August 2014

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

NEW BORROW AREA - DUVAL COUNTY SHORE PROTECTION PROJECT DUVAL COUNTY, FLORIDA

U.S. Army Corps
of Engineers
JACKSONVILLE
DISTRICT

FINDING OF NO SIGNIFICANT IMPACT
NEW BORROW AREA
DUVAL COUNTY SHORE PROTECTION PROJECT
DUVAL COUNTY, FLORIDA

I have reviewed the Supplemental Environmental Assessment (SEA) for the proposed dredging of a new borrow area for the Federally authorized Duval County Shore Protection Project in Duval County, FL. Beach quality material would be placed along the Atlantic Ocean shoreline of Duval County, FL. This Finding incorporates by reference all discussions and conclusions contained in the SEA enclosed hereto. Based on information analyzed in the SEA, reflecting pertinent information obtained from agencies having jurisdiction by law and/or special expertise, I conclude that the proposed action will not significantly impact the quality of the human environment and does not require an Environmental Impact Statement. Reasons for this conclusion are in summary:

a. The proposed action would be conducted in accordance with the Endangered Species Act, and specifically in compliance with the Regional Biological Opinion issued by the National Marine Fisheries Service and Statewide Programmatic Biological Opinion issued by the US Fish and Wildlife Service. The work would not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify any designated "critical habitat."

b. This project has been coordinated with the State of Florida, and all applicable water quality standards will be met.

c. The State of Florida has concurred with the Corps consistency determination that the proposed work is consistent with the enforceable policies of the Florida Coastal Management Program.

d. The proposed work has been coordinated with the Florida State Historic Preservation Officer and appropriate federally recognized tribes. It has been determined that the proposed borrow area dredging would not adversely affect historic properties.

e. Measures will be in place during construction to eliminate, reduce, or avoid adverse impacts below the threshold of significance to fish and wildlife resources.

f. Public benefits will be provided via storm damage reduction and beach recreation.

In consideration of the information summarized, I find that the proposed dredging of a new borrow area for the Federal Duval County Shore Protection Project will not significantly affect the human environment and does not require an Environmental Impact Statement. A copy of this document will be made available to the public at the following website: <http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Duval>.

_____ _____

ALAN M. DODD
Colonel, Corps of Engineers
Commanding

Date

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DUVAL COUNTY SHORE PROTECTION PROJECT,
DUVAL COUNTY, FLORIDA

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
NEW BORROW AREA
DUVAL COUNTY SHORE PROTECTION PROJECT
DUVAL COUNTY, FLORIDA

1 PROJECT PURPOSE AND NEED

1.1 PROJECT DESCRIPTION.

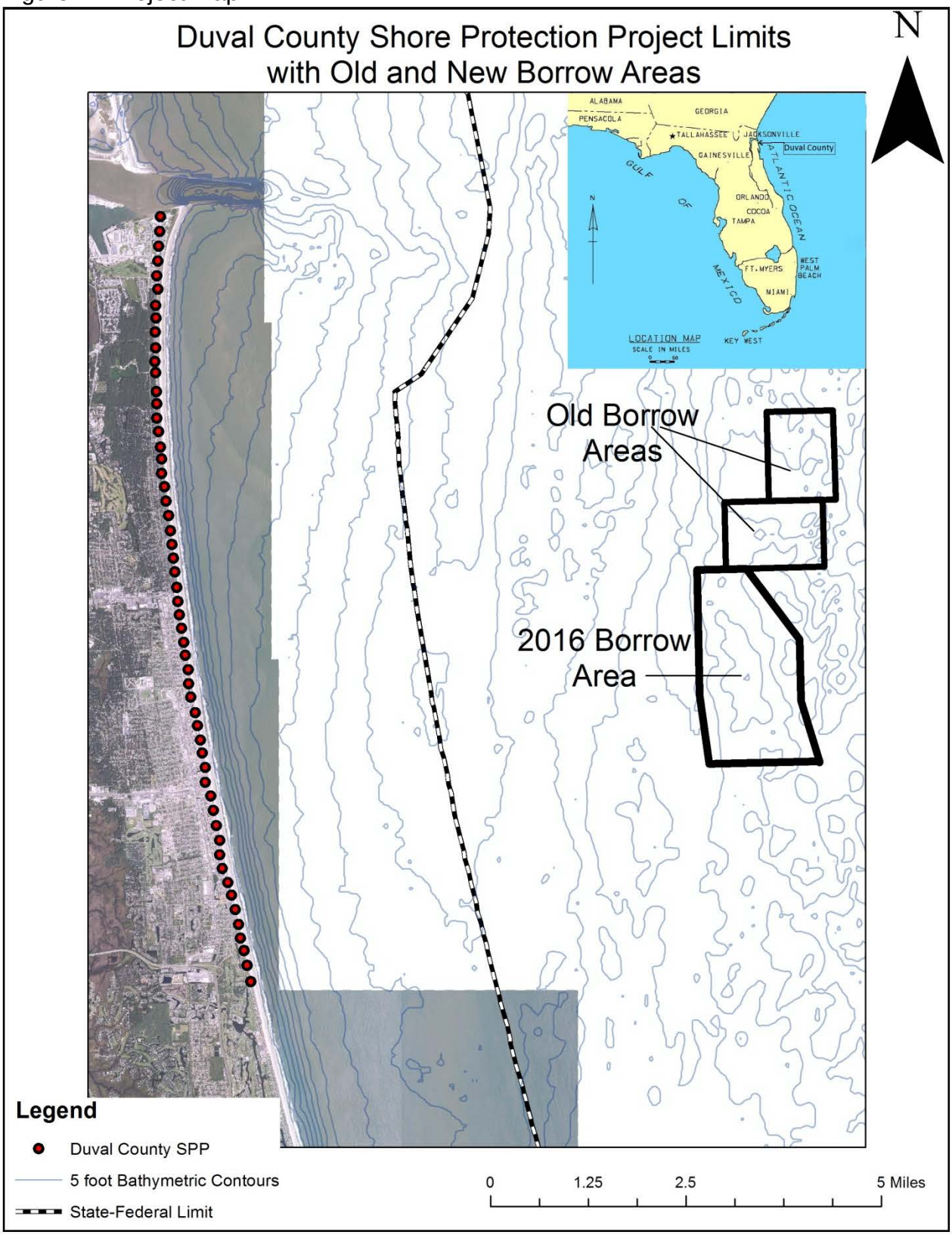
The U.S. Army Corps of Engineers, Jacksonville District (Corps), is proposing to construct the authorized Duval County Shore Protection Project (SPP) which involves the periodic renourishment of 10 miles of Atlantic shoreline between V-501 at the St. Johns River south jetty to R-80 at the Duval County - St. Johns County line (Figure 1). Approximately 1.4 million cubic yards (mcy) of beach compatible fill would be dredged from a new sand borrow area (located approximately 8 miles east of the beach) and placed in a135 feet wide berm with an elevation of +11.0 feet mean lower low water (MLLW) with a 20:1 slope from the berms seaward edge down to the estimated toe of fill.

Because the sand borrow area is located in Federal waters (>3 nautical miles offshore) on the Outer Continental Shelf (OCS), the Bureau of Ocean Energy Management (BOEM) is acting as a cooperating agency on this National Environmental Policy Act (NEPA) document. Their proposed action is the issuance of a negotiated agreement to authorize use of the new sand borrow source so that the Corps, along with the projects local sponsor (City of Jacksonville), can obtain the necessary sand resources for the SPP. A more detailed description of the Duval County SPP and its potential effects can be found in the *Final Environmental Impact Statement* (EIS), *Beach Erosion Control Project Duval County, Florida* (Corps, 1974)*; Environmental Assessment (EA), Duval County Shore Protection Project & Finding of No Significant Impact* (Corps, 1993); *Environmental Assessment, Duval County Beach Erosion Control Project New Borrow Area & Finding of No Significant Impact* (Corps, 2005); and *Environmental Assessment, Use of Outer Continental Shelf Sand from the Duval Borrow Area in the Duval County (Florida) Shore Protection Project* (BOEM, 2011). The 1993, 2005, and 2011 final EAs tiered from the 1974 final EIS and were used by BOEM to support leasing decisions in 1996, 2005, and 2011 utilizing the previous OCS borrow area. This draft EA supplements those existing completed NEPA analyses and examines potential impacts within the new borrow area. Finally, the *Draft Environmental Impact Statement* (DEIS) *for Designation of an Ocean Dredged Material Disposal Site* (ODMDS) *Offshore Jacksonville, Florida* (EPA, 2012) is hereby incorporated by reference because one of the alternative sites evaluated in the DEIS overlaps the new borrow area (Figure 4). DEIS alternative 2 was not chosen as the preferred ODMDS site but much of the analyses within the DEIS is directly applicable to the new borrow area.

1.2 PROJECT NEED OR OPPORTUNITY.

The Duval County SPP provides storm protection and reduces storm damage to the shoreline development and infrastructure at risk from beach erosion along Duval County. Historical causes of erosion include the stabilization of the St. Johns River entrance and major storms. Since the last nourishment cycle in 2011, storm activity (including the passing of Hurricane Sandy in 2012) has eroded an average of approximately 160,000cy per year from the Duval County shoreline. The previously mined borrow areas (Figure 1) are estimated to contain less than the 1.4mcy of beach compatible fill required for the planned 2016 renourishment. Therefore, a new borrow area is needed.

Figure 1. Project Map.



1.3 PROJECT AUTHORITY.

1.3.1 AUTHORIZATION.

A list of authorizations and authorizing documents for the Duval County SPP is provided below in Table 1.

