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**DRAFT ENVIRONMENTAL ASSESSMENT AND 404 (B) (1) EVALUATION
FOR
PROPOSED ADDITION OF SEDIMENT PLACEMENT AREAS FOR DREDGED
MATERIAL

PERDIDO PASS NAVIGATION PROJECT
BALDWIN COUNTY, ALABAMA

FEDERALLY AUTHORIZED**

Table of Contents

Abbreviations and Acronyms iv

1.0 INTRODUCTION..... 1

 1.1 **Location** 1

 1.2 **Description of the Entire Authorized Project** 1

 1.3 **Description of the Proposed Action**..... 2

 1.4 **Purpose and Need for the Proposed Action**..... 2

 1.5 **Authority**..... 2

 1.6 **Environmental History and Scope** 3

 1.7 **Existing Environmental Conditions** 4

2.0 ALTERNATIVES TO THE PROPOSED ACTION..... 5

 2.1 **No Action Alternative** 5

 2.2 **Addition of Two Sediment Placement Areas**..... 5

3.0 AFFECTED ENVIRONMENT 5

 3.1 **Fish and Wildlife Resources**..... 6

 3.2 **Terrestrial Wildlife** 6

 3.3 **Benthos, Invertebrates, and Fishes**..... 6

 3.4 **Essential Fish Habitat**..... 7

 3.5 **Threatened and Endangered Species** 7

 3.6 **Water Quality**..... 15

 3.7 **Hazardous Materials** 16

 3.8 **Air Quality**..... 16

 3.9 **Aesthetics** 16

 3.10 **Noise** 16

 3.11 **Cultural Resources** 16

 3.12 **Sea Level Rise** 17

4.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

 4.1 **Fish and Wildlife Resources**..... 17

 4.2 **Terrestrial Wildlife** 17

4.3 **Benthos, Invertebrates, and Fishes**.....17

4.4 **Essential Fish Habitat**.....19

4.5 **Threatened and Endangered Species**20

4.6 **Water Quality**.....21

4.7 **Hazardous Materials**21

4.8 **Air Quality**.....21

4.9 **Aesthetics**22

4.10 **Noise**22

4.11 **Cultural Resources**22

4.12 **Sea Level Rise**22

5.0 **CUMULATIVE EFFECTS SUMMARY**23

6.0 **OTHER CONSIDERATIONS**..... 23

 6.1 **Coastal Zone Management Act**23

 6.2 **Clean Water Act**23

 6.3 **Rivers and Harbors Act**23

 6.4 **Marine Mammal Protection Act**23

 6.5 **Fish and Wildlife Coordination Act**23

 6.6 **Protection of Children**23

 6.7 **Environmental Justice**24

7.0 **COORDINATION**24

8.0 **CONCLUSIONS**25

9.0 **REFERENCES**.....25

Figures

- Figure 1 - Perdido Pass Federal Navigation Channel Map
- Figure 2 - Perdido Pass Placement Area Map
- Figure 3 - Shoreline Reach and Typical Cross-Section for Placement Area 8
- Figure 4 – Perdido Pass Proposed Sediment Placement Areas PA 5 and PA9.

List of Tables

- Table 1 - Dredged Material Removed from Perdido Pass 2001-2010
- Table 2 - Threatened and Endangered Species for Baldwin County, AL

Enclosures

EA-Enclosure 1– Alabama Standard Manatee Construction Conditions.

EA-Enclosure 2 – Alabama State Water Quality Certification (WQC) and Coastal Zone Consistency (CQC) issued by ADEM November 25, 2014 for Perdido Pass Federal Navigation Project.

EA-Enclosure 3 – Section 404 (b)(1) Evaluation Report for Addition of Sediment Placement Areas for Perdido Pass Navigation Project.

EA- Enclosure 4 – Public Notice FP15-PP15-05 dated March 13, 2015.

EA-Enclosure 5 -- TBD

ACRONYMS AND ABBREVIATIONS

ADEM	Alabama Department of Environmental Management
BA	Biological Assessment
BO	Biological Opinion
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cys	Cubic Yards
CZC	Coastal Zone Consistency
EA	Environmental Assessment
EFH	Essential Fish Habitat
EJ	Environmental Justice
EO	Executive Order
ESA	Endangered Species Act
FONSI	Findings of No Significant Impact
GMFMC	Gulf of Mexico Fishery Management Council
GIWW	Gulf Intracoastal Waterway
HCD	Habitat Conservation Division
NAAQS	National Ambient Air Quality Standards
MDEQ	Mississippi Department of Environmental Quality
Mg/l	Milligrams per liter
MHW	Mean High Water
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLAA	Not Likely to Adversely Affect
NLAM	Not Likely to Adversely Modify
MLLW	Mean Lower Low Water
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PA	Placement Area
PRD	Protected Resource Division
RAI	Request for Additional Information
Register	National Register of Historic Places
RSM	Regional Sediment Management
SAV	Submerged Aquatic Vegetation
SHPO	State Historic Preservation Officer
TSS	Total suspended solids
USACE	U.S. Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WQC	Water Quality Certification

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1.0 INTRODUCTION

1.1 Location. The Perdido Pass Federal navigation project is located on the eastern Alabama Gulf coast (**Figure 1**) about midway between Mobile Bay in Alabama and Pensacola Bay in Florida.

1.2 Description of the Entire Authorized Project. Perdido Pass is a natural inlet about 800 feet wide. The Federal shallow-draft project consists of a 12-foot deep channel, 150 feet wide, and 1,300 feet long from the Gulf of Mexico into the inlet, thence 9 feet deep and 100 feet wide for approximately 2,200 feet to the Alabama 182 bridge, where the channel branches into two extensions each having dimensions of 9 feet deep by 100 feet wide, one of which extends approximately 3,400 feet into Terry Cove and the other extending about 3,200 feet into the southern arm of Perdido Bay. The project also contains two jetties spaced 600 feet apart at the seaward ends. The east jetty has lower weir section of 600 feet in length to allow passage of littoral sand into a dredged deposition basin located between the east jetty and the navigation channel.

There are seven (7) existing certified sediment Placement Areas (PAs) for the maintenance material (**Figures 2 & 3**).

a. PA 1 - Approximately 115-acre open water PA, which extends from a point just west of the west jetty between the -7 and -20-foot contours extending approximately 5,000 feet west of the jetty. Placement in this area could result in sand remaining in the littoral system west of the pass.

b. PA 2 - Located immediately east of the west jetty and extends the entire length of the jetty. Utilization of PA 2 is necessary to prevent further erosion along the jetty, which threatens the structural integrity of the jetty and the adjacent seawall.

c. PA 3 - Approximately 1.5-acre PA located at the south end of an old disposal island immediately north of the Alabama Highway 182 bridge that provides beach nourishment and erosion protection.

d. PA 4 - Approximately 2-acre PA located on the north shore of Perdido Key east of the pass and runs approximately 1,400 feet along Florida Point below mean high water (MHW).

e. PA 6 - Located on the western end of Florida Point and used to stabilize the sand dikes portion of the east jetty, seaward of the dunes and vegetation. Periodic placement at this site is necessary to prevent erosion and flanking of the shoreward terminus of the east jetty and is critical towards preserving its structural integrity.

f. PA 7 - Located adjacent to and west of the west jetty. The PA is approximately 10 acres in size. Placing material in this PA reduces the effects of shoreline erosion in the area, prevents undermining of the jetty due to scour, and preserves the structural integrity of the jetty.

g. PA 8 - Located west of the Pass beginning at the western limit of PA 7 and extending three miles west of the west jetty as shown in Figure 3. Beach quality sand from the maintenance dredging of the navigation channel will be placed along this reach between the +7 and -15-foot elevation contours for MHW. A typical cross section for PA 8 is also presented in **Figure 3**.

1.3 Description of the Proposed Action. The proposed action involves adding two dredged material sediment PAs referred to as PA 5 and PA 9 to the Perdido Pass Federal navigation project (**Figure 4**). These areas are needed to restore eroded coastal shoreline areas. Use of the proposed PA 5 would aid in the restoration and maintenance of the southwest end of Robinson Island, providing a wider buffer to protect the shoreline and upland habitat against excessive erosion. Use of the proposed PA 9 would aid in the renourishment of the Florida Point southern shoreline due east of Perdido Pass and PA 6. This PA consists of shoreline habitat east of PA 6 to the Alabama-Florida state line. The action would also provide numerous other environmental benefits such as increased habitat for various shorebirds and many other sand dwelling organisms. It would also aid in the protection of the existing sand dunes and beach mouse habitat along Florida Point. The cumulative impacts of the overall action are considered to be beneficial to the local ecosystem.

PA 5: PA 5 would be located on the southwest end of Robinson Island (**Figure 4**). The size of the area is approximately one-half acre. Sand from maintenance dredging of the navigation channel due north of Highway 182 Bridge would be placed as needed along the end of the island. The placement of this material would occur from the existing shoreline seaward to -3 to -4 foot elevation contours mean high water (MHW). Placement would be allowed to equilibrate to a natural slope. Although any or all of this new area may be used for placement, the intent is to provide for erosion protection of the island. An adaptive management approach will be implemented to continually adjust the dredged material placement activities so that the desired objectives are achieved.

PA 9: PA 9 would be located due east of Perdido Pass and PA 6 along the entire southern shoreline of Florida Point (**Figure 4**). The size of the area is approximately 100 acres. Sand from the navigation channel south of Highway 182 Bridge would be placed where needed along the eroded sections of the southern shoreline due east of PA 6 and serve to protect valuable dune habitat. The placement of this material would occur from the existing shoreline to between the +7 and -15-foot elevation contours MHW extending eastward for approximately 10,000 feet to the Alabama-Florida state line. The placed material would be contoured to a natural slope with heavy equipment. A typical cross-section for PA 9 is also presented in Figure 3.

1.4 Purpose and Need for the Proposed Action. The purpose of this proposed action is to add two dredged sediment PAs to the federally authorized Perdido Pass navigation project. This action is needed to provide for additional protection and renourishment of the eroded shoreline of Robinson Island and the southern shoreline of Florida Point. Both areas are continuously eroded by the natural waves, currents and storms and need to be included as authorized sediment placement areas to preserve their shorelines and protect the fragile ecosystem.

1.5 Authority. The Perdido Pass Federal navigation project was authorized by the Rivers and Harbors Act of October 27, 1965 (S. Doc. 94, 88th Congress, 2nd Session). The initial project commenced May 1968 and completed March 1969 and was constructed to stabilize the inlet.

1.6 Environmental History and Scope. This Environmental Assessment (EA) was prepared in accordance with Engineer Regulation (ER) 200-2-2, *Procedures for Implementing the National Environmental Policy Act (NEPA)* and the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations (CFR) Pts. 1500-1508). The objective of the EA is to determine the magnitude of the environmental impacts of the proposed action. If such impacts are relatively minor, a Finding of No Significant Impact (FONSI) would be issued and the Mobile District, U.S. Army Corps of Engineers (USACE) may proceed with the action. If the environmental impacts are significant according to CEQ's criteria (40 CFR Pt. 1508.27), an Environmental Impact Statement (EIS) or a supplement to the existing 1976 Final EIS would be prepared before a decision is reached to implement the proposed action.

Pursuant to the National Environmental Policy Act (NEPA), this EA was prepared to update the resource descriptions and to evaluate the potential impacts associated with adding two additional sediment placement areas to the Perdido Pass Federal navigation project. Related environmental documents include the following:

- **Final EIS.** Perdido Pass Channel, Alabama (Maintenance Dredging), Baldwin County, Alabama, January 1976.
- **FONSI and EA.** Erosion Protection Perdido Pass Bridge, Baldwin County, Alabama, August 1980.
- **FONSI and EA.** Modification to the Existing East Jetty, Baldwin County, Alabama, October 1980.
- **Section 404 (b)(1) Evaluation Report.** Erosion Protection Perdido Pass Bridge, Baldwin County, Alabama, August 1980.
- **FONSI and EA.** Alabama Highway Bridge No. 182, Perdido Pass, Alabama, May 1982.
- **FONSI and EA.** Proposed Maintenance Dredging of Perdido Pass Channel, Alabama, June 1983.
- **FONSI and EA.** Proposed Maintenance Dredging of Perdido Pass Channel, Baldwin County, Alabama, A Federally Authorized Project, December 1985.
- **Section 404 (b)(1) Evaluation Report.** Operation and Maintenance, Perdido Pass, Alabama, December 1985
- **Statement of Findings (SOF).** Proposed Maintenance Dredging and Disposal at Perdido Pass Channel, Baldwin County, Alabama, May 1988.
- **Section 404 (b)(1) Evaluation Report.** Proposed Addition of a Previously-Used Beach Nourishment/Open-water Disposal Area, Perdido Pass, Alabama, July 1989.
- **SOF.** Proposed Maintenance Dredging and Disposal at Perdido Pass Channel, Baldwin County, Alabama, August 1989.
- **FONSI and EA.** RSM Demonstration of Downdrift Placement of Maintenance Dredged Material West of the Perdido Pass Navigation Project, Baldwin County, Alabama, November 2002.
- **SOF.** Maintenance Dredging and Placement Activities for the Perdido Pass

- Navigation Project, Baldwin County, Alabama, December 2002.
- **EA.** Recertification for Maintenance and Disposal of Dredged Material for Perdido Pass Navigation Project, Baldwin County, Alabama, August 2004.
- **SOF and 404(b)(1) Evaluation.** Maintenance Dredging and Placement Activities for Perdido Pass Navigation Project, March 2005.
- **FONSI, EA and 404(b)(1) Evaluation.** Recertification for Maintenance and Disposal of Dredged Material for Perdido Pass Navigation Project, Baldwin County, Alabama, 2009.

