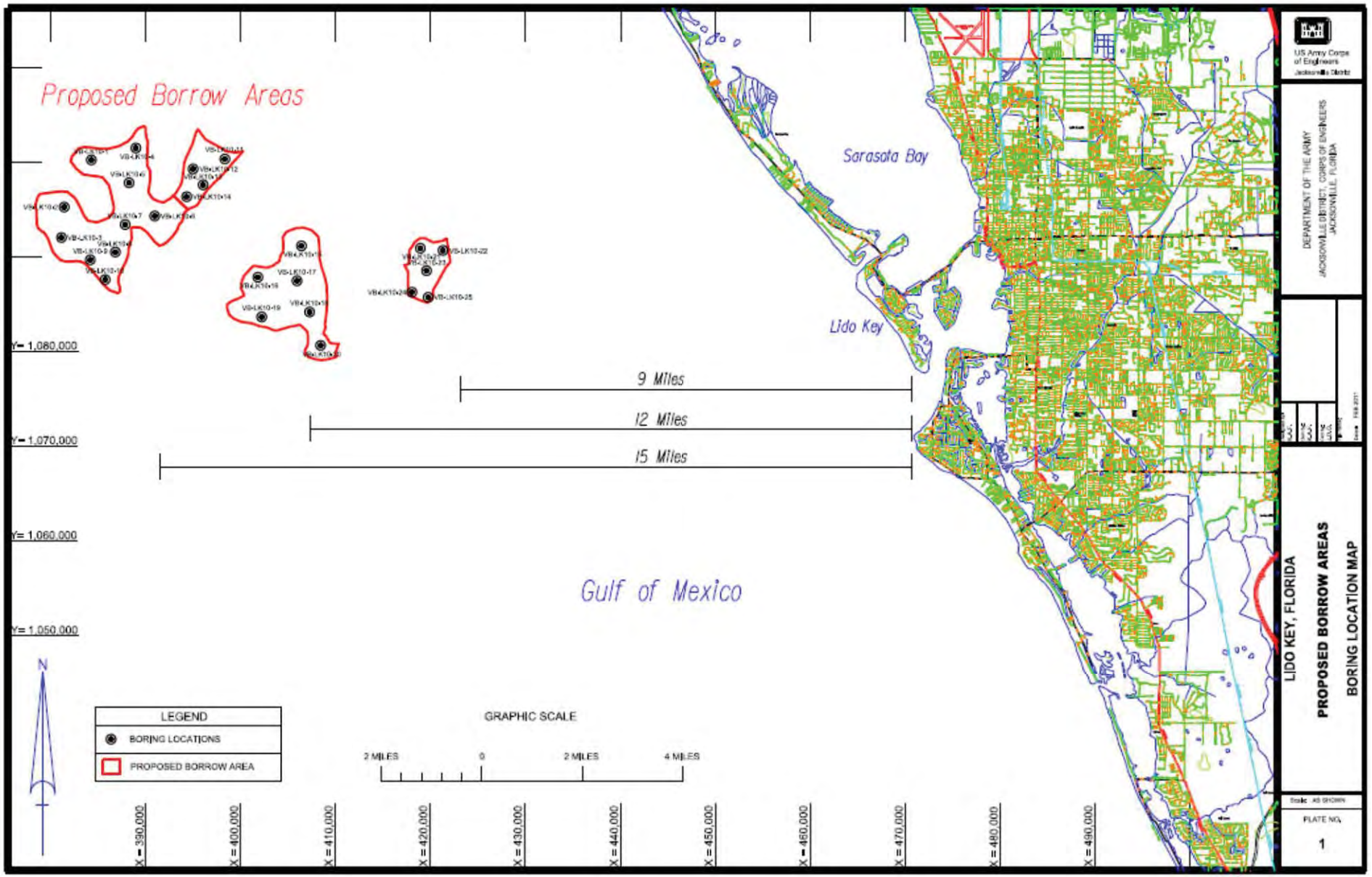

Figure 12. Map of borings taken during additional sand search conducted by USACE in 2010.

Table 1. Summary of potential effects for all alternatives considered in this EA.

ENVIRONMENTAL FACTOR	BSP – Alternative D3*-C-B	BSP – Alternative D3**-B	New Pass Federal Navigation Channel and Ebb Shoal	No A
Ebb Shoal Morphology and Regional Sediment Transport	Reduce velocity of currents in main ebb channel and provide relief to the northern interior shoreline of Siesta Key; provide a recharge basin for future sediment mining.	More sand being bypassed to Siesta (although less sand being retained in the shoal for future mining); no relief to northern interior shoreline of Siesta Key	Currently being conducted by local entities; sand expected to continue to collect in the New Pass ebb shoal as a result of littoral drift	Same Altern
Fish and Wildlife Resources	Short-term impact to beach habitat due to burial/disturbance, but long term benefit through increase in beach habitat for nesting shorebirds and benthic fauna. Temporary impact to fish in the water column and benthic resources during dredging activities.	Effects similar to BSP – Alternative D3*-C-B	Effects similar to BSP – Alternative D3*-C-B	Effects id Alternativ occur possible e vegetation cou upon the exte the pla sand is not ob
Threatened and Endangered Species	Direct adverse impacts include: • Alteration of the beach face resulting in potential adverse impact to sea turtle nesting and hatching success (including effects from grade changes, sediment material, over-compaction, escarpment formation, artificial lighting during construction) resulting in potential "incidental" take of sea turtles • Potential taking of sea turtles with hopper dredge (if utilized) • Possible encounters with manatees by dredge and support vessels during dredge and disposal operations Direct positive impacts: • Nesting area along project reach would increase with nourishment activities	Effects similar to BSP – Alternative D3*-C-B	Effects similar to BSP – Alternative D3*-C-B	Effects sim D3*-C shorebird n migratory bird fo to eros
Sediment Compatibility	Material was determined to be compatible with Lido Key beaches.	Material was determined to be compatible with Lido Key beaches.	Material is compatible with Lido Key beaches	Material h New P Key beaches
Water Quality	Direct adverse impacts include a temporary increase in turbidity adjacent to the dredge site and beach fill area. Turbidity would be monitored during project construction and work would cease if turbidity is not in compliance with Florida water quality standards.	Effects similar to BSP – Alternative D3*-C-B	Effects similar to BSP – Alternative D3*-C-B	Effects sim D3*-C
Essential Fish	No hardbottom habitat is located within the	No hardbottom habitat is located	No hardbottom or seagrass habitat is	Effects sim

Habitat (EFH)	vicinity of the dredge or placement areas. Although small amounts of seagrasses are located near the dredge areas, these areas would be appropriately buffered and turbidity would be monitored to ensure no impacts occur.	within the vicinity of the dredge or placement areas. Although small amounts of seagrasses are located near the dredge areas, these areas would be appropriately buffered and turbidity would be monitored to ensure no impacts occur.	located within the vicinity of the dredge or placement areas.	Altern
Coastal Barrier Resources	Coastal barrier resources (Otherwise Protected Area FL-72P) would be enhanced through restoration of natural habitat.	Effects similar to BSP – Alternative D3*-C-B	Effects similar to BSP – Alternative D3*-C-B	Effects sim D3*-C
Cultural, Historic, and Archeological Resources	Potential to affect historic properties.	Potential to affect historic properties.	Potential to affect historic properties.	No histor
Navigation	Minor temporary impact to recreational boaters required to avoid the dredge and associated equipment during dredging activities. Currents in the Big Sarasota ebb channel would be slightly reduced, making the channel more easily navigated.	Minor temporary impact to recreational boaters required to avoid the dredge and associated equipment during dredging activities.	Minor temporary impact to recreational boaters required to avoid the dredge and associated equipment during dredging activities. Dredging of New Pass ensures adequate depths for recreational navigation.	Minor tem recreat avoid the dr equipm activi ensures adequat recreat
Recreation	Inability to utilize beach during construction; long-term benefit to recreational interests using the beach. Minor temporary impact to recreational boaters required to avoid the dredge and associated vessels during dredging activities.	Effects similar to BSP – Alternative D3*-C-B	Effects similar to BSP – Alternative D3*-C-B	When sand placem Pass occurs, similar to th Alternativ erode withou placem term use by recr
Air Quality	Direct adverse impacts include small, localized, temporary increases in concentrations of nitrogen dioxide (NO2), SO2, CO, VOCs, and PM mostly associated with the dredge plant.	Effects similar to BSP – Alternative D3*-C-B	Effects similar to BSP – Alternative D3*-C-B	Effects sim D3*-C
Noise	Temporary increase in noise at the dredge area and at the placement sites.	Effects similar to BSP – Alternative D3*-C-B	Effects similar to BSP – Alternative D3*-C-B	Effects sim D3*-C

3 AFFECTED ENVIRONMENT

The Affected Environment section describes the existing environmental resources of the areas that would be affected if any of the alternatives were implemented. This section describes only those environmental resources that are relevant to the decision to be made. It does not describe the entire existing environment, but only those environmental resources that would affect or that would be affected by the alternatives being considered if they were implemented. This section, in conjunction with the description of the "No Action" alternative, forms the baseline conditions for determining the environmental impacts of the proposed action and reasonable alternatives.

3.1 GENERAL ENVIRONMENTAL SETTING

Lido Key is a barrier island approximately 2.44 miles long, and it ranges from 100 to 2,500 feet wide. Most of the uplands on Lido Key have been developed, with the exception of North Lido Public Beach and South Lido Park. The developed areas include hotels, motels, private residential homes, and seasonal rental properties. Upland vegetation on Lido Key is composed of both exotic and native species such as Australian pine, sea grape, and wax myrtle. Plants such as palms, grasses, saw palmetto, and sea oats can be found on the upper beach, especially on the north and south ends of the island. The sand placement area is comprised of an 8,280 ft segment of the Lido Key Gulf of Mexico shoreline located between FDEP monuments R-35 and R-43. The sand sources considered in this EA are located north and south of Lido Key (see Figures 4, 5, and 6). The areas proposed for dredging are characterized by nearly featureless sandy bottoms.

3.2 EBB SHOAL MORPHOLOGY AND REGIONAL SEDIMENT TRANSPORT

The volume and shape of the ebb shoal at BSP has changed little since 1883. In the 1920s, John Ringling infilled the Cerol Islands to create Lido Key. Prior to the creation of Lido Key, the ebb shoal at BSP was more symmetrical than it is today. At that time, the main ebb channel bisected the ebb shoal into two equal parts. After the infilling of the Cerol Islands, tidal flows between the Gulf of Mexico and Sarasota Bay that were historically east to west became along-shore directed due to breaking waves in the newly created surf zone and the closure of the conduits through the Cerol Islands (Antonini, 1993; Figure 7). Consequently, sediment transported from the north began to accumulate in the ebb shoal, forcing the main ebb channel toward the south against the northern interior shoreline of Siesta Key. Homeowners responded to the migration of the main ebb channel by hardening the shoreline of the channel as early as the 1950s. A swash channel would occasionally break through the center of the ebb shoal, but the swash channel would not remain open long enough to provide relief to the northern interior shoreline of Siesta Key.

The present volume of the ebb shoal is approximately 23.3 million cubic yards (mcy) of sand as calculated using the "Residual Method" developed initially by Dean and Walton (1975), Walton and Adams (1976), and Marino (1986). This methodology calculates volumes in ebb shoals by

referencing idealized no-inlet contour lines. This volume is approximately 2.3 mcy over the historic average volume of the ebb shoal (21 mcy) due to sand placement activities during the past 25 years. It was found from the analysis conducted using the Coastal Modeling System (CMS) that it is possible to remove at least the 1.3 mcy of sediment required for this project from the ebb shoal without changing the planform area of the shoal.

Regional sediment transport is from north to south at this location. Approximately 100,000 cy of sediment moves through Sarasota County annually, including Lido Key beach, BSP (and its ebb shoal), and Siesta Key beach.

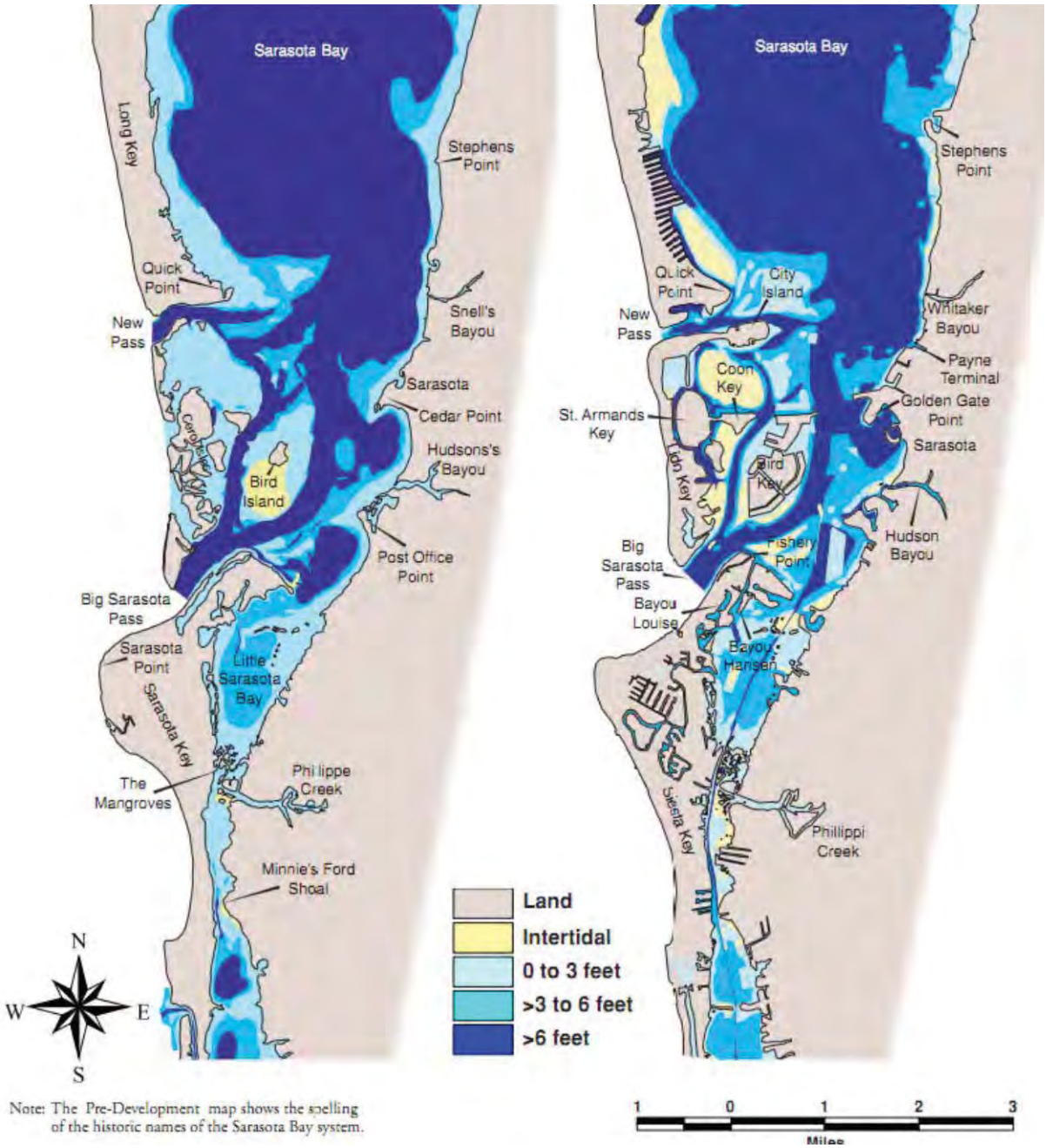

Figure 13. Changes in the GIWW and Long Key, Lido Key, and Siesta Key from 1890 to 1990 (Antonini, 1993).

3.3 FISH AND WILDLIFE RESOURCES

This section contains a brief description of the fish and wildlife found in the vicinity of Lido Key and in the Sarasota Bay Estuary.

3.3.1 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 and Fargion 1996; Davis *et al.*

2000; Russell 2005). The population status and movements of pelagic bird species are difficult to determine because surveys must be conducted offshore under marine field conditions and bird movement is weather dependent. Very few surveys solely dedicated to bird behavior and populations are conducted in the Gulf of Mexico. Many marine mammal surveys contain ancillary pelagic and migratory bird observations. In the Gulf of Mexico, marine mammal movements and pelagic bird species are often associated with the increased primary productivity of the Loop eddies and cold core currents (Ribic *et al.* 1997; Wursig *et al.* 2000; Russell 2005).

Federal regulatory protection of most birds falls under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) and the U.S. Endangered Species Act (ESA) 9(a) (1) (B). All birds listed in the Gulf studies previously mentioned are protected under the MBTA (Davis and Fargion 1996; Davis *et al.* 2000; Russell 2005). These 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.

3.3.2 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]. The Sarasota Bay Estuary provides habitat for bottlenose dolphin, short-finned pilot whale (*Globicephala macrorhynchus*), pygmy sperm whale (*Kogia breviceps*), and the Florida manatee (*Trichechus*

manatus latirostris; SBEP, 2014). Threatened and endangered marine mammals are discussed further in Section 3.4.

3.3.3 FISH

Numerous saltwater fish species inhabit the Sarasota Bay Estuary. The following includes a partial list of the species found in the Bay (SBEP, 2014):

SHARKS and RAYS
Southern Stingray
Atlantic Manta Ray
Spotted Eagle Ray
Yellow Sting Ray
Bull Shark
Tiger Shark
Bonnet Head Shark
Small Tooth Sawfish
Nurse Shark
Hammerhead Shark
Sand Tiger Shark

BONY FISH
Sailfish
Great Barracuda
Tarpon
King Mackerel
Atlantic Croaker
Atlantic Spadefish
Spanish Mackerel
Permit
Sheepshead
Cobia
Amberjack
Black Sea Bass
Rock Sea Bass
Red Snapper
Crevalle Jack
Gag Grouper

SHALLOW-WATER FEEDERS
Spotted Trout
Snook
Florida Pompano
Gray Snapper
Mangrove Snapper
Striped Mullet

REEF FISH
Blue Angel
Queen Parrotfish
Queen Triggerfish

BOTTOM FEEDERS
Gulf Sturgeon
Gafftopsail Catfish
Red Drum
Bonefish

BAITFISH
Inland Silverside
Gulf Menhaden
Atlantic Thread Herring
Spanish Sardine
Gulf Killifish
Pinfish

UNUSUAL SPECIES
Lined Seahorse
Striped Burrfish
Atlantic Needlefish
Atlantic Flyingfish
Spotted Moray
Gulf Toadfish

3.4 THREATENED AND ENDANGERED SPECIES

This section describes Federally listed species that may be located in the vicinity of the Lido Key project area.

Table 2. Threatened and endangered species found on Lido Key and in the vicinity of the sand sources.

Common Name	Scientific Name	Status
Sei whale	*Balaenoptrs borealis*	Endangered
Sperm whale	*Physeter macrocephalus catadon*	Endangered
Finback whale	*Balaenopters physalus*	Endangered
Humpback whale	*Megaptera novaeangliae*	Endangered
Hawksbill turtle	*Eretmochelys imbricata*	Endangered
Kemp's ridley turtle	*Lepidochelys kempii*	Endangered
Green sea turtle	*Chelonia mydas*	Endangered
Leatherback sea turtle	*Dermochelys coriacea*	Endangered
Loggerhead sea turtle	*Caretta caretta*	Threatened
Smalltooth sawfish	*Pristis pectinata*	Endangered
Florida manatee	*Trichechus manatus latirostris*	Endangered
Piping plover	*Charadrius melodus*	Threatened
Rufa red knot	*Calidris canutus rufa*	Threatened

3.4.1 FLORIDA MANATEE

The Florida manatee is a subspecies of the West Indian manatee (*Trichechus manatus*) and can be found in tropical and subtropical coastal waters of the southeastern United States, the Gulf of Mexico, and the Caribbean Sea (Lefebvre and O'Shea 1995), including waters near the project area. Manatees may travel great distances during warm months and have been spotted in Massachusetts and Texas (USFWS 2007). Manatees are a sub-tropical species and are cold intolerant. In Florida, they prefer warm-water sites during the winter, only leaving to feed during warming trends. Manatees congregate near warm water sites when temperatures drop, including natural springs, power plants, and deep canals. Florida manatees are found in freshwater, brackish, and marine environments, including coastal tidal rivers and streams, mangrove swamps, salt marshes, freshwater springs, and vegetated bottoms. Manatees are herbivores and feed on aquatic vegetation. Preferred feeding areas in coastal and riverine habitats appear to be shallow grass beds near deep channels. Primary threats include watercraft-related strikes, entanglement in fishing lines and crab pot lines, exposure to cold, and red tide (USFWS 2007).

Figure 14 shows the locations of important manatee areas identified by the Florida Fish and Wildlife Conservation Commission (FFWCC). The closest critical habitat unit of the Florida manatee is located in Tampa Bay; there is no critical habitat for the manatee within 10 miles of the project area.

Figure 14. Location of important manatee areas in the project area.

3.4.2 SEA TURTLES

Sea turtles regularly nest on Lido Key beaches. For the past ten years, loggerhead sea turtles (*Caretta caretta*) are the only species reported by volunteers conducting nest surveys at Lido Key. Their nesting densities at Lido Key have been steadily increasing since 2004 (see Table 3).

Table 3. Nesting data reported to FFWCC/FWRI as part of the Statewide Nesting Beach Survey program for 2004-2013.

Data Source: FWC/FWRI Statewide Nesting Beach Survey Program (April 17, 2014)

YEAR	DAYS PER WEEK SURVEYED	SURVEY START DATE	SURVEY END DATE	LOGGERHEAD				GREEN TURTLE
				NEST	FALSE CRAWL	FIRST NEST DATE	LAST NEST DATE	NEST
2004	7	5/1/04	10/2/04	26	36	5/24/04	7/27/04	0
2005	7	5/1/05	9/21/05	27	25	5/31/05	7/30/05	0
2006	7	5/1/06	10/1/06	24	35	5/25/06	7/25/06	0

Data Source: FWC/FWRI Statewide Nesting Beach Survey Program (April 17, 2014)

YEAR	DAYS PER WEEK SURVEYED	SURVEY START DATE	SURVEY END DATE	LOGGERHEAD				GREEN TURTLE
				NEST	FALSE CRAWL	FIRST NEST DATE	LAST NEST DATE	NEST
2007	7	5/1/07	9/13/07	33	36	5/20/07	8/30/07	0
2008	7	5/1/08	10/11/08	31	37	5/13/08	8/2/08	0
2009	7	4/1/09	9/10/09	17	39	5/28/09	8/11/09	0
2010	7	5/1/10	9/18/10	17	27	5/23/10	8/6/10	0
2011	7	5/1/11	9/8/11	50	37	5/13/11	8/7/11	0
2012	7	5/1/12	9/26/12	83	75	4/26/12	8/7/12	0
2013	7	5/1/13	9/26/13	68	82	5/21/13	8/26/13	0

BOUNDARY DESCRIPTION	LENGTH (KM)
NEW PASS, 152m S of RM-30 (27.32499, -82.58839) to BIG SARASOTA PASS, 732m E of RM-44 (27.30556. -82.56413)	5.3

The sand placement area is not listed as Designated Critical Habitat (DCH) for the loggerhead turtle; however, both nesting and nearshore reproductive DCH are located at Longboat and Siesta Keys, and in portions of the preferred alternative dredge area (see Figure 15). Nesting DCH units include LOGG-T-FL-17 at Longboat Key and LOGG-T-FL-18 at Siesta Key. Nearshore reproductive DCH in the preferred alternative dredge area includes Unit LOGG-N-30 at Longboat Key and LOGG-N-29 at Siesta Key.

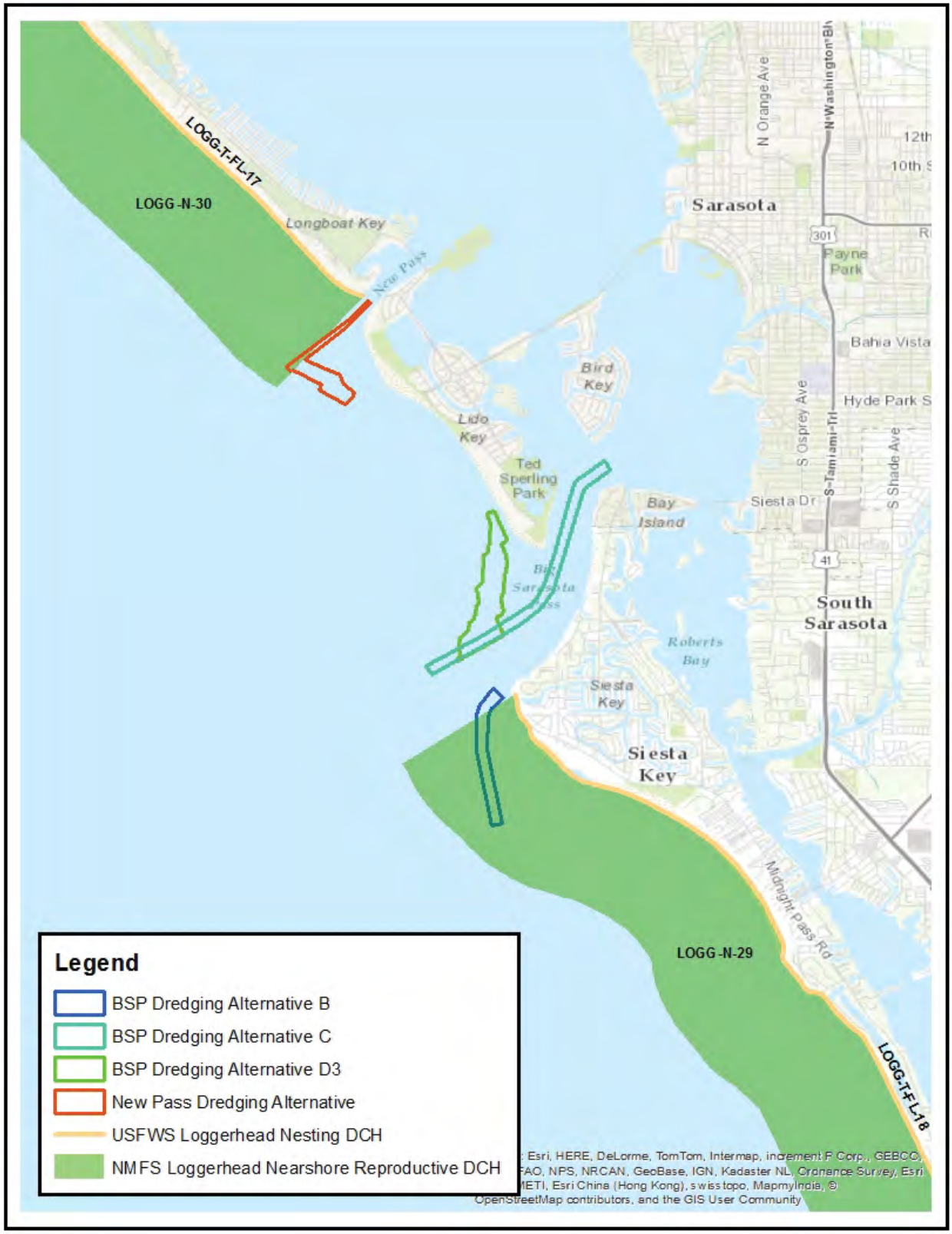

Figure 15. Location of loggerhead turtle critical habitat (including both USFWS nesting critical habitat and NMFS nearshore reproductive habitat) near the project area.

3.4.3 SMALLTOOTH SAWFISH

Smalltooth sawfish inhabit shallow coastal waters of tropical seas and estuaries throughout the world. They are usually found in shallow waters less than 10 m, very close to shore, over muddy and sandy bottoms. They are often found in sheltered bays, on shallow banks, and in estuaries or river mouths. They prefer warmer water temperature of 22-28°C (71-82°F). They are known to ascend inland in river systems and have been shown to have a salinity preference of 18-24 parts per thousand. Smalltooth sawfish currently range from the Florida Keys to the Tampa Bay region; however, their historic range was from the Carolinas through Texas.

Although the proposed project is within the range of the smalltooth sawfish, the closest DCH is the Charlotte Harbor Estuary Unit, which is approximately 30 miles from the project site. Portions of the dredge areas inside Sarasota Bay are near mangrove shorelines that may support smalltooth sawfish.

3.4.4 PIPING PLOVER

Piping plovers (*Charadrius melodus*) are small shorebirds approximately seven inches long, with sand-colored plumage on their backs and crown, and white underparts. During winter, birds lose the black bands, their legs fade to pale yellow, and the bill becomes mostly black. Piping plovers winter along the Gulf Coast of Florida's beaches, primarily on intertidal beaches with sand and/or mud flats with no or very sparse vegetation (USFWS 2011). Piping plovers are also known to utilize inlets as wintering habitat. Wintering populations of piping plover are listed as a threatened species under the Endangered Species Act. Although piping plover may utilize the beach at Lido Key, the closest piping plover critical habitat is approximately 20 miles northwest of the project at Egmont Key in Tampa Bay. Lido Key is bordered on the north by New Pass and on the south by BSP. The beaches adjacent to these inlets at Lido Key are in public ownership, are relatively undeveloped, and would be classified as optimal plover habitat.

3.4.5 RUFA RED KNOT

The USFWS listed the *rufa* subspecies of red knot (*Calidris canutus rufa*) as threatened under the Endangered Species Act on December 11, 2014. The *rufa* red knot is a medium-sized shorebird that winters at the tip of South America in Tierra del Fuego, in northern Brazil, throughout the Caribbean, and along the U.S. coasts from Texas to North Carolina. The *rufa* red knot breeds in the tundra of the central Canadian Arctic from northern Hudson Bay to the southern Queen Elizabeth Islands. Red knots are one of the longest-distance migrants in the animal kingdom, and can travel more than 9,300 miles every spring and fall.

Due to the extensive distances over which red knots travel, it is critical that their stopover areas are rich in easily digested foods with thin or no shells. They seem to time their stopovers with the spawning seasons of intertidal invertebrates to take advantage of juvenile clams, mussels, and horseshoe crab eggs. The *rufa* red knot is similar to the piping plover in its habitat requirements, as they both require coastal habitats for foraging and roosting during their wintering period.

3.5 SEDIMENT COMPATIBILITY

Data representative of the native beach were taken from *Marine Sand Search Investigation, Lido Key Florida* (Finkl et al., 2008). Lido Key was constructed in the 1920s by filling in the area between a series of small islands. Native samples are difficult to define, but Finkl et al. composited sediment statistics and identified the existing Lido Key beach to have a mean grain size of 0.22 mm, silt content of 0.55 percent, sorting of 0.64φ, visual shell estimate of 0.25 percent, and a moist Munsell color value of 6.0 or lighter (2008).

Sediment samples from BSP ebb shoal were collected in 2012 and 2014. The materials in the BSP ebb shoal are poorly sorted, mostly fine to medium grained sand-sized quartz, with trace to some coarse sand-sized to fine gravel-sized whole and broken shell. Munsell values range from 6 to 8 and color descriptions vary from white to gray. For Alternative D3*-C-B, mean grain size was calculated to be 0.26 mm (phi 1.94), the standard deviation 1.08, the fines content 1.42 percent passing the #230 sieve, and a maximum of 2 percent retained on the #4 sieve. Weighted composites for Alternative D3**-B showed mean grain sizes to be 0.22 mm (phi 2.18), the standard deviation 1.04, the fines content 1.58 percent passing the #230 sieve, and a maximum of 3 percent retained on the #4 sieve.

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 Sarasota Bay Estuarine System, which makes up the boundaries of the Sarasota Bay National Estuary Program (NEP). The NEP was established in 1987 by Congress to restore and protect estuaries of significant importance. The Sarasota Bay Estuarine System is also classified as an Outstanding Florida Water (OFW). In addition, the FDEP has designated the portion of Sarasota Bay located west of the Gulf Intracoastal Waterway as Class II waters, which are suitable for shellfish harvesting (62-302.400, F.A.C.; Figure 16).

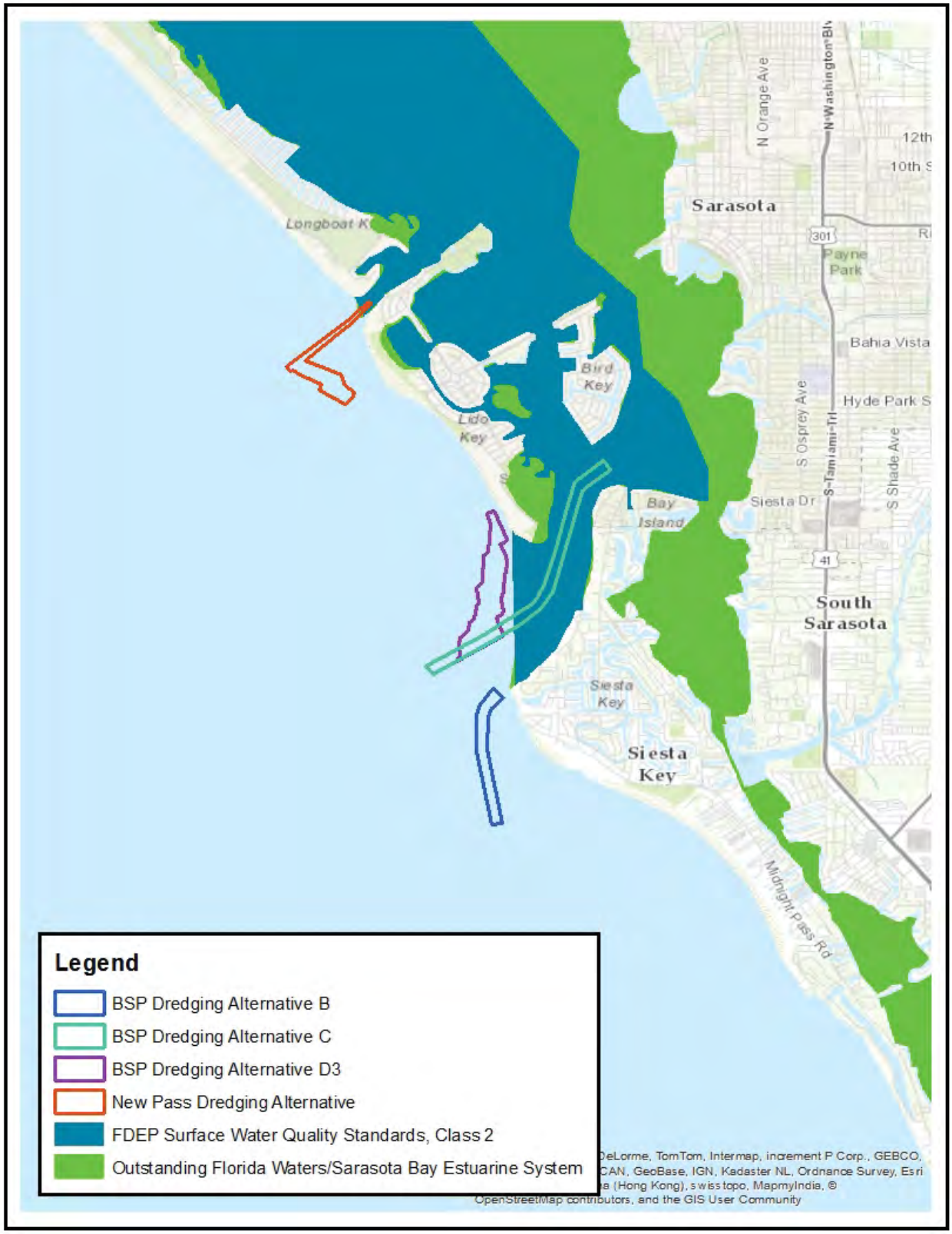

Figure 16. Boundaries of the Sarasota Bay Estuarine System, which is also classified as Outstanding Florida Waters.