Table 1. Authorization History of Duval County SPP

AUTHORIZATIONS FOR THE EXISTING DUVAL COUNTY SHORE PROTECTION PROJECT		
Acts	**Work Authorized**	**Documents**
27 Oct 1965	Construction and periodic renourishment of 10 miles of Atlantic shoreline between the St. Johns River to the Duval – St. Johns County line.	PL 89-298
19 Nov 1986	Extended Federal participation for periodic renourishment through 2040.	PL 99-962

In addition, BOEM would authorize the use of sand from an Outer Continental Shelf (OCS) sand borrow area for the project under the OCS Lands Act, 43 U.S.C. § 1337(k). In 1994, OCSLA was amended to allow BOEM to convey, on a noncompetitive basis, the rights to OCS sand, gravel, or shell resources for use in a program for shore protection, beach restoration, or coastal wetlands restoration undertaken by a Federal, State, or local government agency (43 U.S.C. 1337(k)(2)(A)(i)).

1.4 RELATED ENVIRONMENTAL DOCUMENTS.

Related NEPA documents for the Duval County SPP, Duval County, FL include the following:

- Final Environmental Impact Statement Beach Erosion Control Duval County, Florida. U.S. Army Corps of Engineers. Jacksonville, FL. 1974.

- Final Environmental Assessment: Duval County Shore Protection Project & Finding of No Significant Impact. U.S. Army Corps of Engineers. Jacksonville, FL. 1993.

- Final Environmental Assessment: Duval County Beach Erosion Control Project New Borrow Area & Finding of No Significant Impact. U.S. Army Corps of Engineers. Jacksonville, FL. 2005.

- Final Environmental Assessment: Use of Outer Continental Shelf Sand from the Duval Borrow Area in the Duval County (Florida) Shore Protection Project. Bureau of Ocean Energy Management. Herndon, VA. 2011.

- Draft Environmental Impact Statement for Designation of an Ocean Dredged Material Disposal Site Offshore Jacksonville, Florida. U.S. Environmental Protection Agency. Region 4. Atlanta, GA. 2012

These documents are available for download at the following link: <http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Duval>.

1.5 DECISIONS TO BE MADE.

The purpose of this Supplemental Environmental Assessment (SEA) is to determine if the proposed action, in light of new information or circumstances, could result in different effects and potentially contribute to significant effects on the human environment. This SEA, prepared by the Corps and BOEM as cooperating agencies, supplements existing analyses and updates potential environmental effects resulting from renourishment of the beach with sand from the newly proposed borrow area. The Corps and BOEM identified and reviewed new information to determine if any resources and effects previously analyzed should be re-evaluated or if the new information could alter previous effects determinations. This SEA further supports or elaborates on the analyses or information presented in existing NEPA documents, but it does not change the conclusions of any of those analyses. Pursuant to 40 CFR 1506 and 43 CFR 46, the existing analyses are still valid and are incorporated by reference.

1.6 SCOPING AND ISSUES.

1.6.1 RELEVANT ISSUES.

This SEA supplements the previous NEPA documents listed in section 1.4 above. It provides an evaluation of the effects of dredging suitable material from the new borrow area and also evaluates whether changes in the proposed action, new circumstances not previously analyzed, and information not previously available contribute to a determination of significantly different environmental effects (43 CFR 46.120). The following issues were identified as relevant to the proposed mining of the new borrow area and appropriate for further evaluation: cultural resources; threatened and endangered species including sea turtles, whales, West Indian manatee, smalltooth sawfish, and Atlantic and Shortnose sturgeon; essential fish habitat (EFH); benthic resources; turbidity and water quality; fish and wildlife resources; and noise produced during dredging operations.

1.6.2 ISSUES ELIMINATED FROM FURTHER ANALYSIS.

Previous NEPA documents (Corps, 1974; Corps, 1993; Corps, 2005; BOEM, 2011) have described the Affected Environment in detail and evaluated the potential effects on resources of concern, including aesthetics, air quality, benthic resources and habitat, birds and other wildlife, fish and EFH, physical oceanography, non-threatened marine mammals, threatened and endangered species, recreation and tourism, water quality, , noise and cumulative effects. The conclusions of the existing effects analyses for most resources, except those resources discussed in more detail herein, have been determined to be valid since the beach template and construction methodologies, scope, and timing have remained the same, and relevant Federal laws have not changed in a manner that would require re-evaluation of these resources.

Those environmental effects are summarized in Section 5 of the 2011 EA (BOEM, 2011).

1.7 ENVIRONMENTAL COORDINATION

1.7.1 WATER QUALITY CERTIFICATION

This project would be performed in compliance with the conditions of the Florida Department of Environmental Protection (DEP) Joint Coastal Permit (JCP) 0228528-001-JC (and subsequently issued modifications) to insure State of Florida water quality standards are met. Pursuant to Subpart D of the implementing regulations for the Coastal Zone Management Act (CZMA)(15 CFR 930), the City of Jacksonville obtained a consistency concurrence from the DEP, dated 18 April 2005, indicating the Duval County SPP was consistent with Florida's Coastal Management Program (No. 0228528-001-JC). It is anticipated that DEP will issue a modification to the JCP extending it, which constitutes the finding of consistence for the new borrow area mining.

1.7.2 ENDANGERED SPECIES ACT- SECTION 7 COORDINATION

In accordance with Section 7 of the Endangered Species Act (ESA), the project will be coordinated under the Act. The applicable conditions of the Regional Biological Opinion issued by the National Marine Fisheries Service (NMFS) and the Statewide Programmatic Biological Opinion issued by the U.S. Fish and Wildlife Service (USFWS) would be followed during construction.

2 ALTERNATIVES

The alternatives section is perhaps the most important component of this SEA. It describes the no-action alternative, the proposed action, and other reasonable alternatives that were evaluated. The beneficial and adverse environmental effects of the alternatives are presented in comparative form, providing a clear basis for choice to the decisionmaker and the public. A preferred alternative was selected based on the information and analysis presented in the sections on the Affected Environment and Probable Impacts.

2.1 DESCRIPTION OF ALTERNATIVES.

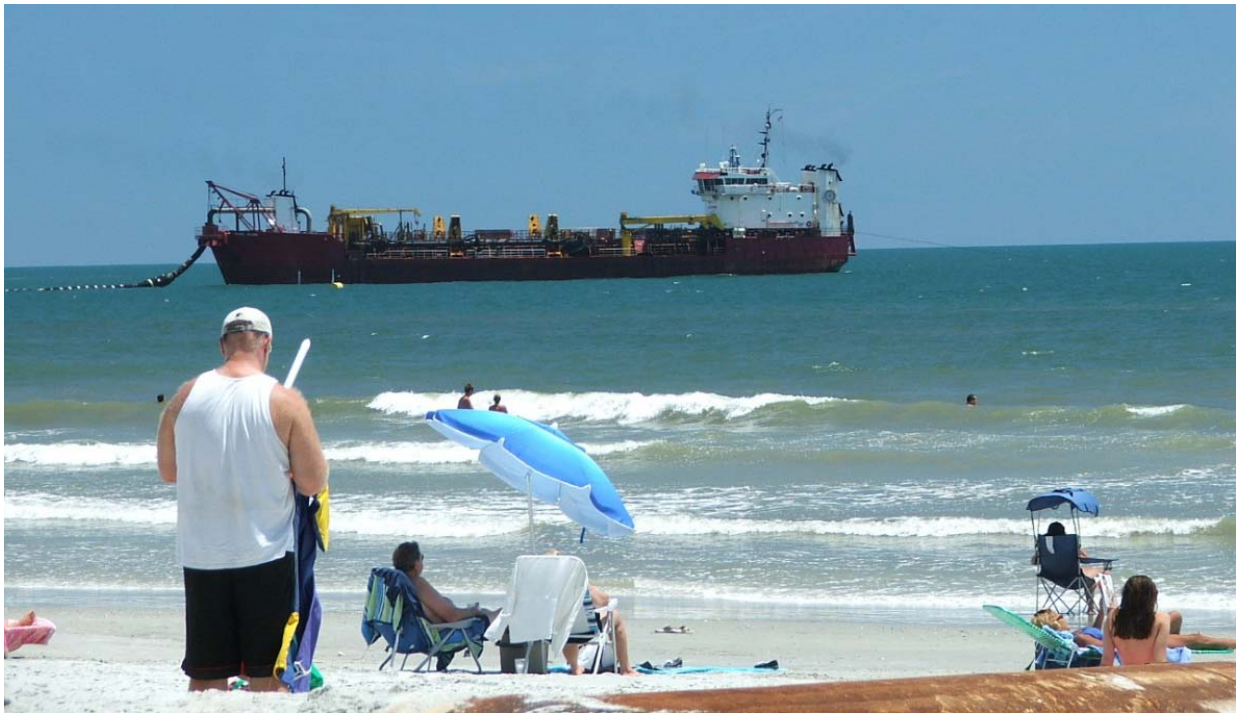
2.1.1 NO-ACTION ALTERNATIVE

The no action alternative would allow the beaches to further erode over time. The current state of erosion would significantly increase the threat of wave and tidal storm damage to residences and businesses along the shoreline as well as virtually eliminate oceanfront recreation for the residents and tourists of Duval. In addition, sea turtle nesting and shorebird foraging habitat would degrade due to the continued erosion.