These documents are hereby incorporated by reference.

The following table shows the dredging history of Perdido Pass over the past twelve years.

Table 1: Dredged Material Removed from Perdido Pass from 2001-2012	
<u>Date</u>	<u>Quantity in Cubic Yards</u>
2001	0
2002	99,396
2003	415,991
2004	0
2005	996,341
2006	46,150
2007	0
2008	0
2009	472,900
2010	206,246
2012	<u>33,047</u>
Total	2,270,071 cys

1.7 Existing Environmental Conditions. The environmental setting of the Perdido Pass area is addressed in the Final EIS for the Perdido Pass Federal Navigation Project, which was circulated on March 10, 1976. Perdido Pass is a natural inlet about 800 feet wide that provides access to the Gulf of Mexico from Perdido Bay. The Pass area is part of Alabama's Gulf Coast resort development. Beaches on either side of the Pass are used for recreational activities, although, public access is limited. The jetties of the project are used extensively for sport fishing. A marine bar across the entrance to the Pass restricts the natural channel to the Gulf. Periodic maintenance dredging has been conducted to alleviate this problem. Shoaling activity within the entrance channel is generated by wave and storm activity.

The coastal placement areas are characterized by predominantly white fine to medium

quartz sand. The near-shore zone is a dynamic environment that changes drastically as a function of climate and wave conditions. The direction of the long-shore transport along this region is from east to west. Due to the harsh environment within the active near-shore beach zone, the benthic community generally consists of a small number of opportunistic invertebrates. Fish species abundance and diversity are generally lower in near-shore environments such as this. The constantly shifting sand does not allow aquatic vegetation to become rooted or attached to the unconsolidated sandy substrate. Due to the sandy nature of the littoral sediments and that these sediments are removed from sources of contamination, no significant levels of contaminants are present. Suspension of such material is temporary and has minimal effect on turbidity levels and dissolved oxygen and in the water column. The beach and near-shore areas may be host to endangered sea turtles during nesting season (April - October). The dynamic nature of this area from the MHW line through the swash and surf zones has resulted in a harsh, unstable environment providing low animal and plant densities.

2.0 ALTERNATIVES TO THE PROPOSED ACTION.

2.1 No Action Alternative. NEPA defines a “no action” as the continuation of existing conditions in the affected environment without the implementation, or in the absence of the proposed action. Inclusion of the “no action” alternative is prescribed by the CEQ regulations as the benchmark against which Federal actions are to be evaluated. The implementation of the “no action” alternative would result in not placing sand in the two proposed sediment placement areas (PA 5 and PA 9) but continue to use the seven other authorized PAs. This alternative would result in the eventual loss of a portion of Robinson Island and critical beach and wildlife habitat along Florida Point. Therefore, the "no action" alternative was deemed unacceptable and not considered further.

2.2 Addition of Two Sediment Placement Areas. The preferred alternative is the additional designation of two sediment placement areas known as PA 5 and PA 9. These areas will provide additional shoreline protection to Robinson Island and Florida Point which are vital for the protection of important wildlife habitat and areas subject high public recreational use. Evaluation of additional alternatives was not deemed warranted at this time.

3.0 Affected Environment

3.1 Fish and Wildlife Resources.

Submerged Aquatic Vegetation. The Mobile Bay National Estuary Program funded a survey of submerged aquatic vegetation (SAV) in coastal Alabama in summer and fall 2002. This work included groundtruthed photo-interpreted aerial imagery of SAVs (Vittor and Associates, 2003). In the marine areas, the 2002 SAV survey found shoal grass *Halodule wrightii* comprised most of the acreage, particularly in the Mississippi Sound (819.4 acres) and southern Perdido Bay (299.6 acres, including Florida waters). In addition, relatively small patches of SAV occurred along the northern shoreline of the western end of Dauphin Island, and in Baldwin County in Little Lagoon, Bay la Launch,

Arnica Bay, and Palmetto Creek. Although there are some SAVs in the vicinity of the proposed project, there are no SAVs in the dredged channel or designated PAs.

Wetlands. Tidal marshes are located along the bay shorelines and the shoreline of the Mississippi Sound. These marshes are typically bordered along the waters edge by a strip of salt marsh grass, *Spartina alterniflora*, with scattered stands of *S. cynosuroides*, *S. patens*, *Distichilis spicata*, and *Phragmites communis*. The majority of the marsh inside of this strip is composed of *Juncus roemerianus* (Swingle, 1971).

Sediments. The sediments within the proposed project along consist of white fine and medium quartz sand with a small percentage of silt.

3.2 Terrestrial Wildlife. Animals inhabiting the terrestrial region in the vicinity of the project include reptiles (alligators, snakes, and lizards), small mammals (muskrat, mice, raccoon, bobcat, and fox) and birds (Gulls, terns, sandpipers, plovers, stilts, skimmers and oystercatchers herons, egrets, and ibises).

3.3 Benthos, Motile Invertebrates, and Fishes. The benthic community in the Mississippi Sound was classified by Vittor and Associates in a study of the Mississippi Sound and selected sites in the Gulf of Mexico (Vittor, 1982). A total of 437 taxa were collected at densities ranging from 1,097 to 35,537 individuals per square meter. Generally, densities increase from fall through the spring months since most of the dominant species exhibit a late winter to early spring peak in production. These species, though sometimes low to moderate in abundance, occur in a wide range of environmental conditions. They are usually the most successful at early colonization and thus tend to strongly dominate the sediment subsequent to disturbances such as dredging activities. These species include polychaetes *Mediomastus spp.*, *Paraprionospio pinnata*, *Myriochele oculata*, polychaete worm *Owenia fusiformi*, *Lumbrineris app.*, *Sigambra tentaculata*, the *Linopherus-Paraphinome* complex, and *Magelona cf. phyllisae*. The phoronid, *Phoronis ap.* and the cumacean *Oxyurostylis* also fit this category. *M. oculata* and *O. fusiformis* are predominate species in the Mississippi Sound. The numerically dominant species collected during the study were polychaete worm *M. californiensis* and *P. pinnata*.

Seasonal patterns in benthic macroinfaunal abundance, distribution, and taxa composition were evaluated in 1999 at 19 sites in Perdido Bay in a study of the *Relative Influence of Hypoxia, Anoxia, and Associated Environmental Factors as Determinants of Macrobenthic Community Structure in a Northern Gulf of Mexico Estuary*. A total of 46 taxa from five phyla were collected. Polychaetes were numerically dominant followed by crustaceans. Seventeen taxa co-occurred in samples during all three study periods. Highest densities occurred in April throughout the bay, reflecting a fall-spring recruitment. Mean taxa richness per core ranged from 0.0 to 5.0, 1.2 to 4.6, and 0.0 to 4.4 in December, April and October, respectively. Mean densities ranged from zero to 368, 0 to 960, and 0 to 430 individuals per 0.1 square meter in December, April, and October.

A number of studies evaluating the fish and invertebrates of Alabama estuaries have been conducted (Swingle, 1971 and Swingle and Bland, 1974). These studies looked at species abundance and diversity in coastal waters. The nearshore and marsh species are comprised largely of fish in the families *Poeciliidae*, *Cyprinodontidae*, and *Atherinidae* which serve as the prey for the Southern flounder *Paralichthys lethostigma* and seatrout *Cynoscion spp.*, both important sport and commercial species. Common migratory fish in the study area are: Atlantic croaker *Micropogonias undulatus*, spot *Leiostomus xanthurus*, and sand seatrout *Cynoscion arenarius*. Important forage fish within the area are the pelagic species: Bay anchovy *Anchoa mitchilli*, striped anchovy *Anchoa hepsetus*, and Gulf menhaden *Brevoortia patronus*. The most commercially important shellfish found in the area include the brown and white shrimp, blue crab, and American oyster.

3.4 Essential Fish Habitat. Congress defines Essential Fish Habitat (EFH) as “those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity.” The designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. The Gulf of Mexico Fishery Management Council (GMFMC) and National Marine Fisheries Service (NMFS) have identified EFHs for the Gulf of Mexico in its Fishery Management Plan Amendments. These habitats include estuarine areas, such as estuarine emergent wetlands, seagrass beds, algal flats, and mud, sand, shell, and rock substrates. In addition, marine areas, such as the water column, vegetated and non-vegetated bottoms, artificial and coral reefs, geologic features and continental shelf features have also been identified. The habitat within the vicinity of the project consists of estuarine waters; shell, sand, substrates; estuarine emergent wetlands; and seagrass beds.

3.5 Threatened and Endangered Species. Table 3 below contains a list of federally listed candidate (C), threatened (T) or endangered (E) species for Baldwin County, AL that may potentially occur within the vicinity of the project.

Table 2: Threatened and Endangered Species for Baldwin County, AL

Common Name	Scientific Name	Status
Fish		
Gulf Sturgeon	<i>Acipenser oxyrinchus desotoi</i>	TCH
Mammals		
West Indian Manatee	<i>Trichechus manatus</i>	E
Perdido Key Beach Mouse	<i>Peromyscus polionotus trissyllepsis</i>	E
Birds		
Piping Plover	<i>Charadrius melodus</i>	TCH
Red Knot	<i>Calidris canutus rufa</i>	T
Wood Stork	<i>Mycteria americana</i>	E
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
Amphibians & Reptiles		
Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	T
Alabama Red-Bellied Turtle	<i>Pseudemys alabamensis</i>	E
Gopher Tortoise	<i>Gopherus polyphemus</i>	T
Loggerhead Sea Turtle	<i>Caretta caretta</i>	T
Green Sea Turtle	<i>Chelonia mydas</i>	E
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	E

Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	E
Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>	E

T - Threatened E - Endangered C - Candidate CH - Critical habitat

Reference: http://ecos.fws.gov/tess_public/reports/species-by-current-range-county?fips=01003 Accessed 3Mar15

The federally listed species that may be found within the vicinity of the project area include: loggerhead sea turtle (*Caretta caretta*), Kemp's ridley (*Lepidochelys kempii*), green sea turtle (*Chelonia mydas*), leatherback sea turtle (*Dermochelys coriacea*), Hawksbill turtle (*Eretmochelys imbricata imbricata*), Gulf sturgeon (*Acipenser oxyrinchus desotoi*), Red Knot (*Calidris canutus rufa*), piping plover (*Charadrius melodus*), West Indian manatee (*Trichechus manatus*), and Perdido Key beach mouse (*Peromyscus polionotus trissyllepsis*). A review of the listed plant and whale species for the project vicinity indicated a low likelihood of occurrence of listed species within the project area. In addition, the bald eagle (*Haliaeetus leucocephalus*) is protected under the Bald and Golden Eagle Protection Act.

The following is a detailed review of the species listed above:

Loggerhead Sea Turtle (*Caretta caretta*)

The loggerhead sea turtle is a medium to large turtle. Adults are reddish-brown in color and generally 31 to 45 inches in shell length with the record set at more than 48 inches. Loggerheads weigh between 170 and 350 pounds with the record set at greater than 500 pounds. Young loggerhead sea turtles are brown above and whitish, yellowish, or tan beneath, with three keels on their back and two on their underside.