3.7 ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), 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." On December 19, 1997, an interim final rule was published in the Federal Register to implement the EFH provisions of the MSFCMA. This rule established 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 impacts from both fishing and non-fishing activities on EFH, and identification of actions required to conserve and enhance EFH. The intended effect of the rule is to promote 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 104-267), 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 EA is prepared consistent with the Finding between USACE Jacksonville District and the National Marine Fisheries Service (NMFS) Southeast Regional Office regarding the coordination of EFH consultation requirements with NEPA (NMFS, 1999).

EFH at the proposed sand source location consists of a marine water column with an unconsolidated sand substrate. Coastal Planning & Engineering, Inc. (CB&I) completed a benthic resource investigation from September 23-25, 2014, to locate seagrass and/or hardbottom resources that may be present in the footprint of the beach fill and groin placement areas (Appendix F). The initial phase of this investigation involved reviewing existing data, including sidescan sonar survey data provided by the USACE, in-house aerial photographs, and previous Lido Key *in situ* resource investigations (CPE, 1992; Dial Cordy, 2001). These recent and historical data were used to determine areas of potential seagrass and hardbottom resources and to plan field investigation sites. The study area included the entire possible dredge alternatives of the BSP Ebb Shoal discussed in Section 2.1.1. The sand placement area and the nearshore region were also studied. To efficiently investigate the large survey area, a combination of methods was employed, including towed video, towed diver surveys, and diver verification.

During the investigation, a DGPS-integrated towed video camera method was used to survey the proposed sand source area in BSP and the nearshore fill placement area to locate potential benthic resources. When conditions allowed, the towboard survey method was used to enable biologists to directly assess areas of potential seagrass inside BSP. Areas where seagrass or hardbottom were observed during towed video or towboard surveys were further verified by divers to collect data on the species present, percent cover, substrate type, and depth. Representative

photographs were also taken of these sites. Hardbottom observed during the field investigations is summarized in Section 3.7.1. Seagrass observations are summarized in Section 3.7.2.

3.7.1 HARDBOTTOMS

Hardbottoms provide substrate for benthic organisms, crevices where organisms can seek protection, and foraging habitat for a number of aquatic species. Hardbottoms can be of various types, artificial or natural, such as reefs, with high and/or low relief, and can be of any shape. CB&I biologists examined sidescan sonar data provided by the USACE for hardbottom resources, and they identified ten contacts that required further investigation. In addition, one site of potential hardbottom was determined from analysis of aerial images. The 11 sites were investigated using towed video, and four were identified as potential resources. All four of these sites were located along the seawall at the north end of Siesta Key within BSP. Diver verification was attempted within the channel and a few photographs were taken; however, diving activities were limited for safety reasons due to the strong tidal currents. Benthic resources consisted of large rocks, rubble, and debris that supported growth of sponges (e.g., *Cliona celata, Pione lampa*), macroalgae (e.g., *Caulerpa* sp.), and octocorals (e.g., *Leptogorgia virgulata*). Fish species, such as sheepshead (*Archosargus probatocephalus*), were also observed utilizing this habitat. Please see Appendix F for additional information.

Figure 17. Hardbottom area identified by CB&I biologists during September 2014 field investigation is shown in yellow.

3.7.2 SEAGRASSES

CB&I biologists did not observe any seagrasses in the sand placement area during their field surveys. However, they did observe seagrasses inside BSP, on the southwest portion of the BSP ebb shoal, and offshore of Siesta Key in the southern portion of the investigation area (Figure 18). Seagrasses observed in the northeastern portion of the investigation area included *Syringodium filiforme* and *Halodule wrightii* in varying densities between 50 and 100 percent cover in shallow waters up to four foot in depth. Areas of seagrasses were identified in the southwestern portion of the ebb shoal, composed of primarily *Halodule wrightii,* and sparse in cover (approximately five percent) located in depths up to 11 feet. Two small areas of *Halodule wrightii* and *Halodule decipiens* were located in the extreme southern portion of the investigation area near the north end of Siesta Key.

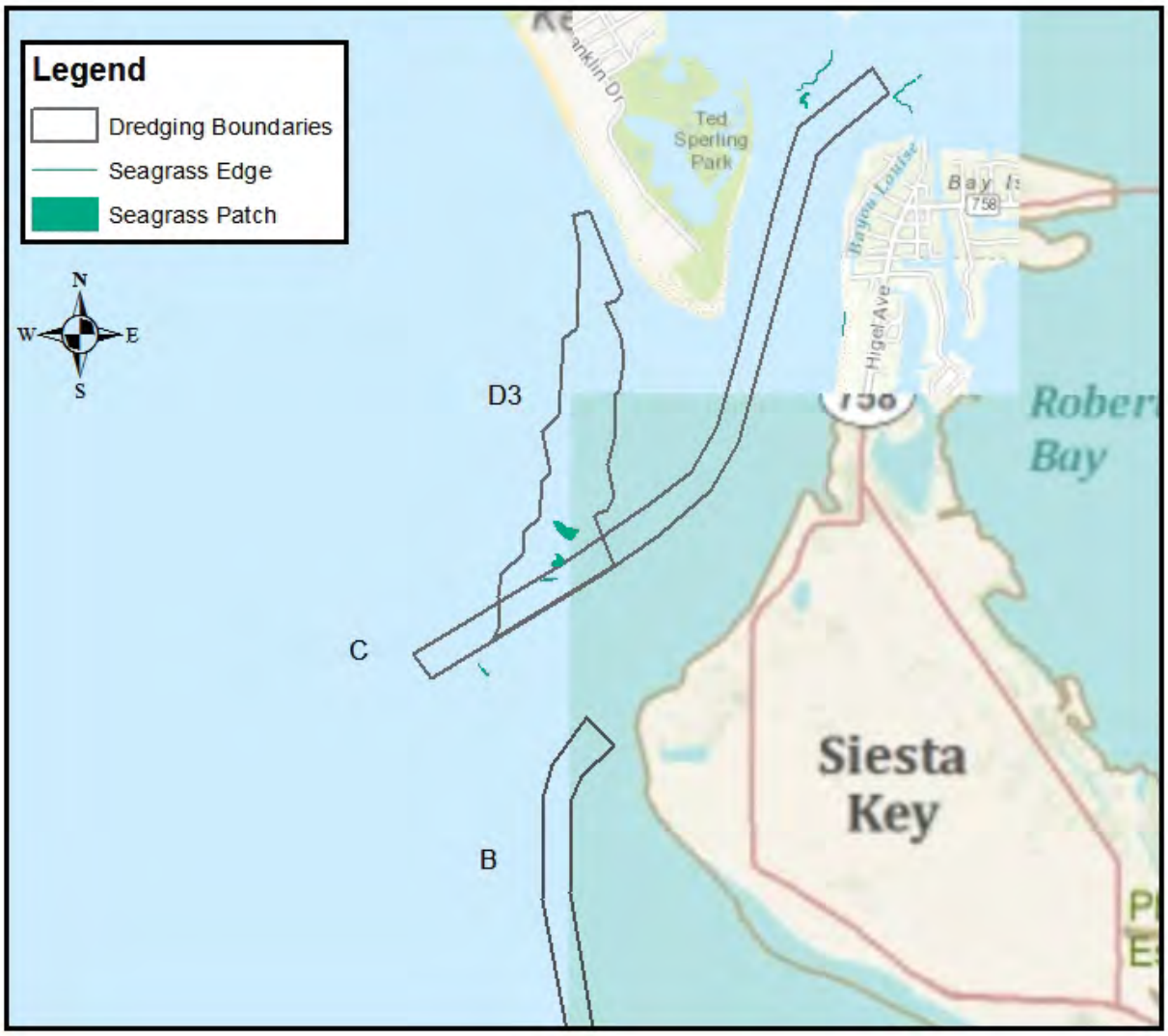

Figure 18. Location of seagrasses in the project area. Seagrasses located in dredge areas D3 and C are sparse (less than five percent cover) and composed of *Halodule wrightii*.

3.8 COASTAL BARRIER RESOURCES

The Coastal Barrier Resources Act (CBRA) of 1982 and the Coastal Barrier Improvement Act (CBIA) of 1990 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. The southern portion of the placement area and Dredge Option D3 are located within the boundaries of OPA Unit FL-72P, which includes South Lido Park and Otter Key (see Figure 19). This CBRA OPA unit comprises approximately 472 acres.

3.9 CULTURAL, HISTORIC, AND ARCHEOLOGICAL RESOURCES

The earliest widely accepted date of occupation by aboriginal inhabitants of Florida dates from around 12,000 years ago. This earliest cultural period, called the Paleo-Indian period, lasted until about 10,000 YBP (years before present). Sea level was lower and the continental shelves were exposed - an area almost twice the width of the current size of the state. Paleo-Indian archeological sites are recorded along the Gulf coast of Florida by the Florida Master Site File (FMSF), and include drowned terrestrial sights Warm Mineral Springs (8SO19) and Little Salt Springs (8SO18) located in Sarasota County.

During the Archaic period (ca. 10,000 YBP - ca. 2,500 YBP), a wider range of resources was exploited and may have led to a more sedentary existence. Sea level rose to its present position but some Archaic period archeological sites, such as the Venice Beach site (8SO26) often occur both on land and underwater. Many Archaic period archeological sites are recorded clustered along the Gulf coast and inland waterways.

Regional Weeden Island cultural traditions within Sarasota County, known as the Manasota culture, developed from the Archaic period in south Florida around 2500 YBP. The Manasota culture sequence (ca. 2,500 YBP to A.D. 1000) produced a large number of sites, predominantly along the coasts, but also in the interior wetlands. Manasota site types include shell and earth middens and low sand mounds.

After A.D. 900, the Safety Harbor culture developed on the Gulf coast of Florida. Known for enormous shell mounds, these native people (historically known as the Tocobaga), were in contact with the Spanish during the early historic period. Beginning with the first Spanish colonial period (A.D. 1513-1763), the Tocobaga were the main tribal group that controlled southern Florida. Their population was decimated by European-introduced diseases, warfare, enslavement, and migration out of Florida.

The Seminole migrated into this region of Florida in the 18th and 19th centuries from Georgia and Alabama. American settlement in south Florida began in earnest in the late 19th century

after Florida became a U.S. Territory in 1821 and settlers began moving into the Sarasota area by the 1830s.

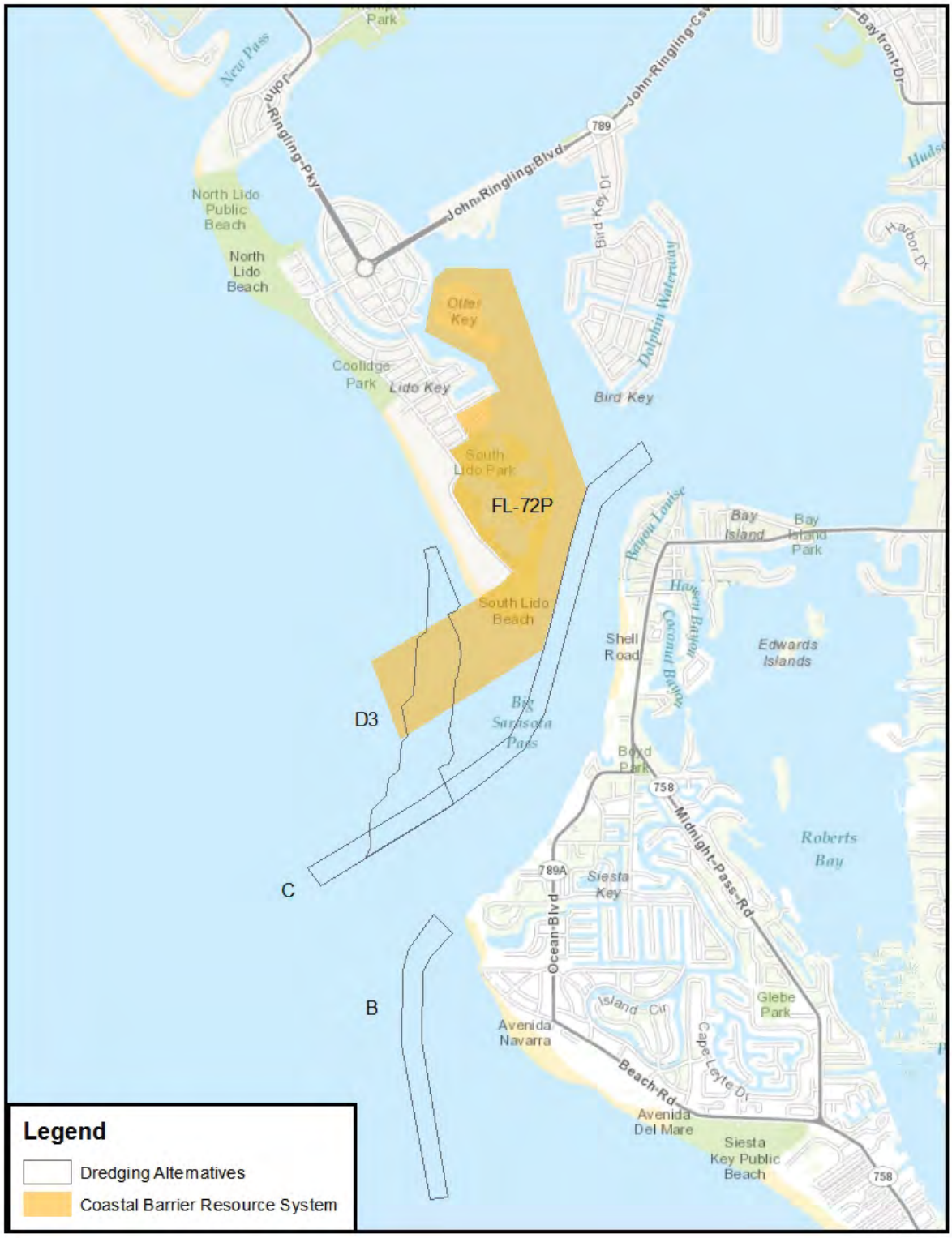

Figure 19. Coastal Barrier Resource Act (CBRA) units in the project area.

The City of Sarasota grew rapidly in the late nineteenth century with the Seaboard Railroad and attracted wealthy developers. By the 1950s, the population of the region had exploded. Today, industry includes agriculture, sport fishing, and tourism.

No historic properties are recorded within the proposed project areas by the FMSF. A terrestrial cultural resources survey of the shoreline was conducted in 1977 by the City of Sarasota (Almy, et al., 1977). No historic resources were identified. No historic properties are recorded within the proposed shoal borrow area by the FMSF, and no previous submerged remote sensing cultural resource surveys have been conducted in the proposed shoal borrow area.

3.10 NAVIGATION

Recreational boaters and fishermen often use both the offshore and the nearshore areas near the proposed dredge areas and the placement site. Specifically, the main ebb channel of BSP is used for navigation between the Gulf of Mexico and Sarasota Bay. BSP has maintained similar morphology for the past 100 years. However, dredging from the 1920s to the 1950s of the Gulf Intracoastal Waterway (GIWW) caused significant changes in the orientation of the main ebb channel primarily used for navigation (Davis and Wang, 2004).

In 1943, the main ebb channel of BSP ran along the northern shoreline of Siesta Key and the ebb shoal was more symmetrical than its present configuration. The construction of revetments along the southern channel bank of BSP occurred as early as 1952 (CPE, 1992). The Interim Report on Lido Key (USACE, 1962) stated that the inlet channel of BSP has steadily migrated southward for years, and the channel has cut into the south bank along the northern interior shoreline of Siesta Key. In addition, material eroding from Lido Key and the deposition of this material from littoral drift has resulted in an ebb shoal geometry that reinforces the location of the inlet channel against the northern interior shoreline of Siesta Key. The southward movement of the enlarging ebb shoal forces this channel toward the south, compresses the width of the channel, and causes currents through the channel to strengthen in velocity.

3.11 RECREATION

The marine environments near the proposed dredge areas and in the nearshore region of the beach placement area are used by snorkelers, recreational fishermen, and scuba divers. The beach placement site is used by local interests and tourists for typical beach-related activities, including swimming, sunbathing, bird watching, jogging, fishing, etc. The BSP ebb shoal is unique due to its shallow depths, which make it a popular site for recreation at low tides during calm sea conditions.

3.12 AIR QUALITY

There are no nearby sources of air pollution. Both the sand source and the beach placement areas are considered to be in attainment with the National Ambient Air Quality Standards under the Clean Air Act.

3.13 NOISE

Noise levels in the project area are low to moderate, and are typical of a beach/coastal environment. The major noise producing sources are the breaking surf, adjacent residential areas, and recreational activities associated with coastal tourism. There is no nearby industrial activity that contributes to noise pollution.

3.14 PUBLIC SAFETY

Dredging and dredged material discharge operations entail the use of equipment that would present a safety hazard to recreational boaters and fishermen. This equipment includes barges, utility boats, dredge anchor floats, and dredge pipeline. This pipeline could be floating or submerged.

4 ENVIRONMENTAL EFFECTS

This section is the scientific and analytic comparison of the alternatives developed in Section 2. A table summarizing and comparing the effects of the four alternatives is found in Section 2.3. The following includes anticipated changes to the existing environment to include direct, indirect, and cumulative effects. For issues that have similar effects across all three dredging Alternatives (BSP – Alternative D3*-C-B; BSP – Alternative D3**-B; and New Pass Federal Navigation Channel and Ebb Shoal), these alternatives are collectively referred to as, "Dredging Alternatives."

4.1 GENERAL ENVIRONMENTAL EFFECTS

The environmental effects associated with the Dredging Alternatives 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. One of the most frequently expressed concerns by the public as a result of the initial scoping letter sent by USACE on June 19, 2014, was how the project would affect sediment transport to Siesta Key to the south, and whether there would be a change to the BSP navigation channel as a result of dredging (see Section 8 for a summary of the public comments received in response to the scoping notice). USACE conducted extensive modeling to identify the potential impacts of various dredging scenarios. The scenarios modeled were initially identified in the BSP Inlet Management Plan, which was prepared by Sarasota County. The draft report prepared by USACE outlining the results of the USACE modeling effort is included in this EA as Appendix G. The potential effects of the dredging with respect to sediment transport and navigation are discussed in Sections 4.2 and 4.9.

4.2 EBB SHOAL MORPHOLOGY AND REGIONAL SEDIMENT TRANSPORT

The *Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project* (USACE, 2014b) used the CMS to assess whether excavation of the ebb shoal would significantly change the entire ebb shoal bathymetry by reducing its depth either through deflation or collapse. CMS also analyzed whether mining the ebb shoal would have a significant adverse impact to the coastal littoral system and adjacent beaches (see Section 2.1.1 for additional information regarding the CMS).

4.2.1 BSP – ALTERNATIVE D3*-C-B – PREFERRED ALTERNATIVE

Alternative D3*-C-B would mine up to 1.45 mcy of sediment from the ebb shoal. Alternative D3*-C-B had no appreciable difference in sediment transport pathways from the "No Action" Alternative based on the modeling conducted. CMS analyses showed that the morphology and the location of the attachment point at Siesta Key were not changed from the "No Action" Alternative. Mining the ebb shoal as described by Alternative D3*-C-B would not obstruct the bypassing function of the ebb shoal to pass sediments south to Siesta Key. Material

transported as a result of littoral drift will continue to bypass the shoal to Siesta Key, but would not result in any additional sediment over the background levels bypassing the ebb shoal to Siesta Key beaches.

The modeling shows that this alternative would result in the capture of some eroded material from the sand placement area in Cuts C and B, which would be re-dredged for subsequent nourishment events at Lido Key. The modeling also showed that Alternative D3*-C-B caused no difference in wave energy from the "No Action" Alternative at the shoreline of Siesta Key. In addition, less sediment is transported into the ebb channel with the Preferred Alternative than with the "No Action" Alternative. This also results in decreased erosional pressure along the northern interior shoreline of Siesta Key.

4.2.2 BSP – ALTERNATIVE D3**-B

Alternative D3**-B would dredge up to 1.38 mcy of sediment from the ebb shoal. CMS analyses showed that dredging Alternative D3**-B did not cause a change in the morphology and the location of the attachment point at Siesta Key from the "No Action" Alternative. The modeling found that Alternative D3**-B is a very conservative option with regard to changes in the ebb shoal relative to the "No Action" alternative. It results in little change to the ebb shoal and carries little risk, but also provides no opportunity to relieve the pressure of the main ebb channel against the northern interior shoreline of Siesta Key. For this alternative, approximately 66 percent of the sediment placed at Lido Key will be deposited back into the ebb shoal, and approximately 34 percent of the sediment placed will bypass the ebb shoal and move to Siesta Key. All material transported as a result of littoral drift will continue to bypass the shoal to Siesta Key. BSP – Alternative D3**-B would not decrease channel velocities to benefit the northern interior shoreline of Siesta Key, but would result in increased sediment transport over BSP – Alternative D3*-C-B to Siesta Key beaches.

4.2.3 NEW PASS FEDERAL NAVIGATION CHANNEL AND EBB SHOAL

According to the Sarasota County Inlet Management Program (Coastal Tech, 2008), New Pass bypasses sediment at a rate of approximately 100,000 cy per year to the Lido Key shoreline. This accounts for sand from both anthropogenic and natural sources. The ebb shoal is mined regularly by the Town of Longboat Key and by the City of Sarasota for placement at their respective beaches. USACE did not model the effects of dredging the New Pass channel and ebb shoal using CMS, but no adverse effects have been recorded following previous dredge events (Coastal Planning & Engineering, Inc. [CP&E], 2009; CP&E, 2010; CP&E, 2011; CP&E, 2012; CB&I, 2014).

4.2.4 NO ACTION

The No Action Alternative would maintain the status quo. Sand from the New Pass Federal Navigation Channel and ebb shoal would continue to be placed on Lido Key when available, but the sand quantities available are insufficient to address erosion issues at the island.

4.3 FISH AND WILDLIFE RESOURCES

4.3.1 ALL DREDGING ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

4.3.1.1 Migratory Birds

The dredging activity may attract some seabirds to the dredge area. Activities such as oil exploration 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 sand dredging. 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. Changes to water clarity resulting from the re-suspension of sediments during dredging operations would negatively affect the foraging capabilities of some species. However, turbidity would only be located in the vicinity of the dredging and placement operations. In addition, the impact of increases in turbidity is likely to be dependent (both in scale and spatial extent) on initial background levels (Cook 2010). Water quality would quickly return to pre-dredging conditions upon completion of construction. Other than these effects, migratory birds would be minimally affected by dredging activities.

Sand placement at Lido Key would result in a temporary loss of the benthic community that provides foraging for bird species. However, it would result in a wider beach for use by nesting migratory birds. Nourishment activities will include specific monitoring measures during construction with regard to migratory birds. Activities at the beach 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.

4.3.1.2 Marine Mammals

Dredging at the sand source area is not likely to affect marine mammal species. Any minor impact due to dredging activity at these 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 Section 4.4.1.1.

4.3.1.3 Fish

The Dredging Alternatives would temporarily impact fish species due to a temporary reduction in water quality due to turbidity. After dredging and placement, the water quality would quickly return to pre-dredging conditions. These effects are considered to be minor and would not result in an overall adverse impact to fishes in the dredging and placement areas.

4.3.2 NO ACTION

The No Action Alternative would result in the eventual loss of beach habitat at Lido Key for the beach utilizing species described in Section 3.3, including migratory birds and other species that nest on beach habitats. However, an eventual breach or overwash of the island would result in additional habitat in the backbay for bird species that use these areas to forage. There would be no effect to marine mammals and other fishery resources.

4.4 THREATENED AND ENDANGERED SPECIES

4.4.1 ALL DREDGING ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

4.4.1.1 Florida Manatee

Manatees typically use nearshore waters for migration, and their movements may be affected by the presence of the dredge equipment. USACE and its contractors will abide by the Standard Manatee Conditions for In-Water Work (FFWCC, 2011) to ensure no adverse impacts 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.

4.4.1.2 Sea Turtles

As the preferred alternative proposes to place sand on the beach and construct new groin features, USACE has determined that it may affect nesting sea turtles. If a hopper dredge is utilized, the project may also adversely affect sea turtles in the marine environment.

4.4.1.2.1 Nesting Habitat

The construction of a wider beach will ensure that sufficient beach habitat is available for female turtles to nest. There are a number of potential impacts to nesting sea turtles as a result of changes in beach characteristics following renourishment. 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). Additionally, groin features result in a loss of that portion of the beach to nesting sea turtles. Groins may also act as an obstruction to nesting turtles (Mann, 1977).

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 (see Sections 3.5 and 4.5). Post-construction surveys will monitor for the presence of scarps, and tilling will be conducted if scarps or compaction 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, 2011). The construction of the new groin features requires formal consultation with USFWS. USACE has coordinated with USFWS in a letter dated January 29, 2015, and will finalize coordination prior to completing the NEPA process.

4.4.1.2.2 Offshore Habitat

The dredging may impact sea turtles due to entrainment, foraging and resting habitat disturbance, noise disruption, and injury from dredges and support vessels. The benthic surveys conducted by CB&I (Appendix F) located some seawall rubble with sponges and octocorals in the eastern portion of the ebb channel along the interior Siesta Key seawall. No significant hardbottom areas were located within the boundaries of the Dredging Alternatives. Seagrass foraging habitat located in the sand source areas will be avoided, but may experience temporary impacts due to elevated turbidity. Seagrasses that are not able to be avoided will be relocated to a suitable location in coordination with state and Federal agencies.

If a hopper dredge is used for the dredging operations, potential impacts 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]. 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. 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.

4.4.1.3 Smalltooth Sawfish

Smalltooth sawfish are rare in the action area, and they are not likely to be entrained by a hopper dredge. The NMFS 2003 GRBO states that:

> *. . .NOAA Fisheries has determined that there has never been a reported take of a smalltooth sawfish by a hopper dredge, and such take is unlikely to occur because of smalltooth sawfishes' affinity for shallow, estuarine systems. Only hopper dredging of Key West channels would have the potential to impact smalltooth sawfish but those channels are not considered in this Opinion. Therefore, NOAA Fisheries believes that smalltooth sawfish are rare in the action area, the likelihood of their entrainment is very low, and that the chances of the proposed action affecting them are discountable. This species will not be discussed further in this Opinion.*

To ensure the protection of smalltooth sawfish, the NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions (2006) will be implemented during project construction. USACE has determined that the project may affect, but is not likely to adversely affect, the smalltooth sawfish.

4.4.1.4 Piping Plover and Rufa Red Knot

USACE determined that the project includes areas identified to be Optimal Piping Plover Areas due to the ability of coastal processes to function mostly unimpeded at South Lido Park. This area is primarily undeveloped, publicly owned, and located within one mile of an inlet. For this reason, USACE has determined that placing sediment from any of the proposed dredging alternatives on Lido Key beaches may affect the piping plover and the *rufa* red knot. 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)."

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 January 29, 2015. 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, and the USFWS has not designated critical habitat for the *rufa* red knot.

4.4.2 NO ACTION

Habitat loss in wintering areas due to sea level rise, shoreline hardening, and development have reduced the resilience of the red knot (79 FR 73707). Although no immediate negative impacts would occur to the threatened and endangered species discussed in this section as a result of this alternative, the slow decline in available habitat for nesting sea turtles, piping plovers, and red knots would result in negative impacts to these species in the long-term.

Beneficial effects of the No Action alternative may occur if a major storm event were to breach or overwash Lido Key, providing additional foraging and roosting habitat for the piping plover and the red knot.

4.5 SEDIMENT COMPATABILITY

4.5.1 BSP EBB SHOAL DREDGING ALTERNATIVES, INCLUDING PREFERRED ALTERNATIVE

USACE completed a sediment compatibility analysis in October 2014, which was based on the samples collected in 2012 and 2014. Data representative of the native beach were taken from *Marine Sand Search Investigation, Lido Key Florida* (Finkl et al., 2007). The mean composite grain size, sorting, and overfill ratio for both Alternatives from the BSP ebb shoal fall within the compatible range of the existing beach. The results of the compatibility analysis show that the sediments in the BSP ebb shoal are similar and compatible to the existing beach sediments on Lido Key, according to the requirements of the FDEP "Sand Rule" guidelines (Chapter 62B-41.0072J). Alternative D3*-C-B had a mean grain size of 0.26 mm, a silt content of 1.42 percent, and a sorting coefficient of 1.08 (poorly sorted). Alternative D3**-B had a mean grain size of 0.22 mm, a silt content of 1.58 percent, and a sorting coefficient of 1.04 (poorly sorted). Between the two Alternatives, Alternative D3*-C-B is slightly more compatible with Lido Key beach sediments. Additional details on the sediment analysis can be found in Appendix H.

4.5.2 NEW PASS FEDERAL NAVIGATION CHANNEL AND EBB SHOAL

CB&I conducted a sand search for material to place at Lido Key in 2007 (Finkl et al., 2007). As part of this study, they analyzed the compatibility of sediments within the New Pass ebb shoal. CB&I found that the ebb-tidal shoal at New Pass contained approximately 1,160,000 cy of beach compatible sediment at that time. Sediments had a mean grain size of 0.17 mm, a silt content of 1.03 percent, and a sorting coefficient of 1.02 (poorly sorted). The material from

ebb shoal was later used for placement at Lido Key, but the material that has since collected in the ebb shoal as a result of littoral drift is expected to have similar properties.

4.5.3 NO ACTION

The No Action alternative would include the continued use of New Pass and its ebb shoal as a sand source when sediment is available. As mentioned in Section 4.5.2, this sediment was identified as being compatible with Lido Key beach sediments. No change would occur to the sediment quality of the beach.

4.6 WATER QUALITY

4.6.1 ALL DREDGING ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

All three Dredging Alternatives would result in a temporary increase in turbidity near the dredge sites and in the nearshore region of the placement site. This condition would cause short-term impacts to water quality in the region. The State of Florida water quality regulations require that water quality standards not be violated during construction operations. The standards require that turbidity shall not exceed 29 nephelometric turbidity units (NTUs) above background at the edge of the mixing zone in State waters. In Outstanding Florida Waters, turbidity levels cannot exceed natural background levels by more than the natural background range through a normal tidal cycle [see recent revisions to 62-4.242(2)(b)2, F.A.C.]. If turbidity exceeds State water quality standards as determined by monitoring, the contractors will be required to cease work until conditions return to normal. Increased turbidity at the dredge site during excavation should be minor and less than the turbidity increase along the shore during re-nourishment. No long-term decline in water quality would occur.

4.6.2 NO ACTION

If severe erosion at Lido Key were to cause a breach in the island, water quality in the back bay area would be severely diminished for the short-term. Water quality would return to background conditions when turbidity from the storm event causing the breach or overwash dissipated.

4.7 ESSENTIAL FISH HABITAT

The following subsections describe the individual and cumulative impacts 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. No hardbottom resources were found in the nearshore of Lido Key during the investigation conducted by CB&I in September 2014 (see Appendix F).

4.7.1 ALL DREDGING ALTERNATIVES, INCLUDING THE 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. Impacts 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. Seagrasses located in the sand source areas will be avoided, but may experience temporary impacts due to elevated turbidity. Seagrasses that are not able to be avoided will be relocated to a suitable location in coordination with state and Federal agencies. A suitable location for moving impacted seagrasses will be identified in coordination with the resource agencies. Monitoring will be conducted of relocated seagrasses to ensure this mitigative measure is successful. 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.

Impacts to benthic infaunal and epifaunal communities would be considered as 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 1 to 2 years after dredging ends (Vivan, Domenico, and Almeida, 2009).

4.7.2 NO ACTION

There are no seagrasses or hardbottom habitat located in the New Pass Federal Navigation Channel and Ebb Shoal. Other impacts associated with the dredging of New Pass would be similar to those discussed in Section 4.7.1.

4.8 COASTAL BARRIER RESOURCES

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 OPA Unit FL-72P, which includes South Lido Park and Otter Key. Therefore, neither the Dredging Alternatives nor the No Action Alternative would affect OPA Unit FL-72P with respect to the goals of the Coastal Barrier Resources Act. Please see also Section 3.7, Section 3.8, Table 4, and Figure 19.

4.9 CULTURAL, HISTORIC, AND ARCHEOLOGICAL RESOURCES

4.9.1 ALL DREDGING ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

No historic properties are recorded within the borrow area by the FMSF; however, NOAA nautical chart 11424 (Lemon Bay to Passage Key Inlet) shows three shipwreck symbols within the proposed shoal borrow area. Because of the potential to affect historic properties, the Corps conducted a submerged remote sensing cultural resources survey, *Submerged Cultural Resources Remote Sensing Survey of the Big Sarasota Pass, Sarasota County, Florida* (LG2ES, 2014). This survey located 23 potentially significant targets (magnetic, sidescan and subbottom) indicative of historic properties within the proposed shoal borrow area.