2.1.2 NEW BORROW AREA ALTERNATIVE

The proposed new borrow area dredging would occur as planned. Beach compatible fill would be dredged from the ocean bottom and placed along the Duval County SPP shoreline (Figure 1). Beach compatible fill is described in 62B-41.007 Florida Administrative Code (F.A.C). The project is anticipated to be constructed using one or more hopper dredges in the June to August 2016 timeframe. Hopper dredging, transport, and placement is expected to occur for approximately 80-90 days to obtain the necessary volume. Efficient dredging practice involves excavating sand in 2-5 foot thicknesses along relatively straight and adjacent runs along the seabed. Dredged depths will not generally exceed 6-8 feet. The dredged sand will travel through the dragheads into the dredge's open hopper and most of the turbid seawater effluent will drain out the overflow structures in the hopper. The vessel(s) will transport the dredged material a distance of approximately 6-9 miles to pump-outs positioned approximately 0.5 mile from shore where the material will be pumped directly from the hopper via pipeline to the beach (Figure 2). Pump-out buoys will be relocated several times to facilitate pump-out along the nourishment template. Pipeline will be rafted, floated into place, and flooded and submerged to the sea floor. The placement and relocation of the nearshore mooring buoys may involve the use of tender tugboats and a barged pipeline hauler or crane. Pump-out buoys may be anchored using multi-ton point anchors and/or clump weights. Support vessels and tugs may support the hopper dredge in other activities, such as crew rotations and pump-out connection.

Figure 2. Hopper Dredge with Shore-connected Pipeline During the 2011 Renourishment.



2.2 PREFERRED ALTERNATIVE

The preferred alternative is to use the new borrow area to obtain beach compatible fill material for the renourishment of the Duval County shoreline.

2.3 ALTERNATIVES ELIMINATED FROM FURTHER EVALUATION

2.3.1 ALTERNATIVE BEACH EROSION CONTROL MEASURES

Alternatives, such as, groins, offshore breakwaters, and nonstructural plans were all considered during the original project study. A thorough description of the potential environmental effects of each alternative and the reasons for alternative selection and/or dismissal are described in detail in the 1974 Final Environmental Impact Statement (Corps, 1974), the 1984 General Design Memorandum (Corps, 1984), and to some extent in the 1990 934 Reevaluation Report (Corps, 1990).

2.4 COMPARISON OF ALTERNATIVES

Table 3 lists alternatives considered and summarizes the major features and consequences of the proposed action and alternatives. See section 4.0 Environmental Effects for a more detailed discussion of impacts of alternatives.

Table 2: Summary of Direct and Indirect Impacts

ALTERNATIVE ENVIRONMENTAL FACTOR	No Action	New Borrow Area
CULTURAL RESOURCES	No effect.	Magnetometer, side scan sonar and sub-bottom profiler surveys are being conducted.
SEA TURTLES	Potential adverse impact from nesting beach loss due to erosion.	May affect. Impacts to marine turtles minimized through implementation of approved protection measures.
WHALES	No effect.	May affect, but not likely to adversely affect with implementation of standard protection measures.
WEST INIDIAN MANATEE	No effect.	May affect, but not likely to adversely affect with implementation of standard protection measures.
SMALLTOOTH SAWFISH	No effect.	May affect, but not likely to adversely affect due to anticipated rare occurrence.
SHORTNOSE STURGEON	No effect.	May affect, but not likely to adversely affect due to anticipated rare occurrence.
ATLANTIC STURGEON	No effect.	May affect, but not likely to adversely affect due to anticipated rare occurrence.
ESSENTIAL FISH HABITAT	Erosion would reduce intertidal beach habitat possibly lowering infaunal community populations in this zone.	Marine water column and unconsolidated substrate habitat would be temporarily impacted during dredging. Long term infaunal community suppression not expected due to anticipated dredging intervals.
BENTHIC RESOURCES	No effect.	Benthos would be temporarily impacted during dredging. Long term suppression not expected due to dredging intervals.
WATER QUALITY	No effect.	Temporary impacts to the water column during dredging. Monitoring with shut-down should 29 NTU Surface Water Standard be exceeded.
FISH AND WILDLIFE RESOURCES	Loss of beach habitat due to erosion.	Wildlife temporarily displaced during dredging.

3 AFFECTED ENVIRONMENT

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

3.1 GENERAL ENVIRONMENTAL SETTING

3.1.1 NEW BORROW AREA

The proposed new borrow area is located between 8-10 miles southeast of the St. Johns River entrance on the OCS in the Atlantic Ocean. The area is approximately 1,900-acres in size in water depths between 40'-60' MLLW. Approximately 10mcy of beach compatible sand has been identified in this area. The borrow area is located within the Duval Ridge Field, which extends from St. Johns County north to Nassau County, from 3 miles offshore to approximately 20 miles offshore (URS and CPE, 2007). Potential sand resources in the Duval Ridge Field are estimated to range on the order of 10 billion cubic yards.

3.2 GEOLOGY

3.2.1 NEW BORROW AREA

Sediment samples of the bottom substrate in the new borrow area from 2013 indicate the presence of poorly-graded, fine to medium-grained quartz sand with an average visual shell content of 7 percent. The mean sediment grain size is 0.32 mm with a standard deviation of 0.93. All samples within the area contain less than 5 percent silt with an average silt content of 1.9 percent. Based on the above analysis, the borrow area material is suitable for beach placement based on the Florida "Sand Rule" (F.A.C. 62B-41.007(2)(j)). In 2010 and 2014, side-scan sonar surveys including the identification and delineation of bottom habitat(s) and substrate types within the new borrow area were conducted. The new borrow area substrates were confirmed to be unconsolidated (sand) sediments with no features such as hardbottoms or rock outcrops.

3.3 THREATENED AND ENDANGERED SPECIES

Threatened and Endangered species that may occur in the project area, and that may be affected by the proposed work, can be found in Table 3.

Table 3. Status of Listed Species that May Occur Within the Project Area.

Species	***State Listing****	***Federal Listing****
Loggerhead Sea Turtle	LT	LT
Leatherback Sea Turtle	LE	LE
Green Sea Turtle	LE	LE
Kemp's Ridley Sea Turtle	LE	LE
North Atlantic Right Whale	LE	LE
West Indian Manatee	LE	LE
Smalltooth Sawfish	LE	LE
Shortnose Sturgeon	LE	LE
Atlantic Sturgeon	LE	LE

* LE=Endangered and LT=Threatened

3.3.1 SEA TURTLES

The sea turtle species potentially occurring within the vicinity of the new borrow area include loggerhead (*Caretta caretta*), leatherback (*Dermochelys coriacea*), green (*Chelonia mydas*), and Kemp's ridley (*Lepidochelys kempii*) sea turtles. The coastal waters of Duval County primarily provide migratory and reproductive habitat for these species. Mating generally takes place in offshore waters near the nesting beach, and males rarely come ashore (Fuller 1978). Migrating nesting females and hatchlings may traverse through the borrow area. Hopper dredges, with their trailing dragheads, can impact swimming sea turtles through entrainment of adults and sub-adults. Hopper dredges have been used to construct this project in the past. No sea turtles were taken during the 1995 renourishment, 1 loggerhead sea turtle was taken by the hopper dredge in 2005, and 2 loggerhead sea turtles were taken by the hopper dredge in 2011.

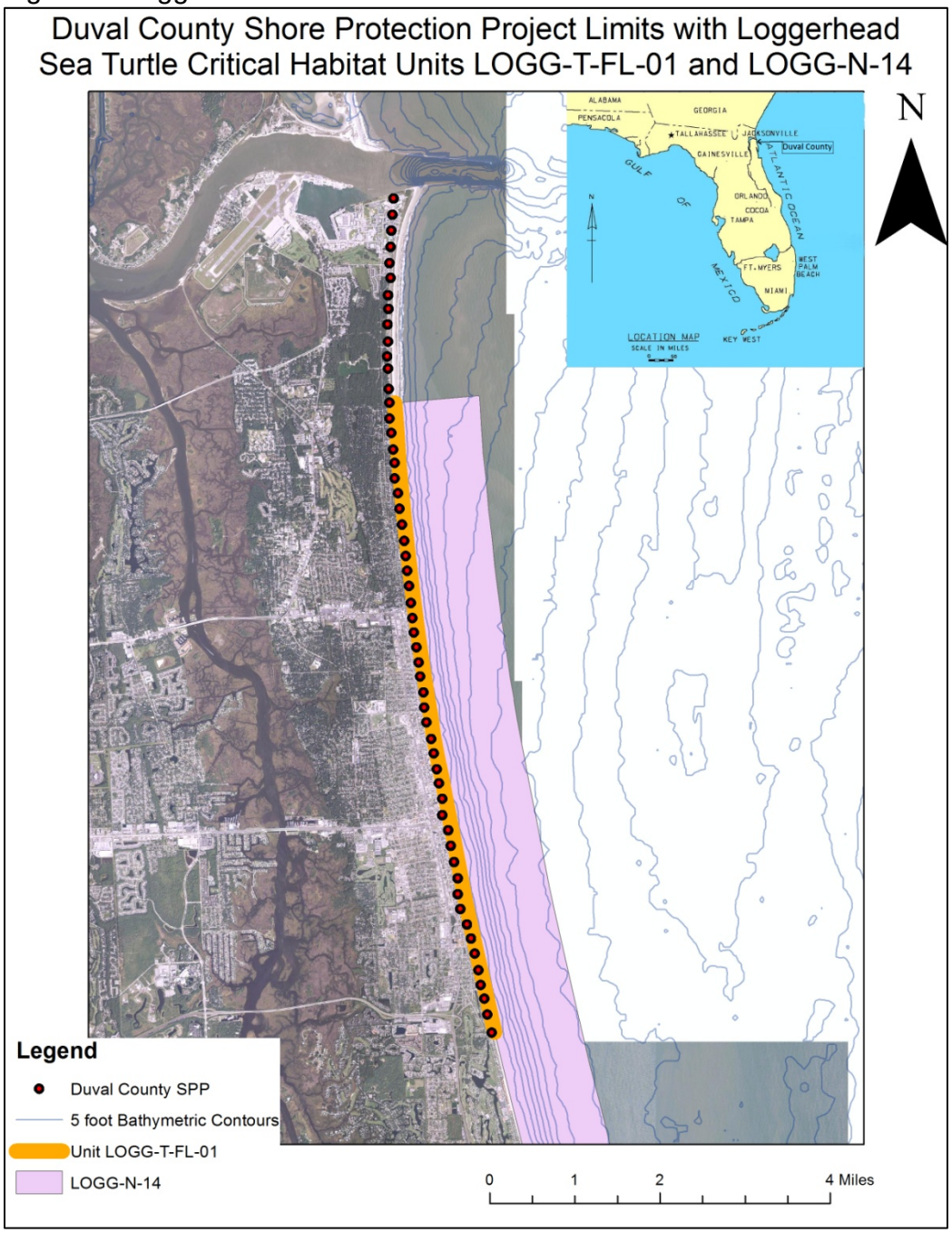
Although the primary Federal action evaluated in this SEA is the mining of beach compatible fill from an offshore borrow source and thus swimming sea turtles are primarily discussed above, the proposed beach renourishment activities overlap newly designated critical habitat for the loggerhead sea turtle. Therefore this new information will be discussed here-in.