Loggerhead sea turtles occur throughout the temperate and tropical regions of the Atlantic, Gulf of Mexico, Pacific, and Indian Oceans. This species may be found hundreds of miles out to sea, as well as in inshore areas such as bays, lagoons, salt marshes, creeks, and the mouths of large rivers. Loggerhead turtles feed primarily on sea urchins, sponges, squid, basket stars, crabs, shrimp, and a variety of mollusks. Their strong beak-like jaws are adapted for crushing thick-shelled mollusks. Although loggerhead sea turtles are primarily bottom feeders, they also eat jellyfish and mangrove leaves obtained while swimming and resting near the sea surface. As loggerheads mature, they travel and forage throughout near shore waters until their breeding season, when they return to the nesting beach areas. The majority of mature loggerheads appear to nest on a two or three year cycle. This species nests within the U.S. from Texas to Virginia, although the major nesting concentrations are found along the Atlantic coast of Florida, Georgia, South Carolina, and North Carolina. Nesting in the northern Gulf outside of Florida occurs primarily on the Chandeleur Islands in Louisiana and to a lesser extent on adjacent Ship, Horn, and Petit Bois Islands in Mississippi (Ogren, 1977). Ogren (1977) reported a historical reproductive assemblage of sea turtles, which nested seasonally on remote barrier beaches of eastern Louisiana, Mississippi, and Alabama.

Loggerhead sea turtles are considered turtles of shallow water. Juvenile loggerheads are thought to utilize bays and estuaries for feeding, while adults prefer waters less than 165 feet deep (Nelson 1986). Aerial surveys suggest that loggerheads (benthic immature and

adults) in U.S. waters are distributed in the following proportions: 54% in the southeast U.S. Atlantic, 29% in the northeast U.S. Atlantic, 12% in the eastern Gulf of Mexico, and 5% in the western Gulf of Mexico. During aerial surveys of the Gulf of Mexico, the majority (97%) of loggerheads were seen off the east and west coasts of Florida (Fritts 1983). Most were observed around mid-day near the surface, possibly related to surface basking behavior (Nelson 1986).

Kemps ridley (*Lepidochelys kempii*)

The Kemp's ridley sea turtle is a small turtle with adults reaching two to two and one-half feet in length and weighing 80 to 100 pounds. Adults are considered the smallest marine turtle in the world. The Kemp's ridley has an oval shell and is usually an olive-gray color with a pale yellowish bottom shell. It is the rarest and most endangered of all sea turtles. It occurs mainly in coastal areas of the Gulf of Mexico and along the East Coast.

Most Kemp's ridleys nest on the coastal beaches of the Mexican state of Tamaulipas and Veracruz, although a small number of Kemp's ridleys nest consistently along the Texas coast. Nesting occurs from May into July. In addition, rare nesting events have been reported in Alabama, Florida, Georgia, South Carolina, and North Carolina. Outside of nesting, adult Kemp's ridley are believed to spend most of their time in the Gulf of Mexico, while juveniles and subadults also regularly occur along the eastern seaboard of the U.S. (NMFS 1992). Age at sexual maturity is believed to be between 10 to 17 years. Under strict protection, the population appears to be in the early stages of recovery. No critical habitat has been designated for the Kemp's ridley sea turtle but it is being proposed by NOAA and USFWS.

Kemp's ridley along with loggerhead sea turtles are most likely species to occur in the project area and are generalist carnivores, typically preying on benthic mollusks and crustaceans in the nearshore environment. Their diet consists of mainly swimming crabs but may also include fish, jellyfish and an array of mullusks. Both species of sea turtles can be found in shallow sand and mud habitats at high-relief rock or reef habitats which fortunately do not occur in the project area (NMFS/NOAA June 2014).

Green Sea Turtle (*Chelonia mydas*)

The green sea turtle is mottled brown in color. The carapace is light or dark brown. It is sometimes shaded with olive, often with radiating mottled or wavy dark markings or large dark brown blotches. This species is considered medium to large in size for sea turtles with an average length of 36 to 48 inches. Its weight ranges from about 250 to 450 pounds. The upper surfaces of young green turtles are dark brown, while the undersides are white.

Although green sea turtles are found worldwide, this species is concentrated primarily between the 35° North and 35° South latitudes. This species migrates often over long distances between feeding and nesting areas (Carr and Hirth 1962). During their first year of life, green sea turtles are thought to feed mainly on jellyfish and other invertebrates. Adult green sea turtles prefer an herbivorous diet frequenting shallow water flats for feeding (Fritts et al., 1983). Adult turtles feed primarily on seagrasses, such as *T.*

testudinum. This vegetation provides the turtles with a high fiber content and low forage quality (Bjorndal 1981a). In the Gulf of Mexico, principal foraging areas are located in the upper west coast of Florida (Hirth 1971). Nocturnal resting sites may be a considerable distance from feeding areas, and distribution of the species is generally correlated with grassbed distribution, location of resting beaches, and possibly ocean currents (Hirth 1971).

Historically in the U. S., green sea turtles have been known to nest in the Florida Keys and Dry Tortugas. Yet, these turtles primarily nest on selected beaches along the coast of eastern Florida. In the southeastern U.S., nesting season is roughly June through September. Nesting occurs nocturnally at 2, 3, or 4-year intervals.

Leatherback Sea Turtle (*Dermochelys coriacea*)

The leatherback sea turtle is the largest of all sea turtles. It may reach a length of about 7 feet and weigh as much as 1,600 pounds. The carapace is smooth and gray, green, brown and black in color. The plastron is yellowish white. Juveniles are black on top and white on the bottom.

This species is highly migratory and is the most pelagic of all sea turtles (NMFS and USFWS 1992). They are commonly found along continental shelf waters (Pritchard 1971; Hirth 1980; Fritts et al. 1983). Leatherbacks are found in temperate waters while migrating to tropical waters to nest (Ross 1981). Distribution of this species has been linked to thermal preference and seasonal fluctuations in the Gulf Stream and other warm water features (Fritts et al., 1983). General decline of this species is attributed to exploitation of eggs (Ross, 1981).

Leatherbacks feed mainly on pelagic soft-bodied invertebrates, such as jellyfish and tunicates. Their diet may also include squid, fish, crustaceans, algae, and floating seaweed. Highest concentrations of these prey animals are often found in upwelling areas or where ocean currents converge.

Nesting of leatherback sea turtles is nocturnal with only a small number of nests occurring in the U.S. in the Gulf of Mexico (Florida) from April to late July (Pritchard 1971; Fuller 1978; Fritts et al. 1983). Leatherbacks prefer open access beaches possibly to avoid damage to their soft plastron and flippers. The Pacific coast of Mexico supports the world's largest known concentration of nesting leatherbacks. There is very little nesting in the U.S. (Gunter 1981).

Hawksbill turtle (*Eretomchelys imbricata imbricate*)

The Hawksbill Sea Turtle is a small to medium sized turtle. Adults range in size from 30 to 36 inches carapace length, and weigh 100 to 200 pounds. It gets its name from its distinctive hawk-like beak. It has overlapping scutes (plates) that are thicker than those of other sea turtles. This protects them from being battered against sharp coral and rocks during storm events. Its carapace (upper shell) is an attractive dark brown with faint yellow streaks and blotches and a yellow plastron (under shell).

As a highly migratory species, Hawksbill sea turtles have a wide range, found predominantly in tropical reefs of the Indian, Pacific and Atlantic Oceans. Most are associated with warm tropical waters. Most U.S. sightings are around Florida and Texas. While they are omnivorous, Hawksbill are specialist feeders that target sponges and seagrass, macoralgae and jellyfish. They are highly resilient and resistant to their prey. Some of the sponges they eat are highly toxic to other organisms.

Their life history can be divided into three phases, namely the pelagic phase, from hatching to about 20cm, the benthic phase, when the immature turtles recruit for foraging areas, and the reproductive phase, when they reach sexual maturity. Hawksbills reach maturity after about 30 years and are believed to live from 30 to 50 years. They are solitary for most of their lives and meet only to mate. They mate biannually in secluded lagoons off their nesting beaches. Within the continental U.S. hawksbill nesting is rare and is restricted to the southeastern coasts of Florida (Volusia through Miami-Dade Counties) and the Florida Keys (USFWS 2011).

Gulf Sturgeon (*Acipenser oxyrinchus desotoi*)

The NMFS and USFWS listed the Gulf sturgeon as a threatened species on September 30, 1991. The Gulf sturgeon, also known as the Gulf of Mexico sturgeon, is a subspecies of the Atlantic sturgeon. Adults are 71-95 inches in length, with adult females larger than adult males. The skin is scaleless, brown dorsally and pale ventrally and imbedded with 5 rows of bony plates.

Adult fish are bottom feeders, eating primarily invertebrates, including brachiopods, insect larvae, mollusks, worms and crustaceans. Gulf sturgeons are anadromous, with reproduction occurring in freshwater. Most adult feeding takes place in the Gulf of Mexico and its estuaries. The fish return to breed in the river system in which they hatched. Spawning occurs in areas of deeper water with clean (rock and rubble) bottoms. River systems where the Gulf sturgeons are known to be viable include the Mississippi, Pearl, Escambia, Yellow, Choctawhatchee, Apalachicola, and Suwannee Rivers, and possibly others.

Gulf Sturgeon Critical Habitat

The primary constituent elements essential for the conservation of the Gulf sturgeon are those habitat components that support foraging, riverine spawning sites, normal flow regime, water quality, sediment quality, and safe unobstructed migratory pathways. The proposed action is found within Gulf sturgeon critical habitat.

Generally, adults and subadults could be described as opportunistic benthivores typically feeding on benthic marine invertebrates including amphipods, lancelets, polychaetes, gastropods, shrimp, isopods, mollusks and crustaceans.

The “water quality” constituent element is important for Gulf sturgeon critical habitat. Temperature, salinity, pH, hardness, turbidity, oxygen concentrations, and other chemical characteristics must be protected in order to preserved normal behavior, growth, and

viability of all Gulf sturgeon life stages. If water quality is severely degraded, adverse impacts to Gulf sturgeon and its critical habitat may result.

The “sediment quality” constituent element is listed to ensure the sediment is suitable (i.e. texture and other chemical characteristics) for normal behavior, growth, and viability of all life stages. In addition, the sediment quality is important to support a viable benthic community in order to allow the Gulf sturgeon continual foraging of the area.

The “migration habitat” constituent element is concerned with ensuring safe unobstructed passage for the species. It is intended primarily for the more confined areas near the river mouths or the rivers themselves. The species could potentially migrate through the project area but there is no critical habitat within the vicinity of the project.

Piping Plover (*C. melodus*)

The piping plover is a small, pale-colored North American shorebird. The bird’s light sand-colored plumage blends in with the sandy beaches and shorelines that are its primary habitat. Historically, piping plovers bred across three geographic regions. These regions include: the U.S. and Canadian Northern Great Plains from Alberta to Manitoba and south to Nebraska; the Great Lakes beaches; and the Atlantic coastal beaches from Newfoundland to North Carolina. Generally, piping plovers favor open sand, gravel, or cobble beaches for breeding. Breeding sites are generally found on islands, lake shores, coastal shorelines, and river margins.

Birds from all three populations build their nests in the north but spend the winter along the south Atlantic and Gulf coasts, sometimes arriving as early as mid-July. Piping plovers winter in coastal areas of the U.S. from North Carolina to Texas. They also winter along the coast of eastern Mexico and on Caribbean islands from Barbados to Cuba and the Bahamas. Piping plovers begin arriving on the wintering grounds in early July, with some late nesting birds arriving in September. A few individuals can be found on the wintering grounds throughout the year, but sightings are rare in June and early July.

Piping plovers feed along beaches and intertidal mud and sand flats. Primary prey for piping plovers includes worms, various crustaceans, insects, and occasionally bivalve mollusks.

The primary constituent elements essential for the conservation of the wintering plovers are those habitat components that support foraging, roosting, sheltering and the physical features necessary to maintaining the natural processes that support these habitat components. The primary constituent elements are found in geologically dynamic coastal areas that support or have the potential to support intertidal beaches and flats and associated dune systems. Important components of intertidal flats include sand and or mud flats with no or sparse emergent vegetation.

Red Knot (*C. canutus*)

The rufa red knot is a medium sized shorebird with breast and sides of head cinnamon-brown and a wing span of 20 inches. It can travel long distances with some flying more

than 9,300 miles from south to north every spring and north to south every fall making this bird one of the longest-distance migrants in the animal kingdom. They winter along the coasts of southern Chile and Argentina and during the spring migrate to the U.S. coast and Delaware Bay to feed on horseshoe crab eggs. Breeding grounds are located in the Canadian Arctic. They eat small clams, mussels, snails and other invertebrates. They may stop on the Alabama coast for a brief period to rest and refuel on their annual migrations and could be in the vicinity of this project.