Several magnetic targets are associated with two wreck symbols on the NOAA nautical chart. There is no sidescan sonar image of the wrecks indicating they are buried. Unrecorded historic properties could be adversely affected by dredging impacts, including drag arm, cutter suction, and spudding (anchoring). There is a potential to adversely affect unrecorded historic properties within the proposed shoal borrow area. Targets that have been identified as potentially significant historic properties will be buffered with a minimum of a 250-foot buffer zone to prevent damage during dredging operations. In the event these targets cannot be avoided, diver identification of the targets will be conducted before construction.

Consultation with the Florida State Historic Preservation Officer (SHPO) and appropriate federally recognized tribes was initiated March 7, 2014. Consultation with the Florida SHPO, appropriate federally recognized tribes, and other interested parties is ongoing and will continue until completion of the project.

4.9.2 NO ACTION

No effects to historic properties.

4.10 NAVIGATION

4.10.1 BSP – ALTERNATIVE D3*-C-B

Sand accumulating in the BSP ebb shoal forces the main navigational channel of BSP southward, placing erosional pressure on the north interior shoreline of Siesta Key. The inclusion of Cut C, which mimics an ephemeral channel, will reduce the velocity of currents in the main ebb channel that is used for navigation. Dredging Cut C will also provide a recharge basin that will fill with material eroding from the shoreline of Lido Key, which can be used for future renourishment events at Lido Key. In addition, dredging Cut C would result in a reduction of shoaled sediments in the main navigational ebb channel.

4.10.2 BSP – ALTERNATIVE D3**-B

As mentioned in Section 4.2.2, the modeling found that Alternative D3**-B is a very conservative option with regard to changes in the ebb shoal. As it results in little change to the ebb shoal, it does not take advantage of the opportunity to reduce the velocities of the currents in the main ebb channel used for navigation. Likewise, it provides no opportunity to decrease

the intense tidal currents in the main ebb channel that cause erosion along the north bank of Siesta Key. The primary navigation channel at BSP is anticipated to remain relatively unchanged with this Alternative.

4.10.3 NEW PASS FEDERAL NAVIGATION CHANNEL AND EBB SHOAL

The New Pass Federal Navigation Channel and its associated ebb shoal have been dredged numerous times in the recent past, with sediments being placed either at Longboat Key or at Lido Key. Additional impacts to navigation at New Pass are not anticipated with its continued use as a sediment source for Lido Key. Navigation at New Pass would improve following dredging of the channel.

4.10.4 NO ACTION

Sediments migrating south due to alongshore transport will continue to increase the volume of sand in the BSP ebb shoal. The shoal forces the main ebb channel (used for navigation) toward the south and causes it to narrow, increasing the velocity of water flowing through the channel as a result of incoming and outgoing tides. This creates strong currents in the channel and decreases navigational safety. The No Action Alternative will exacerbate this trend, as material placed on beaches as part of unrelated projects north of Lido and Siesta Keys is transported south over time.

4.11 RECREATION

4.11.1 ALL DREDGING ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

4.11.1.1 Lido Key Beach

Sand placement at Lido Key provides a wider beach for recreational activities such as sunbathing, sports, and other activities that typically occur in a tourist area. Although no use of the beach or dredge areas are permitted in the project area during construction, any recreational uses of these areas that occurred prior to nourishment should be able to resume immediately following construction.

4.11.1.2 BSP Ebb Shoal

The dredging of the BSP ebb shoal in either configuration (D3*-C-B or D3**-B) would result in deeper depths along portions of the shoal currently used for anchoring and swimming due to its shallow depths. As only a small portion of the shallow depth areas within the ebb shoal are proposed for dredging, this should not have a significant adverse effect on recreational usage of the ebb shoal. If BSP – Alternative D3*-C-B is pursued, the velocities of the tidal currents in the main BSP ebb channel currently used for navigation would decrease, making it easier for recreational vessels to navigate the channel.

4.11.2 NO ACTION

The No Action Alternative would result in continued erosion of the beach, and prevent Lido Key from supporting traditional beach recreation activities such as sunbathing and swimming. It is

likely that hard stabilization methods such as seawalls would eventually be required to protect upland structures if sand placement opportunities were not pursued.

4.12 AIR QUALITY

4.12.1 ALL DREDGING ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

The project is exempt from the Clean Air Act 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.

4.12.2 NO ACTION

The dredging of the New Pass Federal Navigation Channel and Ebb Shoal as part of the No Action Alternative would have similar impacts on air quality as discussed in Section 4.12.1.

4.13 NOISE

4.13.1 ALL DREDGING ALTERNATIVES, INCLUDING THE 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 indicates 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.

Reported source levels for dredging operations range from 160 to 180 dB re 1 uPa @ 1 m for 1/3 octave bands with peak intensity between 50 and 500 Hz (Greene and Moore, 1995). 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.

4.13.2 NO ACTION

Dredging at the New Pass Federal Navigation Channel and Ebb Shoal as part of the No Action Alternative would have effects similar to those discussed in Section 4.13.1.

4.14 PUBLIC SAFETY

During dredging, the area immediately around the dredge and pipeline may be hazardous due to the presence of equipment. Service boat traffic will be increased during construction. These conditions necessitate a higher level of vigilance on the part of the boating public. These impacts are expected to be minor in nature and will be temporary, occurring only during the dredging period, which is expected to take about eight months.

4.15 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. USACE modeled the transport of sediment for each of the BSP dredging alternatives (see Appendix G). The resulting report outlines the background volumes (identified to be approximately 100,000 cy) of sediment anticipated to move from the shoreline to the ebb shoal, into the ebb shoal channel used for navigation, and ultimately to Siesta Key to the south.

BSP – D3-C-B Alternative:* Dredging the D3*-C-B Alternative would cause all sediment placed on Lido Key to be deposited back into the ebb shoal. This would allow for it to be re-dredged for placement back onto Lido Key during the next sand placement event. Dredging this alternative will not affect the approximately 100,000 cy of sediment annually transported through the shoal to the "attachment point" at Siesta Key.

*BSP – D3**-B Alternative:* Dredging the D3**-B Alternative would cause 66 percent of the sediment placed on Lido Key to be deposited back into the ebb shoal, and 34 percent to be transported through the inlet system to the "attachment point" at Siesta Key. This sediment is in addition to the 100,000 cy of sediment that is annually transported through the system as a result of littoral drift (see Section 3.2).

New Pass Federal Navigation Channel and Ebb Shoal: Modeling was not conducted of the New Pass system to identify the volumes of sediment that are deposited annually into the New Pass ebb-tidal shoal. Any sediment removed from the channel and ebb shoal for placement at Lido Key would be removed from this area permanently, as sediment transport in the region is from north to south.

4.16 CUMULATIVE IMPACTS

Cumulative impacts 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 6 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). Also illustrated is the future condition with any reasonable alternatives (or range of alternatives).

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Table 4. Summary of cumulative effects.

	Past (baseline condition)	Present (existing condition)	Future without project	Future with Proposed Action
Sand Resources	Lido Key created from Cerol Islands in the 1920s; in the past, offshore sediments have been more abundant; New Pass sediments used intermittently for Lido Key	offshore sand resources are becoming depleted with use for beach placement and state sediment quality restrictions; ebb shoal sediments at BSP are abundant as sediment accumulates from alongshore transport; New Pass sediments used for both Longboat Key and Lido Key	New Pass sand resources will continue to be utilized for shore protection activities when available; sediments in the BSP ebb shoal will continue to increase in volume; material from navigational channels will need to be dredged more frequently for beach placement due to their generally renewable nature; seawalls may be required to protect upland structures	for BSP – Alternative D3*-C-B, sediments eroding from Lido Key will be deposited into the ebb shoal. For BSP – Alternative D3**-B, 66 percent of sand placed at Lido Key will erode into the ebb shoal and 34 percent will bypass the ebb shoal and be transported to Siesta Key
Protected Species	more abundant and widespread prior to development	individuals of some species becoming increasingly rare; habitat shrinking; coastal species already impacted by New Pass sand placement activities; erosion can cause a decline in habitat	individuals are not acutely affected by dredging; however, beach habitat continues to shrink	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, the creation of Lido Key, and the development of the City of Sarasota 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 do to construction; no long-term change

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4.17 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

4.17.1 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, BSP ebb shoals are expected to reestablish following dredging for all dredging alternatives.

4.17.2 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 shoal over time, the dredging alternatives would not result in an irretrievable commitment of resources.

4.18 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

Species of relatively non-motile infaunal invertebrates that inhabit the dredge areas will unavoidably be lost during dredging. Those species that are not able to escape the construction area are expected to recolonize after project completion.

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

Species of motile epifaunal invertebrates inhabit the ebb shoals. Motile organisms such as fish, crabs, and sand dwelling organisms should be able to escape the area during construction. Many of those species that are not able to escape the construction area are expected to recolonize after project completion.

4.20 CONFLICTS AND CONTROVERSY

NEPA regulations do not define controversy. Controversy itself is not an effect. "Controversy" refers to reasonable dispute over the nature or extent of effects. Some controversy is expected and would be ordinary, but a "highly controversial" dispute would more likely be an extraordinary circumstance. NEPA case law (*Cronin v. U.S. Department of Agriculture*, 919 F.2d 439, 443 (7th Cir. 1990) does clarify that opposition is not equal to controversy. Controversy is usually documented when one or more federal or state agencies raise concerns regarding the science that was used to make the decisions in the NEPA document, or objects to the level of NEPA analysis conducted by the lead agency. In *Fund for Animals v. Williams*, 246 F.Supp.2d 27, 46 (D. D.C. 2003) the court found that there was no controversy when no federal agency disagreed with the lead agency's NEPA determination of FONSI: "But the record also shows that under this circuit's precedent, this disagreement does not qualify as a NEPA controversy. No other federal agency objected to the 2001 EA or requested that an EIS be prepared."

USACE received almost 100 comments in response to the July 23, 2014 request for interested parties to share their comments and concerns relevant to project implementation and the alternative sand sources. While the majority of these comments were supportive of the project, a number of respondents to the scoping request and at the public scoping meetings expressed concern that dredging the BSP ebb shoal may have an adverse effect on the Siesta Key shoreline. To date, none of the Federal or state agencies that have reviewed the draft *Study of BSP Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project* raised concerns regarding the results of the study. In addition, no concerns were raised by the private firms that conducted peer reviews of the study. The draft EA will be made available for public comment, and other governmental agencies will have an opportunity to review the document and identify any concerns related to the content or level of analysis. The questions and specific concerns posed during the public scoping period, along with a summary table that includes responses to the questions, can be found in Appendix D. Comments expressing general support for or opposition to the project are saved in the administrative record and noted on the summary table, but copies are not included in Appendix D.

4.21 UNCERTAIN, UNIQUE, OR UNKNOWN RISKS

The USACE has completed numerous sand placement projects throughout the country, including several in Sarasota County and other counties along the Gulf Coast of Florida. CMS is a well-documented method for simulating waves, currents, water levels, sediment transport, and morphologic change at coastal inlets and entrances. However, the project allows for adaptive management through extensive monitoring following placement. If monitoring shows any change in inlet dynamics from what was anticipated as a result of the modeling effort, the future sand placement events can be modified to address any concerns.

4.22 ENVIRONMENTAL COMMITMENTS

USACE, its Contractors, and the City of Sarasota 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.

4.22.1 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 (OSHA).

- 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 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 (FFWCC, 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 U.S. Fish and Wildlife Service 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 Draft EA was prepared to document the effects of this project, and it will be subject to public review and comment for a 45 day period. This public coordination and environmental impact 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 November 19, 2003 Gulf Regional Biological Opinion (as amended) 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 (2011) and P^3BO (2013), and USACE has coordinated with USFWS in a letter dated January 29, 2015. USFWS generally responds within 30 days to confirm that USACE can utilize these programmatic biological opinions. The SPBO does not authorize new groin structures; therefore, USACE requested formal consultation for the affects to the loggerhead and green turtles resulting from the construction of the three groins, and for affects to the red knot, in their January 29, 2015 letter. Coordination with USFWS will be finalized prior to completing the NEPA process.

5.3 FISH AND WILDLIFE COORDINATION ACT OF 1958

This project has been coordinated with the U.S. Fish and Wildlife Service (USFWS) during the original feasibility study process. A final Coordination Act Report (FCAR) dated August 21, 2002, 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)

Consultation with the Florida State Historic Preservation Officer (SHPO) was initiated March 7, 2014, and is ongoing in accordance with the National Historic Preservation Act of 1966, as amended, and as part of the requirements and consultation processes contained within the NHPA implementing regulations of 36 CFR 800. This project is also in compliance, through ongoing consultation with the SHPO and appropriate Federally recognized tribes, with the Archeological Resources Protection Act (96-95), the Abandoned Shipwreck Act of 1987 (PL 100-298; 43 U.S.C. 2101-2106) American Indian Religious Freedom Act (PL 95-341), Executive Orders (E.O) 11593, 13007, and 13175 and the Presidential Memo of 1994 on Government to Government Relations.

5.5 CLEAN WATER ACT OF 1972

A Section 401 water quality certification application will be submitted to the Florida Department of Environmental Protection, and USACE will obtain this certification prior to construction. All State water quality requirements would be met. A Section 404(b) evaluation is included in this report as Appendix A.

Sarasota Bay is considered to be an "estuary of national significance" as designated by Congress pursuant to Section 320 of the 1987 Clean Water Act Amendments. While portions of the project are located within the estuary, the project would not result in long-term impacts to water quality in the Bay (see Section 4.16). The project is in compliance with this Act.

5.6 CLEAN AIR ACT OF 1972

The short-term impacts from construction equipment associated with the project would not significantly impact air quality. No air quality permits would be required for this project. Sarasota County is designated as an attainment area for federal air quality standards under the Clean Air Act. Because the project is located within an attainment area, USEPA's General Conformity Rule to implement Section 176(c) of the Clean Air Act does not apply and a conformity determination is not required.

5.7 COASTAL ZONE MANAGEMENT ACT OF 1972

The Florida State Clearinghouse coordinated a review of the project in response to USACE's scoping letter dated June 19, 2014. Based on the information contained in the scoping notice and comments provided by their reviewing agencies, the state had no objections to the proposed activities. The state outlined several concerns in their letter dated August 22, 2014. Specifically, FDEP staff recommended that the final study report include additional information to document the selection of model forcing data, the calibration and verification of the numerical model, including sensitivity of model parameters, the duration of the model runs and the evaluation of all listed alternatives in addition to the selected alternatives. Also, they recommended that the final study report include additional information to document the selection of assumptions used in developing the sediment budgets and the application of the family of solutions method. In addition, since the May 2014 GENESIS shoreline modeling study does not provide adequate engineering data to demonstrate with reasonable assurance the expected effects of the groins on the beach-dune system, the FDEP recommended conducting additional engineering design and analysis of the groin field and its expected effects on the beach-dune system. Please see Appendix C for the FDEP comments, which will be addressed primarily during the FDEP permit process.

A federal consistency determination in accordance with 15 CFR 930 Subpart C is included in this report as Appendix B. The 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 Draft EA and Section 404 (b)(1) Evaluation have been submitted to the state in lieu of a summary of environmental impacts to show consistency with the FCMP.

The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting process, in accordance with the 2006 Interagency Coordination Agreement. At this time, this project is in compliance with this Act.

5.8 FARMLAND PROTECTION POLICY ACT OF 1981

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

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

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 listed and protected marine mammal species during project construction. Therefore, this project is in compliance with this Act.

5.11 ESTUARY PROTECTION ACT OF 1968

In the Estuary Protection Act of 1968, 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 impacts to the ecosystem associated with the Sarasota Bay NEP. 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. 460-1 (12), *et seq*. P.L. 89-72, do not apply to this project.

5.13 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT OF 1976, AS AMENDED

Pursuant to the 1999 Finding between USACE and NMFS, USACE's Notice of Availability of this draft EA will initiate USACE's consultation under the Magnuson-Stevens Fishery Conservation and Management Act. NMFS provided initial comments on June 25, 2014, in response to USACE's request for scoping comments (June 19, 2014). NMFS requested that additional diver reconnaissance and side scan sonar surveys be conducted to verify the presence/absence of SAV and hardbottom habitats at the sand source and sand placement/groin field construction

areas (see comments in Appendix C). NMFS personnel participated in field surveys conducted by USACE and CB&I on September 23-25, 2014. Results of these surveys are discussed further in Sections 3.6 and 4.6, and the Field Observation Report is included as Appendix F. The project is being coordinated with NMFS, and is in compliance with the Act.

5.14 SUBMERGED LANDS ACT OF 1953

The project would occur on submerged lands of the State of Florida. The project is being coordinated with the State, and is in compliance with the Act.

5.15 COASTAL BARRIER RESOURCES ACT AND COASTAL BARRIER IMPROVEMENT ACT

The Coastal Barrier Resources Act (CBRA) and the Coastal Barrier Improvement Act of 1990 (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 is one CBIA OPA in the project vicinity (see Figure 19). 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. The USACE will coordinate with the USFWS concerning the CBIA unit in the project area to confirm that the project is in compliance with the Act.

5.16 RIVERS AND HARBORS ACT OF 1899

The proposed work would temporarily obstruct navigable waters of the United States. The proposed action will be 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.

5.17 ANADROMOUS FISH CONSERVATION ACT

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.

5.18 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT

Migratory birds would be minimally affected by dredging at the proposed sand source locations. 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. Renourishment 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 3.3.1, 3.4.4, 3.4.5, 4.3.1, and 4.4.1.4 of this document). The project is in compliance with these Acts.

5.19 MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT

The term "dumping" as defined in the Act (3[33 U.S.C. 1402](f)) does not apply to the disposal of material for beach nourishment or to the placement of material for a purpose other than disposal (i.e. placement of rock material as an artificial reef or the construction of artificial reefs as mitigation). Therefore, the Marine Protection, Research, and Sanctuaries Act does not apply to this project. The disposal activities addressed in this EA have been evaluated under Section 404 of the Clean Water Act (see Appendix A).

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

The purpose of 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 Executive Order.

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 is located within the Coastal High Hazard Area (CHHA), as defined by EO 11988 as an "area subject to inundation by one-percent-annual chance of flood, extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms." The project shoreline is significantly developed, and further development is unlikely.

HSDR projects are inherently located in coastal areas, and are often located in CHHAs based on the problems the project is seeking to alleviate. The primary objective of the Lido Key Hurricane and Storm Damage Reduction 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 Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The Executive Order 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 at South Lido Park, would benefit all members of the public who are able to obtain transportation to access the park. Other potential beneficial effects of the project, such as decreased wave energy to the northern interior shoreline of Siesta Key should Cut C be dredged, would have a disproportionate effect on the landowners in this area. There are no disproportionate adverse impacts 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 Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. The Executive Order 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.

6 LIST OF PREPARERS

This Environmental Assessment was prepared by the following U.S. Army Corps of Engineers personnel:

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7 LIST OF REVIEWERS

This Environmental Assessment was reviewed by the following personnel:

Terri Jordan-Sellers	Biologist	USACE
Jason Spinning	Supervisory Biologist	USACE
Milan Mora, P.E.	Project Manager	USACE
Brooks Moore	Deputy District Counsel	USACE
Alexandria Davis-Shaw, P.E.	City Engineer	City of Sarasota
Tom Pierro, P.E.	Coastal Engineer	CB&I
Michelle Pfeiffer, P.E.	Coastal Engineer	CB&I
Lauren Floyd	Biologist	CB&I

8 PUBLIC INVOLVEMENT

8.1 SCOPING

Specific input from environmental agencies and the public were solicited through several means. A scoping letter was sent to stakeholders on June 19, 2014, referencing a 45-day comment period to provide an opportunity for interested parties to share their comments and concerns relevant to project implementation and the alternative sand sources. The letter notified parties of the two public meetings held on July 23, 2014, to provide the public with additional information about the project and an opportunity for them to ask questions of the project team. The majority of comments received as a result of this scoping period were supportive of the project. A table that includes of the summaries of the questions posed during this comment period, along with responses to the questions, is found at the beginning of Appendix D (Public Participation). Letters or email that posed specific questions or concerns regarding the project are included in Appendix D. Letters and emails generally supporting or opposing the project are not included in Appendix D, but are kept in the administrative record for the project.

8.2 DRAFT EA

This Draft EA and the draft Finding of No Significant Impact will be made available to the public for a 45-day comment period. Comments made during this comment period will be addressed prior to finalizing the NEPA process.

8.3 AGENCY COORDINATION

This proposed project has been coordinated with the following agencies: U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida State Clearinghouse, Florida State Historic Preservation Officer (SHPO), and the Florida Department of Environmental Protection. Correspondence with these agencies is included in Appendix C.

8.4 MAILING LIST

The parties who received copies of the Notice of Availability of this Draft EA and the Draft FONSI are included in Appendix E.

9 REFERENCES

Almy, M., E. Monroe, and S. Wells. 1977. Historical, Architectural, and Archaeological Survey of Sarasota, Florida. Archaeological Consultants, Inc. Sarasota, FL.

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10 ACRONYM LIST

BSP	Big Sarasota Pass
CMS	Coastal Modeling System
CY	Cubic Yards
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
FCMP	Florida Coastal Management Plan
FDEP	Florida Department of Environmental Protection
FFWCC	Florida Fish and Wildlife Conservation Commission
FONSI	Finding of No Significant Impact
GIWW	Gulf Intracoastal Waterway
JCP	Joint Coastal Permit
MCY	Million Cubic Yards
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NTU	Nephelometric Turbidity Unit
USACE	U.S. Army Corps of Engineers, Jacksonville District
USFWS	U.S. Fish and Wildlife Service
WQC	Water Quality Certification

11 INDEX

APPENDIX A - SECTION 404(B) EVALUATION

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Lido Key Hurricane and Storm Damage Reduction Project

SECTION 404(B) EVALUATION

I. PROJECT DESCRIPTION

A. Location

The project is located in Sarasota County on the Gulf Coast of Florida about 45 miles south of Tampa and 20 miles southeast of the mouth of Tampa Bay. Lido Key is approximately 2.5 miles in length and lies entirely within the corporate limits of the City of Sarasota. New Pass separates Lido Key from Longboat Key to the north, and Big Sarasota Pass (BSP) separates Lido Key from Siesta Key to the south.

B. General Description

The proposed work consists of dredging shoal material from the ebb shoals of New Pass and BSP, and disposing that material onto Lido Key. The project also includes the construction of three jetties at the south end of Lido Key.

C. Authority and Purpose

The Lido Key project was initially authorized by the Rivers and Harbors Act of 1970, and provided for initial restoration and periodic nourishment for 1.56 miles of shoreline. The Federally authorized project was never completed and was de-authorized on January 1, 1990. The Water Resources Development Act of 1999 reauthorized the Lido Key Shore Protection Project, which allowed for the continuation of the Feasibility phase of the study. The feasibility report was completed in October 2002 (with 2004 Addendum); however, the borrow areas identified during that study were later determined not to have material of sufficient quality for placement at Lido Key.

D. General Description of Dredged or Fill Material

1) General Characteristics of Material

The materials in the BSP Ebb Shoal are poorly sorted, mostly fine to medium grained sand-sized quartz, with trace to some coarse sand-sized to fine gravel-sized whole and broken shell. Munsell values range from 6 to 8 and color descriptions vary from white to gray. For Alternative D3*-C-B, mean grain size was calculated to be 0.26 mm (phi 1.94), the standard deviation 1.08, the fines content 1.42 percent passing the #230 sieve, and a maximum of 2 percent retained on the #4 sieve. Weighted composites for Alternative D3**-B showed mean grain sizes to be 0.22 mm (phi 2.18), the standard deviation 1.04, the fines content 1.58 percent passing the #230 sieve, and a maximum of 3 percent retained on the #4 sieve.

2) Quantity of Material

Approximately 1.1 million cubic yards of material will be dredged and placed on the project location at Lido Key during each placement event.

3) Source of Material

Material would be obtained primarily from the BSP ebb shoal, with supplemental material from the New Pass ebb shoal when available pursuant to agreements in place between the Town of Longboat Key and the City of Sarasota.

E. Description of the Proposed Discharge Site

1) Location and Size

The project includes nourishment of an 80-foot-wide beach berm over 1.56 miles of shoreline. Three groin features are included in the project: a northern structure located near survey monument R-42.5 and extending 320 feet; a middle structure 1400 feet south of the northern structure and extending 440 feet seaward; and a terminal groin structure 800 feet south of the middle structure and extending 650 feet seaward.

2) Type of Site

The project site is a sand beach.

3) Type of Habitat

The habitat consists of carbonate and quartz sand beach.

4) Timing and Duration of Discharge

Dredging and disposal is expected to begin as early as the winter of 2015-2016, and is expected to take approximately eight months.

F. Description of Disposal Method

Material will be discharged from a pipeline attached to a hopper dredge or a hopper barge.

II. FACTUAL DETERMINATION

A. Physical Substrate Determination

1) Substrate Elevation and Slope

Top elevation of the construction beach fill will be +4.0 feet North American Vertical Datum (NAVD). The slope will be 1 on 10 from the berm to where it intersects with the existing bottom. 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. The average silt content is 1.03 percent.

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.

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 impacts, if any, on salinity, water chemistry, clarity, color, odor, taste, dissolved gas levels, nutrients or eutrophication.

2) Current Patterns and Circulation

Currents in the project area are both tidal and longshore. Net movement of water due to the longshore current is from the north to the south. 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 a mixture of semi-diurnal and diurnal types. During part of each month two high and two low tides occur each day, and during the balance of the month only one high and one low tide occur each day. The mean tide level is 1.8 feet, referenced to mean low water (MLW). Salinity is that of ocean water. Fill placement will not affect normal tide fluctuations or salinity.

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 impacts 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 that period when work is occurring. There will be a long-term increase in aesthetic quality of the beach once the work is completed.

3) Effects on Biota

(a) Primary Productivity and Photosynthesis. Primary productivity is not a recognized, significant phenomenon in the surf zone, where a temporary increased level of suspended particulates will occur. There will be no effect on the nearshore productivity as a result of the proposed beach re-nourishment.
(b) Suspension/Filter Feeders. There will be no long-term adverse impact to suspension/filter feeders.
(c) Sight feeders. There will be no long-term adverse impact to sight feeders.

D. Contaminant Determinations

Deposited fill material will not introduce, relocate, or increase contaminants.

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 impacts are expected.

1) Endangered and Threatened Species

There will be no impacts to any threatened or endangered species or to critical habitat of any threatened or endangered species. Sea turtle nesting will most likely occur in the project area during the time dredging and beach disposal. 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 to a nearby self-release beach hatchery. All relocation and incubation efforts will conform to the guidelines in the "Manual of Sea Turtle Research and Conservation Techniques", Second Edition, 1983, prepared for the Western Atlantic Sea Turtle Symposium and distributed by the Florida Department of Environmental Protection.

2) Hardbottom Habitat

No hardbottom habitat was discovered in the placement area or in the BSP ebb shoal during benthic resource surveys conducted in 2014.

F. Proposed Disposal Site Determinations

1) Mixing Zone Determination

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

2) Determination of Compliance with Applicable Water Quality Standards

Because of the inert nature of the fill material, State Water Quality Standards will not be violated.

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 impacts should be minimal and no long-term impacts 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. Depending on the dredging alternative used at BSP, recreational vessels may benefit from improved navigation through BSP.
(d) Aesthetics. The stabilization of an eroding beach will improve aesthetics.
(e) Parks, National and Historic Monuments, National Seashores Wilderness Areas, Research Sites, and Similar Preserves. The southern portion of the placement area and Dredge Alternative D3 includes South Lido Park and Otter Key, which are located within the boundaries of the Florida Coastal Barrier Resources System (Otherwise Protected Area Unit FL-72P). This unit comprises approximately 472 acres. Dredging is not anticipated to have a long-term adverse affect on this unit. Sand placement activities will prevent the use of South Lido Park temporarily during construction, but will allow for continued recreation in the long-term. The proposed jetties may affect the use of portions of the beach in the long-term.

G. Determination of Cumulative Effects on the Aquatic Ecosystem

There will be no cumulative impacts 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 years. The impact of depositing material on the beach during these events will be minor.

III. FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS OF DISCHARGE

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

B. No practicable alternative exists which 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.

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 borrow sites 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 re-nourishment of the Venice 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 will preserve beach resources, will provide needed sea turtle nesting beaches and dunes, and will 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 commercial and 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 impacts 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 impacts 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 Florida Fish and Wildlife Conservation Commission 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 and, therefore, does not apply.

15. Chapter 380, Environmental Land and Water Management.

This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development.

Response: The proposed 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.

APPENDIX C – AGENCY CORRESPONDENCE

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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

JUN 19 2014

Planning and Policy Division
Environmental Branch

RE: NEPA Scoping Meetings and Comment Period for the Lido Key Hurricane and Storm Damage Reduction Project

Dear Sir or Madam:

The U.S. Army Corps of Engineers (Corps), Jacksonville District, is gathering information to define issues and concerns associated with implementation of the Lido Key Hurricane and Storm Damage Reduction Project, Sarasota County, Florida, including those related to alternatives for source material.

The Corps will hold two public scoping meetings to offer opportunity for input. Please join us at either meeting time:

2:00-3:30 PM or 6:00-7:30 PM
Wednesday, July 23, 2014
Sarasota City Hall, Room 112
1565 1st Street
Sarasota, Florida 34236

In the Water Resources Development Act of 2007, Congress directed the Corps to construct the Lido Key Project in accordance with the Chief of Engineers' report (2004), which approved the recommended plan in the Jacksonville District's *Sarasota County, Florida, Hurricane and Storm Damage Reduction Project, Lido Key, Feasibility Report with Environmental Assessment* in 2002 (with April 2004 Addendum; *Feasibility Report*). The Chief of Engineers' report describes nourishment of an 80-foot-wide beach berm over 1.56 miles of shoreline with a groin field at the southern limits of the project. Periodic nourishment was to be accomplished at 5-year intervals for 50 years of Federal participation, and the report evaluated several offshore sand sources. The project has not yet been constructed. Surveys conducted of the offshore borrow areas after the preparation of the *Feasibility Report* indicated that the sand from these areas would not meet the Florida Department of Environmental Protection's criteria, outlined in 62B-41.007, F.A.C. A subsequent sand search was conducted to identify other offshore borrow sources, but no compatible offshore sand was identified within an economically feasible distance of Lido Key.

In 2010, Sarasota County released their *Comprehensive Inlet Management Plan, Big Sarasota Pass and New Pass System* (the *Plan*). One element of the *Plan*'s "Potential Sand

Management Recommendations" was to consider back-passing sand from the New Pass and Big Sarasota Pass ebb shoals to updrift beaches. The *Plan* recommended further investigation into the alternative of mining roughly 850,000 cubic yards of sand from a borrow area along the northwestern edge of the Big Sarasota Pass ebb shoal in a "generally meandering geometry, roughly between the minus 7 foot and minus 12 foot contours" for placement at Lido Key. In 2013-2014, the Corps evaluated ten alternatives using the ebb shoal of Big Sarasota Pass as a sand source. The draft report, *Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project,* was released on June 11, 2014 (available on the Corps website at http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Sarasota). Figure 1 shows the location of the placement area, the proposed groin field, and the various alternatives for dredging the Big Sarasota Pass ebb shoal.

The Corps proposes to further evaluate the sand source alternatives, including alternatives identified in the draft report such as the Big Sarasota Pass ebb shoal and the "No Action" alternative, pursuant to the National Environmental Policy Act (see the attached Project Location Map). We invite the participation of Federal, state, and local agencies, interest groups, and the public to provide comments and concerns relevant to project implementation and alternative sand sources. **Please provide any written comments within 45 days from the date of this letter to:**

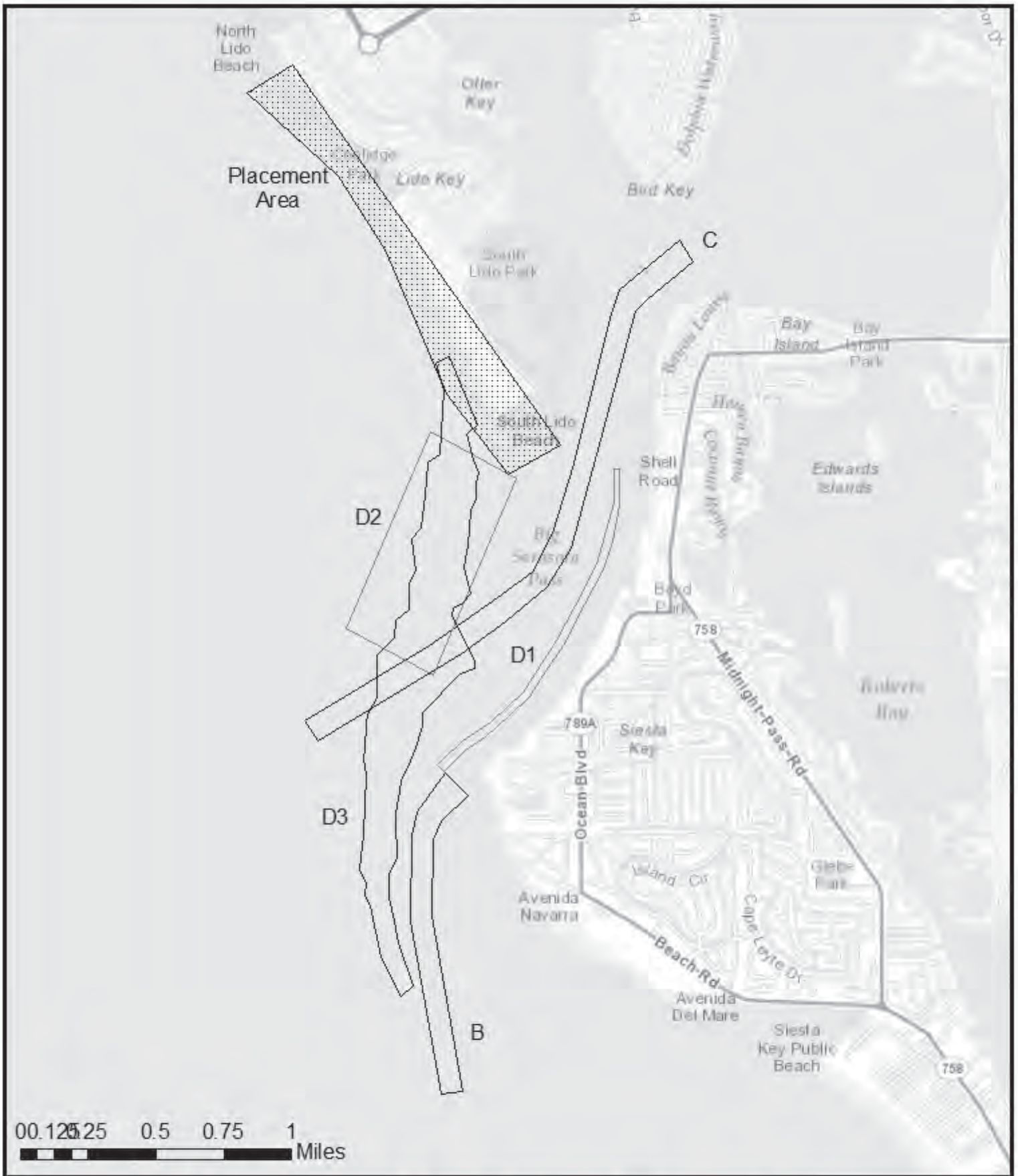
U.S. Army Corps of Engineers
Jacksonville District
Planning and Policy Division, Environmental Branch
Attn: Aubree Hershorin, Ph.D.
P.O. Box 4970
Jacksonville, FL 32232-0019

Comments may also be sent via email to Aubree.G.Hershorin@usace.army.mil. All individuals who respond with comments will be included in future mailings. Others may be added to the mailing list by making a written request to the same address or email. Individuals with disabilities who require assistance to participate in the scoping meeting or to provide comments on the document should contact the project ecologist, Aubree Hershorin, at (904) 232-2136 or Aubree.G.Hershorin@usace.army.mil.