Nesting of all four species has been documented on the beaches of Duval County but loggerheads are by far the most numerously nesting species, with leatherbacks and greens a distant second and third, and Kemp's ridleys nesting only very rarely here. On 10 July 2014 both the USFWS (50 CFR Part 17) and the NMFS (50 CFR Part 226) published final rules in Federal Register Volume 79, Number 132, parts III and IV respectively designating critical habitat for the Northwest Atlantic Ocean Loggerhead Sea Turtle Distinct Population Segment (DPS). The NMFS and USFWS have determined that the worldwide population of loggerhead sea turtles is composed of nine DPSs. A DPS is the smallest division of a taxonomic species permitted to be protected under the ESA.

The critical habitat units within the action area are USFWS Unit LOGG-T-FL-01 and NMFS Unit LOGG-N-14. Unit LOGG-T-FL-01 is designated by the USFWS as

terrestrial nesting beach (the extra-tidal or dry sandy beach from the mean high water (MHW) line shoreward to the toe of the secondary dune) from the southern boundary of Kathryn Abbey Hanna Park to the Duval-St. Johns County line (Figure 2). Terrestrial nesting beach is capable of supporting high densities of nests, contains relatively unimpeded nearshore access, is high enough to avoid frequent nest inundation, contains sand quality appropriate for nest construction and egg incubation, dark enough to avoid disorientations, and contains or mimics natural coastal conditions. Unit LOGG-N-14 is designated by the NMFS as nearshore reproductive habitat (from the MHW line seaward 1.6 km) from the southern boundary of Kathryn Abbey Hanna Park to Matanzas Inlet (Figure 2). Nearshore reproductive habitat is a portion of the nearshore waters adjacent to the nesting beach that is used by hatchlings to egress to the open-water environment as well as by nesting females to transit between the beach and open water during the nesting season.

Figure 3. Loggerhead Critical Habitat



3.3.2 NORTH ATLANTIC RIGHT WHALE

The project area occurs within critical habitat designated for the North Atlantic right whale (*Eubalaena glacialis*). Right whales are known to concentrate off the northeast coast of Florida during November through April. NMFS has established the Southeast Seasonal Management Area between 15 November to 15 April since the southeast Atlantic Coast serves as calving and nursery grounds for this endangered species.

3.3.3 WEST INDIAN MANATEE

Manatees (*Trichechus manatus*) can be found in the inshore waters of the project vicinity and in the coastal waters of the Atlantic Ocean primarily during migration. The proposed work does not overlap any designated critical habitat for this species. Between 1976 and 2012 there have been 405 documented manatee mortalities in Duval County. The probable cause of death for 146 (36%) of these mortalities was watercraft (http://research.myfwc.com/manatees/search_summary_results.asp?c=Duval&txt_description1=Watercraft&txt_description2=Gate%2FLock&txt_description3=Human%2C+Other&txt_description4=Perinatal&txt_description5=Cold+stress&txt_description6=Natural&txt_description7=Undetermined&d=&m=&mn1=January%3C&mn2=February%3C&mn3=March%3C&mn4=April%3C&mn5=May%3C&mn6=June%3C&mn7=July%3C&mn8=August%3C&mn9=September%3C&mn10=October%3C&mn11=November%3C&mn12=December%3C&y=&bln_standardOutput=1&btn_submit=Search).

3.3.4 SMALLTOOTH SAWFISH

Smalltooth sawfish (*Pristis pectinata*) is currently listed as endangered by the NMFS and may rarely occur within the project area; however, it has not been observed during previous dredging events. The National Sawfish Encounter Database managed by the Florida Museum of Natural History, University of Florida documents only 3 encounters in Duval County. These were between 1879-1884. All three observations were recorded from the St. Johns River in the vicinity of Jacksonville. Currently, the core of the smalltooth sawfish Distinct Population Segment is surviving and reproducing in the waters of southwest Florida and Florida Bay, primarily within the jurisdictional boundaries of Everglades National Park where important habitat features are still present and less fragmented than in other parts of the historic range. The NMFS designated critical habitat for the sawfish in 2009, but the project area does not overlap any of these proposed locations.

3.3.5 SHORTNOSE STURGEON

Shortnose sturgeon (*Acipenser brevirostrum*) is currently listed as endangered by the NMFS and may rarely occur within the project area; however, it has not been encountered during previous dredging events adjacent to the proposed new borrow area. Historical distribution for shortnose sturgeon has been in major rivers along the Atlantic seaboard, with the northern limit near the St. John River in Canada and the southern limit near the Indian River in central Florida (NAVFAC 2008). However, due to the limited catch of shortnose sturgeon in the vicinity of the St. Johns River (approximately 4,492 hours of gill-net sampling from January through August of 2002 and 2003 in the upper river and estuarine area; only one shortnose sturgeon was captured; FWRI 2007), their occurrence within the offshore areas near the new borrow area is unlikely.

3.3.6 ATLANTIC STURGEON

Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) is currently listed as endangered by the NMFS and may occur within the project area; however, it has not been encountered during previous dredging events adjacent to the proposed new borrow area. The

historic range of the Atlantic sturgeon was from St. Croix, Maine, to the St. Johns River, Florida. They spend most of their lives in marine waters and migrate up rivers from February through March to spawn. Therefore, because the Atlantic sturgeon spends a majority of its life in marine waters, this species may be present in the offshore area in the vicinity of the proposed new borrow area.

3.4 WATER QUALITY

3.4.1 WATER USE CLASSIFICATION

The waters offshore Duval County within the vicinity of proposed new borrow area have been designated by the State of Florida as Class III - Recreation, Propagation, and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife (popularly referred to as fishable/swimmable). The Florida Current dominates circulation along the east Florida continental shelf and is the local manifestation of the Gulf Stream, the intense western boundary current of the North Atlantic that transports heat north from the equator (Hammer et al. 2005).

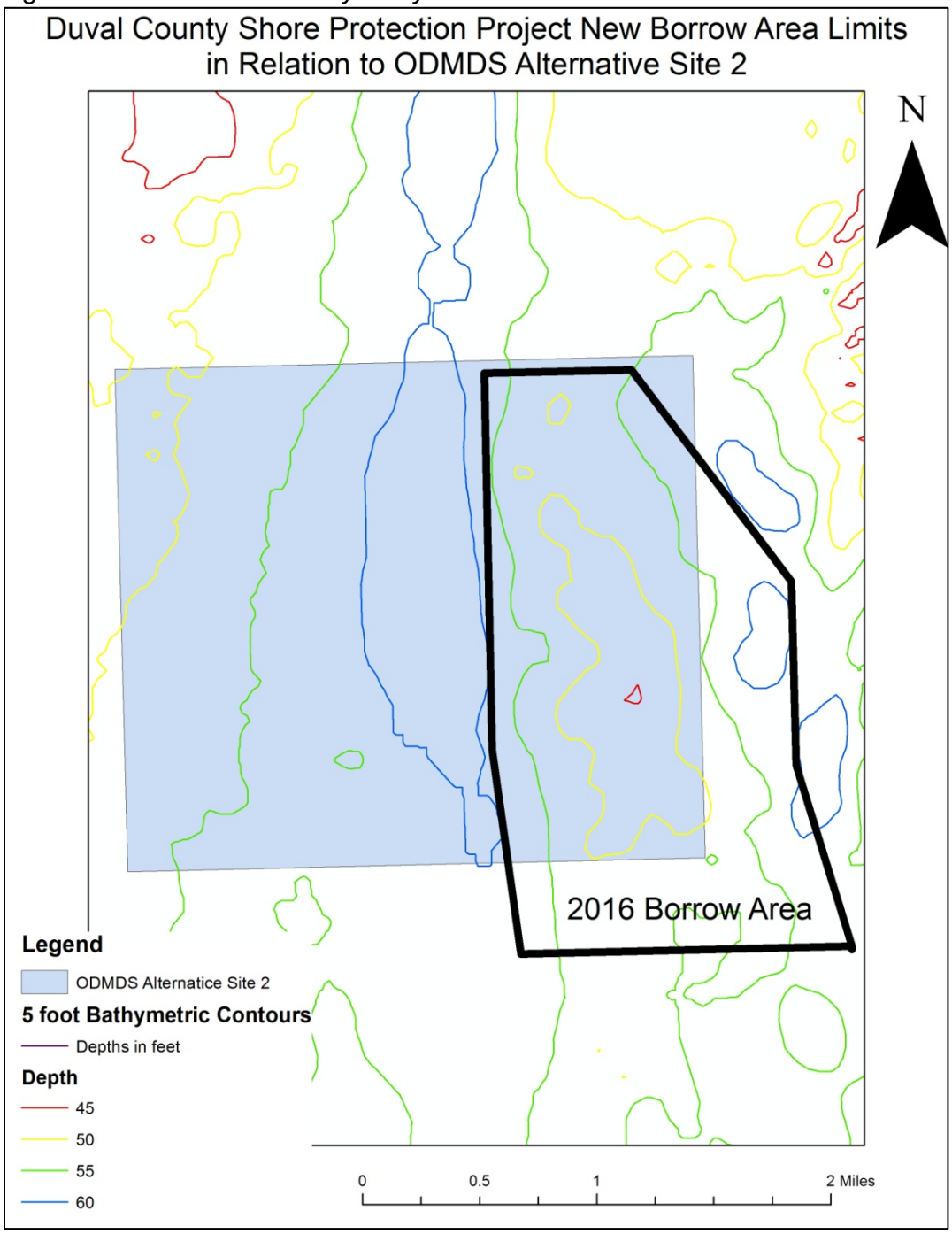
3.5 ESSENTIAL FISH HABITAT

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act of 1996, waters and substrate within the project area have been identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (1998). EFH is defined as those waters and substrate necessary for fish to spawn, breed, feed, or grow to maturity. Marine/offshore EFH within the boundaries of the proposed new borrow area consists of water column with an unconsolidated substrate. A detailed EFH assessment is included in the DEIS (EPA, 2012). Section 3.3.7 and Appendix D (section 2) of the DEIS identify EFH and Federally managed fisheries within the project area.