Wood Stork (*M. Americana*)

The wood stork is primarily associated with freshwater habitats for nesting, roosting, foraging, and rearing. Wood storks typically construct their nests in medium to tall trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden, 1991). During the non-breeding season or while foraging, wood storks occur in a wide variety of wetland and other aquatic habitats. Typical foraging sites for the wood stork include freshwater marshes and stock ponds, shallow, seasonally flooded roadside or agricultural ditches, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Major food items include vegetation, fish, crayfish, insects, amphibians, and reptiles (small alligators and snakes) (Coulter, 1987).

West Indian Manatee (*T. manatus*)

The species occurs in coastal areas from the southeastern U.S. to northeastern South America. It is found in rivers, estuaries, and coastal areas of subtropical and tropical areas of northern South America, West Indies/Caribbean region, Gulf of Mexico (now mainly western and southwestern portions) and southeastern North America. U.S. populations occur primarily in Florida where they are effectively isolated from other populations by the cooler waters of the northern Gulf of Mexico and the deeper waters of the Straits of Florida (Domning and Hayek 1986). A few may remain year-round in Cumberland Sound, southeastern Georgia, where factory warm-water outfalls allow survival of colder winter months (Reeves et al. 1992). Occasionally manatees are found in summer from Texas to North Carolina. The species occurs along most of the Gulf coast of Florida, but infrequently occurs north of the Suwannee River and between the Chassahowitzka River and Tampa Bay. They also occur all along the Atlantic coast of Florida, from the Georgia coast to Biscayne Bay and the Florida Keys, including the St. Johns River, the Indian River lagoon system, and various other waterways (O'Shea and Ludlow 1992).

The species is primarily dependent upon submergent, emergent, and floating vegetation. Their diet varies according to plant availability, and they may opportunistically eat other foods.

Perdido Key beach mouse (*Peromyscus polionotus trissyllepsis*)

The species occurs in the coastal areas in the vicinity of the project site and sediment placement areas. It is found in the coastal sand dunes where they excavate burrows and feed on plant seeds and insects. Unlike house mice, beach mice do not seek out human

dwelling or other structures for food and shelter. Breeding peaks during the winter months, but can occur year around if there is adequate food available. Very little information is available about the life history of this mouse.

Bald Eagle (*H. leucocephalus*)

The Bald eagle is no longer listed as threatened or endangered, but is still protected under the Bald and Golden Eagle Protection Act. Bald eagles roost in winter. The preferred roosts are in conifers or other sheltered trees. Perching in deciduous and coniferous trees is equally common in other areas (e.g., Bowerman et al. 1993). Their breeding habitat commonly include areas close to coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources (Campbell et al. 1990). Typical nest trees include pines, spruces, firs, cottonwoods, oaks, poplars, and beeches. They tend to avoid developed areas with nearby human activity (Buehler et al. 1991). The same nest may be used year after year, or may alternate between two nest sites in successive years.

Eastern Indigo Snake (*D. couperi*)

The current range of population includes southern Georgia and Florida. The snake is very rare or extirpated in Alabama, Mississippi, and South Carolina. Recent reintroductions have been made in Florida, Alabama, Georgia, South Carolina, and Mississippi. One reintroduced population may be thriving in Covington County, Alabama. Habitat includes high pinelands (sandhills, scrub, etc.), flatwoods, and most types of hammock in Florida and southeastern Georgia. The species is found near wetlands and in association with gopher tortoise burrows. It prefers pineland habitats that are maintained by periodic fires. The species requires relatively large tracts of suitable terrestrial habitat. When inactive, it often occupies tortoise burrows, stump holes, or land crab burrows.

Alabama Red-Bellied Turtle (*P. alabamensis*)

The Alabama red-bellied turtle is found in shallow vegetated backwaters of freshwater streams, rivers, bays, and bayous in or adjacent to Mobile Bay (3 to 6 feet in depth). They seem to prefer habitats having soft bottoms and extensive beds of submergent aquatic macrophytes. Snags and dense beds of submersed and emergent aquatic vegetation provide turtles with a substrate for cover, predator avoidance, food, and thermoregulation by basking. The turtle feeds on submergent aquatic macrophytes, such as hydrilla, brushy pondweed, eel-grass, arrowhead and mud plantin. Nesting of the turtles occurs from May through July when female turtles leave their aquatic environment and move onto dry land to lay their eggs. A shallow nest is excavated in generally sandy soil where 4 to 9 eggs are deposited. Hatchlings usually emerge during the summer. However, when the turtles nest in late July, hatchlings may over-winter in the nest and emerge the following spring. The Alabama red-belled turtle is believed to repeatedly nest only on Gravine Island, although Dobie (1985) suggested that the species may periodically nest along embankments of the causeway across Mobile Bay. This area is outside the project area and would not be affected by the project activities. No critical habitat has been designated for this species.

Gopher Tortoise (*G. polyphemus*)

The gopher tortoise is a member of the *Class Reptilia*. Its carapace is grayish-brown and unmarked in adults, while its plastron, legs, head and neck are golden-yellow. The gopher tortoise digs burrows typically ranging in size from 20 to 30 feet long and from six to eight feet deep with its shovel-like front legs. Biologists have found some burrows as big as 40 feet long and 10 feet deep. The burrows are found in dry places, such as sandhills, flatwoods, prairies, and coastal dunes, or in human-made environments, such as pastures, grassy roadsides, and old fields. The gopher tortoise is a keystone species, meaning its extinction would result in measurable changes to the ecosystem in which it occurs. Specifically, other animals, such as gopher frogs, several species of snakes, and several small mammals, depend on tortoise burrows. For the gopher tortoise to thrive, the animal generally needs three things: well drained sandy soil (for digging burrows), plenty of low plant growth (for food), and open, sunny areas (for nesting and basking). The gopher tortoise is found along the dry sand ridges of the southeastern Coastal Plain. The tortoise is found in Florida and the southern parts of South Carolina, Georgia, Alabama and Mississippi. The gopher tortoise usually mates during April and May. Shortly after mating, the female lays between 3 and 15 eggs, either in a sandy mound in front of her burrow or a nearby sunny place. The eggs mature and hatch from 70 to 100 days later. The hatchlings spend much of their time in their mother's burrow until they're old enough to dig their own. They don't reach maturity until they are between 10 and 15 years old, when their shells are about 9 inches long. The gopher tortoise usually eats low-growing plants found in bright sunshine, primarily grasses, such as wiregrass. Some tortoises have been known to eat gopher apples, blackberries, and other fruits. The gopher tortoise will also scavenge and is an opportunistic feeder, occasionally feeding on dead animals or excrement.

3.6 Water Quality. Some silty material may be associated with the dredging and placement operations and its re-suspension may result in a slight localized increase in turbidity. Due to the predominant sandy nature of the material being dredged, the quantity of silt is expected to be low and not a significant problem. Since the materials being excavated are beach quality sands, no significant long-term elevation of turbidity is expected. The State of Alabama's water quality standards would not be significantly affected and water clarity would return to ambient conditions shortly after sediment placement at this site. The mixing zone turbidity limits of 50 NTUs will not be exceeded. No significant impacts are expected to result from the placement of the sandy material. As required by the Clean Water Act, a Section 404 (b)(1) evaluation for the removal of sediment from the navigation channel and placement of material in a PA has been prepared and is included with this report.

The Alabama Department of Environmental Management (ADEM) has classified the coastal water in the project area as suitable for recreation, propagation of fish and wildlife and shellfish harvesting. Recertification of the maintenance dredging placement operation was issued on November 25, 2014 and is included as **Enclosure 2**.

3.7 Hazardous Material. No known hazardous materials are present within the project area or immediate vicinity.

3.8 Air Quality. Existing air quality in coastal Alabama counties was assessed in terms of types of sources contributing to emissions that are regulated by National Ambient Air Quality Standards (NAAQS). NAAQS have been developed for oxides of nitrogen, hydrocarbons, particulate matter, carbon monoxide, sulfur dioxide, lead, volatile organic compounds and other hazardous air pollutants. Sources of air pollution in the project area are mainly from non-point sources such as boat motors and vehicular traffic emissions. No major sources of air pollution were found within the vicinity of the project area.

3.9 Aesthetics. The coastal region of Alabama in the vicinity of the project is aesthetically pleasing. The surrounding lands include national, state and county parks, in addition to several urbanized coastal areas.

3.10 Noise. Noise from the dredge and other job-related equipment is expected to increase during sediment placement operations. There is potential short-term disruption of foraging, roosting, or nesting behavior for shorebirds. Any impacts would be limited to the duration of the placement activities. Noise levels will resume to prior conditions once the dredging, construction, and placement operations are complete. No long-term increase in noise will occur in or around the project area.

3.11 Cultural Resources. USACE is not aware of any known historic properties within the proposed sediment placement areas and no cultural interest is known to occur in the PAs proposed for use. Given the relatively recent maintenance dredging of the project, the potential for submerged cultural resources is low. No sites occurring in the project area are listed on the National Register of Historic Places and no previous recorded cultural resources are within the project area. A final determination relative to historic resource impacts is subject to review by and coordination with the State Historic Preservation Officer (SHPO) and those federally recognized tribes with concerns in Alabama and the impacted. A copy of the Public Notice will be provided to the local tribes and Alabama SHPO for their review.

3.12 Sea Level Rise. Systematic long-term tide elevation observations suggest that the elevation of oceanic water bodies is gradually rising and this phenomenon is termed “sea level rise.” The rate of rise is neither constant with time nor uniform over the globe. In addition to elevation of oceanic water bodies, however, is the gradual depression of land surface along the Gulf coast, referred to as “subsidence,” which becomes an additional factor in the relationship between the land’s elevation over time and changing sea levels. Because the coast of Alabama is affected by both subsidence and global sea level rise (adjusted for local conditions), these factors combine in a single element of “relative” sea level rise. Relative sea level rise at a given location is the change in mean sea level at that location with respect to an observer standing on or near the shoreline. Sea level rise is an issue of paramount importance for the state of Alabama due to its critically important coastline, low relief, high coastal population density, ecologically and economically vital beaches, estuaries, and wetlands. The rate of sea level rise in Alabama is roughly 3 mm per year and is slowly gaining public attention as a significant threat to the natural and socioeconomic future of the state

4.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

4.1 Fish and Wildlife Resources.

Submerged Aquatic Vegetation. No significant impacts to the SAVs were identified in this evaluation. The closest known SAVs are located along the western shoreline of Robinson Island but not in the proposed PA. No SAVs are located along the Florida Point shoreline or within the expected 400-foot turbidity mixing zone of channel dredging.

Wetlands. There are no wetlands within the vicinity of the proposed PAs.

Sediments. The sediment quality and texture of the channel dredge material are expected to be homogenous (white sand).

In addition, the Section 404(b)(1) Evaluation Report concluded that the proposed PAs will not jeopardize or adversely impact any oyster reefs, SAVs, wetlands or other critical habitat (**Enclosure 3**).

4.2 Terrestrial Wildlife. As a result of this evaluation, no adverse impacts to the terrestrial wildlife located in the vicinity of the PAs were identified.

4.3 Benthos, Motile Invertebrates, and Fishes. There would be temporary disruption of the aquatic community caused by the maintenance dredging and shoreline placement. Non-motile benthic fauna within the area would be destroyed by dredging and shoreline placement operations, but should repopulate upon project completion. Some of the motile benthic and pelagic fauna, such as crabs, shrimp, and fishes, are able to avoid the disturbed area and should return shortly after the activity is completed. Larval and juvenile stages of these forms may not be able to avoid the activity due to limited mobility but should recover within a few months.

The materials that will be dredged from the project area are homogenous with those that will remain in the channel and, therefore, no alteration of habitat composition is occurring. If sediment type is not changed as a result of project activities, re-colonization can be expected with the similar species returning to the disturbed areas (Stickney, 1984). The area will remain a shallow-water (defined as depths shallower than 46 feet) neritic zone that can support sub-littoral benthic biota. Because similar habitat, in terms of both sediment composition and depth, will be present pre- and post-dredging, it is concluded that the benthic biota in the channel will have the ability to recover and re-colonize within a few months.

Rates of benthic community recovery observed after dredged material placement ranged from a few months to several years. The relatively species-poor benthic assemblages associated with low salinity estuarine sediments can recover in periods of time ranging from a few months to approximately one year (Leathem et al., 1973; McCauley et al.,

1976 and 1977; Van Dolah et al. 1979 and 1984; Clarke and MillerWay, 1992), while the more diverse communities of high salinity estuarine sediments may require a year or longer (e.g. Jones, 1986; Ray and Clarke, 1999).