Sincerely,

Eric L. Bush
Chief, Planning and Policy Division

Enclosure



Hurricane and Storm Damage Reduction Project

Lido Key, Sarasota, Florida

PROJECT LOCATION MAP

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Hershorin, Aubree SAJ

From: Mark Sramek - NOAA Federal [mark.sramek@noaa.gov]
Sent: Wednesday, June 25, 2014 1:58 PM
To: Hershorin, Aubree SAJ
Cc: Kay Davy - NOAA Federal; Rachel Sweeney - NOAA Federal; Steve Giordano - NOAA Federal; Victoria Foster; Jeffrey_Howe@fws.gov
Subject: [EXTERNAL] Lido Key Hurricane and Storm Damage Reduction Project EA

Hi Aubree,

We received your agency's letter dated June 19, 2014, regarding the subject hurricane and storm damage reduction and groin field projects and proposed NEPA scoping meetings scheduled for July 23, 2014, in Sarasota, Florida, and have reviewed the "October 2002 w/ April 2004 Addendum SARASOTA COUNTY, FLORIDA HURRICANE AND STORM DAMAGE REDUCTION PROJECT LIDO KEY FEASIBILITY REPORT WITH ENVIRONMENTAL ASSESSMENT." Our agency is planning to attend one of the NEPA scoping meetings on July 23 in Sarasota.

In reviewing the information regarding essential fish habitat (EFH) provided in the 2002/2004 addendum EA, Section 4.2.3 states no impacts to [submerged aquatic] vegetation are expected; further, section 3.4 states aerial photographs of the project area shoreline have no indication of nearshore hardbottom habitat, and was also confirmed with side-scan sonar surveys and a marine resource survey. Because of the time between publication of the 2002/2004 EA and anticipated upcoming project construction timeline, we have concern with the potential recuitment of submerged aquatic vegetation (SAV) and re-exposure of hardbottom habitats at the sand borrow and sand placement/groin field construction areas, respectively. Have diver reconnaissance and side scan sonar surveys been conducted since publication of the 2002/2004 EA to verify the presence/absence of SAV and hardbottom habitats within the project area? If so, could the results of these surveys be provided to our agency for review and comment? Please advise.

Finally, the project area is within the known distribution limits of swimming sea turtles, federally listed threatened species under purview of NMFS. In accordance with the Endangered Species Act of 1973, as amended, it is your responsibility to review this proposal and identify actions that may affect endangered or threatened species. Determinations involving listed species should be reported to our Protected Resources Division (PRD) staff, cc: above. If it is determined the activities may adversely affect any species listed as endangered or threatened under PRD purview, formal consultation must be initiated.

Thank you for your consideration of these comments.
Mark
727-824-5311

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MARJORY STONEMAN DOUGLAS BUILDING
3900 COMMONWEALTH BOULEVARD
TALLAHASSEE, FLORIDA 32399-3000

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

August 22, 2014

Dr. Aubree G. Hershorin, Biologist
Jacksonville District, Planning & Policy Division
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, FL 32232-0019

RE: Department of the Army, Jacksonville District Corps of Engineers – Scoping Notice – Lido Key Hurricane and Storm Damage Reduction Project, Big Sarasota Pass Ebb Shoal Sand Source – Sarasota, Sarasota County, Florida.
SAI # FL201406246927

Dear Dr. Hershorin:

The Florida State Clearinghouse has coordinated a review of the referenced public notice under the following authorities: Presidential Executive Order 12372; § 403.061(42), *Florida Statutes*; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

The Florida Department of Environmental Protection's (DEP) Division of Water Resource Management has reviewed the notice and Beaches, Mining and ERP Support Program staff advises that the earlier Lido Key documents (2002 Feasibility Report and Environmental Assessment) considered offshore borrow areas. There was observed hardbottom within 400 ft. of sites labeled LBKBA 6 and 7. The DEP typically requires a minimum of a 400-ft. buffer from hardbottom resources, with monitoring being required if hardbottom is within 400-1000 ft. (less monitoring as you get further away). If hardbottom resources are located within the 400-ft. buffer, the applicant would be asked to relocate the border or mitigate accordingly.

The DEP Division's Engineering, Hydrology and Geology Program also reports that after a review of the draft *Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project*, staff has concerns regarding the potential effects of excavation of a borrow area within the ebb shoal, though the potential effects may not be significant. Final engineering and design of the borrow area(s) may eliminate any expected adverse effects on the inlet system and adjacent shorelines. As indicated in the scoping notice, the U.S. Army Corps of Engineers (USACE) proposes to further evaluate the sand source alternatives. DEP staff recommends that the final study report include additional information to document the selection of model forcing data, the calibration and verification of the numerical model, including sensitivity of model parameters, the duration of the model runs

and the evaluation of all listed alternatives in addition to the selected alternatives. Also, the final study report should include additional information to document the selection of assumptions used in developing the sediment budgets and application of the family of solutions method. In addition, since the May 2014 GENESIS shoreline modeling study does not provide adequate engineering data to demonstrate with reasonable assurance the expected effects of the groins on the beach-dune system, the DEP recommends conducting additional engineering design and analysis of the groin field and its expected effects on the beach-dune system. For additional information, please refer to the enclosed DEP memoranda and contact Ms. Roxane Dow at (850) 245-8376, Roxane.Dow@dep.state.fl.us, or Mr. Bob Brantly, P.E., at (850) 245-7577, Robert.Brantly@dep.state.fl.us.

Southwest Florida Water Management District (SWFWMD) staff has reviewed the USACE's scoping notice and draft *Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project*. This document addressed alternatives analysis for the excavation of material from the Big Sarasota Pass ebb shoal. The SWFWMD offers the following comments:

Comment on the model used to analyze alternatives:

- The Coastal Modeling System (CMS) only considers sediment grain size and not submerged aquatic vegetation (seagrass) for its bottom friction calculations to determine velocity. Seagrass is present along the entrance of Big Sarasota Pass and may affect bottom friction in this area.

Comments on the alternatives evaluation criteria:

- While "increased wave energy at the shoreline" was considered as part of the evaluation and cumulative wave energy calculated, not all impacts of increased wave energy were considered in Table 14: Alternatives Risks and Benefits on page 151. Increased wave energy may increase the physical stress placed directly on seagrass communities in the area. In addition, increased wave energy can then increase sediment transport to those locations creating the potential for sediment burial/smothering of seagrass.

- Alternative D3**-B, which proposes the least amount of increased wave energy, may need to be explored as the optimal alternative for marine resources in the area.

General Comment:

- While the study modeled implications of alternatives, it did not examine the impact of construction activities on nearby marine resources. Turbidity and any instability of material remaining at the borrow site after construction can pose threats to seagrass in the area.

Based on the information contained in the scoping notice and comments provided by our reviewing agencies, at this stage, the state has no objections to the proposed federal activities. To ensure the project's consistency with the Florida Coastal Management Program (FCMP),

the concerns identified by the state must be addressed prior to project implementation. The state's continued concurrence will be based on the activity's compliance with FCMP authorities, including federal and state monitoring of the activity to ensure its continued conformance, and the adequate resolution of issues identified during this and subsequent reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting process, in accordance with Section 373.428, *Florida Statutes*.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please don't hesitate to contact me at Lauren.Milligan@dep.state.fl.us or (850) 245-2170.

Yours sincerely,

Lauren P. Milligan, Coordinator
Florida State Clearinghouse
Office of Intergovernmental Programs

Enclosures

cc: Roxane Dow, DEP, BMESP
Trisha Neasman, SWFWMD

Project Information	
Project:	FL201406246927
Comments Due:	07/31/2014
Letter Due:	08/22/2014
Description:	DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT CORPS OF ENGINEERS - SCOPING NOTICE - LIDO KEY HURRICANE AND STORM DAMAGE REDUCTION PROJECT, BIG SARASOTA PASS EBB SHOAL SAND SOURCE - SARASOTA, SARASOTA COUNTY, FLORIDA.
Keywords:	ACOE - LIDO KEY, BIG SARASOTA PASS EBB SHOAL SAND SOURCE - SARASOTA CO.
CFDA #:	12.101

Agency Comments:

FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

No Comments Received

SOUTHWEST FLORIDA WMD - SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

District staff has reviewed the United States Army Corps of Engineers (USACE) scoping notice on the Lido Key Hurricane and Storm Damage Reduction Project, Big Sarasota Pass Ebb Shoal Sand Source. As part of the review, staff also examined the June 2014 study entitled "Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project." This document addressed alternatives analysis for the excavation of material from the Big Sarasota Pass ebb shoal. The District offers the following comments: Comment on the model used to analyze alternatives: 1.The Coastal Modeling System (CMS) only considers sediment grain size and not submerged aquatic vegetation (seagrass) for its bottom friction calculations to determine velocity. Seagrass is present along the entrance of Big Sarasota Pass and may affect bottom friction in this area. Comments on the alternatives evaluation criteria: 1. While "increased wave energy at the shoreline" was considered as part of the evaluation and cumulative wave energy calculated, not all impacts of increased wave energy were considered in Table 14, pg. 151 "Alternatives Risks and Benefits." Increased wave energy may increase the physical stress placed directly on seagrass communities in the area. In addition, increased wave energy can then increase sediment transport to those locations creating the potential for sediment burial/smothering of seagrass. 2.Alternative D**-B, which proposes the least amount of increased wave energy, may need to be explored as the optimal alternative for marine resources in the area. General Comment: 1. While the study modeled implications of alternatives, it did not examine the impact of construction activities on nearby marine resources. Turbidity and any instability of material remaining at the borrow site after construction can pose threats to seagrass in the area.

ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

The DEP's Division of Water Resource Management has reviewed the notice and Beaches, Mining and ERP Support Program advises that the earlier 2002 documents (Feasibility Report/EA) considered offshore borrow areas. There was observed hardbottom within 400 ft. of sites labeled LBKBA 6 and 7. The DEP typically requires a minimum of a 400-ft. buffer from hardbottom resources, with monitoring being required if hardbottom is within 400-1000 ft. (less monitoring as you get further away). If hardbottom resources are located within the 400-ft. buffer, the applicant would be asked to relocate the border or mitigate accordingly. There does not appear to be any hardbottom or submerged aquatic vegetation in the vicinity of the new proposed ebb shoal borrow site. The Division's Engineering, Hydrology and Geology Program also reports that after a review of the draft study report of Big Sarasota Pass mining alternatives, staff has concerns regarding the potential effects of excavation of a borrow area within the ebb shoal; however, the potential effects may be not be significant. Final engineering and design of the borrow area(s) may eliminate any expected adverse effects on the inlet system and adjacent shorelines. As indicated in the scoping notice, the USACE proposes to further evaluate the sand source alternatives. DEP staff recommends that the final study report include additional information to document the selection of model forcing data,

the calibration and verification of the numerical model, including sensitivity of model parameters, the duration of the model runs and the evaluation of all listed alternatives in addition to the selected alternatives. Also, the final study report should include additional information to document the selection of assumptions used in developing the sediment budgets and application of the family of solutions method....
STATE - FLORIDA DEPARTMENT OF STATE
No Comment/Consistent
SW FLORIDA RPC - SOUTHWEST FLORIDA REGIONAL PLANNING COUNCIL
The SWFRPC noted the following concerns during its review of associated Joint Coastal Permit Application No. 0039755-003-JC: 1) Potential negative impacts to listed shorebird species - least tern, snowy plover and piping plover - will occur if the project is implemented during shorebird nesting season. 2) The project has the potential to jeopardize the benthic communities located waterward of the proposed fill sites. Both direct burial and associated sediment generated turbidity can be expected to impact these areas, which serve both habitat and fisheries functions. This could severely impact nearshore bait and pompano fisheries. Based on the information provided, the SWFRPC finds this project to be regionally significant, but cannot determine its consistency with regional goals, policies and objectives until the USFWS and NMFS opinions are rendered.

For more information or to submit comments, please contact the Clearinghouse Office at:

3900 COMMONWEALTH BOULEVARD, M.S. 47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

Visit the Clearinghouse Home Page to query other projects.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

BOB MARTINEZ CENTER
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

MEMORANDUM

TO: Lauren Milligan, Office of Intergovernmental Programs

FROM: Roxane Dow, Division of Water Resource Management

SUBJECT: Department of the Army, Jacksonville District Corps of Engineers – Scoping Notice – Lido Key Hurricane and Storm Damage Reduction Project, Big Sarasota Pass Ebb Shoal Sand Source – Sarasota, Sarasota County, Florida.
SAI # FL201406246927

DATE: August 1, 2014

Staff in the Division of Water Resource Management have reviewed the documentation provided on an alternative sand source for the Lido Key Hurricane and Storm Damage Reduction Project. Please see the attached memo from the Engineering, Hydrology and Geology Program.

The Beaches, Mining and ERP Support Program also notes that the earlier 2002 documents (Feasibility Report/EA) considered offshore borrow areas. There was observed hardbottom within 400 feet of sites labeled LBKBA 6 and 7. The Department typically requires a minimum of a 400-foot buffer from hardbottom resources, with monitoring being required if hardbottom is within 400-1000 feet (less monitoring as you get further away). If hardbottom resources are located within the 400-foot buffer, the applicant would be asked to relocate the border or mitigate accordingly. There does not appear to be any hardbottom or submerged aquatic vegetation in the vicinity of the new proposed ebb shoal borrow site.

Thank you for the opportunity to comment. Please let me know if you have any questions.

Attachment

cc: Danielle Irwin
Robert Brantly
Lainie Edwards

Engineering, Hydrology and Geology Program
Division of Water Resource Management

DATE: July 21, 2014

TO: Roxane Dow, BMES Program

FROM: Bob Brantly, Coastal Engineer, EHG Program

RE: Lido Key Hurricane and Storm Damage Reduction Project
NEPA Scoping Meeting and Comment Period

The comments below are provided in response to the Corps' letter dated June 19, 2014, requesting comments and concerns relevant to project implementation and alternative sand sources.

The use of Big Sarasota Pass ebb shoal as a sand source for Lido Key beach nourishment is generally consistent with the requirements of Chapter 161, Florida Statutes. After a review of the draft study report of Big Sarasota Pass mining alternatives, Department staff has concerns regarding the potential effects of excavation of a borrow area within the ebb shoal; however, the potential effects may not be significant. Final engineering and design of the borrow area(s) may eliminate any expected adverse effects on the inlet system and adjacent shorelines. As indicated in the scoping notice, the Corps proposes to further evaluate the sand source alternatives. Department staff recommends that the final study report include additional information to document the selection of model forcing data, the calibration and verification of the numerical model, including sensitivity of model parameters, the duration of the model runs, and the evaluation of all listed alternatives in addition to the selected alternatives. Also, the final study report should include additional information to document the selection of assumptions used in developing the sediment budgets and application of the family of solutions method.

After a review of the GENESIS shoreline modeling study dated May 2014, the Department cannot conclude that the proposed groin field at the southern limits of the Lido Key project is consistent with the requirements of Chapter 161, Florida Statutes. The study does not provide adequate engineering data to demonstrate with reasonable assurance the expected effects of the groins on the beach-dune system. The Department recommends conducting additional engineering design and analysis of the groin field and its expected effects on the beach-dune system. In accordance with Rule 62B-41.005(5), Florida Administrative Code, structures such as groins, which interfere with the natural alongshore movement of sediments, shall not be allowed unless a net positive benefit to the coastal system can reasonably be expected to occur and mitigation is provided for any adverse impacts which may occur to the coastal system.

BB/

SWFRPC
Plan Protect Improve

Southwest Florida Regional Planning Council

1926 Victoria Ave, Fort Myers, Florida 33901-3414 (239) 338-2550 FAX (239) 338-2560 www.swfrpc.org

August 11, 2014

Lainie Edwards, Ph.D.
Environmental Specialist Ill
Florida Department of Environmental Permitting
Bureau of Beaches and Coastal Systems
Mail Station 300
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000

Re: IC&R 2014-24, Permit 0039755-003-JC, Sarasota County, Town of Longboat Key and City of Sarasota, Longboat Key Periodic dredge the ebb shoal portions of the New Pass navigation channel in Sarasota County, website references ftp://ftp.dep.state.fl.us/pub/ENV-PRMT/sarasota/pending/0039755/003-JC%20New%20Pass%20Maintaince%20dredging/Application/

Dear Dr. Edwards:

The staff of the Southwest Florida Regional Planning Council reviews various proposals, Notifications of Intent, Preapplications, permit applications, and Environmental Impact Statements for compliance with regional goals, objectives, and policies, as determined by the Strategic Regional Policy Plan. The staff reviews such items in accordance with the Florida Intergovernmental Coordination and Review Process (Chapter 291-5, F.A.C.), and adopted regional clearinghouse procedures.

These designations determine Council staff procedure in regards to the reviewed project. The four designations are:

Less Than Regionally Significant and Consistent- No further review of the project can be expected from Council.

Less Than Regionally Significant and Inconsistent- Council does not find the project of regional importance, but will note certain concerns as part of its continued monitoring for cumulative impact within the noted goal area.

Regionally Significant and Consistent- Project is of regional importance, and appears to be consistent with Regional goals, objectives, and policies.

Regionally Significant and Inconsistent- Project is of regional importance and does not appear to be consistent with Regional goals, objectives, and policies. Council will oppose the project as submitted, but is willing to participate in any efforts to modify the project to mitigate the concerns.

The Southwest Florida Regional Planning Council (SWFRPC) has reviewed the Proposed Permit 0039755-003-JC for the periodic dredge the ebb shoal portions of the New Pass navigation channel in Sarasota County and has the following comments.

The request is dated June 24, 2014. The purpose of the proposed work is to perform periodic dredging of the ebb shoal portions of the established New Pass navigation channel in Sarasota County, FL, and to place the dredged material along the Gulf of Mexico shorelines of Longboat Key, FL, and Lido Key, FL, over a 15-year period. The initial excavation of the ebb shoal channel segment is expected to produce at least 200,000 cy / 152,900 m3 (above -13.5 ft NAVD88, December 2013 conditions). Sediment from the initial excavation is intended for placement along the previously nourished 1.68 mile / 2.70 km segment of the Longboat Key shoreline between DEP survey monuments R-20 and R-29. Sediment from a second nourishment event is intended for placement along the previously nourished 1.62 mile / 2.61 km segment of the Lido Key shoreline between R-35.5 and R-44.2. The co-applicants intend to share sand from all maintenance disposal events under a sand-sharing agreement developed between the co-applicants. Based upon recent dredging events in 2003 and 2009, sediment infilling rates in the channel suggest a potential dredging interval of five to six years. The proposed project will serve to augment ongoing beach management activities along both shoreline segments. A secondary benefit to the project is anticipated to be improved navigability across the ebb shoal entrance at New Pass (for some period of time).

The proposed project has the potential to affect hydrology and wildlife habitats on a barrier island beachfront.

The project work will occur in three different FLUCCS communities. The landward portion of the work includes the primary dune line and the sandy beach out to the landward limit of typical wave up-rush. This area falls into the coastal scrub classification (FLUCCS 322). Almost 100% of this fairly narrow zone (~ 50- to 75-ft in width, pre-renourishment) is unvegetated sandy beach area since the work will principally occur GULFWARD of the edge of significant vegetation, although some limited repair of the dunes may be required. The zone occupies approximately 25 acres of the project footprint (includes both disposal fill segments). Herbaceous species

occurring within this FLUCCS community includes sea oats (*Uniola paniculata*), panic grass (Panicum amarum), dune sunflower (*Helianthis debilis*), sea purslane (Sesuvium portulacastrum), and beach morning glory (*Ipomoea pescaprae*). Much of the beach disposal work along both disposal segments will fall along the Gulf of Mexico shoreline, which is the sandy near shore open sand/benthic habitat at the shoreline (FLUCCS 652). This zone of the project is approximately 80 ft wide and covers roughly 30 acres (both segments), extending from the upland limit of wave up-rush (an approximation) to Mean Low Water. 100% of this zone is unvegetated sandy barrier beach. The remainder of the renourishment project footprint falls into the Water Bodies classification for the sandy seabed of the Gulf of Mexico (FLUCCS 572). The seaward 80- to 100-ft, approximately 35 acres, (pre-equilibration, both segments) falls into this classification. Any equilibration along either segment will occur in this zone. 100% of this zone is unvegetated sandy seabed. No submerged aquatic vegetation exists within the project limits.

The U.S. Fish and Wildlife Service and the National Marine Fisheries Service (NOAA Fisheries) maintain lists of Threatened or Endangered Species that exist in a particular project area. The Florida Fish and Wildlife Conservation Commission likewise maintains a list of Imperiled Species. Potential listed species and species of concern in the project area include piping plover, snowy plover, roseate tern, least tern, black skimmer, American oystercatcher, red knot, Atlantic loggerhead turtle, Atlantic green turtle, leatherback turtle, Atlantic hawksbill turtle, Kemp's ridley turtle, West Indian manatee, Gulf Sturgeon, smalltooth sawfish, and several whale species. Additionally, these agencies maintain Critical Habitat areas and other designated habitat areas. It is expected that the project may utilize the USFWS Statewide Programmatic Biological Opinion for beach nourishment, as it relates to nesting sea turtles and shore birds. To supplement this information, an updated Biological Assessment need to be finalized.

Prior biological opinions from the U.S. Fish and Wildlife Service have been generated for beach renourishment activities within the project area to identify the threatened and endangered species of the project area. We await the revised biological opinion that will be required for evaluation of the wildlife impacts of this new permit application. Shorebird nesting and sea turtle nesting is prevalent throughout Longboat Key, during their respective nesting seasons.

Consultation with USFWS regarding the potential for impacting sea turtles is necessary and there is a strong likelihood that an incidental takes permit for sea turtles would be needed to institute the project. Consultation with the FWC regarding the potential for impacting nesting shorebirds will also be necessary and there is likelihood that an incidental takes permit may be needed for both the project site and down-drift of the project site.

Our concerns with this project are as follows:

1) Potential negative impacts to listed shorebird species, least tern (T), snowy plover (T) and piping plover (T), will occur if the project is implemented during shorebird nesting season.

2) The project has the potential to jeopardize the benthic communities' located waterward of the proposed fill sites. Both direct burial and associated sediment generated turbidity can be expected to impact these areas which serve both habitat and fisheries functions. This could severely impact nearshore bait and pompano fisheries.

Based on the submitted information contained in the initial document, the RAIs and other available information and on local knowledge, the Southwest Florida Regional Planning Council staff has found this project to be **regionally significant, but cannot determine its consistency** with regional goals, policies, and objectives until the USFWS and NMFS opinions are rendered. We await the USFWS biological opinion that is be required for evaluation of the wildlife impacts of this new permit application Our concerns for resources of regional significance could be addressed by a positive review with protective conditions for wildlife and fishery natural resources of the proposed project by the U. S. Fish and Wildlife Services, the Florida Fish and Wildlife Conservation Commission, and the National Marine Fisheries Service.

Should you or any other party request this finding to be reconsidered, please contact me, with this request, or any questions concerning staff review of this item. If you have specific questions about the content of this letter, please contact Mr. Jim Beever directly at (239) 338-2550 # 224, e-mail jbeever@swfrpc.org.

Sincerely,

SOUTHWEST FLORIDA REGIONAL PLANNING COUNCIL

Margaret Wuerstle, AICP
Executive Director

Cc: Mr. Mark Evans
Chief, Regulatory Division
Department of the Army
Jacksonville Distinct Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32332-0019

Mr. Larry Williams
Field Supervisor
U.S. Fish and Wildlife Service

2014-2692

COUNTY: SARASOTA

RECEIVED
BUREAU OF
HISTORIC PRESERVATION
2014 JUN 27 A 8:27

DATE: 6/23/2014
COMMENTS DUE DATE: 7/31/2014
CLEARANCE DUE DATE: 8/22/2014
SAI#: FL201406246927
REFER TO: FL200407167941C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
ENVIRONMENTAL PROTECTION	SOUTHWEST FLORIDA WMD		
FISH and WILDLIFE COMMISSION			
X STATE			

RECEIVED
AUG 18 2014
DEP Office of
Intergovt'l Programs

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- _ **Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.**
- X **Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.**
- _ **Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.**
- _ **Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.**

Project Description:

DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT CORPS OF ENGINEERS - SCOPING NOTICE - LIDO KEY HURRICANE AND STORM DAMAGE REDUCTION PROJECT, BIG SARASOTA PASS EBB SHOAL SAND SOURCE - SARASOTA, SARASOTA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA

- ☑ No Comment
- ☐ Comment Attached
- ☐ Not Applicable

Federal Consistency

- ☑ No Comment/Consistent
- ☐ Consistent/Comments Attached
- ☐ Inconsistent/Comments Attached
- ☐ Not Applicable

From:

Division/Bureau: Historical Resources

Reviewer: Michael Hart

Date: 8/11/14

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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning Division
Environmental Branch

JAN 29 2015

Mr. Jeffrey Howe
U. S. Fish & Wildlife Service
South Florida Ecological Services Office
1339 20th Street
Vero Beach, FL 32960-3559

Dear Mr. Howe,

The U.S. Army Corps of Engineers (Corps) is proposing to conduct a beach nourishment project in Sarasota County, Florida. The project name is the Lido Key Hurricane and Storm Damage Reduction Project, and it proposes to place approximately 1.1 million cubic yards of sand on 1.56 miles of beach. The material will be obtained from the Big Sarasota Pass ebb shoal, located just north of Big Sarasota Pass between Lido Key and Siesta Key. New Pass channel and ebb shoal is considered an alternative source for material for future nourishment events, but will not be used for the initial construction. This project includes the construction of three groins at the south end of the island. Please see the enclosed Project Location Map (Figure 1) for additional details.

Endangered Species Act

The northern portion of Cut C is located within an area considered to be an "Important Manatee Area" (Figure 2). However, with the incorporation of the standard manatee protection measures into the project specifications, the Corps has determined that the proposed activity may affect, but is not likely to adversely affect the Florida manatee.

The beach placement area currently provides suitable nesting habitat for loggerhead and green turtles, which will temporarily adversely affect nesting sea turtles. In addition, there is loggerhead critical habitat located immediately north and south of the project (Figure 3). However, no critical habitat is located in the project area; therefore, the Corps has determined that the proposed project will not affect loggerhead critical habitat under USFWS' jurisdiction.

The southern end of the sand placement area is located within South Lido County Park, where coastal processes are allowed to function mostly unimpeded. This could provide suitable habitat for both the piping plover and the newly listed red knot. Therefore, the Corps has determined that the project may affect, and is likely to adversely affect, the

piping plover, the red knot, and nesting sea turtles. The proposed action does not occur in beach mouse habitat and will not affect beach mice.

The local sponsor agrees to adhere to the Terms and Conditions in the Statewide Programmatic Biological Opinion (SPBO) for nesting sea turtles and the Florida manatee. In addition, the project will adhere to the Terms and Conditions in the Piping Plover Programmatic Biological Opinion (P^3BO) for piping plovers. This letter initiates formal consultation for impacts to nesting sea turtles (associated with the groin features) and to the red knot related to this project. A summary of the affected species is provided below.

Species	**Scientific Name**	**ESA Listing Status**	**Corps Determination**	**Status of Consultation**
Florida manatee	*Trichechus manatus latirostris*	Endangered	May affect, not likely to adversely affect	SPBO
Loggerhead turtle	*Caretta caretta*	Threatened	May affect, likely to adversely affect	SPBO/ formal consultation for groins
Green turtle	*Chelonia mydas*	Endangered	May affect, likely to adversely affect	SPBO/ formal consultation for groins
Piping plover	*Charadrius melodus*	Threatened	May affect, likely to adversely affect	P^3BO
Rufa red knot	*Calidris canutus rufa*	Threatened	May affect, likely to adversely affect	Formal consultation

All post-construction monitoring will be conducted by the City of Sarasota, and will not be the responsibility of the Corps.

If you determine that the proposed activity as described herein falls within the scope of the SPBO and P^3BO, please consider this letter as the initiation of the 30-day coordination required by these opinions. If you determine that the proposed activity as described herein does not fall within the scope of the SPBO, please consider this letter a biological assessment initiating consultation. In addition, please consider this letter as initiating consultation for effects to the loggerhead turtle and the green turtle associated with the construction of the groin features, and for effects to the red knot.

Coastal Barrier Resources Act

The following describes the history and the applicability of the Coastal Barrier Resources Act (CBRA) of 1982 and the Coastal Barrier Resources Improvement Act (CBRIA) of 1990 to the Lido Key HSDR. The placement site is located adjacent to and within near CBRA Unit FL-72P, which is an "otherwise protected areas" (OPA) of the John H. Chafee Coastal Barrier Resources System (CBRS; Figure 4).

The CBRA and the CBRIA 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. CBRIA provides development goals for undeveloped coastal property held in public ownership, including wildlife refuges, parks, and other lands set aside for conservation (OPAs). These public lands are excluded from most of the CBRA restrictions, although they are prohibited from receiving Federal Flood Insurance for new structures.

The proposed Lido Key HSDR project does not include the construction of structures that would require Federal Flood Insurance; therefore, Federal expenditures for the proposed project should not be restricted in Unit FL-72P. The USACE determined that the proposed project is consistent with CBRA and CBRIA, and we request your confirmation of this determination.

If you have any questions regarding this project, please contact Aubree Hershorin by phone at (904) 232-2136 or by email at Aubree.G.Hershorin@usace.army.mil.

Sincerely,

Eric P. Summa
Chief, Environmental Branch

Enclosures

Figure 1. Project Location Map.

Figure 2. Location of Important Manatee Areas in the vicinity of the project.