3.6 BENTHIC RESOURCES

Benthic organisms such as crustaceans, echinoderms, anthozoans, annelid worms, mollusks, and demersal fish play a major role in altering underlying benthic substrates and in breaking down organic material which provides sustenance for economically important species of pelagic fishes (Sumich 1988). These organisms are important marine ecological community members because they burrow within and oxygenate the sediments, may filter large volumes of water, contribute organic materials to the overall marine system, and serve as food for bottom-feeding fish and other invertebrates. The predominant infaunal invertebrates inhabiting the sand-bottom habitats of the nearshore east Florida shelf include polychaete worms, crustaceans, echinoderms, and mollusks (Zarillo et al 2009). See section 3.3.5 of the DEIS (EPA, 2012) for a detailed analysis of the benthic community within the proposed new borrow area (ODMDS alternative site 2).

Figure 4. Borrow Area Bathymetry



3.7 FISH AND WILDLIFE RESOURCES

Marine life common to northeast Florida can be found within the proposed new borrow area. Marine mammal species known to occur in the project area include bottlenose dolphin (*Tursiops truncatus*), Atlantic spotted dolphin (*Stenella frontalis*), and North Atlantic right whale (discussed separately in Section 3.3.2). Avian species most likely to occur in the study area are pelagic birds, pelicans, gulls, and terns. A wide variety of fin

fish and shellfish species that dwell in softbottom and coastal pelagic (i.e., at or near the sea surface in the water column) habitats are caught and landed off the coast of northeast Florida. Important commercial fisheries species from these groups include northern brown shrimp, northern white shrimp (softbottom), snappers, and king mackerel (coastal pelagic).

3.8 CULTURAL 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. Few Paleo-Indian archeological sites are recorded in northeastern Florida.

During the Archaic period (ca. 10,000 YBP - ca. 2500 YBP), a wider range of resources were exploited and may have led to a more sedentary existence. Sea level rose to its present position. Known sites in Duval County mostly date to the Late Archaic time period and are located along inland waterways and marshes. Presumably, early archaic sites are located in drowned river valleys and offshore since sea level rise. Two, inundated, prehistoric sites are recorded in the St. Johns River, including one of the earliest recorded Archaic sites in Duval County (9DU21117) dated to around 6,000-7,000 YBP. The other site (9DU21118) dates from around 1,000 years ago (A.D. 970-1100). The dominant cultural tradition within Duval County, known as St. Johns, developed from the archaic period in north Florida around 2500 YBP. The various stages of St. Johns I and II (2500 YBP to A.D. 1565) are based on the evolution of pottery types and design and increasing sedentism, ceremonialism and mound building. St. Johns site types recorded by the Florida Master Site File (FMSF) include shell and earth middens and low sand mounds, many of which are recorded in Duval County.

During the early historic period, beginning with the first Spanish colonial period (A.D. 1513 - 1763), the Timucua were the main tribal group that controlled northeastern Florida. Their population was decimated by European-introduced diseases, warfare, enslavement, and migration out of Florida.

Initially the French, under Jean Ribault in 1562, and then the Spanish, afterwards, attempted to colonize this area of northeastern Florida. Fort Caroline was built along the banks of the St. Johns River by the French in 1564, but was captured by the Spanish in 1565. Spain maintained control of northeastern Florida until 1763 when the British took it over. Spain regained power in 1784 and finally Florida became a state in 1821.

While Florida was not a major participant during the Civil war, it supplied men and goods to the Confederacy. Many steamer captains in Jacksonville became blockade runners to supply these goods, but by 1862, the Union had blockaded the river and Confederate forces had abandoned Jacksonville.

Despite impoverishment after the Civil War, Jacksonville rebounded with timber, fishing, shipbuilding and steamship packet industries. By 1900 Jacksonville had become a thriving port with a large population. Navigational improvements to the river, including the construction of training walls, deepening the channel and building the jetties, were completed by 1938.

More than 50 known and unknown shipwrecks are located in the vicinity of Duval County. The FMSF lists four 19th century shipwrecks (9DU3157, 8030, 11520, 19811) in the vicinity of the project area. To the north of the project area in Nassau County, there are four known 18 and 19th century shipwrecks along the shore.

4 ENVIRONMENTAL EFFECTS

This section is the scientific and analytic basis for the comparisons of the alternatives. See table 1 in section 2.0 Alternatives, for summary of impacts. The following includes anticipated changes to the existing environment including direct, indirect, and cumulative effects.

4.1 THREATENED AND ENDANGERED SPECIES

4.1.1 NO-ACTION ALTERNATIVE

Should no renourishment occur, sea turtle beach nesting habitat could erode and degrade thus impacting this critical habitat for these species.

4.1.2 NEW BORROW AREA ALTERNATIVE

In accordance with Section 7 of the Endangered Species Act, consultation with the USFWS and NMFS will be performed. The Corps has determined that the proposed new borrow area dredging may affect sea turtles, but is not likely to adversely affect manatees, whales, sturgeon and the smalltooth sawfish. This determination is based on the implementation of species specific protective measures. The terms and conditions of the 1998 NMFS South Atlantic Division Regional Biological Opinion (SARBO) and the USFWS Statewide Programmatic Biological Opinion (SPBO) will be followed for these species.

4.1.2.1 Sea Turtles

The Corps has previously determined that the use of a hopper dredge may adversely affect sea turtles. Potential effects include entrainment of adult and sub-adult sea turtles. The NMFS has concurred with this determination and believes that take resulting from hopper dredging operations will not jeopardize the continued existence of any sea turtle species. In compliance with the SARBO, the following protective measures shall be implemented to minimize the risk of taking sea turtles during proposed hopper dredging activities:

- The Contractor shall instruct all personnel associated with the project of the potential presence of threatened and endangered species, such as sea turtles, and the need to avoid collisions with these animals or harming them in any way.

- All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing sea turtles, which are protected under the Endangered Species Act. The Contractor may be held responsible for any threatened and endangered species harmed, harassed, or killed as a result of construction activities.

- During dredging operations, an observer approved by the NMFS shall be aboard the dredge to monitor for the presence of sea turtles.

- Any take concerning a sea turtle or sighting of any injured or incapacitated sea turtle shall be reported immediately to the Corps contracting officer.

- Hopper dredge drag heads shall be equipped with rigid sea turtle deflectors which are rigidly attached. No dredging shall be performed by a hopper dredge without an installed turtle deflector device approved by the Corps contracting officer.

- The Contractor shall install baskets or screening over the hopper inflow(s) with no greater than 4" x 4" openings. The method selected shall depend on the construction of the dredge used and shall be approved by the contracting officer prior to commencement of dredging. The screening shall provide 100% screening of the hopper inflow(s). The screens and/or baskets shall remain in place throughout the performance of the work.

- The Contractor shall install and maintain floodlights suitable for illumination of the baskets or screening to allow the observer to safely monitor the hopper basket(s) during non-daylight hours or other periods of poor visibility. Safe access shall be provided to the inflow baskets or screens to allow the observer to inspect for turtles, turtle parts or damage.

- The Contractor shall operate the hopper dredge to minimize the possibility of taking sea turtles and to comply with the requirements stated in the Incidental Take Statement provided by the NMFS in their RBO.

- The turtle deflector device and inflow screens shall be maintained in operational condition for the entire dredging operation.

- When initiating dredging, suction through the drag heads shall be allowed just long enough to prime the pumps, and then the drag heads must be placed firmly on the bottom. When lifting the drag heads from the bottom, suction through the drag heads shall be allowed just long enough to clear the lines, and then must cease. Pumping water through the drag heads shall cease while maneuvering or during travel to/from the disposal area.

- Raising the drag head off the bottom to increase suction velocities is not acceptable.

- The Contractor shall keep the drag head buried a minimum of 6 inches in the sediment at all times.

- During turning operations the pumps must either be shut off or reduced in speed to the point where no suction velocity or vacuum exists.

The Corps has determined that the presence of the hopper dredge in the nearshore waters could temporarily impact the physical or biological features (PBF) and primary constituent elements (PCE) of loggerhead critical habitat unit LOGG-N-14 during construction. Hatchling egress from the water's edge to open water and nesting female transit back and forth between the open water and the nesting beach during nesting season could be hindered by the presence of the hopper dredge and pipeline. The Corps has also determined that the presence of the construction equipment on the beach and the process of filling the beach template with offshore sand could temporarily impact the PBFs and PCEs of loggerhead critical habitat unit LOGG-T-FL-01. Nesting females could be deterred due to the presence of the equipment and activity on the beach. However, the construction phase typically takes 3-5 months approximately every 5 years and the daily construction activity occurs on only a small area at a time (approximately 500-1,000 feet of beach per 24 hours). In addition the SARBO and SPBO include conditions that minimize incidental take of turtles. Finally, the placement of sand on the beach may increase sea turtle nesting habitat if the placed sand is highly compatible (i.e., grain size, shape, color, etc.) with naturally occurring beach sediments in the area, and compaction and escarpment remediation measures are incorporated into the project (i.e. the project complies with the terms and conditions of the SPBO). Therefore, the Corps has determined that the project will not destroy or adversely modify loggerhead critical habitat.