Several studies of turbidity from total suspended solids (TSS) associated with dredging operations have concluded that dredging had no substantial effects on nekton (Ritchie, 1970; Stickney, 1972; Wright, 1978); however, other studies have shown that elevated TSS levels and prolonged exposure can suffocate and reduce growth rates of adult and juvenile nekton and reduce viability of eggs (Moore, 1977; Stern and Stickle, 1978). Detrimental effects are generally recognized at TSS concentrations greater than 500 milligrams per liter (mg/L) and for durations of continuous exposure ranging from several hours to a few days. Turbidities exceeding 500 mg/L have been observed around maintenance dredging and placement operations (EH&A, 1978), and such turbidities may affect some aquatic organisms near the active dredges. In a study in Corpus Christi Bay, Schubal et al. (1978) reported TSS values greater than 300 mg/L but only in a relatively small area near the bottom. They also found that TSS from maintenance dredging in Corpus Christi Bay is not greater than that from shrimping and affects the bay for much shorter time periods. In a study of the Laguna Madre, Sheridan (1999) found elevations in turbidity only over the subtidal placement material fluid mud pile. In this study they found that even 16.5 feet from the edge of the placed material, turbidity was not statistically greater than that 1 kilometer or more away. May (1973) found that TSS was reduced by 92 percent within 100 feet of the discharge point, by 98 percent at 200 feet, and that concentrations above 100 mg/L were seldom found beyond 400 feet from the point of placement. Elevated turbidities during construction and maintenance dredging may affect some aquatic organisms near the dredging activity; however, turbidities in open-water habitats can be expected to return to near ambient conditions within a few hours after dredging ceases or moves out of a given area. Schidler (1984) reports similar TSS levels from dredging and storm events. Overall, motile organisms are mobile enough to avoid highly turbid areas (Hirsch et al., 1978). Under most conditions, fish and other motile organisms are only exposed to localized suspended-sediment plumes for short durations (minutes to hours) (Clarke and Wilber, 2000).

Due to the dynamic nature of the channel, clean sandy material, the small area of the entire ecosystem that will be affected at a given point in time and the use of hydraulic pipelines for placement of dredged material, no significant long-term impacts to the benthos, motile invertebrates, and fishes are expected to occur as a result of the two additional sediment PAs. The area of sand placement is a highly dynamic area. These sediments will continue to move within the littoral system. Failure to periodically place sediments within the new PAs will eventually result in the continued erosion of Robinson Island and the sandy southern shoreline along Florida Point.

4.4 Essential Fish Habitat. EFH for several species of sharks, migratory fish, crabs and shrimp occur within the vicinity of the project. However, no shell, sand, silt and clay substrates; estuarine emergent wetlands; and/or seagrass beds would be adversely affected by the proposed action. Only a small percentage of the Perdido Bay area would be affected during the routine maintenance dredging and sediment placement event.

Dredged material would be removed from the channel by a hydraulic pipeline dredge and discharged through a pipeline to the authorized PAs and beach placement sites. This method is preferable in terms of turbidity reduction and minimizing the potential impact to fish and wildlife. Most of the motile benthic and pelagic fauna, such as crab, shrimp, and fish, should be able to avoid the disturbed area and should return shortly after the activity is completed. No long-term direct impacts to managed species are anticipated. However, it is reasonable to anticipate some non-motile and motile invertebrate species will be physically affected through placement operations. Initial placement operations would cover benthic organisms with dredged material. However, as detailed in section 4.3 of this assessment no significant long-term impacts to this resource is expected as result of this action. These species are expected to recover rapidly soon after the sediment placement operations are complete.

Increased water column turbidity during dredging and placement would be temporary and localized. The spatial extent of elevated turbidity is expected to be within 400 feet of the operation, with turbidity levels returning to ambient conditions within a few hours after completion of the dredging activities. Due to the nature of the channel maintenance and the small area (percentage wise) of ecosystem that would be affected at a given point in time no significant long-term impacts are expected to occur.

Extensive steps will be taken to reduce and avoid potential impacts to EFH as well as other significant area resources. There will be strict adherence to water quality requirements provided by ADEM to further reduce impacts to EFH. These steps also include placing the minimal amount required to achieve the project objectives.

Notwithstanding the potential harm to some individual organisms, no significant impacts to managed species of finfish or shellfish populations are anticipated from the placement operations.

4.5 Threatened and Endangered Species. The USACE, Mobile District anticipates that the majority of the threatened and endangered species listed for Baldwin County (**Table 2**) are not likely to be in the project area. For example, the wood stork is primarily associated with freshwater habitats for nesting, roosting, foraging, and rearing. The Bald eagle is not known to nest or roost in the vicinity of the project. The USACE, Mobile District is not aware of any nesting by either species in the project area. The Eastern indigo snake is largely restricted to the vicinity of sandhill habitats occupied by Gopher tortoises. No such habitat occurs in this area. In summary, the marine open-water setting and sandy beach environment is not suitable habitat for the above mentioned species.

Past consultation has focused on the West Indian manatees, Gulf sturgeon, sea turtles, piping plovers, least terns and Perdido Key beach mice. The USACE, Mobile District has historically agreed to implement "Standard Manatee Construction Conditions" during similar dredging and placement projects in Alabama (**Enclosure 1**). The USACE anticipates that if these measures are implemented there will be no adverse impact to West Indian manatees. The loggerhead, Kemp's ridley, and green sea turtles could possibly be impacted because they could be found in the area; however, if they are in the

vicinity, they will avoid the area while dredging and placement operations are in progress. Dredged material would be removed from the channel by a hydraulic cutterhead pipeline dredge and discharged through a pipeline to the authorized PAs and beach placement sites. This method is preferable in terms of turbidity reduction and minimizing the potential impact to wildlife, primarily manatees and sea turtles.

Since the project is located outside of critical habitat for Gulf sturgeon, it is unlikely that adverse effects to the species' habitat would result. In the unlikely event a Gulf sturgeon is in the area, the proposed action would not adversely affect the species due to the mobile species likely avoiding the project area during dredging and placement operations. Cutterhead dredging is known to have no impact on Gulf sturgeon so no significant impacts to these species are anticipated.

The project area is in or near the vicinity of the wintering grounds for least terns and critical habitat for piping plover and the Perdido Key beach mouse. Piping plovers and least terns begin arriving on the wintering grounds as early as July with late-nesting birds arriving as late as September. The rufous Red Knot may be in the vicinity of the project during their annual spring and fall migrations. The beach mouse preferred habitat is the sparsely vegetated frontal coastal dunes. In the unlikely event that these species happen to be in the project vicinity, the USACE, Mobile District anticipates these motile species would avoid the sediment placement operations.

Based on this assessment the USACE, Mobile District has determined that no federally-protected species or designated critical habitat were likely to be adversely affected as a result of the proposed project. However, a letter requesting concurrence with the District's Not Likely to Adversely Affect (NLAA) determination will be sent to the U. S. Fish and Wildlife Service (USFWS) for the two additional PAs. Previous coordination on this project with the USFWS has resulted in concurrence that the majority of species listed for Baldwin County are not likely to be in the project areas and will not be affected by the project.

To reduce the likelihood of take the USACE, Mobile District has agreed to incorporate the following conditions during operations and maintenance dredging of Perdido Pass:

- Dredging will be conducted utilizing hydraulic or mechanical methods reducing the potential for entrainment of Gulf sturgeon and sea turtles associated with hopper dredges.
- During active hydraulic dredging operations the cutterhead will be located within the substrate.
- If threatened or endangered species are observed during dredging operations, the operation will be temporarily stopped until the species has left the area.
- Alabama Standard Manatee Construction Conditions will be followed during operations.

- If dredging operations take place during sea turtle nesting season (May 1 through November 30), the USFWS office in Daphne, AL must be contacted to determine if formal consultation is required.

4.6 Water Quality. The dredging and placement operations are expected to create some degree of construction-related turbidity in excess of the natural condition in the proximity of the channel and placement sites. Impacts from sediment disturbance during these operations are expected to be temporary, minimal and similar to conditions experienced during past routine operation and maintenance of the pass. Suspended particles are expected to settle out within a short time frame (hours), with no long-term measurable effects on water quality. No measurable changes in temperature, salinity, PH, hardness, oxygen content or other chemical characteristics are expected with the addition of these two PAs. ADEM recently issued water quality certification on November 25, 2014 for the Perdido Pass dredging and sediment placement operations for the previously approved sediment PAs (**Enclosure 2**).

4.7 Hazardous Materials. No hazardous materials are known to exist in the project area. The contractor would be responsible for proper storage and disposal of any hazardous material, such as oils and fuels used during the dredging and placement operation.

4.8 Air Quality. Air quality would be temporarily and insignificantly affected by the proposed action. Emissions are expected to occur and would result from the operation of the dredge, land-based equipment, and any other support equipment which may be on or adjacent to the job site. However, the exhaust emissions are considered insignificant in light of prevailing breezes and when compared to the existing exhaust fumes from other vessels using the project area. The project area is currently in attainment with NAAQS parameters. The proposed action would not affect the attainment status of the project area or region. A State Implementation Plan conformity determination (42 United States Code 7506 (c) is not required since the project area is in attainment for all criteria pollutants.

4.9 Aesthetics. Aesthetics would be reduced in the project area during the dredging and placement operations, due to the physical presence of the dredge and pipeline used to transport the dredged material as well as the presence of other land-based equipment. However, these impacts would be temporary and insignificant. Benefits are received through increased protection provided by the restored shoreline. Increasing the supply of beach sand will also allow natural building and maintenance of the dune system. The resultant wider beaches and the overall enhanced beach environment will increase the esthetics qualities of the area. Impacts would primarily occur as a result of the physical presence of heavy equipment. Some minor increases in turbidity maybe noted in the immediate vicinity during placement operations, but these increases would be minor and short term in nature.

4.10 Noise. Noise from the dredge and other associated support equipment would be evident in the project area. While this noise would be evident to those workers on the job and any users of the beach in proximity of the project, it would be short-term and insignificant. Normal noise levels would be achieved at the end of each workday and after completion of the job. No long-term increase in noise would occur in or around the proposed PAs.

4.11 Cultural Resources. In compliance with the National Historic Preservation Act (NHPA), coordination with the District Cultural Resource Officer, Alabama State Historic Preservation Officer and local tribes will be conducted. No cultural resources are known to occur in the placement or channel areas. No sites listed on the Register are located within the proposed PAs.

4.12. Sea Level Rise. Perdido Pass is located in a vulnerable area and subject to the consequences of climate change and storm damage. Serious threats to the area come from the combination of elevated sea levels and intense hurricanes. The Alabama coastline consists primarily of low-lying topography which lies in the hurricane-prone Gulf of Mexico. As a result, the low-lying shoreline is more susceptible to the effects of storm surge than other areas. Rising sea levels result in pushing the high-water mark landward, potentially causing the existing dunes, marsh and seagrass beds to disappear. Losses could be accelerated by a combination of other environmental and oceanographic changes such as an increase in the frequency of storms and changes in prevailing currents, both of which could lead to increased shoreline loss through erosion. This could translate into continued loss of valuable habitat along the Alabama coastline, including sea turtle nesting and beach mouse habitat, shorebird foraging and roosting areas, dune habitat, and salt marsh. This project has the potential to minimize some of the local sediment losses by placement of sandy dredged material within the eroded shoreline. These sediments will elevate the site by a few feet and potentially minimize the impacts of sea level rise and storm impacts.

5.0 CUMULATIVE EFFECTS SUMMARY. Cumulative effects are those impacts on the environment that result from the incremental impacts 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. This project should only have positive impacts on cumulative effects. Eroded shorelines will be renourished and valuable coastal habitat will be restored and protected.

6.0 OTHER CONSIDERATIONS

6.1 Coastal Zone Management Act of 1972. The USACE, Mobile District determined that the proposed action is consistent with the Alabama Coastal Management Program to the maximum extent practicable. USACE, Mobile District will be requesting that ADEM modify their existing recently issued November 25, 2014 Coastal Zone Consistency permit to include these two additional sediment PAs.

6.2 Clean Water Act of 1972. No sediment placement work would occur in these two proposed PAs until the State of Alabama has issued water quality certification for them.

All State water quality standards will be met. Previous Section 401 water quality certification was requested from the ADEM and issued on November 25, 2014 for the existing federal navigation project which included seven other PAs in the vicinity of these two sites (**Enclosure 2**).

6.3 Rivers and Harbors Act of 1899. The proposed work would not obstruct navigable waters of the United States.

6.4 Marine Mammal Protection Act of 1972, as amended. Incorporation of the safe guards used to protect threatened or endangered species during project implementation will also protect any marine mammals in the area; therefore, the project is in compliance with this Act.

6.5 Fish and Wildlife Coordination Act of 1958, as amended. These proposed PAs will be coordinated with the FWS and in full compliance with the act.