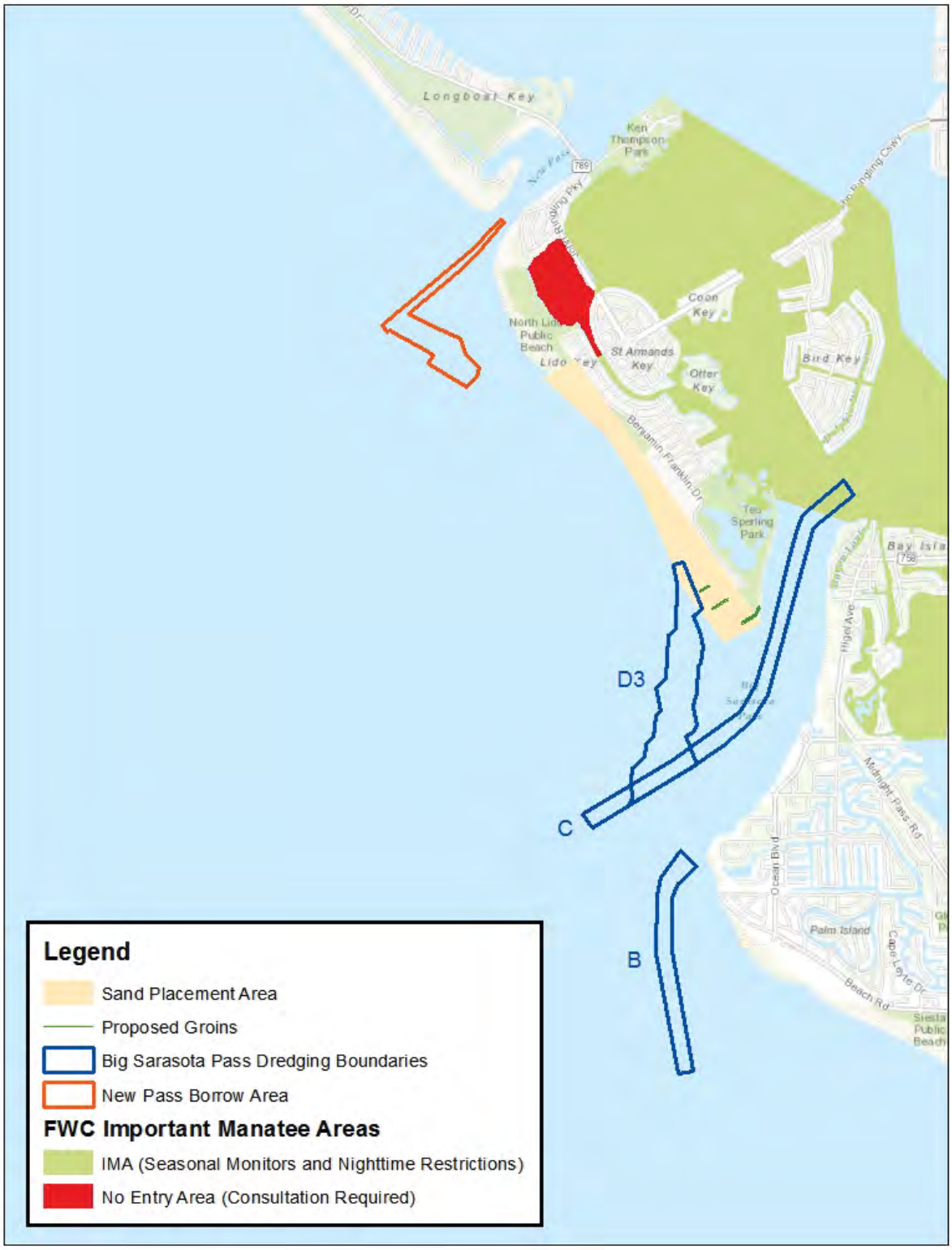
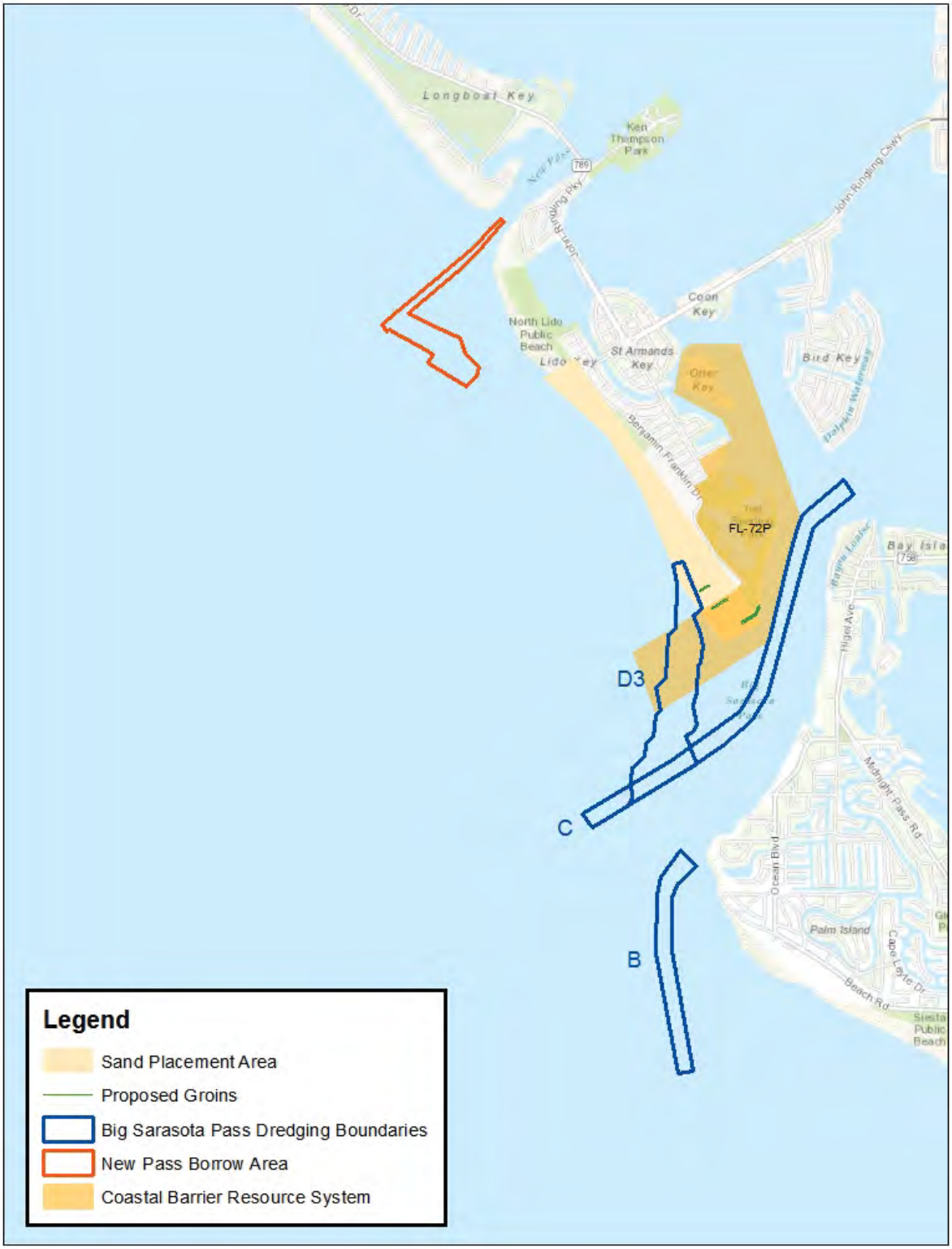


Figure 3. Location of Critical Habitat for Nesting Loggerhead Sea Turtles.

Figure 4. Location of Coastal Barrier Resources in the vicinity of the project.



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APPENDIX D – PUBLIC PARTICIPATION

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Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
Bruce Abramowitz, MD	1800 Ben Franklin Dr., B607 Sarasota, FL 34236	"Excellent presentation; I strongly support the recommendation of using Big Pass as a sand source stated by 2008 Comprehensive Inlet County Management and verified by the Army Corps of Engineers study 2014 for Lido Key beach nourishment, but something needs to be done NOW."	Noted.
Joanne Adler	1212 Benjamin Franklin unit 403 Sarasota, FL 34236	Delaying the project will affect their rental income	Noted.
Gary Anderton		General support	Noted.
Murali Atluru	Diversified Technology Consultants (DTC) 2321 Whitney Avenue, Suite 301 Hamden, CT 06518	General support	Noted.
W. Kevin Bales	315 Jackson Dr. Sarasota, FL 34236	"The St. Armands Residents' Association wish to express once again our support of the Corps of Engineers' plan for the restoration of Lido Beach. That beach is vital to the vitality of St. Armands' Circle businesses and the value of residential properties in the area."	Noted.
Geoff Bicknell	1300 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Lawrence Bond	1212 Ben Franklin Dr., #502 Sarasota, FL 34236	general support	Noted.
Barbara Brainard	2110 Ben Franklin Drive, S408 Sarasota, FL 34236	General support	Noted.
Carolyn Brown	Director Sarasota County Parks, Recreation and Natural Resources 1660 Ringling Blvd., Sarasota, FL 34236	(1) Was there any kind of analysis done related to recreational impacts to users based on the 3rd groin at S. Lido Park? (2) What happens if the groins are uncovered before the 5-year increment? (3) Who is responsible for renourishing/covering them with sand? (4) Is there allocated funding for the 5-year period or sooner, if needed? (5) What happens after 50 years? Who is responsible? (6) Has there been an environmental assessment done, and what are the results/outcomes?	(1) Although a separate study of the groins' effects on recreational users was not conducted, the impacts of the entire project on recreation in the study area are discussed in this draft EA. (2) The 5-year period is an estimate, and it may be lengthened or shortened if the design berm is breached. The groins becoming uncovered is an indication that the design berm has been breached, and it is no longer providing its intended function; therefore, the beach needs to be renourished. Please note that sand placement is always dependent upon the availability of funding. (3) USACE will be responsible for identifying when nourishment needs to occur, and costs will be shared between the Federal government and the City of Sarasota. (4) Funds will be requested from Congress prior the groins becoming uncovered (typically 2 years in advance); however, funds must be allocated specifically for this project by Congress. (5) The City of Sarasota would normally be responsible for the project after the 50-year authorization period; however, Congress stipulated in WRDA 2014 (Section 1037) that the non-Federal sponsor can request a study to determine the feasibility of extending the authorization for an additional 15 years. (6) A draft EA has been prepared, and public comments are being solicited.
Laura Bryg	1212 Ben Franklin Dr Sarasota FL. 34236	General support for USACE project and post-Debby FEMA plan	Noted.
Dave Bullock	dbullock@longboatkey.org	attended public meetings; Town Manager for Longboat Key; comments included in Appendix C	Comments noted; added to mailing list.

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
Robert Cameron	1212 Ben Franklin Dr, Unit 404 Sarasota FL. 34236	General support	Noted.
Joe Carullo		General support and request for start date	Noted; a start date cannot be identified until the NEPA and permitting processes are complete. The best estimate at this time would be Fall/Winter 2015.
Renee Chase	15 Sandy Hook Rd. N	Provided photographs from backyard; concerned that shoal is acting as a breakwater for their property. Concerned that removal will cause waves from storm events to cause more extensive erosion to their property than would otherwise occur.	Please refer to Sections 3.2 and 4.2 of the Draft EA for information on the BSP ebb shoal morphology and the impacts of dredging on the BSP navigation channel. Modeling suggests that dredging Cut C will reduce the currents through the channel, reducing pressure on the adjacent shoreline of Siesta Key.
Marees Choppin	Lido Beach Club, #507	General support	Noted.
Peter and Jane Conrad	2050/2052 Ben Franklin Dr., Unit 901A Sarasota, FL 34236	General support	Noted.
Michael P. Crosby, Ph.D., FLS	Mote Marine Laboratory 1600 Ken Thompson Pkwy. Sarasota, FL 34236	Expressed concern that current scientific data be considered during project formulation, and that the 2002 EA would be utilized to make project decisions.	This EA updates the information included in the 2002/2004 EA for the project, and analyzes the use of the Big Sarasota Pass ebb shoal as a borrow source for material to be placed at Lido Key. Previous EAs did not consider this shoal as a source; therefore, this NEPA analysis was conducted.
Alexandrea Davis-Shaw, P.E.	City Engineer 1565 1st. St., P.O. Box 1058 Sarasota, FL 34230	General support; would like USACE to consider adding dune features to the project.	Dune features could be included, but their placement would depend on the space available in the beach width profile and the location of existing beach vegetation. Where dunes could not be built, planting vegetation and/or using sand fences may enable a natural dune to grow more quickly once the area is protected by the berm and fed by wind-blown sand from that berm. These actions would likely either need to be paid for by the City or conducted by the City after USACE has placed the sand.
William R. Dodds, Jr.	2052 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Kevin and Marcia Dolan	Orchid Beach Club 2050/2052 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Jon Donnell	1751 Mound Street, Suite 201 Sarasota, FL 34236	General support; provided letter; no specific questions	Noted.
Alan and Barbara Ebersole	1212 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Ed and Annette Eliasberg	1001 Ben Franklin Dr., Unit 709 Sarasota, FL 34236`	General support	Noted.
Nancy Everett	1800 Ben Franklin Dr.	General support	Noted.
Kathleen Frankart	1700 Ben Franklin Dr., #11A Sarasota, FL 34236	General support	Noted.
Kevin and Madeleine French	1212 Ben Franklin Dr., #807	General support	Noted.
Marie Gauthier	1750 Ben Franklin Dr. Sarasota, FL 34236	Add to Mailing List; support for the project and concern about erosion affecting sea turtle nests	Noted; added to mailing list.
Tom and Sue Ghezzi	1100 Ben Franklin Dr., Unit 715	General support	Noted.

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
Ralph Groetzinger	1800 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Jeff Gwinnell	1800 Ben Franklin Dr., #302 Sarasota, FL 34236 AND 5300 Ocean Blvd. #1204 Sarasota, FL 34242	Owns two properties-one on Lido and one in North Siesta; supportive of project	Noted.
Lakhbir Hayre	lakhbir1914@hotmail.com	General support; add to email list.	Noted.
Jeffrey Heath	1212 Ben Franklin Dr Sarasota FL. 34236	Add to Mailing List	Noted; added to mailing list.
Edward and Beverly Heller	1212 Ben Franklin Dr., #906 Sarasota, FL 34236	general support	Noted.
James H. Henry II	300 North Jackson StreetTullahoma, TN 37388	General support	Noted.
Brian Hunter	Bdhinc1@aol.com	Request to be added to email distribution list.	Added to email list.
Ed and Louise Janka	1212 Ben Franklin Dr., Unit 208	General support	Noted.
Vern Johnson	vjsiesta@hotmail.com	Concern regarding project, with the following questions: (1) what is the distance to Siesta from Cut B; (2) has USACE considered taking sand from all three sites; (3) why is the project designed over a 50-year period; and (4) what are the estimated costs for the first nourishment	(1) A map showing the distances of the proposed dredging from Siesta Key was provided; (2) clarification that both dredging alternatives would dredge multiple "cuts"; (3) clarification that the 50-year project life does not start until construction commences; and (4) the estimated cost of the initial construction is approximately $19 million.
Daryl and Monica Jones	Lido Beach Club, Unit 903 1212 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Michael Keebaugh	2050 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Kevin M. Kelleher	2050 Ben Franklin Dr., Unit 601C Sarasota, FL 34236	General Support	Noted.
Karen Kiehne	800 Ben Franklin Dr. Sarasota, FL 34236 lunarkk@aol.com	Add to mailing list	Added to mailing list.
Victoria King	545 McKinley Drive Sarasota, FL 34236	General support	Noted.
Jude Levy	Box 3015 Sarasota, FL 34230	Since sand flows like a river from north to south, it appears that groins/piers, etc., jutting out may hold sand for a while but scour below. Surely, you have NJ coastline as your lab. They aren't helpful. Dunes, maybe. Also, have the models taken into account the rising oceans? Only an 11" increase + high tide + hurricane winds swamped lower Manhattan. Lido Key is a mere sandbar.	Please refer to the 2002/2004 Feasibility Study for additional information on the merits of the groins proposed as part of this project. The models are run over a limited timeframe (1.5 years), and sea level rise during this timeframe is relatively insignificant.
Victor Loehrer	1212 Ben Franklin Dr.	General support	Noted.
Jeffrey W. Long	101 Ben Franklin Dr., #62 Sarasota, FL 34236	General support	Noted.
Barbara Lowenthal	1800 Ben Franklin Dr.	General support	Noted.

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
Janet Lustgarten	800 Ben Franklin Dr., Unit 207 Sarasota, FL 34236	Add to mailing list.	Added to mailing list.
Ing-Marie Malkin	ingmalkin@gmail.com	General support	Added to mailing list.
Sandy Mayer	1212 Ben Franklin Dr., Unit 901	General support	Noted.
Shelley McDaniel	Icard, Merrill, Cullis, Timm, Furen & Ginsburg, P.A. 2033 Main St., Suite 600 Sarasota, FL 34237-6091	Requested clearer copy of map.	Map provided.
Lee Michaels	1800 Ben Franklin Dr., #406 Sarasota, FL 34236	General support	Noted.
Paul Michaels	1800 Ben Franklin Dr., #406Sarasota, FL 34236	General support	Noted.
Jono Miller	P.O. Box 627 Sarasota, FL 34230	1) Did the Corps consider offshore breakwaters parallel to the beach rather than groins at South Lido? If not, why not? 2) Does adding sand to Lido Beach increase or decrease the steepness of the offshore shoreface? 3) Since North Lido has been accreting significantly and South Lido has been relatively stable, what accounts for more significant erosion in the middle Lido area? 4) If the Big Pass shoal continues to accumulate sand and none is removed what would happen in the future? Couldn't shoal build-up result in either a southern extension of Lido Beach, emergent shoal islands, or increased beach on Siesta Key? 5) How is the Corps communicated with Sarasota County Parks regarding the impacts on user experience in South Lido Park that could result from the design and placement of the groins? 6) The 600' spacing between the middle and northern groin on South Lido seems to suggest that the benefits or function of the groin become minimal approximately 600 feet up beach. Why isn't the Corps proposing additional groins to stabilize the beach fill further north on Lido Beach? 7) Removing shoal sand to the west of South Lido Beach is likely to reduce wave attenuation and therefore increase erosion on south Lido.Please discuss how the northern limit of sand removal was determined and how this will affect wave action at South Lido. 8) Please provide a record of all publicly-noticed meetings concerning this project, including the dates, locations, method of public notice, and participants. 9) Has the Corps ever redistributed supra-tidal beach sand as part of a beach management strategy? How much sand has accumulated at North Lido in unvegetated areas and could it be used to provide sand to middle Lido? 10) The vast majority of this project benefits beach in front of privately-owned property. What provision has been made for increased public access in this area?	1) Breakwaters were considered and rejected during the feasibility phase. The offshore and nearshore bars that feed sediment into the shoal begin approximately 3000 feet north of the southern end of the island. It is not advisable to build structures that would impede the flow of sand into the shoal or disrupt the existing tidal currents. Breakwaters also reduce water quality behind them due to reduced flushing, and are not preferred by the FDEP. 2) The steepness of the shoreface is dependent on sediment grain size. FDEP rules dictate that sediment placed on the beach is similar to the native sediment; therefore, the slope of the beach will not change following beach equilibration. 3) North Lido Key is an ebb shoal attachment point resulting from the inlet dynamics associated with New Pass. 4) Shoals are in dynamic equilibrium between the tidal forcing and the wave climate. A shoal will not accrete ad finitum. 5) Sarasota County Parks commented during the NEPA scoping period, and responses to their questions and comments are provided in the EA. 6) The two northern groins are necessary to hold sand in front of the two condominium buildings that are located further seaward than the buildings adjacent to them. The Federal project requires an 80 foot berm width, which would quickly erode in front of these two buildings without a groin structure to hold it in place. Sand placement would need to occur more frequently without the groins. Since placing sand on beaches is expensive and has impacts, reducing the frequency of nourishment events is preferable. The USACE Coastal Engineering Manual provides additional information describing the effects of the proposed groin spacing and length. 7) This information is provided in the draft USACE modeling report, provided as Appendix F to the EA. 8) The scoping meetings held on July 23, 2014, at 1:30 p.m. and 6:00 p.m. were the first held in relation to the NEPA process for the use of the Big Sarasota Pass ebb shoal. The Meeting Notice and the attendance lists from the meetings are included in Appendix C of the EA. A mailing list is included as Appendix E. 9) USACE does not advise using beach scraping as a beach management strategy. Nearshore beach scraping can turn a more stable, accreting beach to an erosional beach. Since the area south of New Pass is the attachment lobe for New Pass, dredging that northern area to get material could jeopardize the area for wave attacks where the lobe is now attenuating the energy and providing material to the south.

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
		11) What figures is the Corps using to estimate sea level rise on this section of coast in the next fifty years? How does increased sea level affect projections of future renourishment needs? Who in your office is responsible for studying and assessing sea level changes in this area? 12) If the project can be demonstrated to have resulted in increased storm damage or erosion on Siesta Key, does the Corps have a mechanism to pay for remedial or compensatory actions? 13) If the Big Pass Shoal proves to be unusable for any reason, what "plan B" sand sources exist for this project? 14) Has the Corps calculated and compared the cost of 50 years of dredging with strategic purchase and relocation of buildings closest to the Gulf? 15) Where else have groins similar to the ones proposed for South Lido been used? 16) Please list the extant 50-year contracts the Corps has with other communities, providing the name of the community and the year the relationship started. 17) Is the Corps in a position to create an exclusive relationship wherein sand from the Big Pass shoal cannot be exported to beaches other than Lido and Siesta Public Beach (New Pass to Point of Rocks)? If not, what is to prevent a "sand rush" as other locales seek to mine the Big Pass shoal? 18) Is it true that neither was the Sarasota County Inlet Management Plan ever adopted as county policy nor have many of its actions ever been implemented? 19) Presumably removal of sand from the Big Pass Shoal will create space that sand moving generally southward will fill. Where would that replacement sand have gone if the space created by the dredging didn't exist? 20) How can the Corps of Engineers claim this project is congruent with the state plan when the state plan calls for an offshore sand source (and Big Pass is not such a source)?	10) The regulation for public access is included in USACE ER 1105-2-100, Appendix E. The Federal government cost-shares in the project at the locations of privately-owned property if the properties meet requirements for public access, including easements across private lands where sand is placed allowing public use, access points at 1/2 mile increments, and parking or public transportation. Cost-sharing is adjusted to 100% non-federal for properties integral to the project that do not meet the requirements. The non-Federal sponsor obtains perpetual easements for the use of the property seaward of the Erosion Control Line, and this portion of the beach becomes public property after the Federal government places sand there. 11) Pages A-26 to A-30 of the 2002/2004 Feasibility Study provide detailed information on how sea-level rise was incorporated into the project. They were based on the NRC curves published in 1987, which were available at the time of publication of the feasibility report. 12) For other projects in the Jacksonville District where this has been a concern, USACE has conducted an in-depth analysis to determine the cause of potential impacts. 13) All other known sand sources in this region are too far from Lido Key to be cost effective; therefore, this project would not be built unless other sources are found or dredging operations become more cost-efficient. 14) An array of nonstructural and structural alternatives was considered as part of the 2002/2004 Feasibility Study, including a moratorium on construction, relocating structures, and condemning land and structures (see page 41). 15) These are among the simplest design of groins available (rubble-mound), and groins of this type are used along beaches of the Gulf, Atlantic, and Pacific coasts, and around the world. Locally, the closest groin of this type is 0.8 miles to the north in the middle of Lido Key. Other examples are located near the south end of Treasure Island (a half-mile north of Blind Pass), just south of the Venice airport, in northern Captiva Island, and in northern Naples. 16) USACE, Jacksonville District, has 18 active Hurricane and Storm Damage Reduction Projects in the State of Florida. All projects are authorized for a 50-year period. Please refer to the information and map available at http://www.saj.usace.army.mil/Missions/CivilWorks/ShoreProtection.aspx. 17) The Big Sarasota Pass shoal is sovereign submerged lands, and is under the jurisdiction of the State of Florida. Therefore, the use of sand from the shoal by other localities is entirely determined by the FDEP. 18) USACE has no involvement in the County's decisions on policy-related matters. 19) Based on USACE's modeling, dredging Cut C will allow Cut C to act as a recharge basin for material that is placed on Lido Key. This material will essentially be "recycled;" the same amount of material that currently bypasses Lido Key to Siesta Key will continue to be moved through this system. 20) It is unclear what is meant by the "state plan." Although the 2002/2004 Feasibility Study outlines the use of an offshore borrow source, this source was later determined to contain unsuitable material (and would not comply with FDEP rules). Therefore, it was necessary to identify a new borrow source. The purpose of the Feasibility Study (as stated on Page 2) is to determine if the project is technically sound, environmentally acceptable, and economically justified. Changing the borrow source does not affect whether or not the project is technically sound or economically justified. This EA analyzes whether the project continues to be environmentally acceptable.
Nancy Mina	147 Garfield Dr. Sarasota, FL 34236	General support	Noted.

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
Janice Morris	2050 Ben Franklin Dr., Unit 1004 Sarasota, FL 34236	General support for USACE project and interim project	Noted.
Mary Moss	1800 Ben Franklin Dr., B708 Sarasota, FL 34236	General support	Noted.
Andrea Movsessian-Wallack	Lido Beach Club	General support; would like updates.	Noted.
Michael E. Nannes	Dickstein Shapiro LLP 1825 Eye Street NW Washington, DC 20006	General support	Noted.
Dave Norton	1800 Ben Franklin Drive, Unit A-305 Sarasota, FL 34236	General support	Noted.
Robert Patten	1701 Hawthorne St. Sarasota, FL	(1) Does the COE intend to produce an Environmental Impact Study (EIS) for the proposed action? If not, what is the environmental justification for concluding that the impacts of this project are not major impacts? (2) Does the COE intend to supplement the Environmental Assessment (EA) that was done in 2002 and amended in 2004? (3) The Plan assumes that the groins will be continually covered with sand and therefore will not create downdrift erosion. What is the historical evidence to show that this area does not experience significant erosion as a result of storms on an average of every five years? (4) What percentage of the total project cost do the groins represent? (5) Has modeling shown that removing the groins will reduce the 'life' of the design project and increase the frequency of periodic renourishment? If so, to what extent? (6) The COE has publicly stated that if the project is authorized it will allow them to expedite an emergency project that will repair the erosion caused by a storm. Based on past projects in Florida that fell under these criteria what is the average elapsed time between the date of the storm and the pumping of sand onto the damaged beach? What was that time frame for the Debby repair planned for Lido Beach this fall?; (7) Why are three groins proposed for the southern end of the project and why is the southern groin offset to the extent it is? Is there any concern by the COE that, if exposed, that groin would cause erosion to the beach north of the groin? (8) Big Pass is designated by the State of Florida as an Outstanding Florida Water (OFW). How will this impact the state permitting process? (9) Has a 'Local Preferred Option' been requested by the City of Sarasota? How long would it take the COE to develop the local cost-sharing amount for that change? (10) Do the models you used predict a specific quantity of sand associated with the models' results? In other words, if the model shows accretion or erosion in a certain area is there a cubic yard amount associated with that prediction?	(1) USACE began this process with the drafting of this EA, and is making it available for a 45-day public comment. Based on this draft EA, USACE does not believe the project will significantly affect the human environment, and an EIS is not warranted for this project. However, should the public comment period raise significant concern regarding a project effect that is determined to be significant, USACE is prepared to draft an EIS. (2) This Draft EA draws upon the information from the 2002/2004 EA and provides updated information about project effects, as well as new information about anticipated effects associated with the use of the Big Sarasota Pass ebb shoal. Please review the various sections within the EA for more specific information related to this question. (3) Erosion does occur in this area, and downdrift erosion may occur south of the groins. However, this would generally prompt the initiation of a sand placement event. (4) The groins represent approximately 25% of the total project cost. (5) To address concerns expressed by the public regarding the proposed groins, the USACE is currently reevaluating the effect of removing the third groin. The northern two groins would decrease the project's storm protection function and cause erosion to occur more rapidly, ultimately costing the project more by requiring more frequent sand placement. (6) For storm events recognized as emergency situations by the Federal government, USACE receives "Flood Control and Coastal Emergencies (FCCE)" funding to restore the project to pre-storm conditions. FCCE funds must be expended as expeditiously as possible, usually within one year. USACE completed restoration efforts associated with TS Sandy, which occurred in October 2012, in Spring 2014. In contrast, the City of Sarasota began construction in March 2015 to restore impacts resulting from TS Debby (June 2012). (7) See the response to Question 3, above. (8) Please see Sections 3.6 and 4.6 of the EA for information related to the project's effects on OFWs. (9) No, the City has not requested a Locally Preferred Plan. (10) Yes, the model transports sediment volume. The volumetric results from the model were used to develop new Sediment Budgets as described in Section 7 of the modeling report. (11) No other municipalities or agencies have expressed an interest in using sand from the Big Sarasota Pass ebb shoal.

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
		(11) Has any other municipality or agency, either during meetings or through correspondence with the COE, expressed an interest in using the Siesta Key Shoal as a sand source in the future?	
Roy Pera	roypera@yahoo.com	General support	Noted.
Steve Perry	Lido Beach Club	General support	Noted.
Sheila Pether	Orchid Beach Club 2050/2052 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Thad and Kathy Piatkowski	Orchid Beach Club 2050/2052 Ben Franklin Dr. Sarasota, FL 34236	General support for USACE project and interim project	Noted.
Randy Pistone		General support	Noted.
Dr. Donna Polelle	1102 Ben Franklin Dr., Apt 511 Sarasota, FL 34236	General support	Noted.
Michael Polelle	1102 Ben Franklin Dr., Apt 511 Sarasota, FL 34236	"We live at Lido Surf & Sand on the beach and have seen [the] beach erode in some places to only six feet from Sea Oats Hill to Water Edge. Losing Lido Key Beach would harm all of Sarasota, because tourists already overcrowd Siesta Key and all Sarasota would suffer property value loss and a decline in tourist interest. The Sea Turtle Conservancy group (not for profit) in Gainesville confirms that a proper beach renourishment can benefit sea turtles by providing more habitat in which to lay eggs."	Noted. Agreed that nourishment improves sea turtle nesting habitat in the long term. See Section 4.4.2 of the EA for additional information.
Thomas W. Reese/Florida Wildlife Federation	2951 61 Ave. South St. Petersburg, FL 33712	(1) Request to draft EA that results in the drafting of an EIS; (2) consider impacts to OFW and establish the OFW existing ambient water quality baselines; determine whether the proposed dredging of Big Sarasota Pass causes any degradation of the OFW existing ambient water quality of Big Sarasota Pass, New Pass or Sarasota Bay; (3) establish the existing baseline tidal prisms and tidal velocities for Big Sarasota Pass and New Pass; (4) establish the existing baseline bayside flood-delta (shoal); (5) examine the effect of mining the tidal ebb-delta on the re-suspension and transport of particulates in Big Sarasota Pass; (6) examine the effect of the new Longboat Pass management actions on the tidal prism of Big Sarasota Pass	(1) The draft EA was made available to the public. The final determination on whether or not an EIS is appropriate will not be made until the public comment is complete and all federal and state agencies are provided the opportunity to comment on the project; (2) Pursuant to 62-4.242 F.A.C., discharges into OFWs will only be permitted for the dredging of beach-quality sand from inlets and the nourishment of beaches if turbidity is minimized and does not exceed background levels (or 29 NTU) at the edge of the approved mixing zone, and if turbidity is not expected to have an adverse impact on marine resources, recreational value, or public safety. USACE has determined that the project meets these requirements. The FDEP will review the project during the public comment period to ensure consistency with state laws. (3) The tidal prism and the velocities for Big Sarasota Pass are found in Sections 1.5 and 3.3, respectively, of the USACE modeling report. A good reference for the entire area that discusses the dynamic equilibrium of all of the Passes is: Mohamed A. Dabees and Brett D. Moore (2011) Inlet Evolution Modeling of Multiple Inlet Systems in Southwest and Central Florida. Journal of Coastal Research: Special Issue 59: pp. 130 – 137. (4) The volume of the bayside flood-tidal delta was greatly reduced when it was developed as Bird Key in the 1920's. The area fronting Bird Key known as Middle Ground is an important region for fishing and is what remains of the ebb shoal. Modeling has shown that this area will not be affected given that there is no bathymetric change between the with- and without-project conditions as discussed in Section 4.2 of the report; (5) Section 4.4 of the report entitled "Sediment Transport Pathways and Sediment Fluxes" contains an extensive discussion of the re-suspension and transport of sediment in Big Sarasota

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
			Pass. Sediment and suspended particulates continue to be carried through the main ebb channel due to tidal forcing, and sediments are transported across the ebb shoal lobes predominantly by wave forcing. Cuts C and D3 will collect sediments. (6) The main ebb channel, through which the majority of the tidal prism passes, will not be mined for this project.
Corinne Richman	2050/2052 Ben Franklin Dr.	General support	Noted.
Syed Rizvi	1750 Benjamin Franklin Dr., Unit 10F	General support	Noted.
Paul Robbins	1800 Ben Franklin Dr. Sarasota, FL 34236	General support for USACE project and interim project	Noted.
Joseph Roediger	1310 S. Osprey Ave. Sarasota, FL 34239	General support	Noted.
Tony Romanus	5551 Contento Dr. Sarasota, FL 34242	Attended public meeting on 7/23	Added to mailing list.
Gerald Roosen	ggroosen@aol.com	Add to Mailing List	Added to mailing list (email only).
Chelly Caflisch Serrano	77 Beach Road Sarasota, FL 34242	Attended public meeting on 7/23; provided report on effects to their property on Siesta Key	Added to mailing list. Refer to Sections 3.2 and 4.2 within the EA for additional discussion on the effects of the dredging alternatives on Siesta Key.
David and Paula Sheppard	101 Ben Franklin Dr.	General support	Noted.
Carl Shoffstall	129 Tyler Dr., #102 Sarasota, FL 34236	Attended public meetings; general support	Noted.
Meg Sibbernsen	800 Ben Franklin Dr. Sarasota, FL 34236	Would like to attend scoping meetings via teleconference	Unfortunately, facilities were not available that included teleconference capabilities. We will consider this possibility for future public meetings.
Todd Sikon	2050/2052 Ben Franklin Dr.	General support for USACE project and interim project	Noted.
Irwin Singer	2050 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.
Josef Spatz	2050/2052 Ben Franklin Dr.	General support	Noted.
Cheryl Speaker		General support	Noted.
Nancy and Donald Solar	1700 Ben Franklin Dr.	General support	Noted.
Elsie Souza	100 Central Ave., #406 Sarasota, FL 34236	Attended public meeting on 7/23	Added to mailing list.
Susan Stelfox	4200 Shell Road Sarasota, FL 34242 sms6102@gmail.com	Comments that need response in EA re various dredge options and how they will affect properties along Shell Road.	The USACE report, "Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project," studied the impacts of dredging Cut D1. These impacts are summarized in Section 2.1.1.3.1 of the EA. Evaluating the placement of sand along the northern interior shoreline of Siesta Key or preparing an Inlet Management Plan is not within the scope of the federally-authorized Lido Key project. These actions would need to be evaluated and conducted separately by the City of Sarasota, Sarasota County, or USACE.
Edward Thompson	1900 Ben Franklin Dr. Sarasota, FL 34236	General support	Noted.

Name of Commenter	Contact Information	Summary of Comment/Concern	Summary of USACE/Sponsor Response
Linda Thompson	61 S. Boulevard of the Presidents St. Armands Circle Sarasota, FL 34236	General support; realtor on St. Armands Circle	Noted.
Andrew Vac	201 Morningside Dr. Sarasota, FL 34236	Attended public meeting on 7/23	Added to mailing list.
Peter Van Roekens	5300 Ocean Blvd., #201 Sarasota, FL 34242	Please add SOSS2@earthlink.net to the email list for all project notifications; clear to SOSS2 and others that an EIS is required (support for this included); commenter believes it is USACE's responsibility to prove that all of the negative effects on beaches and navigation that have occurred in the past with ACOE dredging projects on the west coast of Florida will not be repeated in Big Pass. Generally opposed; provided written comments dated 7/23/14 and verbal comments at the meeting	Please refer to the various sections within the EA that discuss ebb shoal morphology, sediment transport, and navigation that provide information on the effects of the proposed project to the inlet system.
Margaret Velordi	1750 Ben Franklin Dr., 10-G Sarasota, FL 34236	General support	Noted.
Robert Vigder	101 Ben Franklin Dr. #73 Sarasota, FL 34236	general support	Noted.
Janet Watson	800 Ben Franklin Dr. #208 Sarasota, FL 34236	General support	Noted.
Walter Zacharko	1800 Ben Franklin Dr.	Commented during public meeting	Noted.