4.1.2.2 West Indian Manatee, North Atlantic Right Whale, Atlantic and Shortnose Sturgeon, and Smalltooth Sawfish

Standard protective measures would be taken during renourishment activities to ensure the safety of manatees, whales, sturgeon and sawfish. To make the contractor and his personnel aware of the potential presence of these species in the project area, their endangered status, and the need for precautionary measures, the contract specifications would include the following protection clauses:

- The contractor shall instruct all personnel associated with construction activities about the potential presence of manatees, whales, sturgeon and sawfish in the area and the need to avoid collisions with them or harm them in any way.

- During dredging operations, an observer approved by the NMFS shall be aboard the dredge to monitor for the presence of manatees and whales.

- If siltation barriers are used, they shall be made of material in which these species cannot become entangled, are properly secured, and are regularly monitored to avoid entrapment. Barriers must not block entry to or exit from essential habitat.

- The tug/barge or dredge operator shall maintain a 500-yard buffer between the vessel and any whale.

- If a manatee or sawfish is sighted within 100 yards of the project area, all appropriate precautions shall be implemented by the contractor to ensure protection of these

species. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee or sawfish. If a manatee or sawfish is closer than 50 feet to moving equipment or the project area, the equipment shall be shut down and all construction activities shall cease to ensure protection of these species. Construction activities shall not resume until the animal has departed the project area.

- All vessels associated with the project shall operate at 'no wake' speeds at all times while in shallow waters or channels where the draft of the boat provides less than three feet clearance from the bottom. Boats used to transport personnel shall be shallow draft vessels, preferably of the light-displacement category, where navigational safety permits. Vessels transporting personnel between the landing and any workboat shall follow routes of deep water to the greatest possible extent. Shore crews shall use upland road access if available.

- Mooring bumpers shall be placed on all large vessels wherever and whenever there is a potential for manatees to be crushed between two moored vessels. The bumpers shall provide a minimum stand-off distance of four feet. In addition, pipeline placement must not completely block manatee access to adjacent waters.

- All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, whales, sturgeon and sawfish, which are protected under the Endangered Species Act and the Marine Mammal Protection Act.

- Any collisions with a manatee, whale, sturgeon or smalltooth sawfish or sighting of any injured or incapacitated animal shall be reported immediately to the Corps. The Contractor shall also immediately report any collision with and/or injury to: a manatee to the Florida Fish and Wildlife Conservation Commission “Manatee Hotline” 1-888-404-FWCC (3922) as well as the U.S. Fish and Wildlife Service, Jacksonville Field Office; a whale to the NMFS Whale Stranding Network pager number at 305-862-2850; and a smalltooth sawfish or sturgeon to the National Marine Fisheries Service’s Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.

4.1.2.2 Dredge Noise

Dredging operations may present risk of vessel noise-related behavioral disruption to North Atlantic right whales and humpback whales. Principal effects or risk of exposure would be limited to possible behavioral changes from broad band, vessel and dredging noise < 10 kHz. In an on-going study to describe the acoustic behavior of North Atlantic right whale mother-calf, mother-calf pairs produced very few sounds that were detectable (at ranges of ~100m or more) in the Southeastern U.S. when the calf was less than four months of age (Reeb personal communication). Instances when sounds were documented involved interaction between the mother-calf pair and either another whale or a novel object in their environment that elicited a curious approach. In terms of surface behavior, calves were consistently in much closer proximity to their mothers in the Southeastern U.S. and spent more time at the surface compared to mother and

older calf pairs in the Bay of Fundy. These preliminary results indicate that masking of mother/calf communication when calves are less than four months of age (in the Southeastern U.S.) is of less a concern than potential communication masking in the Northeast U.S. when the calves are older.

4.2 WATER QUALITY

4.2.1 NO-ACTION ALTERNATIVE

There would be no effect to water quality from this alternative.

4.2.2 NEW BORROW AREA ALTERNATIVE

The primary anticipated change in water quality at the new borrow area would be a temporary increase in turbidity during dredging. Studies of past projects indicate that the extent of the sediment plume is generally limited to between 1,640 – 4,000 ft from the dredge and that elevated turbidity levels are generally short-lived, on the order of an hour or less. (USACE 1983; Hitchcock et al. 1999; MMS 1999; Anchor Environmental 2003; Wilber et al. 2006). The length and shape of the plume depend on the hydrodynamics of the water column and the sediment grain size. Given that the dominant substrate at the borrow sites is sand, it is expected to settle rapidly and cause less turbidity and oxygen demand than finer-grained sediments. No appreciable effects on dissolved oxygen, pH, or temperature are anticipated because the dredged material has low levels of organics and low biological oxygen demand. Additionally, dredging activities would occur within the open ocean where the hydrodynamics of the water column are subject to mixing and exchange with oxygen rich surface waters. Any resultant water column turbidity would be short term (i.e., present for approximately an hour) and would not be expected to extend more than several thousand feet from the dredging operation. Accordingly, it is anticipated that the project would have only minor impacts on marine waters at the offshore borrow area. Per the State of Florida water quality certification (0228528-001-JC) turbidity would be monitored at the point of discharge to insure compliance with State of Florida water quality standards or those activities causing the violation would temporarily cease.

4.3 ESSENTIAL FISH HABITAT

4.3.1 NO-ACTION ALTERNATIVE

This alternative would not impact EFH or federally managed fisheries along the northeast coast of Florida.

4.3.2 NEW BORROW AREA ALTERNATIVE

As stated in section 3.5 above, section 3.3.7 and appendix D (section 2) of the DEIS (EPA, 2012) identify EFH and Federally managed fisheries within the project area. Section 4.2.7 and appendix D (section 3) of the DEIS (EPA, 2012) evaluate the effects of ocean disposal of dredged material on EFH and Federally managed fisheries within the project area and most of these evaluations are applicable to the proposed dredging of the new borrow area. EFH impacts include direct removal of benthic organisms as a

result of dredging; turbidity/siltation effects, including increased light attenuation from turbidity; noise disturbance to aquatic organisms; and alteration of hydrodynamic regimes and physical habitat. Dredging the proposed new borrow area could affect a total of 1,900 acres of unconsolidated substrate on the OCS. While managed species may be impacted (i.e. coastal migratory pelagics) the majority of the effects would be on associated and prey species for managed species. Benthic infaunal organisms and sessile organisms that serve as prey to managed species are expected to be affected by dredging activities. These effects however should be temporary in nature as these organisms should re-colonize the borrow area from adjacent similar habitat. Noise associated with all aspects of the dredging process may affect organisms in several ways. Continental Shelf Associates, Inc. (2004) reviewed effects of noise on fishes. This report stated that all fish species investigated can hear, with varying degrees of sensitivity, within the frequency range of sound produced by cutterhead dredges, hopper dredges, and clamshell excavators. These sounds can mask the sounds normally used by fishes in their normal acoustic behaviors at levels as low as 60 to 80 dB (just above detection thresholds for many species). Levels as high as 160 dB may cause receiving fish to change their behaviors and movements that may temporarily affect the usual distribution of animals and commercial fishing. Continuous, long-term exposure to levels above 180 dB has been shown to cause damage to the hair cells of the ears of some fishes under some circumstances. These effects may not be permanent because damaged hair cells are repaired and/or regenerated in fishes. None of the dredge types proposed for this project produce continuous sounds above 120 dB (Richardson et al., 1995). Due to the short duration of dredge projects, the effects of underwater noise on fish populations should be minimal.

The Corps has determined that the proposed action would not have a significant adverse impact on EFH or federally managed fisheries along the northeast coast of Florida. This determination is based on the fact that the substrate of the project area is naturally dynamic and unconsolidated, and measures shall be taken to protect adjacent habitat. Turbidity could affect vision of marine life within any sediment plume as well as those marine organisms with gills and dredge noise could cause behavioral disturbance, but these effects would be temporary as they would be limited to the time of construction. The anticipated dredging interval is approximately every 5 years and thus re-colonization of benthic organisms is expected between events. Also, it is important to note that the new borrow area encompasses a fraction of the entire water body and similar habitat occurs immediately adjacent. EFH coordination with the NMFS Habitat Conservation Division (HCD) will be initiated concurrently with noticing of the draft NEPA document.

4.4 BENTHIC RESOURCES

4.4.1 NO-ACTION ALTERNATIVE

Under the no action alternative erosion of the beach would continue unabated. However, impacts to benthic resources would not be anticipated.

4.4.2 NEW BORROW AREA ALTERNATIVE

Dredging in the proposed new borrow area could affect a total of 1,900 acres of unvegetated, open sandy substrate on the OCS. This will result in a localized reduction in the abundance, diversity, and biomass of the immediate fauna. Species affected most are those that have limited capabilities or are incapable in avoiding the dredging activities. The fauna most affected would predominantly include invertebrates such as crustaceans, echinoderms, mollusks, polychaetes, and annelids. Brooks et al. (2006) found in most cases, polychaetes were the first to recolonize dredged sites, with crustaceans, specifically amphipods, also recolonizing relatively quickly. Some studies note that carnivores recolonized dredged areas in a short amount of time, speculating that this response may be tied to the food resources available in dredged areas due to dead and injured organisms resulting from the dredging process itself. Measurements of recovery, however, were varied, with some studies looking at general abundance of organisms, and others evaluating community structure. Those evaluating entire communities often indicated that while abundances of organisms may increase to background levels relatively quickly, community structure may remain altered for some time, and, in repetitively mined areas, may have difficulty ever recovering to the original state. Hammer et al. (2005) indicated that potential impacts from dredging within proposed borrow areas are expected to be localized and short-term because surrounding areas can serve as a primary source for re-colonization of the benthos. Therefore, due to the relatively small area that will be impacted as viewed on a spatial scale, impacts to the benthic community are anticipated to be minimal due to the relatively short period of recovery regarding infaunal communities following disturbance. Adjacent areas not impacted would most likely be the primary source of recruitment to the impacted area.