6.6 Protection of Children. On April 21, 1997, President Clinton issued Executive Order (EO) 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. This EO directs each federal agency to ensure that its policies, programs, activities and standards address disproportionate risks to children that result from environmental health risks or safety risks. These risks arise because:

- Children’s neurological, immunological, digestive, and other bodily systems are still developing.
- Children eat more food, drink more fluids, and breath more air in proportion to their body weight than adults.
- Children’s size and weight might diminish their protection from standard safety features.
- Children’s behavior patterns make them more susceptible to accidents because they are less able to protect themselves.

Therefore, to the extent permitted by law, and appropriate and consistent with each agency’s mission, the President directed each federal agency to:

- Make it a high priority to identify and assess environmental health risks and safety risks that might disproportionately affect children.
- Ensure that the agency’s policies, programs, and standards address disproportionate health risks to children that result from environmental health risks or safety risks.

Examples of risks to children include increased traffic volumes and industrial or production-oriented activities that would generate substances or pollutants that children might come into contact with or ingest.

The potential environmental health or safety risks to children resulting from the Proposed Action are very low. The proposed action complies with EO 13045, “Protection of Children from Environmental Health Risks and Safety Risks,” and does not represent

disproportionately high and adverse environmental health or safety risks to children in the United States. The project area is not used disproportionately by children.

6.7 Environmental Justice. On February 11, 1994, the President issued EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. The Environmental Justice (EJ) Policy requires agencies to incorporate into NEPA documents and analysis of the environmental effects of their proposed programs on minorities and low-income populations and communities. EJ is defined by the USEPA as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group, should bear the disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies.”

The effects of the proposed action on local populations and the resources used by local groups, including minority and low-income groups, are addressed in Section 6. The proposed action complies with EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” and does not represent disproportionately high and adverse human health or environmental effects on minority populations and low-income populations in the United States. The project area is not used disproportionately by these populations.

7.0 COORDINATION. Under the agency and public coordination guidelines of the NEPA process, numerous persons have been contacted for input on the proposed action. Alabama coastal state and federal resource agencies were notified of the project during a interagency working group meeting on December 10, 2014. No opposition was received during this meeting. The general public will be notified of the proposed action via public notice. Copies of the public notice will be made available to Federal and state agencies and the interested public for a 30-day review period. Comments on the proposed action will be requested in writing by the end of that 30-day period. Comments on the action will be considered prior to a decision on the action.

The following is a list of federal and state agencies that will be notified of the Public Notice:

- Region 4, U.S. Environmental Protection Agency
- Field Representative, Fish and Wildlife Service
- Regional Director, National Park Service
- Regional Director, National Marine Fisheries Service
- Commander, Eighth Coast Guard District
- Alabama State Historic Preservation Officer
- Alabama Department of Environmental Management
- Alabama Department of Conservation and Natural Resources
- Gulf of Mexico Fishery Management Council
- Federal Emergency Management Agency

Other Federal, State, and local organizations, affiliated Indian Tribe interests, and U.S. Senators and Representatives of the State of Alabama will also be sent copies of the Public Notice and asked to participate in coordinating this proposal.

8.0 CONCLUSION. Adding these two sediment PAs to the Perdido Pass Federal navigation project will have some impact to the overall ecosystem. However, impacts would be minimal and temporary in nature and include smothering of benthos, reduced air quality, increased turbidity, increased noise, and aquatic organism disturbance. The beneficial impacts of these sediment placement areas consist of maintaining wider and more elevated shorelines, increased storm protection, and increased habitat for endangered sea turtles, various shore birds, and many other beach dwelling organisms.

The proposed action would have no significant environmental impacts on the existing environment. No mitigation actions are required for the proposed project. The implementation of the proposed action would not have a significant adverse impact on the quality of the environment and an environmental impact statement is not required.

9.0 REFERENCES.

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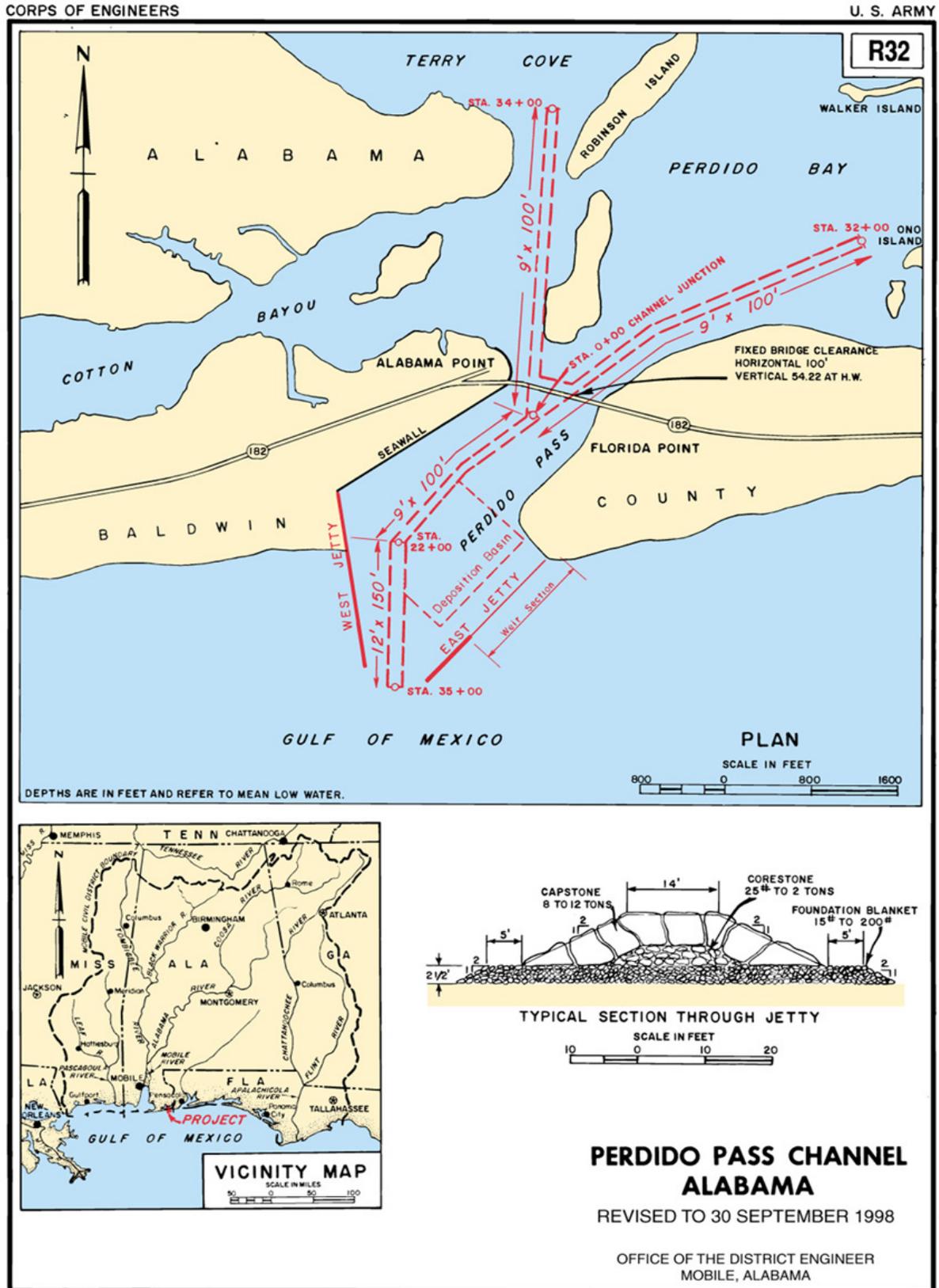
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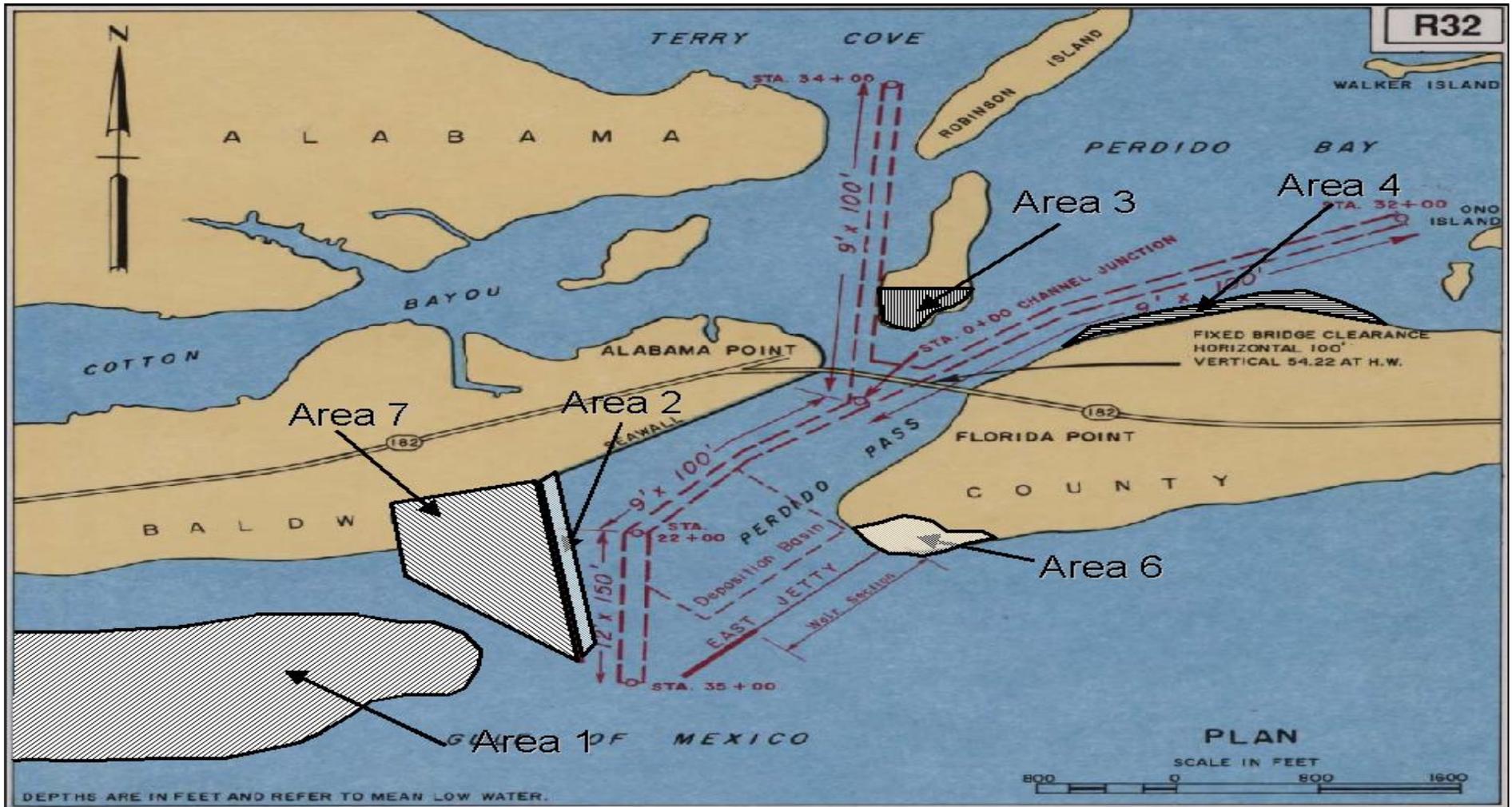


Figure 2. Existing approved sediment placement areaa for the Perdido Pass navigation project