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CARLTON FIELDS JORDEN BURT

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May 14, 2014

Atlanta
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New York
Orlando
St. Petersburg
Tallahassee
Tampa
Washington, DC
West Palm Beach

Colonel Alan M. Dodd
District Commander
Jacksonville District
United States Army Corps of Engineers
701 San Marco Boulevard
Jacksonville, FL 32207

Via Certified Mail/Return Receipt Requested
and Via Email alan.m.dodd@usace.army.mil

Subject: Lido Key Beach Renourishment Project

Dear Colonel Dodd:

We understand that the United States Army Corps of Engineers ("the Corps") may be in the process of making a decision regarding the proposed Sarasota County, Florida Hurricane and Storm Damage Reduction Project (Lido Key) (hereinafter "Lido Key Beach Renourishment Project" or "the Project").

On behalf of SOSS2, Suncoast Waterkeeper, Rich Schineller, Maria Bankemper, Peter van Roekens and Mike Lepore, we would like to express our concerns and questions regarding the Project's compliance with, inter alia, the National Environmental Policy Act ("NEPA"), Section 404 of the Clean Water Act ("Section 404"), the Endangered Species Act, and the Water Resources Development Act of 1999 ("the WRDA").

We ask that the Corps respond to questions posed in this letter prior to making any decisions regarding the Project. In addition, if the Corps declines to take the actions requested in this letter, we ask that the Corps provide the groups and individuals listed herein with a written explanation as to why the Corps has declined each of our specific requests.

We understand that the Corps may soon be releasing further studies and scheduling further meetings and hearings concerning the Project. Please include me on the "release" list for any studies and on the notice list for any meetings and hearings. I can be reached via email at dhemke@cfjblaw.com.

renourishment at Lido Key, but we insist that any renourishment does not jeopardize Siesta Key in any way or impair navigation and that alternatives to obtaining sand from Big Pass be appropriately explored and used.

NEPA

NEPA requires that an agency critically examine the environmental impacts of and alternatives to any federal action "significantly affecting the quality of the human environment" and to study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources. See, e.g., Vermont Yankee Nuclear Power v. NRDC, 435 U.S. 519, 551 (1978); see also Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989); Wilderness Watch & Pub. Emps. for Envtl. Responsibility v. Mainella, 375 F.3d 1085, 1094 (11th Cir. 2004). NEPA's procedural requirements must be followed faithfully. New Mexico ex rel. Richardson v. Bureau of Land Management, 565 F.3d 683, 703-04 (10th Cir. 2009). These include taking a "hard look" at the proposed action's direct and cumulative impacts and rigorously exploring all reasonable alternatives. We request written discussion of the Corps' analysis of all reasonable alternatives, including the alternative of utilizing sand from the seven FDEP permitted sand sources specifically designated for Lido Beach nourishment.

We understand, based on the Corps' public statements, that the Corps may be planning to use the 2002 Sarasota County Florida Hurricane and Storm Damage Reduction Project (Lido Beach) Environmental Assessment ("EA"), as the NEPA analysis for the Project. This EA is, as explained below, a legally inappropriate analysis for the Project. Instead, to comply with NEPA, the Corps should prepare an environmental assessment ("EA") and, ultimately, an environmental impact statement ("EIS") concerning the Project as presently being considered with obtaining the renourishment sand from Big Pass, rather than from the offshore sites which were considered in the 2002 environmental assessment.

1. *An EIS, not just an EA, is appropriate for the Project, given the Project's size, the Project's 50-year duration, the Project's potential impacts, the Project's proximity to Siesta Key, one of premier, if not the premier, beach in the United States, and the controversy concerning the Project's environmental impacts.* If a "major federal action" is or may be likely to "significantly affect. . .the quality of the human environment," an EIS is required. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.9. An EA is only appropriate if the project has no significant impact. 40 C.F.R. §§ 1501.4, 1508.9, 1508.13. The Project has the potential to create major negative impacts for navigation as well as negatively impact the shoreline and beaches of Siesta Key and South Lido Park. The proposed groins will have a negative impact on South Lido Park and will cause irreparable harm to this popular recreation area. Additionally, Siesta Beach is naturally nourished as a part of a closed littoral cell of which Big Pass is an integral part. Siesta Key Beach has been named as the number one beach in the country and

contributes about one third of the County's Tourist Development Tax revenues. The Project, as presently being considered with renourishment sand to be obtained from Big Pass, threatens to harm the quality and integrity of Siesta Key Beach, which would have a profound impact on the region.

In examining the actual results vs. the predicted results of dredged inlets in the area, (Johns Pass, Longboat Pass, New Pass and Stump Pass), it has been shown that shallow water conditions follow the dredging, and it is not uncommon to have five years or more where controlling depths are less than four feet. Contrast this with Big Pass and Redfish Pass which have never been dredged and have controlling depths of 5.5 feet to 6 feet. There are significant marine interests that depend on Big Pass being navigable, beyond skiffs with outboards. The proposed groins will have a negative impact on South Lido Park and will cause irreparable harm to this pubic beach. Without exception, the published coastal technical papers and professional studies have found that rock groins create downdrift erosion. The Project proposes to mitigate downdrift erosion through a constant and predictable re-nourishment schedule. However, that schedule is dependent upon consistent and reliable Federal funding that is impossible to guarantee. Also, it assumes that no major storms will impact the project area to the extent that the groins will be exposed to wave action. Again, this assumption is not supported by a review of recent storm activity in the area.

These impacts are highly significant, constitute an irreversible and irretrievable commitment of resources, and require an EIS. Neither the 2002 EA nor the 2002 "Finding of No Significant Impact" addresses these issues and thus should not be relied upon.

Such an EIS should assess the predicted impacts of the Project on all aspects of the environment, including indirect and cumulative impacts, the impacts of all connected and cumulative actions, and an analysis of all reasonable alternatives to dredging from Big Pass and their impacts. 42 U.S.C. § 4332(2)(C); 40 C.F.R. pt. 1502 & §§ 1508.11, 1508.25(c). The 2002 EA fails to do this.

2. *The 2002 EA, even when considered with the 2004 Update, is ten years old, out of date, and should be either replaced or supplemented*. Even if the Corps refuses to conduct an EIS, it must supplement the 2002/2004 EA in order to comply with NEPA. Under NEPA, supplemental analysis is required when "there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" or "the agency makes substantial changes in the proposed action that are relevant to environmental concerns." 40 C.F.R. § 1502.9(c)(1)(ii). The significant new circumstances or information include the following:

- Additional federal authorizations, if any.

- Changing the proposed borrow areas from three offshore sites to Big Pass, which would be highly environmentally controversial concerning the impacts on Siesta Key. See, e.g., 40 C.F.R. § 1508.27(b)(4).

- Changes in Florida coastal management policy, goals, or regulations over the last ten years that would apply to or could affect the project area.

- Changes in state, county or city policy, goals, or regulations that would apply to or could affect the project area. Such changes would include, but are not limited to, the 2008 Sarasota County Inlet Management Plan, the 2008 FDEP Strategic Beach Management Plan, the Sarasota County Comprehensive Plan, and the Sarasota City Environmental Protection and Coastal Islands Plan.

- New information regarding the project area. This would include shoreline change data for the years since 1999; the Corps' 2008 study, *Application of Regional Sediment management Techniques at New Pass and Big Sarasota Pass, Florida*, by Steven M. Bratos, MSCE and Jason A. Engle, MSCE; the 2008 report, *Regional Model for Sarasota Bay and Case Studies of Longboat Pass and Venice Inlet* by Humiston & Moore Engineers, the 2006 *Topographic and Bathymetric Survey Report* by Coastal Engineering Consultants, the 2007 *Sediments of New Pass and Big Pass* by the University of South Florida, the *2007 Current Measurements at Big Sarasota Pass and New Pass* by Davis, Beck and Ping, *Morphodynamics of Big Sarasota Pass*, the 2007 *New Pass Elucidated From Time Series Aerial Photos* by Davis, Beck and Ping, the *2007 Erosion Analysis Report* by Coastal Engineering Consultants. All of these reports and studies were published after the 2004 EA update and are not cited.

In addition, as was noted above, there are significant changes in the Project itself since 2004, such as obtaining the renourishment sand from offshore, that would require a supplemental NEPA analysis. See DuBois v. United States Department of Agriculture, 102 F.3d 1273, 1291-92 (1st Cir. 1996); Environmental Defense Fund v. Marsh, 651 F.2d 983, 992-94 (5th Cir. 1981). There have been, or will be, changes from the original Corps' project which require a supplemental EIS because they reconfigured the project and would impact new areas. Environmental Defense Fund, supra, 651 F.2d at 992-994.

Section 404

Section 404 prohibits the discharge of dredged or fill material into navigable waters except in compliance with a Corps permit issued under Section 404, 33 U.S.C. § 1344. See 33 U.S.C. § 1311(a). Pursuant to the 404(b)(1) Guidelines, *see* 33 U.S.C. § 1344(b)(1); 40 C.F.R. Part 230, the Army Corps should only issue a Section 404 permit

when the proposed project: (1) is the least environmentally damaging practicable alternative (the "LEDPA") to meet the project purpose; (2) will not violate other environmental standards, including applicable water quality standards; (3) avoids impacts to specially protected species or aquatic sites; and (4) adequately minimizes and compensates for unavoidable wetland and other aquatic resource losses. See 40 C.F.R. § 230.10(a)–(d). The Section 404 permitting process is particularly focused on avoiding and minimizing impacts to special aquatic sites. See 40 C.F.R. §230.10. Special aquatic sites are "geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region." 40 C.F.R. § 230.03 (q-1). In light of its designation as an Outstanding Florida Water, Big Pass should be considered a special aquatic site, as may be other possibly affected areas.

The 404(b) analysis included in Appendix 1 of the 2002 EA does not meet the CWA's standard. The 404(b) analysis is inadequate in light of the twelve years that have passed since its drafting, its failure to address impacts to Big Pass as a special aquatic area, and its failure to demonstrate that the Project is the LEDPA. We ask that it be redone to address these points.

Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the Marine Mammal Protection Act

Consultations with the Fish and Wildlife Service and National Marine Fisheries Service are required in order to comply with Section 7 of the Endangered Species Act (regarding effects to threatened and endangered species), the Magnuson-Stevens Fishery Conservation and Management Act (regarding impacts to Essential Fish Habitat), and the Marine Mammal Protection Act (regarding effects to marine mammals). Given the twelve years and numerous changed circumstances that have passed since the Corps' consultations with these agencies, these consultations must be re-initiated in order to fully comply with these federal statutes.

Water Resources Development Act of 1999

As acknowledged in the 2002/2004 EA, the current project is significantly different than the project authorized by Section 364(2) of the WRDA of 1999 and exceeds the maximum project cost allowed by Section 902 of the WRDA of 1999. Please explain the consistency of the Project with the WRDA, and please explain if there has been any additional Congressional action, and, if not, why further Congressional authorization is not required prior to any Corps action on the Project.

Conclusion

In summary, we note that these are only preliminary comments and questions and we reserve the right to comment further. It appears that there is a lack of cooperation and understanding between and amongst the various agencies, stakeholders and the public concerning the project purpose, scope, potential impacts and alternatives. In light of the significant concerns and questions raised in this letter we believe that a thorough evaluation of this costly project is required, with adequate public and agency input, particularly analyzing those alternatives which would avoid obtaining renourishment sand from Big Pass.

Accordingly, we ask the Corps to hold a formal public hearing on this matter, in which Sarasota citizens can ask the Corps questions and receive answers and make public comments. We also, as explained above, request that an EIS be prepared in accordance with NEPA.

Should you have any questions, I can be reached via telephone 813-229-4101 or via email at dhemke@cfjblaw.com.

Very truly yours,

CARLTON FIELDS JORDEN BURT, P.A.

Donald E. Hemke

Copy furnished
Milan A. Mora, Project Manager, Jacksonville District, USACOE,
via email Milan.A.Mora@usace.army/mil
Sarasota Mayor Shannon Snyder, via email Shannon.Snyder@sarasotagov.com
Sarasota Vice Mayor Willie Shaw, via email Willie.Shaw@sarasotagov.com
Sarasota Commissioner Suzanne Atwell, via email Suzanne.Atwell@sarasotagov.com
Sarasota Commissioner Paul Caragiulo, via email Paul.Caragiulo@sarasotagov.com
Sarasota Commissioner Susan Chapman,
via email Susan.Chapman@sarasotagov.com
Sarasota City Engineer Alexandrea DavisShaw,
via email Alexandrea.DavisShaw@sarasotagov.com
Sarasota City Attorney Robert Fournier, via Robert.Fournier@sarasotagov.com
Sarasota County Commissioner Carolyn L. Mason, via email cmason@scgov.net
Sarasota County Commissioner Joseph A. Barbetta, via email jbarbett@scgov.net

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Sarasota County Environmental Services Coastal Resources Manager Laird Wreford,
via email LWREFORD@scgov.net
Sarasota County Attorney Stephen E. DeMarsh, via email sdemarsh@scgov.net
Sarasota Yacht Club, via email pete@plkujawski.com
Commodore of Bird Key Yacht Club, via email birdkeytachtclubyc.com
Siesta Key Chamber of Commerce, via Debra@siestkakeychamber.com
David Shafer, via David@Shafer-consulting.org
Jono Miller, via email jonosarasota@gmail.com
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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

June 18, 2014

Office of Counsel

Donald E. Hemke
Carlton Fields Jorden Burt, P.A.
4221 W. Boy Scout Boulevard
Suite 1000
Tampa, Florida 33607-5780

Dear Mr. Hemke:

Thank you for your letter of May 14, 2014 to Colonel Dodd regarding the Lido Key Project. I am responding on his behalf. As you requested, the U.S. Army Corps of Engineers ("Corps") will include you on our list to receive public notices related to the project, and you should be receiving a letter from the Corps in the near future inviting you and your clients to participate in scoping meetings scheduled for Wednesday, July 23, 2014 in Sarasota for the Corps to obtain input on project implementation including sand sources.

The scoping meetings will begin the process for the Corps to update, as appropriate, its National Environmental Policy Act ("NEPA") analysis from 2002 (with 2004 addendum) and for the Corps to consider alternative sources of material for beach placement. This process will involve Federal, State and local agencies as well as the public. The Corps intends to fully consider alternatives and potential impacts and prepare requisite documentation in accordance with NEPA. We look forward to receiving your clients' input related to potential navigation and environmental impacts and other areas of concern. Any construction of the authorized project will occur in full compliance with applicable laws including the Clean Water Act and the Endangered Species Act.

We welcome your engagement throughout this public process. If you have questions or concerns, please do not hesitate to contact me at 904-232-1164 or by e-mail at brooks.w.moore@usace.army.mil.

Sincerely,

Brooks W. Moore
Supervisory Attorney for Civil Works

Coastal Dunes Associates, Inc.

July 23, 2014

Dr. Aubree Hershorin, Ph.D
USACOE
Jacksonville, District
Planning and Policy Division
PO Box 4970
Jacksonville, FL 32232

Received
23 July 2014
Date

Dear Dr. Hershorin,

RE: Questions raised at July 23rd Scoping Meeting at Sarasota City Hall re: Lido Beach Project

The following are questions that I raised at the July 23rd Scoping Meeting held at City Hall regarding the proposed COE action on Lido Beach and the dredging of Siesta Key Shoal. Please enter this letter into the official record. They were:

1. Does the COE intend to produce an Environmental Impact Study (EIS) for the proposed action? If not, what is the environmental justification for concluding that the impacts of this project are not major impacts?

2. Does the COE intend to supplement the Environmental Assessment (EA) that was done in 2002 and amended in 2004? The following changes have occurred since the original EA, including studies and assessments that were not incorporated into the EA.

    - Changing the proposed borrow areas from three offshore sites to Big Pass, which would be highly environmentally controversial concerning the impacts on Siesta Key. See, e.g., 40 C.F.R. § 1508.27(b)(4).
    - Additional Federal authorizations, it any

    - Changes in Florida coastal management policy, goals, or regulations over the last ten years that would apply to or could affect the project area.

    - Changes in state, county or city policy, goals, or regulations that would apply to or could affect the project area. Such changes would include, but are not limited to, the 2008 Sarasota County Inlet Management Plan, the 2008 FDEP Strategic Beach Management Plan, the Sarasota County Comprehensive Plan, and the Sarasota City Environmental Protection and Coastal Islands Plan.

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robpatten@gmail.com

- Recent public information regarding the project area. This would include shoreline change data for the years since 1999; the Corps' 2008 study, *Application of Regional Sediment management Techniques at New Pass and Big Sarasota Pass, Florida*, by Steven M. Bratos, MSCE and Jason A. Engle, MSCE; the 2008 report, *Regional Model for Sarasota Bay and Case Studies of Longboat Pass and Venice Inlet* by Humiston & Moore Engineers, the 2006 *Topographic and Bathymetric Survey Report* by Coastal Engineering Consultants, the 2007 *Sediments of New Pass and Big Pass* by the University of South Florida, the *2007 Current Measurements at Big Sarasota Pass and New Pass* by Davis, Beck and Ping, *Morphodynamics of Big Sarasota Pass*, the 2007 *New Pass Elucidated From Time Series Aerial Photos* by Davis, Beck and Ping, the *2007 Erosion Analysis Report* by Coastal Engineering Consultants. All of these reports and studies were published after the 2004 EA update and are not cited.

    - In addition, as was noted above, there are significant changes in the Project itself since 2004, including a change in the borrow area.

1. The Plan assumes that the groins will be continually covered with sand and therefore will not create downdrift erosion. What is the historical evidence to show that this area does not experience significant erosion as a result of storms on an average of every five years?

2. What percentage of the total project cost do the groins represent?

3. Has modeling shown that removing the groins will reduce the 'life' of the design project and increase the frequency of periodic renourishment? If so, to what extent?

4. The COE has publicly stated that if the project is authorized it will allow them to expedite an emergency project that will repair the erosion caused by a storm. Based on past projects in Florida that fell under these criteria what is the average elapsed time between the date of the storm and the pumping of sand onto the damaged beach? What was that time frame for the Debby repair planned for Lido Beach this fall?

5. Why are three groins proposed for the southern end of the project and why is the southern groin offset to the extent it is? Is there any concern by the COE that, if exposed, that groin would cause erosion to the beach north of the groin?

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robpatten@gmail.com

6. Big Pass is designated by the State of Florida as an Outstanding Florida Water (OFW). How will this impact the state permitting process?

7. Has a 'Local Preferred Option' been requested by the City of Sarasota? How long would it take the COE to develop the local cost-sharing amount for that change?

8. Do the models you used predict a specific quantity of sand associated with the models' results? In other words, if the model shows accretion or erosion in a certain area is there a cubic yard amount associated with that prediction?

9. Has any other municipality or agency, either during meetings or through correspondence with the COE, expressed an interest in using the Siesta Key Shoal as a sand source in the future?

Thanking you in advance for your consideration and response to these questions. I look forward to your reply

Sincerely,

Rob Patten
Environmental Consultant
President, Coastal Dunes Associates, Inc.

Cc: Mr. Milan Mora, Project Manager

220 South Pineapple Ave, Suite 700 Sarasota, FL 34236
robpatten@gmail.com

Thomas W. Reese
Attorney At Law
2951 61st Avenue South
St. Petersburg, Florida 33712
(727) 867-8228
TWReeseEsq@aol.com

July 28, 2014

Via Electronic Mail

Colonel Alan M. Dodd
District Commander
Jacksonville District
U.S. Army Corps of Engineers
701 San Marco Boulevard
Jacksonville, FL 32207
alan.m.dodd@usace.army.mil

Attention: Aubree Hershorin, Ph.D.
Aubree.G.Hershorin@usace.army.mil

Subject: U.S. ACOE NEPA Scoping- Mining Big Sarasota Pass OFW and Groin Field on Lido Key, Sarasota County, Florida

Dear Colonel Dodd:

I write on behalf of the Florida Wildlife Federation (FWF) regarding the U.S. Army Corps of Engineers (Corps) National Environmental Policy Act (NEPA) scoping process notice for public comments concerning the Corps new proposal to dredge the ebb tidal shoal of the Big Sarasota Pass Outstanding Florida Water (OFW). The Corps scoping notice also requested comments the Corps proposed groin field at the south limits of the proposed beach nourishment of Lido Key, and the Corps "No Action" alternative.

Prior to this NEPA scoping notice, the Corps proposed sources of sand for the proposed beach nourishment of Lido Key was offshore borrow areas in the Gulf of Mexico outside the Sarasota Bay Estuarine System OFW and its OFW tidal inlets.

The Corps new proposal is to dredge the ebb tidal shoal of the Big Sarasota Pass OFW. This new Corps proposal raises a series of new and important environmental impact issues which the Corps current administrative record fails to consider or address.

FWF'S Request to the Corps

The FWF respectfully requests the Corps comply with the National Environmental Protection Act (NEPA), 42 U.S.C. §4321-4347, by preparing an Environmental Assessment (EA) which

determines that the Corps needs to prepare an Environmental Impact Statement (EIS) concerning the impacts of the Corps new proposal to dredge the Big Sarasota Pass OFW. In order for the Corps to adequately consider and address the new environmental impacts of the Corps new proposed dredging within the Sarasota Bay Estuarine System OFW, the Corps must prepare an environmental impact statement on the following issues.

A. Establish the OFW existing ambient water quality baselines

The Corps must establish the baseline OFW existing ambient water quality of Big Sarasota Pass, New Pass and Sarasota Bay, including the baseline fish diversity and abundance, the baseline water quality parameters, and the baseline mapping of submerged aquatic vegetation (SAV).

By rule, the OFW existing ambient water quality of Big Sarasota Pass, New Pass, and Sarasota Bay is that which existed between April 29, 1985 and April 29, 1986. As discussed below, Big Sarasota Pass, New Pass, and Sarasota Bay were designated on April 29, 1986, over 28 years ago, as OFW Special Waters (Fla.Admin.Code R. 62-302.700(9)(i)(29)). However, to date the OFW existing ambient water quality of Big Sarasota Pass, New Pass, and Sarasota Bay has never been established by anyone.

It is impossible for the Corps to determine where the proposed dredging of Big Sarasota Pass will comply with Florida's OFW antidegradation water quality standard without first establishing the OFW existing ambient water quality of Big Sarasota Pass, New Pass, and Sarasota Bay. Not only would it impossible for the Florida Department of Environmental Protection (FDEP) to issue the Corps a water quality certification for dredging the Big Sarasota Pass OFW without the Corps having established the applicable OFW existing ambient water quality, it would be arbitrary and capricious, and not in accordance with law, for the Corps to request the Florida Department of Environmental Protection (FDEP) to issue a state water quality certification without first establishing the OFW existing ambient water quality of Big Sarasota Pass, New Pass, and Sarasota Bay. See, Save Anna Maria, Inc. v. Department of Transp., 700 So.2d 113, 117-118 (Fla. 2nd DCA 1997)(FDEP permit for a new Anna Maria Island bridge over the Sarasota Bay Estuarine System OFW denied due to FDOT's failure to establish the existing ambient water quality of the Sarasota Bay Estuarine System OFW); DeCarion v. Dept. Environmental Regulation, 445 So.2d 619, 621 (Fla. 1st DCA 1984) (permit denied for activities outside the John Pennekamp Coral Reef State Park OFW because the permit applicant had failed to met the no significant degradation standard of the existing ambient water quality of an OFW for projects outside the OFW).

B. Determine whether the proposed dredging of Big Sarasota Pass causes any degradation of the OFW existing ambient water quality of Big Sarasota Pass, New Pass or Sarasota Bay

Once the Corps establishes the OFW existing ambient water quality of Big Sarasota Pass,

New Pass, and Sarasota Bay, the Corps must then proceed to determine whether the Corps proposed dredging activity in Big Sarasota Pass will collectively cause or contribute to any degradation of OFW existing ambient water quality of Big Sarasota Pass, New Pass, and Sarasota Bay. As discussed in more detail below, in order to make this OFW antidegradation water quality determination the Corps must first: a) establish the existing baseline tidal prisms and tidal velocities for Big Sarasota Pass and New Pass, the two tidal inlets which function as a multiple inlet system in dynamic equilibrium; b) establish the existing actual volume sand stored in the bayside flood-tidal delta (shoal) of Big Sarasota Pass, and if it will be altered by mining the tidal ebb-shoal; and c) the effect of the proposed mining of the Big Sarasota Pass tidal ebb-delta on the re-suspension and transport of particulates in Big Sarasota Pass.

Any detectable or measurable degradation of the existing ambient water quality of Big Sarasota Pass, New Pass, and Sarasota Bay by the Corps proposed dredging activity within the Big Sarasota Pass OFW is prohibited by Fla.Admin.Code R. 62-320.700(1). See, Save Anna Maria, Inc. v. Department of Transp., 700 So.2d 113, 117-118 (Fla. 2nd DCA 1997); Arkansas v. Oklahoma, 503 U.S. 91, 111 (1992) (EPA interpreted the Oklahoma antidegradation WQS of "no degradation" of the upper Illinois River to be violated if the discharge effected an "actually detectable or measurable" change in water quality).

C. Establish the existing baseline tidal prisms and tidal velocities for Big Sarasota Pass and New Pass

The Corps must establish the existing baseline tidal prisms and tidal velocities for both Big Sarasota Pass and New Pass. Because these two OFW tidal inlets function as a multiple inlet system in dynamic equilibrium (Beck and Wang, 2009), the Corps must determine the impacts of dredging the Big Sarasota Pass tidal ebb-shoal has upon not only the tidal prism and tidal velocities in Big Sarasota Pass, but also the impact of such dredging on the tidal prism and tidal velocity of the New Pass OFW.

Tidal prism volume of water flowing in or out of these two tidal inlets is a critically important and directly related to the existing ambient water quality, especially for salinity inputs, circulation of Sarasota Bay Estuarine System OFW, flushing of the Sarasota Bay Estuarine System OFW, dissolved oxygen levels in the Sarasota Bay Estuarine System OFW, and inlet stability of Big Sarasota Pass and New Pass.

D. Establish the existing baseline bayside flood-delta (shoal)

The Corps has not yet identified the existing actual volume sand stored in the bayside flood-delta (shoal) of Big Sarasota Pass, and if the bayside flood-delta (shoal) of Big Sarasota Pass would be altered by the Corps proposed mining the Big Sarasota Pass tidal ebb-shoal. The Corps also has not addressed the issue of whether mining the tidal ebb-shoal of Big Sarasota Pass will cause erosion of the bayside flood-delta and adjacent bay bottom and related SAVs. The Corps must establish the shoal volume relationship between the tidal ebb-delta on the gulf side of

Big Sarasota Pass with the bayside flood-delta of Big Sarasota Pass.

E. The effect of mining the tidal ebb-delta on the re-suspension and transport of particulates in Big Sarasota Pass

The Corps has not assessed and identified the effect of the Corps proposed mining of the Big Sarasota Pass tidal ebb-delta on the re-suspension and transport of particulates in the Big Sarasota Pass OFW.

F. The effect of the new Longboat Pass management actions on the tidal prism of Big Sarasota Pass

The Corps needs to undertake a baywide assessment of the effects of tidal inlet management plans for the five tidal inlets of the Sarasota Bay OFW. These five tidal inlets are the Passage Key Inlet, Longboat Key Pass OFW, the New Pass OFW, the Big Sarasota Pass OFW and the Venice Inlet, three of which are Federally-managed channels that are periodically dredged, and one of which has is fixed by jetties.

All of these tidal inlets are connected to the Intracoastal Waterway which extends completely through the Sarasota Bay Estuarine System OFW, exerting a string influence on the hydraulic characteristics of these five interrelated OFW tidal inlets.

The Corps is proposing a fifty (50) year dredging project for Big Sarasota Pass. Such a long term management plan needs a comprehensive EIS assessment of the Sarasota Bay Estuarine System OFW.

FWF's Affected Interests

FWF is duly incorporated under the laws of the State of Florida as a not for profit conservation protection corporation. The FWF has its office headquarters is in Tallahassee, Florida, and regional offices in Naples and St. Augustine, Florida.

The FWF has over 14,000 members and approximately 60,000 supporters. The members of FWF use and enjoy the surface waters of the State of Florida for recreational and aesthetic purposes, including fishing, boating, canoeing, kayaking, swimming, wading, research, photography, and observation of Florida's aquatic ecosystems.

The corporate purposes of the FWF include the protection of the environment, protecting and conserving fish and wildlife resources, and the protection of the air and water quality of the State of Florida and the nation. For decades the FWF has been actively advocating and litigating pursuant to the CWA for the protection and improvement of surface water quality in the State of Florida.

The Corps proposed action will adversely affect the substantial interests and rights of FWF members to use and enjoy Florida's surface waters. FWF members suffer injuries in fact if the Corps fail to conduct an EIS which takes a "hard look" at the impacts of the proposed Big Sarasota Pass dredging on the OFW existing ambient water quality of Big Sarasota Pass, New Pass and Sarasota Bay.

The Corps Proposed Project

The Corps June 9, 2014 NEPA Scoping Meeting Notice states the Corps proposed project involves the "nourishment of an 80-foot wide beach berm over 1.56 miles shoreline with a groin field at the southern limits of the project [on Lido Key in Sarasota County, Florida]. Periodic nourishment was to be accomplished at 5-year intervals over 50 years of Federal participation."

The Corps scoping notice stated that in 2013-2014, "the Corps evaluated ten alternatives using the ebb shoal of Big Sarasota Pass as a sand source." The notice stated the "Corps proposes to further evaluate the sand source alternatives, including alternatives identified in the draft report as the Big Sarasota Pass ebb shoal and the "No Action" alternative. The notice invited public comment and concerns relevant to the project implementation and alternative sand sources.

National Environmental Protection Act

The National Environmental Protection Act (NEPA) requires that all agencies of the federal government prepare a "detailed statement" regarding all "major Federal actions significantly affecting the quality of the human environment..." (42 U.S.C. Section 4332(2)(c)).

To determine whether an EIS is required, the Corps must prepare an Environmental Assessment (EA).(40 C.F.R. 1501.4). This EA must consider the ten "significant factors" set forth in the Council of Environmental Quality's (CEQ) NEPA regulations. When one or more of these "significant factors" are present, the Corps must prepare an EIS before deciding whether to take the proposed major federal action. (40 C.F.R. §1508.27(b)).

The CEQ NEPA regulation significant factors pertinent in this application are as follows.

1. The unique characteristics of the area in question. Big Sarasota Pass is a unique undredged OFW naturally functioning tidal inlet on the west coast of Florida. Big Sarasota Pass and New Pass are also a unique multiple tidal inlet system that function in dynamic equilibrium with each other.

2. The effects of the Corps proposed action are highly controversial as reflected by public comment objecting to the proposed Corps project.

3. Approval of the Corps proposed action may establish a precedent for future

actions with significant effects which will ultimately eliminate all undredged tidal inlets in Florida's.

4. The action may result in cumulative effects of dredging OFWs without establishing the OFW existing ambient water quality.

5. There are substantial questions raised as to whether the project may cause degradation of the Sarasota Bay Estuarine System OFW, a degradation prohibited by Fla.Admin.Code R. 62-302.700(1).

The Corps must carefully assess and take a "hard look" at the direct, indirect (secondary) and cumulative effects of the proposed activity, the practicable alternatives of off-shore borrow sites, and explain the reasons for the decision made, and demonstrate reasoned decision making. (40 C.F.R. §230.10(c), 230.11, 230.12; 33 C.F.R. Section 320.4(a); Sierra Club v. Watkins, 808 F.Supp. 870, 871-72 (D.D.C. 1991; Sierra Club v. Flowers, 423 F. Supp.2d 1273 (S.D.Fla. 2006)(hard look and independent evaluation and analysis of alternatives and possible affects based upon administrative record); National Wildlife Federation v. Norton, 332 F.Supp.2d 170 (D.C. Dist. 2004)(failure to analyze cumulative impact, and failure to articulate rational connection between administrative record and permit decision); Florida Wildlife Federation v. U.S. Army Corps of Engineers, 401 F.Supp.2d 1298 (S.D.Fla. 2005)(failure to take hard look at alternatives and cumulative impacts).

The Corps must "rigorously explore and objectively evaluate" all reasonable alternatives, including "No Action." (42 U.S.C. Section 4332(2)). In order for the Corps to take the "hard look" at the impacts of the proposed action the Corps must:

a) Establish the OFW existing ambient water quality baseline of fish diversity and abundance, baseline water quality parameters, and baseline SAV;

b) Determine whether the Corps proposed dredging activity in Big Sarasota Pass will collectively cause or contribute to any degradation of OFW existing ambient water quality of Big Sarasota Pass, New Pass, and Sarasota Bay.

c) Establish the existing baseline tidal prisms and tidal velocities for Big Sarasota Pass and New Pass, the two tidal inlets which function as a multiple inlet system in dynamic equilibrium;

d) Establish the existing actual volume sand stored in the bayside flood-tidal delta (shoal) of Big Sarasota Pass, and if it will be altered by mining the tidal ebb-shoal; and

e) Determine the effect of the proposed mining of the Big Sarasota Pass tidal ebb-delta on the re-suspension and transport of particulates in Big Sarasota Pass.

Florida's Tier 2.5 OFW Antidegradation WQS

Fla.Admin.Code R. 62-302.200(42) defines Florida's water quality standards as follows.

"(42) "Water quality standards" shall mean standards composed of designated

> present and future most beneficial uses (classification of waters), the numerical and narrative criteria, incuding Site Specific Alternative Criteria, applied to the specific water uses or classification, the Florida antidegradation policy, and the moderating provisions, sush as variances, mixing zones,rule rovisions, or exceptions." (e.s.).

Florida's current antidegradation water quality standands consist of four tiers: Tier 1, Tier 2, Tier 2.5 (OFW), and Tier 3. Florida's antidegradation water quality standards for Tier 1 and 2 are set forth in Fla.Admin.Code R. 62-302.300, and the antidegradation WQSs for Tier 2.5 and 3 are set forth in Fla.Admin.Code R.62-302.700 and Fla.Admin.Code R. 62-4.242(2) & (3).

Florida's OFW antidegradatiion water quality standard in Fla.Admin.Code R. 62-302.700(1) reads in pertinent part as follows.

> "62-302.700 Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters.
>
> "(1) It shall be the Department policy to afford the highest protection to Outstanding Florida Waters and Outstanding National Resource Waters. No degradation of water quality, other than that allowed in subsections 62-4.242(2) and (3), F.A.C., is to be permitted in Outstanding Florida Waters and Outstanding National Resource Waters, respectively, notwithstanding any other Department rules that allow water quality lowering." (e.s.).