4.5 FISH AND WILDLIFE RESOURCES

4.5.1 NO-ACTION ALTERNATIVE

Little impact is expected to fish and wildlife from this alternative except for the loss of beach habitat due to unabated erosion.

4.5.2 NEW BORROW AREA ALTERNATIVE

Fish and wildlife could be temporarily displaced during dredging operations. However, negative impacts to these species are expected to be minimal due to the limited extent of the dredging operations relative to the abundance of similar adjacent habitat and the mobility of these resources.

4.6 CULTURAL RESOURCES

4.6.1 NO-ACTION ALTERNATIVE

No adverse effects to submerged historic properties within the proposed new borrow area from the no-action alternative.

4.6.2 NEW BORROW AREA ALTERNATIVE

A submerged cultural resources survey was conducted within a portion of the proposed new borrow area. The survey entitled, *Cultural Resources Remote Sensing Survey of the Jacksonville Harbor Project Potential Ocean Dredged Material Disposal Sites Alternative 1 and 2, Duval County, Florida (*James, et al *2012)* identified a total of 8 magnetic anomalies (comprising three clusters), no sidescan sonar targets and four subbottom features that were potentially indicative of significant historic properties. Subsequent archeological diver identification of these three magnetic anomaly clusters and four subbottom features resulted in no historic properties identified and no further investigation recommended (Lydecker, et al 2012). The Corps determined no historic properties affected for the Jacksonville Harbor ODMDS Alternatives 1 and 2 on 29 August 2012, and the Florida SHPO concurred with this determination on 1 October 2012.

The remaining portion of the new borrow area has not had a cultural resources investigation conducted within it and the Corps has determined that a survey will be necessary to locate potential historic properties eligible for listing on the NRHP. This new borrow area will be investigated using a magnetometer, sidescan sonar and subbottom profiler and the results coordinated with the appropriate agencies.

4.7 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

4.7.1 IRREVERSIBLE

An irreversible commitment of resources is one in which the ability to use and/or enjoy the resource is lost forever. Other than the use of fuel, equipment and supplies, there would be no irreversible commitment of resources.

4.7.2 IRRETRIEVABLE

An irretrievable commitment of resources is one in which, due to decisions to manage the resource for another purpose, opportunities to use or enjoy the resource as they presently exist are lost for a period of time. Dredging of the new borrow area could temporarily disrupt navigation and recreational activities.

4.8 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

The dredging of the new borrow area would adversely impact benthic organisms, some fish species, and temporarily adversely impact other wildlife.

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

The proposed dredging is typically of short duration. Adversely affected benthos would be expected to recover in less than a year, possibly longer. However, some benthic species may not achieve full recovery depending on dredging frequency. Most fish species and other motile organisms like crabs should be able to avoid the equipment. Since the project area is limited in size, the long-term productivity of fish and other

motile species should not be significantly affected. As this site is only periodically used, the wildlife would re-colonize and habituate the area between dredging events.

4.10 INDIRECT EFFECTS

Maintaining the authorized beach project could benefit the tourism industry and local and statewide economies. This may contribute to increased development in adjacent areas.

4.11 COMPATIBILITY WITH FEDERAL, STATE, AND LOCAL OBJECTIVES

This project has wide support and is compatible with Federal, State, and most local objectives.

4.12 CONFLICTS AND CONTROVERSY

Dredging would be done in a manner that would avoid or minimize impacts to resources outside the project limits.

4.13 UNCERTAIN, UNIQUE, OR UNKNOWN RISKS

There is a potential for the hopper dredge to take sea turtles. The exact amount, if any, is uncertain.

4.14 PRECEDENT AND PRINCIPLE FOR FUTURE ACTIONS

As this project involves the dredging of a sand borrow area on the OCS adjacent to other previously mined areas, there would be no precedent and or principle for future actions established.

4.15 ENVIRONMENTAL COMMITMENTS

The U.S. Army Corps of Engineers and contractors commit to avoiding, minimizing or mitigating for adverse effects during construction activities by including the following commitments in the contract specifications:

1. A Hopper, clamshell or cutter head dredge could all be used to perform the proposed work; therefore, adverse impacts to sea turtles, manatees, whales, sturgeon and smalltooth sawfish would be minimized through incorporation of protection measures for these species (section 4.1.2 above) into the project specifications. Other protective measures, such as equipment lighting requirements shall also be implemented.

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

3. The contracting officer would notify the contractor in writing of any observed noncompliance with Federal, State, or local laws or regulations, permits and other elements of the contractor's Environmental Protection Plan. The contractor would, after receipt of such notice, inform the contracting officer of proposed corrective action and take such action as may be approved. If the contractor fails to comply promptly, the contracting officer would issue an order stopping all or part of the work until satisfactory

corrective action has been taken. No time extensions would be granted or costs or damages allowed to the contractor for any such suspension.

4. The contractor would train his personnel in all phases of environmental protection. The training would include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities to insure adequate and continuous environmental pollution control. Quality control and supervisory personnel would be thoroughly trained in the proper use of monitoring devices and abatement equipment, and would be thoroughly knowledgeable of Federal, State, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the contractor.

5. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract would be protected during the entire period of this contract. The contractor would confine his activities to areas defined by the drawings and specifications.

6. As stated in the standard contract specifications, the disposal of hazardous or solid wastes would be in compliance with Federal, State, and local laws. A spill prevention plan would also be required.

4.16 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

4.16.1 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

Environmental information on the project was compiled and this SEA was prepared and will be noticed. Comments received will be incorporated into the final document. The project is in compliance with the National Environmental Policy Act.

4.16.2 ENDANGERED SPECIES ACT OF 1973

The project will be coordinated under the Endangered Species Act. The applicable conditions of the Regional Biological Opinion issued by the NMFS and the SPBO issued by the USFWS would be followed during construction.

4.16.3 FISH AND WILDLIFE COORDINATION ACT OF 1958

This project will be coordinated with the USFWS. A Coordination Act Report is not required for the proposed work. This project is in full compliance with the act.

4.16.4 NATIONAL HISTORIC PRESERVATION ACT OF 1966 (INTER ALIA)

(PL 89-665, the Archeology and Historic Preservation Act (PL 93-291), and executive order 11593)
Consultation with the Florida State Historic Preservation Officer (SHPO) 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 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, & 13175 and the Presidential Memo of 1994 on Government to Government Relations. Consultation is ongoing with the SHPO and appropriate federally recognized tribes.

4.16.5 CLEAN WATER ACT OF 1972

A Section 401 Water Quality Certification has been obtained from the Florida Department of Environmental Protection through the Joint Coastal Permitting Program. All State Water Quality Standards would be met. A public notice will be issued which will satisfy the requirements of Section 404 of the Clean Water Act.

4.16.6 CLEAN AIR ACT OF 1972

Vehicular emission and airborne dust particulates resulting from construction activities shall be controlled. This project will be coordinated with EPA and is in compliance with Section 309 of the act.

4.16.7 COASTAL ZONE MANAGEMENT ACT OF 1972

The Corps and BOEM have determined that the project is consistent with the enforceable policies of the Florida Coastal Management Program. Pursuant to Subpart D of the implementing regulations for the CZMA (15 CFR 930), the City of Jacksonville obtained a consistency concurrence from the DEP, dated 18 April 2005, indicating the Duval County SPP was consistent with Florida's Coastal Management Program (No. 0228528-001-JC). It is anticipated that DEP will issue a modification to the JCP extending it, which constitutes the finding of consistence for the new borrow area mining.

4.16.8 FARMLAND PROTECTION POLICY ACT OF 1981

No prime or unique farmland would be impacted by this project. Therefore, this act is not applicable to the proposed work.

4.16.9 WILD AND SCENIC RIVER ACT OF 1968

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

4.16.10 MARINE MAMMAL PROTECTION ACT OF 1972

Protective measures for marine mammals such as manatees, dolphins and whales shall be implemented. This project will be coordinated with the USFWS and NMFS. The work is in full compliance with the act.

4.16.11 ESTUARY PROTECTION ACT OF 1968

The protective measures described in section 4 would insure avoidance and minimization of impacts from the proposed dredging. This project is in compliance with this act.

4.16.12 FEDERAL WATER PROJECT RECREATION ACT

The principles of the Federal Water Project Recreation Act, (Public Law 89-72) as amended, are not applicable to the proposed borrow area dredging.

4.16.13 SUBMERGED LANDS ACT OF 1953

The borrow area dredging would not occur on submerged lands of the State of Florida. The project will be coordinated with the State and is in compliance with the act.

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

This act is not applicable to the proposed dredging.

4.16.15 RIVERS AND HARBORS ACT OF 1899

The proposed work could temporarily obstruct navigable waters of the United States. The proposed action will be subjected to a public notice and other evaluations normally conducted for activities subject to the act. The project is in full compliance.

4.16.16 ANADROMOUS FISH CONSERVATION ACT

There is a slight potential for the take of Atlantic and shortnose sturgeon during the dredging of the proposed borrow area. The project will be coordinated with the NMFS.

4.16.17 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT

Measures shall be taken to protect migratory birds. The project is in compliance with these acts.

4.16.18 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 proposed dredging. Therefore, the Marine Protection, Research and Sanctuaries Act does not apply to this project. The disposal activities addressed in this SEA have been evaluated under Section 404 of the Clean Water Act.