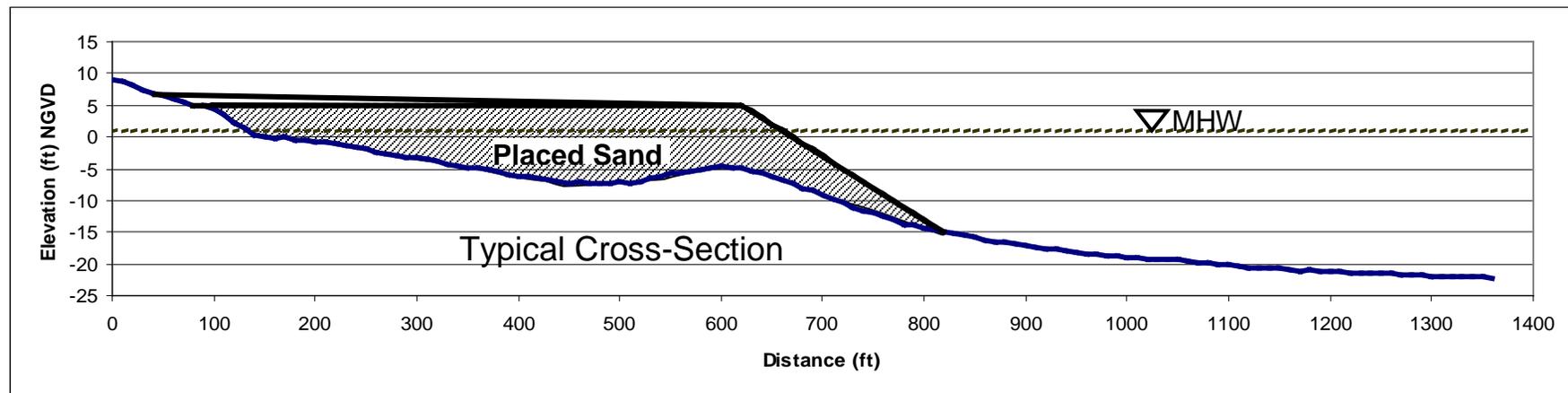
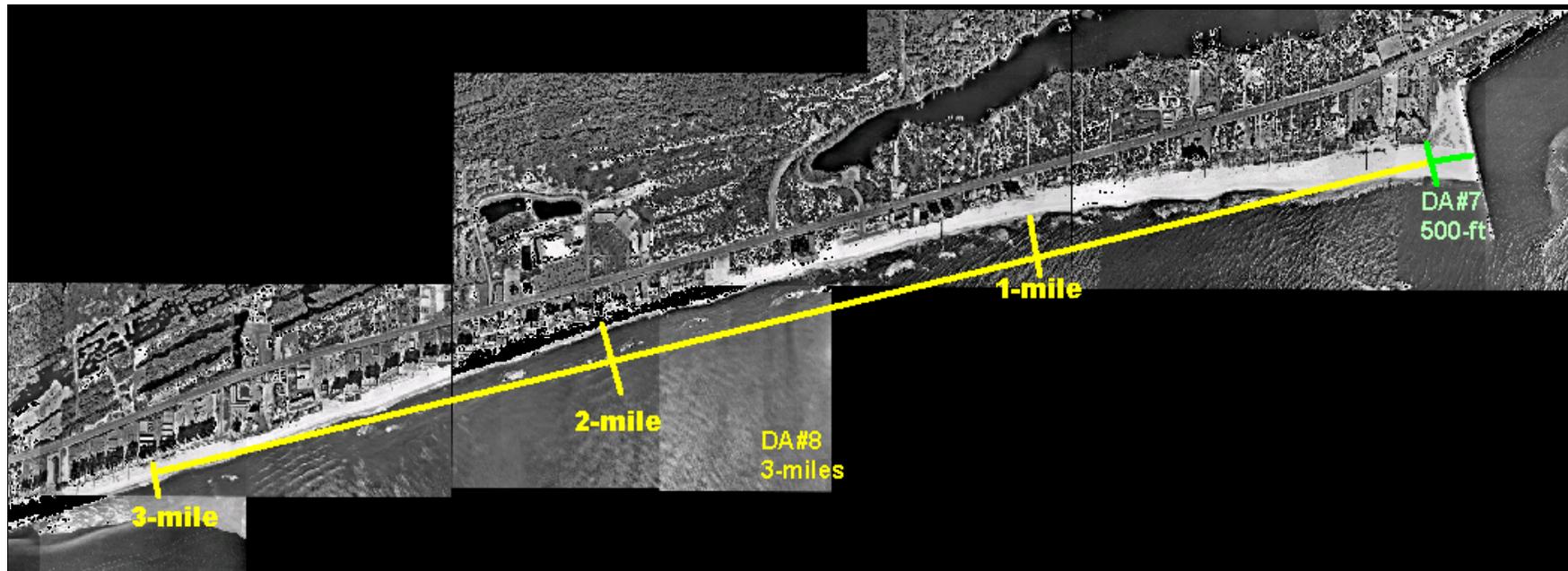


Figure 3. Shoreline reach for PA 8 and typical cross-section for PA 8 and 9.

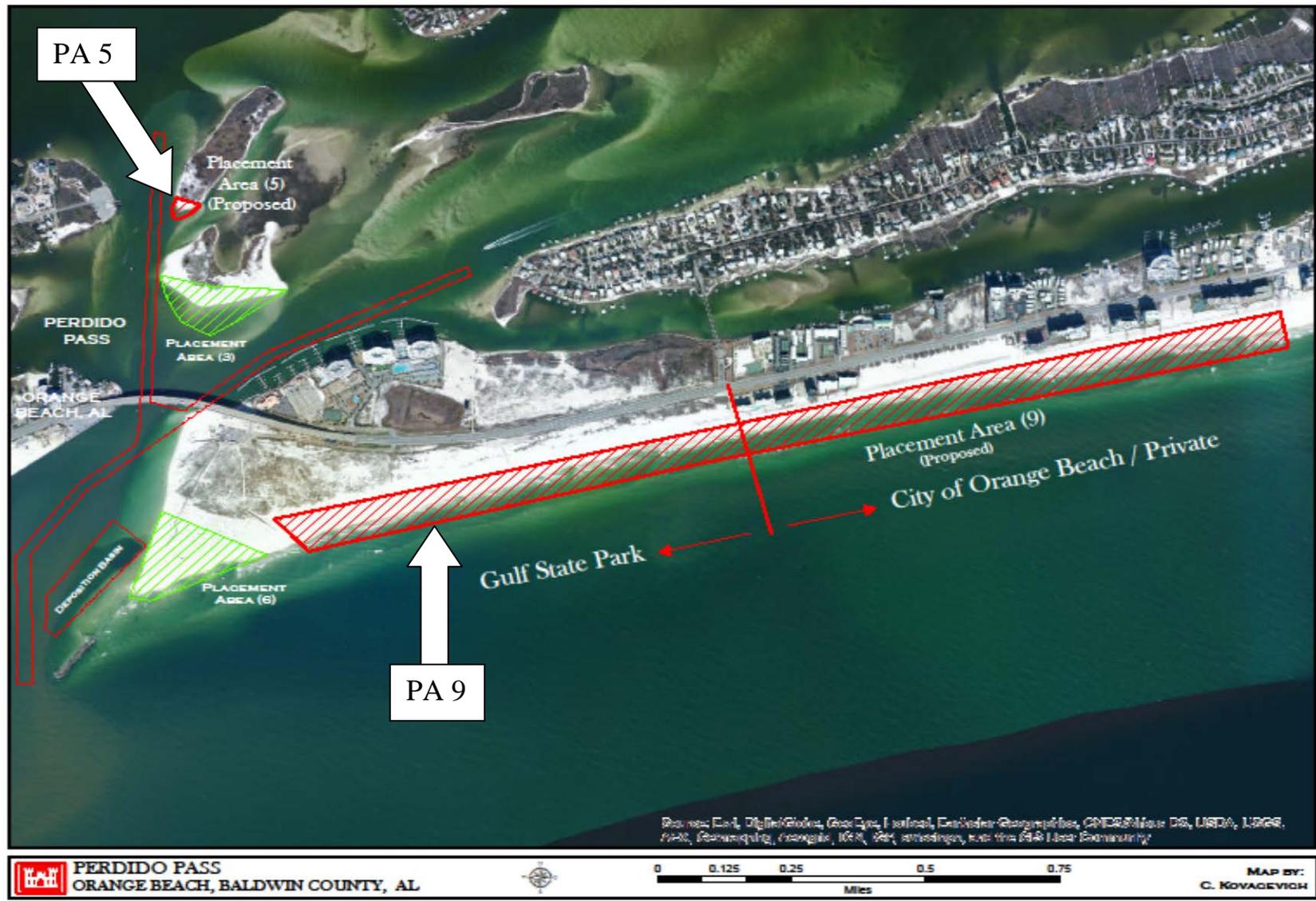


Figure 4. Perdido Pass Proposed Sediment Placement Areas PA 5 and PA 9.

Enclosures

ALABAMA
STANDARD MANATEE CONSTRUCTION CONDITIONS

- a. The Corps of Engineers (COE) shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatees.
- b. The COE 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 of 1972 and the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to, or exit from, essential habitat.
- d. All vessels associated with the construction project shall operate at “no wake/idle” speeds at all times while in the construction 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.
- e. If manatees are seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure their protection. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- f. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).
- g. Temporary signs concerning the manatees shall be posted prior to and during all construction/dredging activities. All signs are to be removed by the lessee/grantee upon completion of the project. A sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* will be posted in a location prominently visible to water related construction crews. A second sign should be posted if vessels are associated with the construction, and should be placed visible to the vessel operator. The second sign should be at least 8½” by 11” which reads *Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).*

TEMPORARY MANATEE SIGNS
for standard manatee construction conditions

The *Caution: Manatee Area* signs are available through the companies listed below and may also be available from other local suppliers. Permit/lease holders, should contact sign companies directly to arrange for shipping and billing.

Cape Coral Signs & Designs Inc.

1311 Del Prado Boulevard
Cape Coral, Florida 33990
1-800-813-9992
FAX 813-772-9992

Municipal Supply and Sign Company

P.O. Box 17
Naples, Florida 33939-1765
1-800-329-5366
813-262-4639
FAX 813-262-4645

JADCO Signing Inc.

708 Commerce Way
P.O. Box 911
Jupiter, Florida 33458
1-800-432-3404
407-747-1065
FAX 407-744-2985

The second sign should be at least 8½ inches by 11 inches, and should read:

Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).

LANCE R. LEFLEUR
DIRECTOR



ROBERT J. BENTLEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

November 25, 2014

Mr. Curtis Flakes
U.S. Army Corps of Engineers
Post Office Box 2288
Mobile, AL 36628-0001

RE: State of Alabama Concurrence with the U.S. Army Corps of Engineers' Coastal Consistency Determination
Perdido Pass Federal Navigation Project, Baldwin County, Alabama
U.S. Army Corps of Engineers (USACE) Joint Public Notice: FP14-PP14-05
Alabama Department of Environmental Management (ADEM) Tracking Code: 2015-041-COEP-CZM

Dear Mr. Flakes:

On November 10, 2014, the ADEM received the USACE's consistency determination for the proposed activity referenced above and its request for Alabama's response. Pursuant to 15 CFR §930, et seq. and §307 of the Coastal Zone Management Act of 1972, as amended, and based upon review of the information submitted by the USACE, the ADEM **concurs** that the proposed activity is consistent, to the maximum extent practicable, with the enforceable policies of the Alabama Coastal Area Management Program.

Should the proposed activity be modified, a revised consistency determination could be necessary pursuant to 15CFR 930.46.

Contact the Mobile-Coastal office anytime with questions. Always include the ADEM tracking code above when corresponding on this matter.

Sincerely,

Anthony Scott Hughes, Chief
Field Operations Division

ASH/cap File: CZCERT/46024

cc: Michael Malsom, U.S. Army Corps of Engineers
Rosemary Hall, USEPA Region IV, Atlanta
Josh Rowell, USFWS, Daphne
Mark Thompson, NMFS-HCD, Panama City
Carl Ferraro, ADCNR
Phillip. Hinesley, ADCNR
Linda McCool, ADCNR

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)



Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

LANCE R. LEFLEUR
DIRECTOR



ROBERT J. BENTLEY
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November 25, 2014

Mr. Curtis Flakes
U.S. Army Corps of Engineers
Post Office Box 2288
Mobile, AL 36628-0001

RE: State of Alabama Water Quality Certification (WQC) Pursuant to Clean Water Act (CWA) §401(a)
Perdido Pass Federal Navigation Project, Baldwin County, Alabama
U.S. Army Corps of Engineers (USACE) Joint Public Notice: FP14-PP14-05
Alabama Department of Environmental Management (ADEM) Tracking Code: 2015-041-COEP-WQC

Dear Mr. Flakes:

The ADEM has completed its review of all materials submitted related to the USACE’s proposal to conduct maintenance dredging activities in Perdido Pass in Orange Beach, Baldwin County, Alabama. Approximately 50,000 yd³ of material from the channels above the Alabama Highway 182 bridge and approximately 250,000 yd³ from below the bridge will be dredged on an annual basis. The dredged material, composed predominantly of medium sand with small percentages of sands and silt, will be removed by hydraulic pipeline and placed in previously approved disposal areas.