Thus, Rule 62-302.700(1) provides that "no degradation" of OFW water quality is allowed "other than that allowed in subsection 62-4.242(2)." Fla.Admin.Code R. 62-4.242(2)(a) provides that

> "[n]o permit or water quality certification shall be issued for any proposed activity or discharge within Outstanding Florida Waters, or which significantly degrades, either alone or in combination with other sources or activities, any Outstanding Florida Waters, unless the applicant affirmatively demonstrates that: .... the proposed activity or discharge is clearly in the public interest, and .... the existing ambient water quality within Outstanding Florida Waters will not be lowered as a result of the proposed activity or discharge...". (e.s.).

Fla.Admin.Code R. 62-4.242(2)(c) defines "existing ambient water quality" of an OFW as follows.

> "(c) For purpose of this section the term 'existing ambient water quality' shall mean (based upon the best scientific information available) the better of either (1) that which could reasonable be expected to have existed for the baseline year of an Outstanding Florida Water designation or (2) that which existed during the

> year prior to the date of a permit application. It shall include daily, seasonal, and other cyclic fluctuations, taking into consideration the effects of actual allowable discharges for which Department permits were issued or applications for such permits were filed and complete on the effective date of the designation.

Fla.Admin.Code R. 62-302.700(8) sets forth how the baseline year for defining "existing ambient water quality" as follows.

> "(8) For each Outstanding Florida Water listed under subsection 62-302.700(9), F.A.C., the last day of the baseline year for defining the existing ambient water quality (paragraph 62-4.242(2)(C), F.A.C.) is March 1, 1979, unless otherwise indicated. Where applicable, Outstanding Florida Water boundary expansions are indicated by date(s) following "as mod." under subsection 62-302.700(9), F.A.C. For each Outstanding Florida Water boundary which expanded subsequent to the original date of designation, the baseline year for the entire Outstanding Florida Water, including the expansion, remains March 1, 1979, unless otherwise indicated."

FDEP's OFW antidegradation water quality standard has been harmoniously interpreted by two separate detailed Florida appellate court decisions. These two Florida appellate court decisions are binding upon FDEP and the Corps because Florida's stare decisis doctrine holds that a district court of appeal decision is binding throughout Florida unless there is a conflict with an decision of another district court of appeal, or a contrary precedent from the Florida Supreme Court. Pardo v. State, 596 So.2d 665, 667 (Fla. 1992); Brannon v. State, 850 So.2d 452, 458 (n.4) (Fla. 2003). There is no conflict between these two appellate court decisions, nor is there a contrary precedent from the Florida Supreme Court.

In Save Anna Maria, Inc. v. Department of Transp., 700 So.2d 113, 117-118 (Fla. 2nd DCA 1997), Florida's Second District Court of Appeal interpreted Fla.Admin.Code R. 62-4.242(2)(c) to require that applicants for any FDEP approval under Rule 62-4.242(b) must establish the existing ambient OFW water quality during the year prior to the date of a permit application as required by Fla.Admin.Code R. 62-4.242(2)(c). This appellate court opinion affirmed FDEP's final order which denied Fla. Department of Transportation's (FDOT) permit application for a bridge over an OFW denied due to FDOT's failure to establish the existing ambient water quality of the subject OFW.

In DeCarion v. Dept. Environmental Regulation, 445 So.2d 619, 621 (Fla. 1st DCA 1984), Florida's First District Court of Appeal interpreted Fla.Admin.Code R. 17-4.242(b) (renumbered now by FDEP to Fla.Admin.Code R. 62-4.242(b)) to "prohibit any degradation of water quality below ambient conditions for projects located within outstanding Florida waters, and prevents any significant degradation of such waters by projects located outside the outstanding Florida water."(e.s.). This appellate court opinion affirmed a FDER final order which denied a permit application for activities outside the John Pennekamp Coral Reef State Park OFW on the grounds

of the applicant had failed to met the no significant degradation standard of the existing ambient water quality of an OFW for projects outside the OFW.

These two appellate decisions collectively hold that:

(A) No permit is allowed by Fla.Admin.Code R. 62-4.242(2) for activity in an OFW, or outside an OFW and affecting the OFW, unless the permit applicant affirmatively establishes the existing ambient water quality of the affected OFW.

(B) That no degradation of the existing ambient water quality of an OFW is allowed by activities within the OFW. See, Arkansas v. Oklahoma, 503 U.S. 91, 111 (1992) (EPA interpreted the Oklahoma antidegradation WQS of "no degradation" of the upper Illinois River to be violated if the discharge effected an "actually detectable or measurable" change in water quality).

(C) Activities outside an OFW are limited to insignificant cumulative degradation of the affected OFW's "existing ambient water quality."

FWF Request for Notification

The FWF request the Corps provide to their undersigned legal counsel, Thomas W. Reese, notification of any Corps decision or action reqarding the Corps NEPA Scoping process, and notice of any Corps permit application or request for water quality certification to FDEP, if one is made, for this proposed Corps project.

Thank you for consideration of these comments.

Very truly yours,
/S/ Thomas W. Reese

Thomas W. Reese
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(727) 867-8228
twreeseesq@aol.com

cc: Milan A. Mora (Milan.A.Mora@usace.army.mil
Peter van Roekens (pnvr@earthlink.net)
Manley K. Fuller, III (FWF) (wildfed@gmail.com)

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

September 11, 2014

Office of Counsel

Thomas W. Reese
2951 61st Avenue South
St. Petersburg, Florida 33721

Dear Mr. Reese:

Thank you for your letter of July 28, 2014 to Colonel Dodd on behalf of Florida Wildlife Foundation ("FWF") regarding the Lido Key Hurricane and Storm Damage Reduction Project. I am responding on Colonel Dodd's behalf. As you requested, the U.S. Army Corps of Engineers ("Corps") will include you on our list to receive public notices related to the National Environmental Policy Act ("NEPA") process for the project. We hope that you and your clients will fully participate in the NEPA process including meetings to be scheduled in December 2014 or January 2015 after release of a draft Environmental Assessment.

As you are aware, the Corps is in the early stages of updating, as appropriate, its NEPA analysis from 2002 (with 2004 addendum). This process will involve Federal, State and local agencies as well as the public. We will fully engage the Florida Department of Environmental Protection ("FDEP") throughout the process to provide input on water quality as well as other environmental issues. At this stage of the planning process, the Corps is considering alternative sources of material for the Lido Key Hurricane and Storm Damage Reduction Project and has not prepared a request for water quality certification to submit to FDEP. Any such request will follow the selection of a preferred alternative. As a matter of practice, within 14 days of submission, a notice of the Corps application for water quality certification will be publicly noticed in a local newspaper (legal notices section). The Corps will also publish notification of FDEP's intent to issue a permit. The complete permit application and permit will be posted on the FDEP Environmental Permitting website: http://www.dep.state.fl.us/beaches/permitting/permits.htm. Additionally, please feel free to contact me concerning the status of the water quality certification process and any relevant documentation that may be available upon request.

Regarding the tidal prism and shoaling impacts, the Corps' NEPA process will be informed, in part, by the Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project that is still in draft form (dated June 11, 2014) , available on our web page: http://www.saj.usace.army.mil/Portals/44/docs/Planning/EnvironmentalBranch/EnvironmentalDocs/SarasotaLidoBigSarasotaPassStudy.pdf. The Corps will also consider information gathered from agencies and the public throughout the planning phase.

The Corps will consider alternatives and potential impacts and prepare requisite documentation in accordance with NEPA. Any construction of the authorized project will occur in full compliance with applicable laws including the Clean Water Act. Again, we welcome your engagement and that of your clients during this public process. If you have questions or concerns, please do not hesitate to contact me at 904-232-1164 or by e-mail at brooks.w.moore@usace.army.mil.

Sincerely,

Brooks W Moore

Brooks W. Moore
Supervisory Attorney for Civil Works

Hershorin, Aubree SAJ

From: Engle, Jason A SAJ
Sent: Wednesday, July 30, 2014 4:26 PM
To: Vernon Johnson
Cc: stu gray; Legault, Kelly R SAJ; Mora, Millan A SAJ; Hershorin, Aubree SAJ
Subject: RE: [EXTERNAL] Lido Key Project (UNCLASSIFIED)
Attachments: cutB_ppt.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Mr. Johnson, Thank you for your email. The answers to your four questions are below.

1) The attached file is a map of the 'Cut B' area that is north and west of northern Siesta Key with distances shown from the edge of the proposed dredge area to the shoreline of Siesta Key.

2) There are two dredging alternatives being proposed--both of the alternatives would involve dredging in multiple proposed sites. The first alternative is for all three sites (northern portion of D3, C and B) to be dredged to -12 feet; the second alternative is for two sites to be dredged (northern D3 and B) to -14 feet.

3) The 50-year project life will start when initial construction is begun, so the 'clock' is not running on that 50-year period yet.

4) The estimated cost of initial construction is approximately $19 Million.

Respectfully,
Jason

Jason Engle, P.E.
Chief, Coastal Design Section
Jacksonville District, USACE
o: 904.232.2230
c: 904.579.6212

-----Original Message-----
From: Vernon Johnson [mailto:vjsiesta@hotmail.com]
Sent: Thursday, July 24, 2014 7:37 AM
To: Engle, Jason A SAJ
Cc: stu gray
Subject: [EXTERNAL] Lido Key Project

Jason, Thanks for you presentation at city Hall.
My original question: How far out in the Gulf will you be if taking sand from the proposed option closest to Siesta Key Beach.
My second observation: Has there been any consideration given to taken sand from all three proposed sites.
My third observation: Why is this project designed over a fifty year period, when requested funds may not be available until Fiscal year 2015-16 for the

initial phase.
Finally: What is the estimated costs for this first phase proposed project.
Thanks. Vern Johnson

Classification: UNCLASSIFIED
Caveats: NONE

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July 31, 2014

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

Dear Dr. Hershorin,

Mote Marine Laboratory (MOTE) is please to provide this communication in response to the June 19, 2014 request for comment issued by Eric L. Bush, Chief, Planning and Policy Division, U.S. Army Corps of Engineers (CoE), and regarding the Lido Key Hurricane and Storm Damage Reduction Project (PROJECT).

Our primary comment is that the best and most currently available science-based information should serve as the foundation upon which PROJECT options are developed by the CoE and decisions made by the community for which PROJECT option best serves their collective values and interests. In this regard, we note that it appears not to be the case for this PROJECT as no reference to any reports or peer-reviewed science publications dealing with flora or fauna or ecosystem level function past 2002 is included in any of the CoE material utilized for development of PROJECT options and environmental assessments (i.e., the August 2002 [with appendices] CoE "Lido Key Shore Protection Project Environmental Assessment", the October 2002 [with April 2004 addendum and appendices] CoE "Feasibility Report with Environmental Assessment for Sarasota County, Florida Hurricane and Storm Damage Reduction Project – Lido Key", and the Draft June 2014 [with appendices] CoE report "Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project").

There are numerous post-2002 peer-reviewed science publications that should be reviewed by CoE in development of PROJECT options. For example, Fazioli *et al.*, 2006, McHugh *et al.*, 2011, and Wells 2014 collectively describe the strong pattern of multi-decadal, multi-generational site fidelity of a resident Sarasota Bay community of dolphins to a range that includes Big Pass, as well as the relative importance of waters in and around passes to resident Sarasota Bay dolphins as compared to adjacent communities of dolphins using primarily Gulf waters. In the interest of brevity but by way of a single example, we would like to highlight the absence of any reference to a significantly important species, Spotted Eagle Rays (*Aetobatus narinari*), in any of the CoE material for development of PROJECT options and environmental assessments (i.e., CoE reports cited previously).

Since 2009 the Mote Spotted Eagle Ray Conservation Research Program has conducted studies on life history and seasonal occurrence of Spotted Eagle Rays in Southwest Florida coastal waters (see Bassos-Bassos-Hull *et al.* 2014, attached). Spotted Eagle Rays are listed as a protected species in Florida state waters and, therefore, should be considered in the environmental assessment and environmental monitoring plan for the PROJECT. We have observed Spotted Eagle Rays using all parts of the shoals (and feeding on the shell beds) in Big Pass since the initiation of our study. We believe particular attention should be paid to the use of the eastern shoals of the Big Pass area (proposed dredging section C) where we have observed high use particularly by spotted eagle ray pups (see attached Figure 1, Wilkinson *et al.*, in prep.). During our 2010-2013 surveys in this area, we also documented sightings of other marine mega-fauna species including all sharks, rays, dolphins, manatees, and sea turtles. Corresponding data for Spotted Eagle Ray, and other mega-fauna with date, latitude, longitude, and GPS track logs has also been collected.

In addition, one would expect the CoE to seek out the engagement of local knowledge when developing PROJECT options and environmental assessments. In this regard, there appears to be a somewhat surprising absence of any mention of, any apparent interaction with, or any apparent data input from MOTE research in any of the CoE PROJECT material (i.e., CoE reports cited previously). Hence, it is perhaps appropriate to provide some context for the comments MOTE has provided and opportunities for future engagement of MOTE in developing sampling and monitoring protocols for marine mega-fauna species in the proposed PROJECT dredging and renourishment areas.

MOTE is an independent, nonprofit marine science institution with multiple facilities in Florida and 24 research programs conducting world-class science on six of the world's seven continents. MOTE has been committed to ocean sciences since the institution was founded in 1955. With nearly 200 total staff, half of whom are in our Research Division and 33 of whom hold PhD's, we remain one of the few completely independent marine research institutions of our size and impact in the world. As such we have somewhat unique abilities and flexibility to nurture the innovation and potentially transformative marine research essential for addressing some of the most pressing grand challenges facing our oceans.

Throughout our history, MOTE scientists have published over 3,250 peer-reviewed manuscripts in scientific journals, technical reports and books, including work that has advanced the fields of shark behavior and biology, ocean observing systems, harmful algal bloom dynamics, coral reef ecology, immunology, ecotoxicology, marine mammal and sea turtle biology and population dynamics, ocean technology, benthic ecology, aquaculture systems research and development and numerous other areas of focus. In addition, Mote is home to the national Center for Shark Research, the only such center in the U.S. to receive a congressional designation. We have six campuses in Southwest Florida from Sarasota to the Florida Keys. Our primary campus in located on the barrier island between New Pass and Big Pass, the focal point for the PROJECT. The PROJECT site is literally in the backyard of one of the world's foremost marine research institutions, yet to the best of our knowledge MOTE has not been consulted in the preparation of any of the PROJECT's environmental assessments.

Please let us know if we can be of assistance in providing further input on the relationship of marine mega-fauna to the Big Pass shoals and in developing PROJECT sampling and monitoring protocols in any of our areas of scientific expertise.

Sincerely,

Michael P. Crosby, PhD, FLS

Attachments:

1) *Bassos-Bassos-Hull et al. 2014*
2) *Figure 1, Wilkinson et al., in prep.*

From:	Hershorin, Aubree SAJ
To:	Dr. M.P. Crosby
Cc:	Donna Basso; Kim Bassos Hull; Krystan Wilkinson; Jim Culter; Randall Wells; Robert Hueter; Spinning, Jason J SAJ; Mora, Millan A SAJ
Subject:	RE: [EXTERNAL] mote comments re Lido Key Hurricane and Storm Damage Reduction Project (UNCLASSIFIED)
Date:	Monday, November 03, 2014 3:04:22 PM

Classification: UNCLASSIFIED
Caveats: NONE

Dear Dr. Crosby,

Thank you for providing your comments in response to our request dated June 19, 2014. The U.S. Army Corps of Engineers (Corps) recognizes Mote Marine Laboratory as a world-class research facility, and feels lucky to have your facility located in such close proximity to this project.

The 2002 analysis of the Lido Key Hurricane and Storm Damage Reduction project pursuant to the National Environmental Policy Act (NEPA) considered an offshore borrow area as the sand source for Lido Key. Further analysis (2004-2006) showed that sand did not meet new FDEP criteria, prompting the City and Corps to conduct an extensive offshore sand search for other sources (2006-2010). This search did not locate any economically feasible offshore sources with compatible sand, and a subsequent inlet study conducted by the County in 2008 suggested the inlets (including New Pass and Big Sarasota Pass) should be studied further to identify whether sand accumulating in their associated shoals would be appropriate for use on area beaches.

The recent Corps modeling study ("Study of Big Sarasota Pass Sediment Mining Alternatives for Sarasota County, Lido Key Federal Shore Protection Project") was the first step in determining the feasibility of using Big Sarasota Pass as a sediment source. This study focused on modeling sediment transport through the system; the scope did not include an evaluation of environmental impacts associated with the use of the Pass. The modeling identified two dredging configurations that had either no effect or a beneficial effect on the Siesta Key shoreline to the south (with respect to erosion and accretion of sediment). The next step in the process is to conduct a detailed environmental analysis of these two dredging configurations pursuant to NEPA. The scope in this analysis will be expanded well beyond sediment transport to include any impacts to the human and natural environment.

Since it was only recently determined that the Pass could be dredged without negatively affecting Siesta Key, it would have been premature to conduct the extensive NEPA analysis before now. We are currently collecting data and identifying resources potentially at risk should the project be carried forward. The June 19 letter initiated this process, requesting input from organizations such as yours to assist in this analysis. The Corps recently completed benthic surveys of the project area, and is currently drafting an Environmental Assessment (EA). We anticipate that the Draft EA will be complete in late 2014. When complete, the Draft EA will be made available for review and comment by the public (typically a 45-day period). We will also hold a public meeting during the commenting period in late January 2015 to allow interested parties an opportunity to speak with the project team and have their questions addressed in person.

As you suggest in your letter, we are looking to partner with organizations such as Mote at this time to assist in our analysis due to their extensive knowledge of local resources.

Resources currently identified by the Corps that may be impacted by the project and that require additional consideration in the EA include:

* cultural resources;
* essential fish habitat (including hardbottoms and seagrasses);
* fish and wildlife (such as bottlenose dolphin and spotted eagle ray);
* navigation;
* recreation; and
* threatened and endangered species (including the Florida manatee, sea turtles, and smalltooth

sawfish).

We ask for your guidance on the accuracy of this list, and in identifying data availability/gaps related to these resources (or others that should be included). Should impacts to resources be identified, we would also value your assistance with developing monitoring or other methods of mitigating these impacts. If you could identify the researchers within your organization who would be most appropriate for us to contact for assistance, it would be greatly appreciated.

We look forward to working with Mote to ensure that the unique resources of Sarasota Bay are considered and protected during the evaluation and implementation of this project.

Best,
Aubree

~~~~~~~~~~~~~~~~~~~~~~~~~~
Aubree Hershorin, Ph.D.
Environmental Branch, Coastal Section
Planning and Policy Division
U.S. Army Corps of Engineers
701 San Marco Blvd.
Jacksonville, FL 32207
USACE Office: (904) 232-2136

-----Original Message-----
From: Dr. M.P. Crosby [mailto:mcrosby@mote.org]
Sent: Thursday, July 31, 2014 6:05 PM
To: Hershorin, Aubree SAJ
Cc: Donna Basso; Kim Bassos Hull; Krystan Wilkinson; Jim Culter; Randall Wells; Robert Hueter
Subject: [EXTERNAL] mote comments re Lido Key Hurricane and Storm Damage Reduction Project

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

Dear Dr. Hershorin,

Mote Marine Laboratory (MOTE) is please to provide the attached communication in response to the June 19, 2014 request for comment issued by Eric L. Bush, Chief, Planning and Policy Division, U.S. Army Corps of Engineers (CoE), and regarding the Lido Key Hurricane and Storm Damage Reduction Project (PROJECT).
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++++++++++++++

Dr. Michael P. Crosby, PhD, FLS

President & CEO

Mote Marine Laboratory

1600 Ken Thompson Parkway

Sarasota, Florida 34236
~~~~~~~~~~~~~~~~~~~~~~~~~~

Biography: www.mote.org/drcrosbybio <http://www.mote.org/drcrosbybio>

E-mail: mcrosby@mote.org <mailto:mcrosby@mote.org>

Website: www.mote.org <http://www.mote.org/>

Phone: (941) 388-4443

~

Adjunct Professor of Marine Science

University of Hawaii at Hilo

~

Immediate-Past President – Association of Marine Laboratories of the Caribbean

~

Immediate-Past President - Pacific Congress on Marine Science and Technology (PACON)

~

Past President - Sigma Xi-The Scientific Research Society

07.23.2014

To

Dr. Aubree Hershorin
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville
FL 32232-0019

Dear Dr. Hershorin,

Here are the questions that I raised at the afternoon session of the Army Corps of Engineers Scoping Meeting on July 23rd held at Sarasota City Hall.

1. Are you planning to create an area wide EIS as there are a number of inlets that would be affected by any dredging in Big Pass?

2. The Boaters' Coalition has taken over 5.5 M depth soundings in Big Pass and we often find dramatic shifts within a few weeks. How can morphology information gathered over ten years ago still be relevant?

3. Where in the plan is the dollar amount of dedicated funding that has been set aside each year for Siesta waterfront property, beaches and navigational impacts should remediation be required? Further, what is the speed with which these resources could be deployed?

4. Finally, where will you post all the questions that you have been asked along with your answers?

Please enter these questions as a part of the official record.

Thank you and I look forward to your response.

Sincerely,

Peter van Roekens

Peter van Roekens

Save Our Siesta Sands

Tel 941-685-1570 SOSS2, INC. 6600 S. Tamiami Tr. Sarasota, FL 34231 www.soss2.com soss2@earthlink.net

From:	Hershorin, Aubree SAJ
To:	Take Action
Cc:	Mora, Millan A SAJ; "Alex DavisShaw"; "Laird Wreford"
Subject:	RE: [EXTERNAL] SOSS2 Questions as submitted by Peter van Roekens on 7/23/14 RE: Lido Key Hurricane and Storm Damage Reduction Project (UNCLASSIFIED)
Date:	Wednesday, July 30, 2014 9:42:01 AM

Classification: UNCLASSIFIED
Caveats: NONE

Dear Peter,

It was nice to meet you last Wednesday as well. Thank you for providing your written comments on the Lido Key Hurricane and Storm Damage Reduction (HSDR) project. Your correspondence will be included in an appendix to the draft NEPA document (currently anticipated to be an Environmental Assessment, or EA). Each question/comment will be addressed and the Corps' response will be included within the document. We hope to have this document complete in late 2014, and it will be made available for a 45-day public comment period. As was discussed during the public meeting, the NEPA process typically begins with an EA. If the EA finds that the project would significantly affect the environment and these effects cannot be mitigated, an Environmental Impact Statement would be required. If not, a Finding of No Significant Impact would be prepared for signature by the USACE, Jacksonville District Commander, following the public comment period and finalization of the draft EA.

We will provide a "Notice of Availability" of the draft EA to interested parties to initiate the public comment period, and I have included your contact information on the mailing list for this notice. The draft EA will be made available to the public at the USACE website: <http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Sarasota > (this webpage will also be referenced in the notice). This webpage is where you can find other documents pertaining to the project as well, including the Feasibility Report and EA from 2002/2004 and the modeling report completed in June 2014.

We plan to host another public meeting during the public comment period. The date/location of that meeting is still to be determined, but information regarding it will be included in the Notice of Availability previously mentioned.

If you have any other questions regarding this project, please do not hesitate to contact me.

Thank you again for your interest in this project!

Aubree

~~~~~~~~~~~~~~~~~~~~~~~~~
Aubree Hershorin, Ph.D.
Environmental Branch, Coastal Section
Planning and Policy Division
U.S. Army Corps of Engineers
701 San Marco Blvd.
Jacksonville, FL 32207
Phone: (904) 232-2136

-----Original Message-----
From: Take Action [mailto:soss2@earthlink.net]
Sent: Thursday, July 24, 2014 9:25 AM
To: Hershorin, Aubree SAJ
Cc: Mora, Millan A SAJ; 'Alex DavisShaw'; 'Laird Wreford'
Subject: [EXTERNAL] SOSS2 Questions as submitted by Peter van Roekens on 7/23/14 RE: Lido Key Hurricane and Storm Damage Reduction Project

Dear Dr. Hershorin, I was pleased to meet you yesterday at the meeting as I had previously met or talked with most of the other people on the project.

Please add the attached set of questions to the official set of records along with the answers. Can you tell me where and when these will be posted?

Thank you,
~~~~~~~~~~~~~~~~~~~~~~~~~

Peter

Peter van Roekens

5300 Ocean Blvd. # 201

Sarasota FL 34242

Home (941) 312-0318

Cell (941) 685-1570

www.SOSS2.com

Classification: UNCLASSIFIED
Caveats: NONE

APPENDIX E – MAILING LIST

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NAME	TITLE	ORGANIZATION	ADDRESS 1	ADDRESS 2	CITY, STATE, ZIP	EMAIL
Federal Agencies						
Nancy Sutley	Chair	Council on Environmental Quality	722 Jackson Place NW		Washington, DC 20006	
Rear Admiral Robert S. Branham	Commander, Seventh Coast Guard District		909 SE 1st Avenue		Miami, FL 33131	
	Bureau of Indian Affairs	Eastern Regional Office	545 Marriott Drive	Suite 700	Nashville, TN 37214	
Director	Office of Environmental Policy and Compliance	U.S. Department of the Interior	Main Interior Building (MS 2462)	1849 C Street, NW	Washington, DC 20240	
Mr. Richard Harvey		EPA - South Florida Office	400 N. Congress Ave	Ste 120	West Palm Beach, FL 33401	
		Federal Emergency Management Administration	500 C Street SW, Room 714		Washington, DC 20472	
	Regional Director	FEMA Insurance & Mitigation Division	3003 Chamblee-Tucker Rd		Atlanta, GA 30341	
	Director, NRCS	US Dept. of Agriculture Deland Service Center	101 Heavens Gate Road	Suite F	Deland, FL 32720	
	Office of Constituent Services	NMFS - Recreational Fisheries Branch	1315 East West Highway		Silver Spring, MD 20910	
Mr. Mark Sramek		NMFS - SERO - HCD	263 13th Ave. S.		St. Petersburg, FL 33701	
Mark Thompson		NMFS-HCD	3500 Delwood Beach Dr		Panama City, FL 32408	
Ken Hollingshead		NMFS-Marine Mammal Conservation Division	Sanctuary	1315 East West Highway	Silver Spring, MD 20910	
Mr. David Bernhart		NOAA/National Marine Fisheries Service -	PSB	263 13th Avenue South	St. Petersburg, FL 33701	
	U.S. Dept. of the Interior	Office of Environmental Policy and Compliance	1849 "C" St	NW-Room 2340	Washington, DC 20240	
Mr. Bryant L. Vanbrakle		SEC FED Maritime COMM	800 North Capitol St. NW		Washington, DC 20573	
Mr. Jeffrey Schmidt		U.S. Department of Agriculture - NRCS	420 South State Road 7, Suite 160		Royal Palm Beach, FL 33414	
	U.S. DOI	Office of Environmental Policy and Compliance	1849 "C" St., NW - Room 2340		Washington , DC 20240	
Mr. Paul Gagliano	U.S. EPA Region 4	Environmental Policy Section		61 Forsyth Street SW	Atlanta, GA 30303	
Mr. Larry Williams	US Fish & Wildlife Service	State Supervisor	1339 20th St.		Vero Beach, FL 32960-3559	
Mr. Craig Aubrey	US Fish & Wildlife Service	South Florida Field Office	1339 20th St.		Vero Beach, FL 32960-3559	
	Southern Region Forester	US Forest Service	1720 Peachtree Road NW		Atlanta, GA 30309	
	Executive Director	Advisory Council on Historic Preservation	The Old Post Office Bldg Suite 809	1100 Pennsylvania Ave NW	Washington, DC 20004	
Ms. Ann Marie Lauritsen		US Fish & Wildlife Service	600 4th St. S.		St. Petersburg, FL 33701	
	State Conservationist	USDA/Natural Resources Conservation Service	PO. Box 141510		Gainesville, FL 32605	
Mr. William Waskes		BOEMRE Offshore Alternative Energy Programs	Mail Stop 4090		Herndon, VA 20170	
State/Local Government						
Edward F. Lavallee	City Manager	City of Venice	401 West Venice Ave.		Venice, FL 34285	
Kathleen Weeden	City Engineer	City of Venice	401 West Venice Ave.		Venice, FL 34285	
Mr. Robert Bendus	Director	Div of Historical Resources - SHPO	500 South Bronough St		Tallahassee, FL 32399	
Mr. Mark Ferrulo		FL Public Interest Research Group	1010 Central Ave #209		St. Petersburg, FL 33705	
Mrs. Sally B. Mann		FLDEP - Office of Intergovernmental Programs	3900 Commonwealth Blvd.	Mail Station 47	Tallahassee, FL 32399	
Ms. Lauren Milligan		FLDEP - State Clearinghouse	3900 Commonwealth Blvd.	Mail Station 47	Tallahassee, FL 32399	
John Stevely		Florida Cooperative Extension	1303 17th St. West		Palmetto, FL 34221	
Secretary Herschel Vinyard		Florida Department of Environmental Protection	3900 Commonwealth Blvd.	Mail Station 10	Tallahassee, FL 32399	
Ms Catherine M. Florko		FDEP Beach Control Erosion Program	3900 Commonwealth Blvd.	Mail Station 300	Tallahassee, FL 32399	
Director Bureau Chief		FDEP, Beaches & Coastal Systems	3900 Commonwealth Blvd	Mailing Station 300	Tallahassee, FL 32399	
Director		FDEP - Div. of State Lands	3900 Commonwealth Blvd	Mail Station 100	Tallahassee, FL 32399	
		FDOT	10041 Daniels Pkwy		Ft. Myers, FL 33913	
Director		FFWCC - Imperiled Species Management	620 South Meridian Street	Mail Station 6A	Tallahassee, FL 32399	
Robbin N. Trindell		FFWCC - Office of Environmental Services	620 South Meridian Street		Tallahassee, FL 32399	
Nancy Douglass		FFWCC, SW Division	3900 Drane Field Road		Lakeland, FL 33811	
		FL Dept of Agriculture & Consumer Services	3125 Conner Blvd. RM 269		Tallahassee, FL 32399	
Ms. Lisa Gregg		FWC, Divi. of Marine Fisheries Management	2590 Executive Center Circle East	Ste 203	Tallahassee, FL 32301	
	House Environmental Protection Committee	Institute of Florida Studies	402 S. Monroe St.		Tallahassee, FL 32399	
Andy Squires	Coastal Manager	Pinellas County Environment and Infrastructure	22211 US Hwy. 19 N	Building 10	Clearwater, FL 33765	
	Manager, Sarasota County	Resources Protection Services	1301 Cattlemen Road	Bldg. A	Sarasota, FL 34232	
		Sarasota County Chamber of Commerce	1945 Fruitville Rd.		Sarasota, FL 34236	
	General Manager	Sarasota County Environmental Services	Business Center	1301 Cattlemen Road	Sarasota, FL 34232	
Carolyn Brown	Director	Sarasota County Parks, Recreation and Natural Resource	1660 Ringling Blvd.		Sarasota, FL 34236	
		Southwest Florida Regional Planning Council	PO Box 3455		North Ft. Myers, FL 33918	
	Executive Director	Southwest Florida Water Management Dist.	2379 Broad Street		Brooksville, FL 34604	
	Office of Governor Rick Scott	State of Florida The Capitol	400 S. Monroe St.		Tallahassee, FL 32399	
Dave Bullock	Town Manager	Town of Longboat Key	501 Bay Isles Road		Longboat Key, FL 33548	dbullock@longboatkey.org