4.16.19 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

The Corps has determined that the project would not have a significant adverse impact on EFH or federally managed fish species occurring along the northeast coast of Florida. EFH coordination will be conducted during the noticing of this draft SEA.

4.16.20 E.O. 11990, PROTECTION OF WETLANDS

There would be no impacts to wetlands by project activities. This project is in compliance with the goals of this Executive Order.

4.16.21 E.O. 11988, FLOOD PLAIN MANAGEMENT

This project would have no adverse impacts to flood plain management.

4.16.22 E.O. 12898, ENVIRONMENTAL JUSTICE

The proposed action would not result in adverse human health or substantial environmental effects. The work would not impact "subsistence consumption of fish and wildlife".

4.16.23 E.O. 13089, CORAL REEF PROTECTION

This project would not impact those species, habitats, and other natural resources associated with coral reefs.

4.16.24 E.O. 13112, INVASIVE SPECIES

This project would not introduce any invasive species.

5 LIST OF PREPARERS

5.1 PREPARERS

Preparer	Discipline	Role
Paul DeMarco, U.S. Army Corps of Engineers	Biologist	Principal Author
Wendy Weaver, U.S. Army Corps of Engineers	Archaeologist	Cultural Resources
Wendy Dauberman-Zerby, U.S. Army Corps of Engineers	Ecologist	Water Quality
Jennifer Culbertson, Bureau of Ocean Energy Management	Oceanographer	

5.2 REVIEWERS

This draft SEA was reviewed by the supervisory chain of the Environmental Branch and Planning Division, US Army Corps of Engineers, Jacksonville District and by the Division of Environmental Assessment within the Bureau of Ocean Energy Management.

6 PUBLIC INVOLVEMENT

6.1 SCOPING AND DRAFT EA

A Public Notice will be issued for this action in which the draft FONSI and SEA will be made available to the public. Comments received will be incorporated into this document and discussed in Section 6.4 below.

6.2 AGENCY COORDINATION

Coordination will be conducted with appropriate agencies, described in this report and discussed in section 6.4 below. Agency coordination letters will be located in Appendix C.

6.3 LIST OF RECIPIENTS

Per the Public Notice, copies of the draft SEA will be made available to appropriate stakeholders. A list of stakeholders receiving notification can be found within the Public Notice in Appendix C.

6.4 COMMENTS RECEIVED AND RESPONSE

Comments received will be listed and discussed here.

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INDEX

APPENDIX A - PERTINENT CORRESPONDENCE

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

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

AUG 13 2014

TO WHOM IT MAY CONCERN:

Pursuant to the National Environmental Policy Act (NEPA), U.S. Army Corps of Engineers regulation (33 CFR 230.11), and U.S. Department of the Interior's Bureau of Ocean Energy Management, this letter constitutes the Notice of Availability of the draft Finding of No Significant Impact (FONSI) and draft Supplemental Environmental Assessment (SEA) for the Shore Protection Project, Duval County, Florida. Approximately 1.4 million cubic yards of beach compatible fill will be dredged from a new sand borrow area (located approximately 8 miles east of the beach) and placed along the Atlantic shoreline between the St. Johns River south jetty and the Duval County - St. Johns County line (See Enclosure). The draft SEA supplements information contained in the existing NEPA documents completed for this project in 1974, 1993, 2005, and 2011 and examines potential effects from dredging sand from the new borrow area.

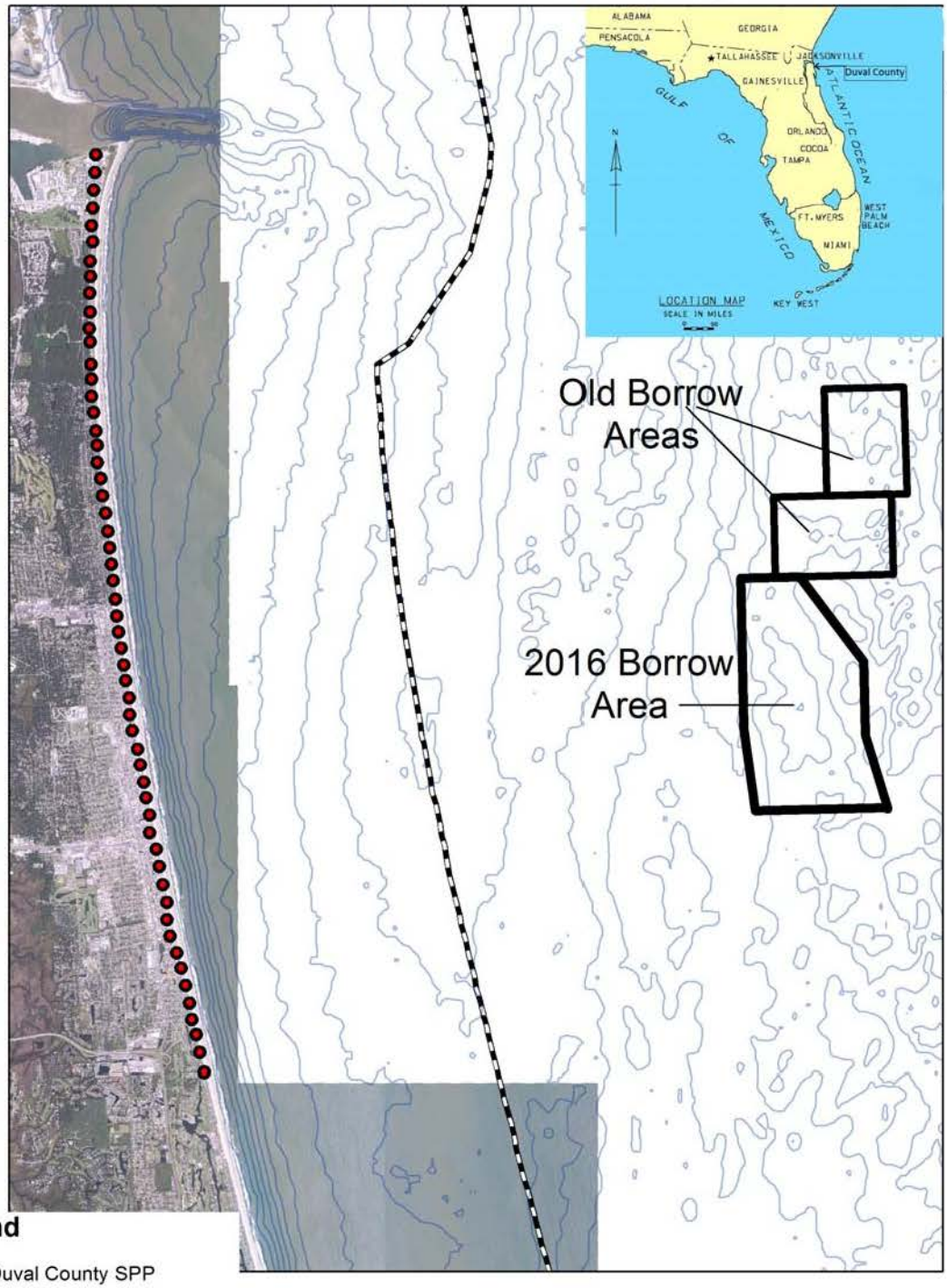
We welcome your views, comments and information about resources and important features within the described project area. Letters of comment or inquiry should be addressed to the letterhead address to the attention of Planning Division, Environmental Branch, Coastal Section within 30 days of the date of this letter. If you have any questions, please contact Mr. Paul DeMarco by telephone at 904-232-1897, or by email at Paul.M.DeMarco@usace.army.mil. The draft SEA/FONSI is available online at: <http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Duval>.

Sincerely,

Eric P. Summa
Chief, Environmental Branch

Enclosure

Duval County Shore Protection Project Limits with Old and New Borrow Areas



DRAFT FINDING OF NO SIGNIFICANT IMPACT
NEW BORROW AREA
DUVAL COUNTY SHORE PROTECTION PROJECT
DUVAL COUNTY, FLORIDA

I have reviewed the Supplemental Environmental Assessment (SEA) for the proposed dredging of a new borrow area for the Federally authorized Duval County Shore Protection Project in Duval County, FL. Beach quality material would be placed along the Atlantic Ocean shoreline of Duval County, FL. This Finding incorporates by reference all discussions and conclusions contained in the SEA enclosed hereto. Based on information analyzed in the SEA, reflecting pertinent information obtained from agencies having jurisdiction by law and/or special expertise, I conclude that the proposed action will not significantly impact the quality of the human environment and does not require an Environmental Impact Statement. Reasons for this conclusion are in summary:

a. The proposed action would be conducted in accordance with the Endangered Species Act, and specifically in compliance with the Regional Biological Opinion issued by the National Marine Fisheries Service and Statewide Programmatic Biological Opinion issued by the US Fish and Wildlife Service. The work would not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify any designated "critical habitat."

b. This project has been coordinated with the State of Florida, and all applicable water quality standards will be met.

c. The State of Florida has concurred with the Corps consistency determination that the proposed work is consistent with the enforceable policies of the Florida Coastal Management Program.

d. The proposed work has been coordinated with the Florida State Historic Preservation Officer and appropriate federally recognized tribes. It has been determined that the proposed borrow area dredging would not adversely affect historic properties.

e. Measures will be in place during construction to eliminate, reduce, or avoid adverse impacts below the threshold of significance to fish and wildlife resources.

f. Public benefits will be provided via storm damage reduction and beach recreation.

In consideration of the information summarized, I find that the proposed dredging of a new borrow area for the Federal Duval County Shore Protection Project will not significantly affect the human environment and does not require an Environmental Impact Statement. A copy of this document will be made available to the public at the following website: <http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Duval>.

_____ _____

ALAN M. DODD
Colonel, Corps of Engineers
Commanding

Date