NAME	TITLE	ORGANIZATION	ADDRESS 1	ADDRESS 2	CITY, STATE, ZIP	EMAIL
Alexandrea Davis-Shaw, P.E.	City Engineer	City of Sarasota	P.O. Box 1058		Sarasota, FL 34230	
Elected Officials						
Honorable Marco Rubio		US Senate	B40A Dirksen Senate Office bldg.		Washington, DC 20510	
Honorable Bill Nelson		US Senate	716 HART SENATE OFFICE BUILDING		Washington, DC 20510	
Honorable Vern Buchanan		U.S. House of Representatives, Dist. 13	1051 Manatee Ave. West	Suite 305	Bradenton, FL 34205	
Hon. Darryl Ervin Rouson		Florida House of Representatives, Dist. 55	405 House Office Building	402 South Monroe Street	Tallahassee, FL 32399	
Honorable Greg Steube		Florida House of Representatives, Dist. 67	1102 The Capitol	402 South Monroe Street	Tallahassee, FL 32399	
Honorable Jim Boyd		Florida House of Representatives, Dist. 68	1102 The Capitol	402 South Monroe Street	Tallahassee, FL 32399	
Honorable Ray Pilon		Florida House of Representatives, Dist. 69	1101 The Capitol	402 South Monroe Street	Tallahassee, FL 32399	
Honorable Doug Holder		Florida House of Representatives, Dist. 70	204 House Office Building	402 South Monroe Street	Tallahassee, FL 32399	
Hon. Nancy C. Detert		Florida Senate, District 28	417 Commercial Court	Suite D	Venice, FL 34292	
Stakeholders/Special Interest Groups						
Ms. Victoria Tschinkel		1000 Friends of Florida	926 East Park Ave.	PO Box 5948	Tallahassee, FL 32314	
Ann Paul	Audubon of Florida	Florida Coastal Islands Sanctuaries	410 Ware Blvd.	Suite 702	Tampa, FL 33619	
Mr. Peter van Roekens	Chairman	Boater's Coalition	5300 Ocean Blvd.	Suite 201	Sarasota, FL 34242	
Mr. Donald E. Hemke		Carlton Fields Jorden Burt	P.O. Box 3239		Tampa, FL 33607-5780	dhemke@cfjblaw.com
Michael P. Crosby, Ph.D., FLS	President & CEO	Mote Marine Laboratory	1600 Ken Thompson Pkwy.		Sarasota, FL 34236	mcrosby@mote.org
	Florida Program Director	Defenders of Wildlife	233 Third Street North	Suite 201	St. Petersburg, FL 33701	
Dr. Brent Weisman		Department of Anthropology	4202 East Fowler Ave.	SOC 104	Tampa, FL 33620	
Pat Saunders		Ducks Unlimited	4343 Tideview Drive		Jacksonville Beach, FL 32250	
	Director of the Southeast Office	Environmental Defense Fund	4000 Westchase Blvd.	Suite 510	Raleigh, NC 27607	
		Florida Defenders of the Environment	4424 NW 13 St.	Suite C-8	Gainesville, FL 32609	
	Executive Director	Florida Shore & Beach Preservation Assoc	PO Box 13146		Tallahassee, FL 32317	
Thomas W. Reese		Florida Wildlife Federation	2951 61 Ave. South		St. Petersburg, FL 33712	TWReeseEsq@aol.com
	Chairperson	Gulf of Mexico Fishery Management Council	2203 N. Lois Avenue	Suite 1100	Tampa, FL 33607	
Mr. Bernie Roman		Miccosukee Tribe of Indians	Post Office Box 440021	Tamiami Station	Miami, FL 33144	
Mr. Steve Terry		Miccosukee Tribe of Indians	P.O. Box 440021	Tamiami Station	Miami, FL 33144	
Mr. Fred Dayhoff	Tribal Representative NAGPRA, Section 106	Miccosukee Tribe of Indians of Florida	P.O. Box 440021	Tamiami Station	Miami, FL 33144	
Chairman Colley Billie		Miccosukee Tribe of Indians	P.O. Box 440021	Tamiami Station	Miami, FL 33144	
Betty Osceola		Miccosukee Tribe of Indians	P.O. Box 440021	Tamiami Station	Miami, FL 33144	
Mr. Curtis Osceola		Miccosukee Tribe of Indians	P.O. Box 440021	Tamiami Station	Miami, FL 33144	
Mr. Rory Feeney		Miccosukee Tribe of Indians	P.O. Box 440021	Tamiami Station	Miami, FL 33144	
		Mote Marine Laboratory	1600 Ken Thompson Parkway		Sarasota, FL 34236	
Ms. Kim Bassos-Hull	Senior Biologist	Mote Marine Laboratory	1600 Ken Thompson Parkway		Sarasota, FL 34236	kbhull@mote.org
Mrs. Joyce Bear	Muscogee (Creek) Nation of Oklahoma	Cultural & Historical Tribal Complex	P.O. Box 580		Okmulgee, OK 74447	
Mr. Ted Isham	Muscogee (Creek) Nation of Oklahoma	Cultural & Historical Tribal Complex	P.O. Box 580		Okmulgee, OK 74447	
Michael Harty		National Resources Defense Council	40 West 20th Street	11th Floor	New York, NY 10011	
John Hammond		National Wildlife Federation	730 Peachtree St. NE	Suite 1000	Atlanta, GA 30308	
Alberto Tamayo		OSAT International Cooperation	6550 NW 77th Ct.		Miami, Fl 33166	
	Tribal Historic Preservation Officer	Poarch Creek Indians - Environmental Dept.		5811 Jack Springs Rd.	Atmore, AL 36502	
		Reefkeeper International	PO. Box 1316		Middletown, MD 21769	
		Sarasota Audubon Society	P.O. Box 52132		Sarasota, FL 34232	
		Sarasota Bay National Estuary Program	111 S. Orange Avenue	Suite 200 W.	Sarasota, FL 34232	
Mr. Patrick Rose		Save the Manatee Club	500 N. Maitland Ave		Maitland, FL 32751	
		Sea Turtle Conservancy	4424 NW 13th St.	Suite B-11	Gainesville, FL 32609	
Ms. Jennifer Johnson		Seminole Nation of Oklahoma	P.O. Box 1489		Wewoka, OK 74884	
Mr. Mitchell Cypress		Seminole Tribe of Florida	6300 Stirling Road		Hollywood, FL 33024	
Dr. Paul Backhouse, THPO		Seminole Tribe of Florida	30290 Josie Billie Hwy	PMP 1004	Clewiston, FL 33440	
		Sierra Club - Manatee-Sarasota Group	P.O. Box 3485		Sarasota, FL 34236	
		Siesta Key Association	PO Drawer 35200		Sarasota, FL 34242	
		Siesta Key Chamber of Commerce	5114 Ocean Blvd.		Siesta Key, FL 34242	
		SOSS2, Inc.	6600 S. Tamiami Tr.		Sarasota, FL 34231	
		Surfrider (Suncoast Chapter)				chair@suncoast.surfrider.org

NAME	TITLE	ORGANIZATION	ADDRESS 1	ADDRESS 2	CITY, STATE, ZIP	EMAIL
		Surfrider (Volusia Chapter)	231 Kirkland Road		New Smyrna Beach, FL 32169	
		Surfrider (First Coast Chapter)				firstcoast@surfrider.org
Mr. Robert Dendick		The Nature Conservancy - Florida Chapter	222 S. Westmonte Dr.	Suite 300	Altamonte Springs, FL 32714	
Mr. David White	The Ocean Conservancy	South Atlantic Regional Office	449 Central Ave.	Suite 200	St. Petersburg, FL 33701	
Mr. Charles W. Listowski		West Coast Inland Navigation District	200 E. Miami Ave.		Venice, FL 34285	
SOSS2						soss2@earthlink.net
Post Offices/Media Outlets/Public Libraries						
		ABC 7	1477 10th Street		Sarasota, FL 34236-4048	
		WEDU/PBS	1888 Brother Greenen Way		Sarasota, FL 34236-7118	
		WTSP-TV / WTSP	11450 Gandy Blvd		St. Petersburg, FL 33702	
		Herald-Tribune	1741 Main St.		Sarasota, FL 34236	
		Longboat Key News	PO Box 8001		Longboat Key, FL 34228	
		Island Visitor Siesta Sand	PO Box 35086		Siesta Key, FL 34242	
		Sarasota News Leader	PO Box 5099		Sarasota, FL 34277	
Concerned Public						
* Concerned Public who provided email addresses or initially communicated with the U.S. Army Corps of Engineers via email received the Notice of Availability of the Draft EA via email.						
Mr. Gerald Roosen						ggroosen@aol.com
Lakhbir Hayre						lakhbir1914@hotmail.com
Ing-Marie Malkin						ingmalkin@gmail.com
Roy Pera						roypera@yahoo.com
Karen Kiehne						lunarkk@aol.com
Vern Johnson						vjsiesta@hotmail.com
Susan Stelfox						sms6102@gmail.com
Brian Hunter						bdhinc1@aol.com
Randall Pistone						randallpistone@sbcglobal.net
Marees Choppin						choppin@harpethhall.org
Joe Carullo						Joe@kcdesignsnyc.com
Gene Jaleski						geneonlbk@gmail.com
Gary and Christine Anderton						gary.anderton@ntlworld.com
Cheryl Speaker						cherylspeaker@yahoo.com
Andrea Movsessian-Wallack						teawithus@aol.com
Tom and Sue Ghezzi			1100 Ben Franklin Dr., Unit 715		Sarasota, FL 34236	sgmaxx@rcn.com
Victoria King			545 McKinley Drive		Sarasota, FL 34236	prospect54@aol.com
Shelley McDaniel		Icard, Merrill, Cullis, Timm, Furen & Ginsburg, P.A.	2033 Main St., Suite 600		Sarasota, FL 34237-6091	smcdaniel@icardmerrill.com
Barbara Brainard			2110 Ben Franklin Drive, S408		Sarasota, FL 34236	BBrainard@verizon.net
Mary Moss			1800 Ben Franklin Dr., B708		Sarasota, FL 34236	hmosswi@aol.com
Lawrence Bond			1212 Ben Franklin Dr., #502		Sarasota, FL 34236	JeanLaw@aol.com
Jeffrey Heath			1212 Ben Franklin Dr		Sarasota, FL 34236	jah@landstonegroup.com
Meg Sibbernsen			800 Ben Franklin Dr.		Sarasota, FL 34236	rsibb@sbcglobal.net
Janet Watson			800 Ben Franklin Dr. #208		Sarasota, FL 34236	jsw17130@yahoo.com
Kevin and Madeleine French			1212 Ben Franklin Dr., #807		Sarasota, FL 34236	jkflaw@aol.com
Ed and Louise Janka			1212 Ben Franklin Dr., Unit 208		Sarasota, FL 34236	loujanka@yahoo.com
Daryl and Monica Jones			1212 Ben Franklin Dr., Unit 903		Sarasota, FL 34236	mmj@cfl.rr.com
Victor Loehrer			1212 Ben Franklin Dr.		Sarasota, FL 34236	vicwithsatocorporation@comcast.net
Sandy Mayer			1212 Ben Franklin Dr., Unit 901		Sarasota, FL 34236	muf444@aol.com
Steve Perry			Lido Beach Club		Sarasota, FL 34236	shperry123@aol.com
Michael Keebaugh			2050 Ben Franklin Dr.		Sarasota, FL 34236	orchid-beach@comcast.net
Barbara Lowenthal			1800 Ben Franklin Dr.		Sarasota, FL 34236	Bellnote3@aol.com
Paul Robbins			1800 Ben Franklin Dr.		Sarasota, FL 34236	PRobbinsFabrics@aol.com
Josef Spatz			2050/2052 Ben Franklin Dr.		Sarasota, FL 34236	jim.spatz@southwest.ca
Janet Lustgarten			800 Ben Franklin Dr., Unit 207		Sarasota, FL 34236	janet.lustgarten@gmail.com

NAME	TITLE	ORGANIZATION	ADDRESS 1	ADDRESS 2	CITY, STATE, ZIP	EMAIL
Thad and Kathy Piatkowski			2050/2052 Ben Franklin Dr.		Sarasota, FL 34236	thadpiat@gmail.com
David and Paula Sheppard			101 Ben Franklin Dr.		Sarasota, FL 34236	thesheppards@sbcglobal.net
Laura Bryg			1212 Ben Franklin Dr		Sarasota, FL 34236	lolobryg@comcast.net
Robert Cameron			1212 Ben Franklin Dr, Unit 404		Sarasota, FL 34236	bobcameron2@comcast.net
Kevin and Marcia Dolan			2050/2052 Ben Franklin Dr.		Sarasota, FL 34236	m_louise4@hotmail.com
Janice Morris			2050 Ben Franklin Dr., Unit 1004		Sarasota, FL 34236	jfmorris8@aol.com
Corinne Richman			2050/2052 Ben Franklin Dr.		Sarasota, FL 34236	cmr1952@gmail.com
Todd Sikon			2050/2052 Ben Franklin Dr.		Sarasota, FL 34236	tsikon@Transtar1.com
William R. Dodds, Jr.			2052 Ben Franklin Dr.		Sarasota, FL 34236	william.dodds@gmail.com
Alan and Barbara Ebersole			1212 Ben Franklin Dr.		Sarasota, FL 34236	lidomitchell@gmail.com
James H. Henry II			300 North Jackson Street		Tullahoma, TN 37388	jhenry@henry-mccord.com
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APPENDIX F – CBI FIELD OBSERVATION REPORT

Benthic Resource Investigation
Lido Key Hurricane and Storm Damage Reduction Project

September 23-25, 2014

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FIELD OBSERVATION REPORT

Date:	September 23-25, 2014
Project:	Lido Key Hurricane and Storm Damage Reduction Project Benthic Resource Investigation
Location:	Lido Key, Sarasota County, Florida
Commission No.:	153076.03
Field Representatives:	Katy Brown (biologist), Judd French (field support), Ben Alcocer (field support), and Scott Tillman (captain)

CB&I completed a benthic resource investigation in support of the Lido Key Hurricane and Storm Damage Reduction Project from September 23-25, 2014. The project is anticipated to be constructed in 2015 and includes beach nourishment and construction of three (3) groins. This investigation was required in order to locate seagrass and/or hardbottom resources that may be present in the footprint of the beach fill and groin placement areas and the proposed water quality mixing zones for the beach fill and the Big Sarasota Pass borrow areas. Results from this report will be used in support of obtaining the Florida Department of Environmental Protection (FDEP) permit and consultation with NOAA National Marine Fisheries Service (NMFS) Habitat Conservation Division (HCD). Aubree Hershorin (USACE) and Mark Sramek (NMFS HCD) joined the CB&I crew on September 23 to observe and participate in the resource survey.

METHODS

The initial phase of this investigation involved reviewing existing data, including sidescan sonar survey data provided by the USACE, in-house aerial photographs, and previous Lido Key *in situ* resource investigations (CPE, 1992; Dial Cordy, 2001). These recent and historical data were used to determine areas of potential seagrass and hardbottom resources and to plan field investigation sites. Figure 1 shows the location of the overall investigation area, the specific investigation methodologies conducted and the sidescan contacts (areas that warranted investigation). To efficiently investigate the large survey area, a combination of methods was employed, including towed video, towboard diver surveys and diver verification.

First, a DGPS-integrated towed video camera method was used to survey the borrow areas in Big Sarasota Pass and the nearshore fill placement area to locate potential benthic resources. This method allowed for the collection of data over a large area. The camera was deployed from the vessel and the streaming video was viewed by a biologist topside in real-time. When potential seagrass or hardbottom was observed, a fix was taken in Hypack navigational software to mark the location of the resource. The position data was also recorded and displayed as GPS coordinates overlaid on the video. The preliminary survey lines were spaced 500 ft apart; however, if resources were observed, then the spacing was systematically decreased to delineate the resource area. Cross lines (e.g., C1) were also run to determine the outer extent of resources. Towed video survey lines were concluded once the investigation area boundary was reached or when the water depth became too shallow (less than 1 m [3 ft]) for the vessel to operate.

When general conditions allowed, the towboard survey method was used. This method allowed biologists to directly assess areas of potential seagrass inside Big Sarasota Pass. This method

involved two snorkelers being towed astern of the vessel at slow speeds, allowing for a visual survey of the seafloor. This method was only conducted along one survey line when sea conditions were relatively calm and boat traffic was minimal.

The third method of diver verification was utilized to further investigate areas where seagrass or hardbottom were observed during the towed video and towboard surveys. Figures 2a-b show the location of seagrass and hardbottom resources confirmed by diver verification. A CB&I biologist, accompanied by a field support diver, collected data on the species present, percent cover, substrate type, and depth, and took representative photographs of the site. When conditions permitted, divers delineated the resource using a towed buoy equipped with a DGPS antenna and attached by a cable connected to a topside laptop running HYPACK navigational software to record the positioning data. A summary of the investigation findings is provided below.

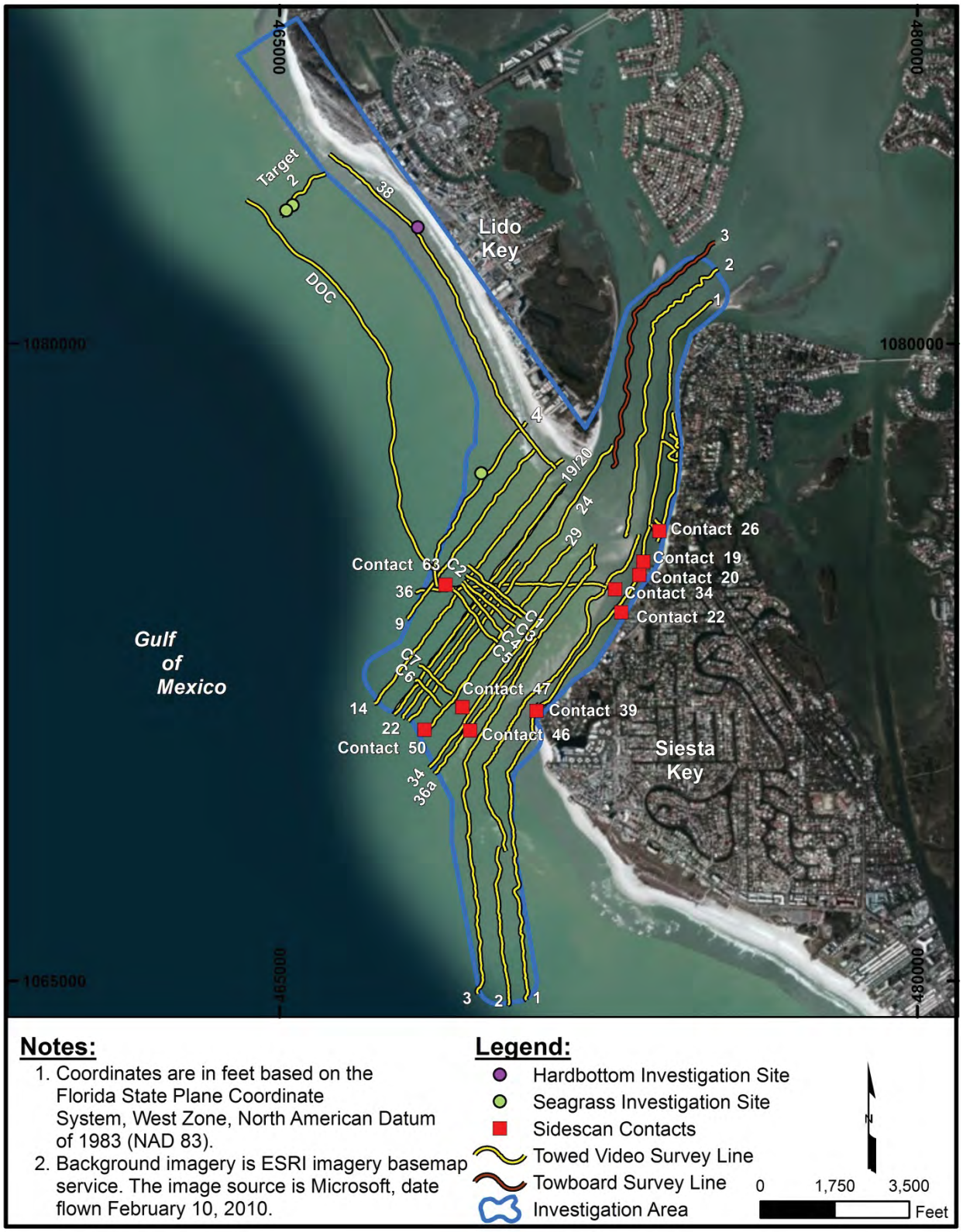

Figure 1. Map of the investigation area located in Big Sarasota Pass. The planned field investigation sites and the towed video and towboard survey lines are shown. A towed video survey line was also conducted along the depth of closure (DOC) even though it was outside of the investigation area. Labels for each line correspond to the labeled towed videos provided on the enclosed DVDs.

RESULTS

Seagrass Resources

Figures 2a-b and Table 1 summarize the seagrass observed during these investigations. No seagrass resources were observed in the nearshore Lido Key fill placement area. A towed video survey was also conducted offshore of the fill placement area along the depth of closure (DOC) (see Figure 1) at approximately 5-6 m (18 ft). No seagrass resources were observed here. Seagrass resources were observed using the towed video and towboard survey methods in three main locations within the investigation area: (1) inside Big Sarasota Pass; (2) on the southwest portion of the Big Sarasota Pass ebb shoal; and (3) offshore of Siesta Key in the southern portion of the investigation area.

Inside Big Sarasota Pass (Figure 2a), seagrass was present in the northeastern and northwestern sections of the investigation area and along the seawall located along the north end of Siesta Key. In the northeastern section a dense patch (Patch 1) of *Syringodium filiforme* (75-100% cover) was observed from the vessel and confirmed by diver verification. The patch was delineated using the diver-towed buoy equipped with a DGPS antenna. The depth was less than 1 m (~2 ft) and the patch extended outside of the investigation area. In the northwestern section of the Big Sarasota Pass investigation area, several patches of seagrass were observed during the towboard survey and subsequently confirmed by diver verification. A dense patch (Patch 2) of *Syringodium filiforme* (75-100% cover) at approximately 1-2 m (4 ft) depth was observed along the edge (and continuing outside) of the investigation area and was delineated from the vessel. Two small patches (Patches 3 and 4) of *Halodule wrightii* (approximately 50-75% cover) were observed at a depth of 1.5-2 m (5-6 ft), and fixes were taken at the center of the patches. Three larger patches (Patches 5, 6, and 7) of *H. wrightii* were also observed and delineated using the diver towed buoy. The percent coverage of *H. wrightii* was greater at Patch 5 (approximately 75-100%) than at Patches 6 and 7 (both had approximately 50-75% cover), and depths ranged from 1.5-2 m (5-7 ft). A patch (Patch 8) of *S. filiforme* was observed along the seawall at the north end of Siesta Key during the towed video survey and fixes were taken from the vessel (Figure 2b). This patch was located near the start of the rocky rubble area in approximately 4 m (14 ft) depth. Due to the strong tidal currents, divers could not safely dive the site to collect *in situ* data. Representative photographs of the seagrass resources in Patches 1-8 are presented in Figures 3 through 5.

On the southwest portion of the Big Sarasota Pass ebb shoal, four large patches (Patches 9, 10, 11 and 12) of *H. wrightii* were observed during the towed video survey and confirmed by diver verification (Figures 2b and 6). Cover by *H. wrightii* was sparse, less than 5% at each of the patches, and depths ranged from 2-3 m (9-11 ft). The substrate consisted mostly of fine sand with areas of shell hash and dense aggregations of sand dollars (*Mellita tenuis)*. To ensure the areas surrounding Patches 9-12 were adequately surveyed, intersecting towed video lines were conducted and fixes were taken to confirm the outer limits of each patch (see lines C1-C7 in Figure 1).

In the southern portion of the investigation area, located southwest of the north end of Siesta Key, two small patches (Patches 13 and 14) were observed during the towed video survey and subsequently confirmed by diver verification (Figures 2b and 7). Fixes were taken at the center

of each patch. Patch 13 was a sparse patch (few individuals, less than 5% cover) of *H. wrightii* that covered approximately 0.5 m^2 at 3 m (9 ft) depth. Patch 14 was a dense patch (50-75% cover) of *Halophila decipiens* that covered approximately 0.5 m^2 at 5 m (17 ft) depth. The substrate consisted of fine sand and sand dollars at both sites.

Figure 2a. Location of seagrass patches (Patches 1-7) observed inside Big Sarasota Pass.

Figure 2b. Location of seagrass patches (Patches 8-14) observed along the seawall on the north end of Siesta Key, on the southwest portion of the Big Sarasota Pass ebb shoal, and in the southern portion of the investigation area (offshore of Siesta Key). The location of the rock/rubble resources along the southern seawall is also shown.

Table 1. Summary of seagrass observations in the investigation area.

Site	Depth (m)	Species	Percent Cover
Patch 1	1	*Syringodium filiforme*	75-100%
Patch 2	1	*Syringodium filiforme*	75-100%
Patch 3	2	*Halodule wrightii*	50-75%
Patch 4	2	*Halodule wrightii*	50-75%
Patch 5	2	*Halodule wrightii*	75-100%
Patch 6	2	*Halodule wrightii*	50-75%
Patch 7	2	*Halodule wrightii*	50-75%
Patch 8	4	*Syringodium filiforme*	*
Patch 9	3	*Halodule wrightii*	numerous, but < 5%
Patch 10	3	*Halodule wrightii*	numerous, but < 5%
Patch 11	2	*Halodule wrightii*	numerous, but < 5%
Patch 12	3	*Halodule wrightii*	numerous, but < 5%
Patch 13	3	*Halodule wrightii*	few, < 5%
Patch 14	5	*Halophila decipiens*	50-75%

*Divers were unable to collect *in situ* data for Patch 8 due to the unsafe diving conditions at the site.

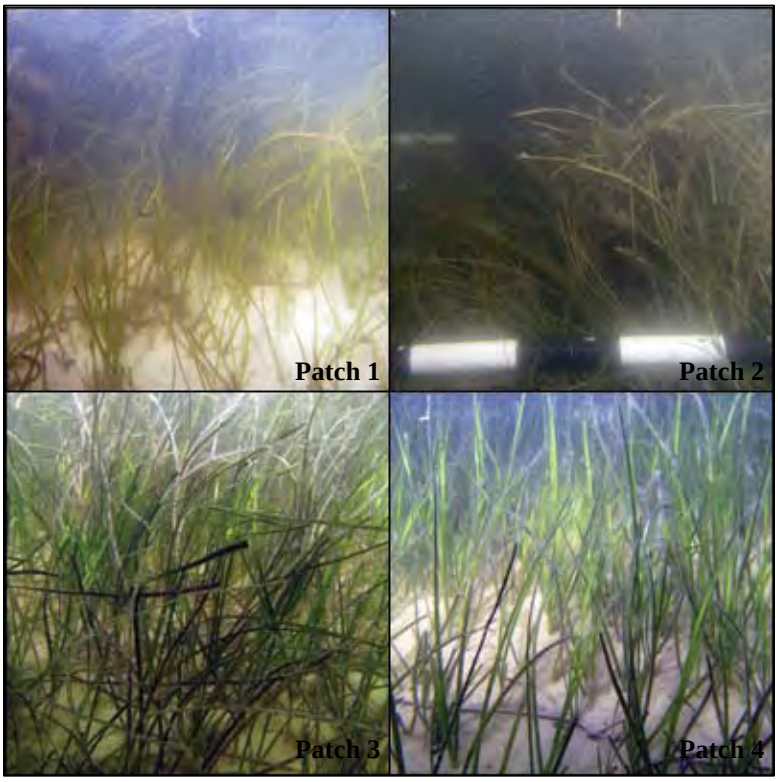

Figure 3. Photographs of seagrass Patches 1-4 located inside of Big Sarasota Pass. Patches 1 and 2 are *S. filiforme* and Patches 3 and 4 are *H. wrightii*.

Figure 4. Photographs of seagrass Patches 5-7 located inside of Big Sarasota Pass. All patches consist of *H. wrightii*.

Figure 5. Image of Patch 8 recorded during the towed video survey within the channel in Big Sarasota Pass.

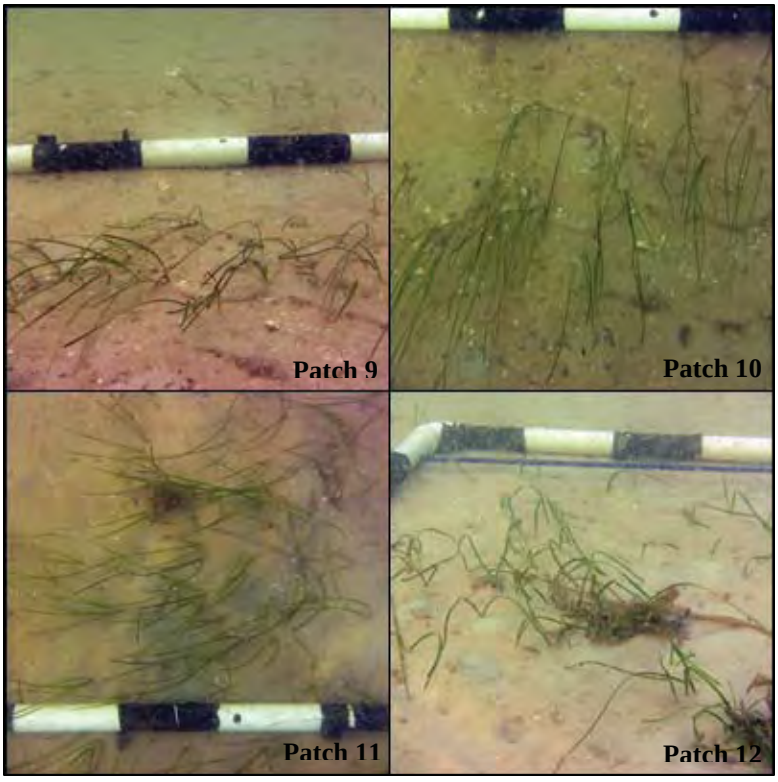

Figure 6. Photographs of seagrass Patches 9-12 located in the southwestern portion of the Big Sarasota Pass ebb shoal. All patches consisted of *H. wrightii*.

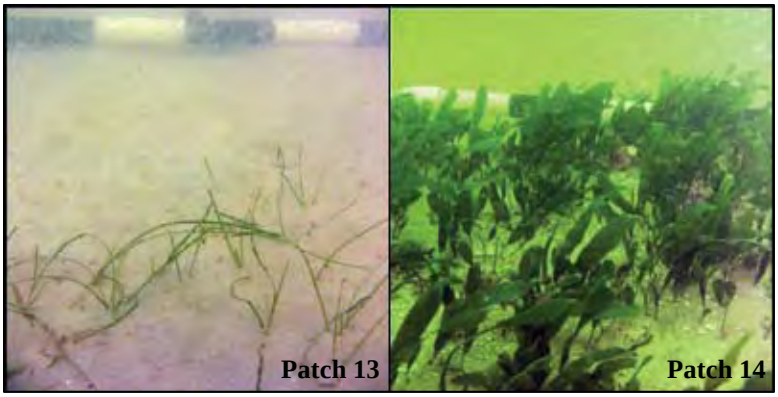

Figure 7. Photographs of seagrass Patches 13 and 14 located in the southern portion of the investigation area, offshore of Siesta Key. Patch 13 consists of *H. wrightii* and Patch 14 is *Halophila decipiens*.

Hardbottom Resources

Sidescan sonar data provided by the USACE was examined prior to the field survey, and ten contacts were determined to be potential resources that required further investigation. Also, one site of potential hardbottom was determined from analysis of aerial images (see Figure 1 - hardbottom investigation site). The towed video camera was used to investigate these 11 sites, four of which resulted in identification of potential resources. All four of these sites (Contacts 19, 20, 22, and 26 in Figure 1) were located along the seawall at the north end of Siesta Key within Big Sarasota Pass. Towed video camera surveys were conducted along the length of the channel as well as perpendicular to the shoreline to delineate the edges of benthic resources

(Figures 1 and 2b). Figure 8 shows representative images of the rock and rubble resources recorded during the towed video. Diver verification was attempted within the channel and a few photographs were taken, however due to the strong tidal currents the diving activities were limited for safety reasons. The benthic resources in this location consisted of large rocks, rubble, and debris that supported growth of sponges (e.g., *Cliona celata, Pione lampa*), macroalgae (e.g., *Caulerpa* sp.), and octocorals (e.g., *Leptogorgia virgulata*) (Figures 8 and 9). Fish species, such as sheepshead (*Archosargus probatocephalus*), were also observed utilizing this habitat (Figure 10).

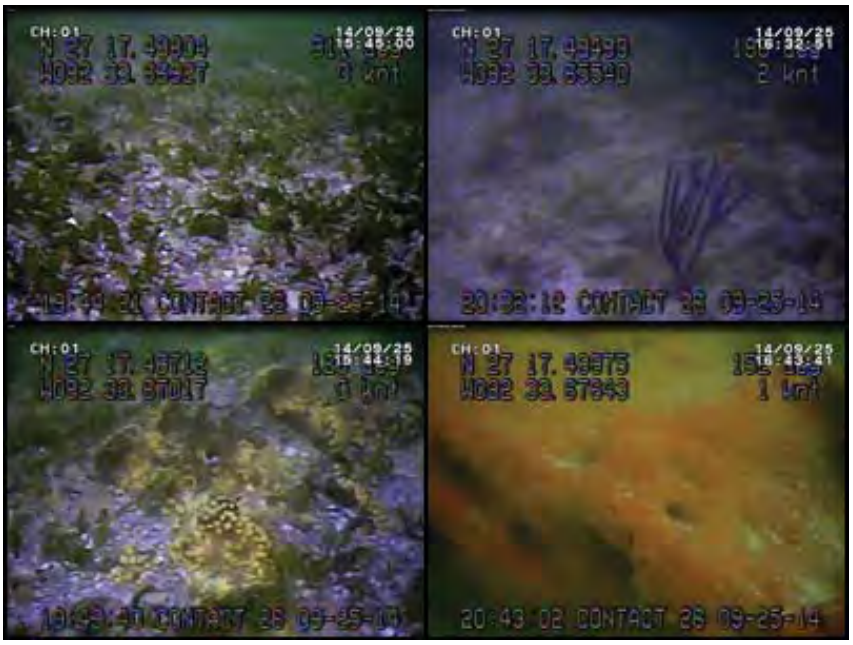

Figure 8. Hardbottom resources located within the channel in Big Sarasota Pass recorded during the towed video survey. Clockwise from the top: *Caulerpa* sp., *Leptogorgia virgulata, Cliona celata,* and *Pione lampa*.

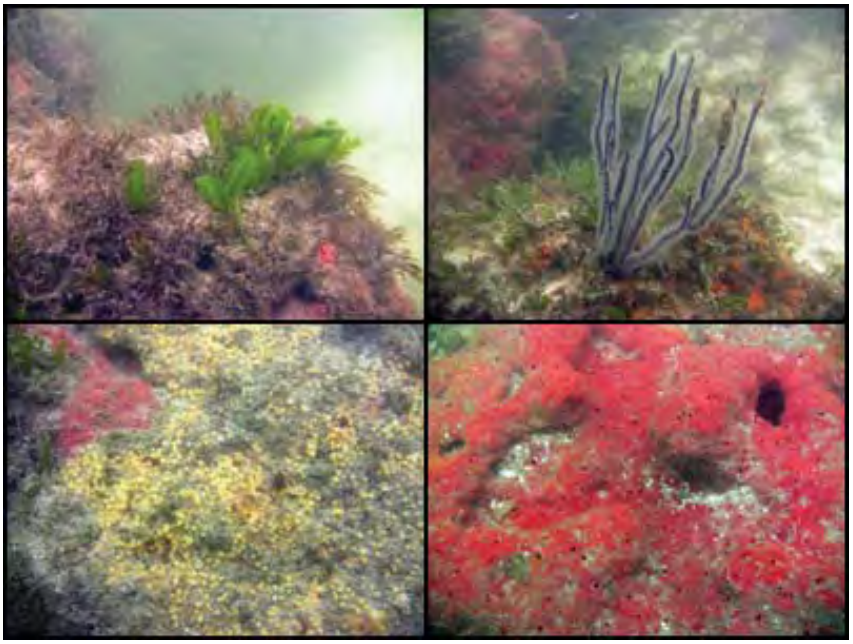

Figure 9. *In situ* photographs of the hardbottom resources located within the channel in Big Sarasota Pass. Clockwise from the top: *Caulerpa* sp., *Leptogorgia virgulata, Cliona celata,* and *Pione lampa*.

Figure 10. ***Archosargus probatocephalus*** **(sheepshead) were one of the fish species recorded during the towed video survey within the channel in Big Sarasota Pass.**

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