The USACE’s advertisement of this project by joint public notice with ADEM has been completed. Action pertinent to WQC is required by CWA §401(a)(1), 33 U.S.C. §1251, et. seq. If conducted in accordance with the conditions prescribed herein, ADEM hereby **grants** official certification that there is reasonable assurance that the discharge resulting from the proposed activities as submitted will not violate applicable water quality standards established under §303 of the CWA and §22-22-9(g), Code of Alabama (1975). This certification terminates coincidentally with the expiration of **FP14-PP14-05** but shall not exceed a maximum of five (5) years from the date the USACE activates the permit unless specifically authorized in response to a written request for same.

The ADEM certifies that there are no applicable effluent limitations under Sections 301 and 302 nor applicable standards under Sections 306 and 307 of the CWA in regard to the activities specified. However, regulations promulgated by the EPA requiring discharge permits for storm water runoff from individual and commercial facilities may be applicable. This certification does not address the requirements of those regulations.

By accepting this certification from the State of Alabama, the USACE and its assigns must allow any duly authorized employee of the ADEM or its contractors, or Attorney General or District Attorney to enter upon the premises on which this project is occurring for the purposes of ascertaining compliance with ADEM’s Administrative Code. Deviation from the approved project design **must not** be implemented without prior written notice and approval from the ADEM.

In recognition that projects are site specific in nature and conditions can change during project implementation, the ADEM reserves the right to require the submission of additional information or require additional management measures to be implemented, as necessary on a case-by-case basis, in order to ensure the protection of water quality and coastal resources.

Liability and responsibility for compliance with the requirements of this certification are not delegable by contract or otherwise. The USACE must ensure that any agent, contractor, subcontractor, or other person employed by, under contract, or paid a salary by the USACE understands the approved project design.

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)



Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

U.S. Army Corps of Engineers
2015-041-COE-WQC/FP14-PP14-05
Page 2 of 2

This certification does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations and in no way purports to vest in USACE title to lands now owned by the State of Alabama nor shall it be construed as acquiescence by the State of Alabama of lands owned by the State that may be in USACE's possession. This certification is not transferable without prior written notice and approval of the ADEM.

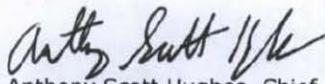
To protect water quality, the following conditions must be incorporated as part of **FP14-PP14-05**.

1. The USACE and/or its assigns shall implement appropriate BMPs to minimize turbidity impacts to the maximum extent practicable. Turbidity generated by the activity must not cause substantial visible contrast nor result in an increase of more than fifty (50) Nephelometric turbidity units (NTU) [above background] in surface waters more than four-hundred (400) feet from the activity. If turbidity generated from project exceeds acceptable levels, the USACE and/or its assigns must cease operations until turbidity is restored to acceptable levels and immediately notify the ADEM Coastal/Facility Section at (251) 304-1176 of resultant work stoppage, with a follow-up written notification no later than seventy-two (72) hours from the beginning of the work stoppage.
2. Upon the loss or failure of any treatment facility, BMP, or other management control measure as identified by responsible on-site staff during day to day construction operations or as identified by ADEM technical staff during facility inspections, the USACE and/or its assigns shall, where necessary to maintain compliance with this certification, suspend, cease, reduce, or otherwise control work/activity and all discharges until effective treatment is restored and immediately notify the ADEM Coastal/Facility Section at (251) 304-1176 of resultant work stoppage, with a follow-up written notification no later than seventy-two (72) hours from the beginning of the work stoppage.

Notifications, modification requests, and submissions of other documents as required by the conditions above and any other correspondence related to this project should be submitted to the ADEM Coastal/Facility Section, 3664 Dauphin Street, Suite B, Mobile, AL 36608-1211. Telephone notifications should be made to the ADEM Coastal/Facility Section at (251) 304-1176.

Contact the Mobile-Coastal office anytime with questions. Always include the ADEM tracking code above when corresponding on this matter.

Sincerely,



Anthony Scott Hughes, Chief
Field Operations Division

ASH/cap File: 401WQ/46024

E-copy: Michael Malsom, U.S. Army Corps of Engineers
Rosemary Hall, USEPA Region IV, Atlanta
Josh Rowell, USFWS, Daphne
Mark Thompson, NMFS-HCD, Panama City
Carl Ferraro, ADCNR
Phillip. Hinesley, ADCNR
Linda McCool, ADCNR

PUBLIC NOTICE NO. FP14-PP14-05
CESAM-PD-EC

August 14, 2014

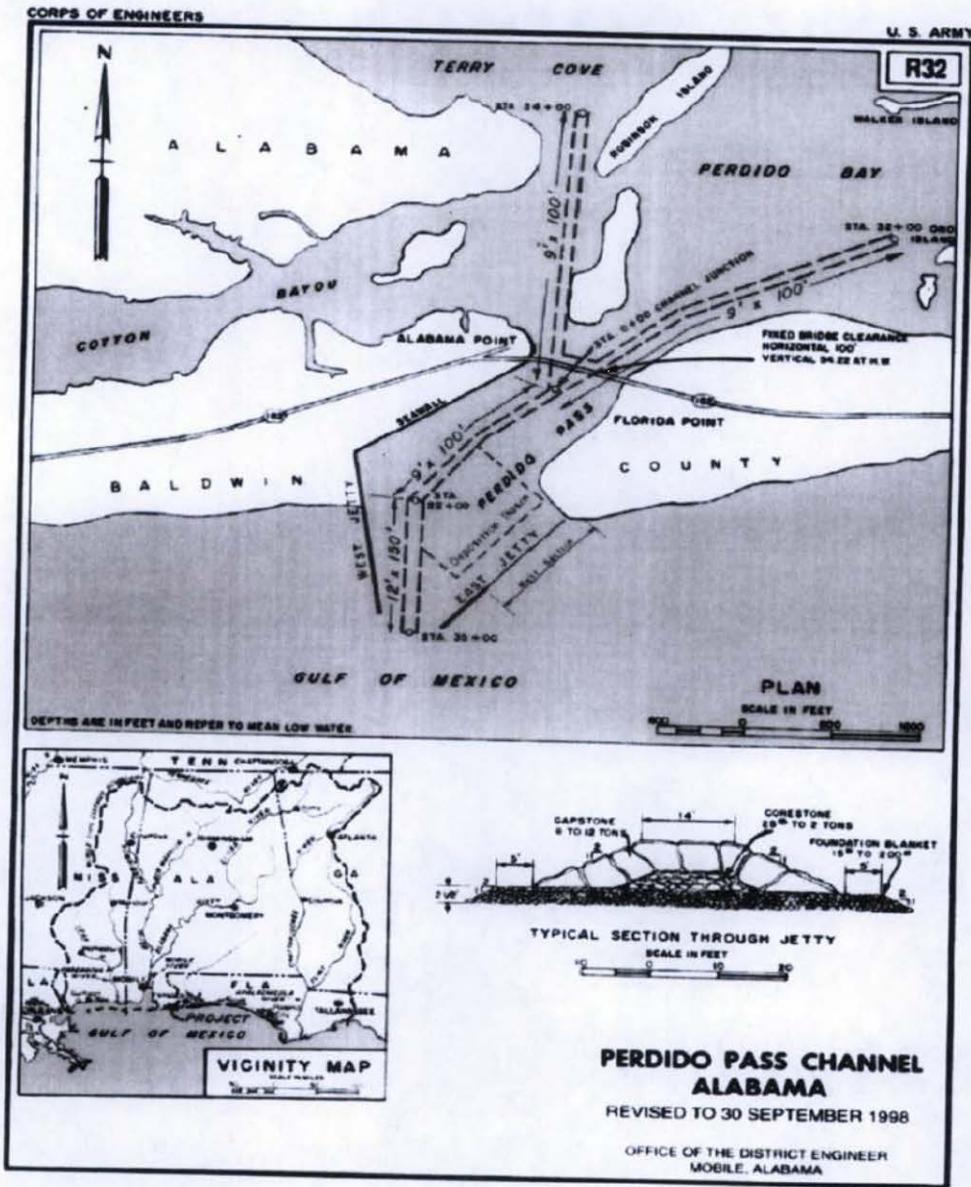


Figure 1. Perdido Pass Federal Navigation Project Map

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2015-041-CEE-CZ41-WQC
Site Plans

Enclosure 1

EA-Enclosure 2

Draft Section 404 (b)(1) Evaluation—Perdido Pass Navigation Project Sediment Placement Areas

Last Update: 23Jan15

**Draft SECTION 404 (b)(1) EVALUATION REPORT
FOR
PROPOSED ADDITION OF SEDIMENT PLACEMENT AREAS FOR DREDGED
MATERIAL**

**PERDIDO PASS NAVIGATION PROJECT
BALDWIN COUNTY, ALABAMA**

FEDERALLY AUTHORIZED

I. PROJECT DESCRIPTION:

a. Location. The Perdido Pass Federal Navigation Project is located on eastern Gulf of Mexico coast of Alabama about midway between Mobile Bay in Alabama and Pensacola Bay in Florida.

b. General Description of the Proposed Action. The proposed action involves adding two additional dredged material sediment placement areas (PA) referred to as PA 5 and PA 9 to the Perdido Pass Federal Navigation Project (**EA-Figure 4**). These areas are needed to restore eroded coastal shoreline areas. Use of the proposed PA 5 would aid in the restoration and maintenance of the southwest end of Robinson Island, providing a wider buffer to protect the shoreline and upland habitat against excessive erosion. Use of the proposed PA 9 would aid in the renourishment of the Florida Point southern shoreline due east of Perdido Pass and PA 6. This PA will run all the way to the Alabama-Florida state line. The action would also provide numerous other environmental benefits such as increased habitat for various shore birds and many other sand dwelling organisms. It would also aid in the protection of the existing sand dunes and beach mouse habitat along Florida Point. The cumulative impacts of the overall action are considered to be beneficial to the local ecosystem.

Placement Area 5: PA 5 would be located on the southwest end of Robinson Island (**EA-Figure 4**). The size of the area is approximately one-half acre. Sand from maintenance dredging of the navigation channel due north of Highway 182 Bridge would be placed as needed along the end of the island. The placement of this material would occur from the existing shoreline out to -3 to -4 foot elevation contours mean high water (MHW). Placement would be allowed to equilibrate to a natural slope. Although any or all of this new area may be used for placement, the intent is to provide for erosion protection of the island. An adaptive management approach will be implemented to continually adjust the dredged material placement activities so that the desired objectives are achieved.

Placement Area 9: PA 9 would be located due east of Perdido Pass and PA 6 along the entire southern shoreline of Florida Point (**EA-Figure 4**). The size of the area is approximately 100 acres. Sand from the navigation channel south of Highway 182

Bridge would be placed where needed along the eroded sections of the southern shoreline due east of PA 6 and serve to protect valuable dune habitat. The placement of this material would occur from the existing shoreline to between the +7 and -15-foot elevation contours MHW extending eastward for approximately 10,000 feet to the Alabama-Florida state line. The placed material would be contoured to a natural slope with heavy equipment. A typical cross section for PA 9 is also presented in **EA-Figure 3**. involves the maintenance dredging and disposal activities for the Perdido Pass which is a natural inlet about 800 feet wide. It is estimated that approximately 50,000 cubic yards of sandy material from the channels above the Alabama Highway 182 bridge and up to 250,000 cubic yards from below the bridge will be removed on an annual basis.

c. Authority and Purpose. The existing project was authorized by River and Harbor Act of October 27, 1965. (S. Doc. 94, 88th Congress, 2d Sess.). The initial project commenced May 1968 and completed March 1969 and was constructed to stabilize the inlet.

d. General Description of the Dredged or Fill Material. The material to be placed in the proposed PAs site will be maintenance-dredged material from the navigation channel and deposition basin. The dredged material will be of beach quality sand composed predominantly of medium and fine-grained quartz sand. The time of placement typically falls during the fall and winter seasons.

(1) General Characteristics of Material. The dredged material consists of marine sand from sources within the littoral system. The sand is predominantly white and consists of white fine to medium quartz sand with a small percentage of silt.

(2) Quantity of Material. It is estimated that approximately 50,000 cubic yards of material from the channels above the Alabama Highway 182 bridge and approximately 250,000 cubic yards from below the bridge are removed once every two (2) to three (3) years. Due to the sandy, coarse-grained nature of the littoral sediments and that these sediments are far removed from sources of contamination, it is considered that no significant levels of contaminants are present.

(3) Source of Material. The source of the sand to be placed in the proposed PAs is sand dredged from the navigation channel and deposition basin in the immediate vicinity of the Alabama State Highway 182 bridge.

e. General Description of the Discharge Sites.

(1) Location Map. A map illustrating the location of the existing disposal areas is presented in **Figures 2 and 3** of the Environmental Assessment (EA).

(2) Size. The size of the placement areas are approximately 0.5 acres for PA 5 and 100 acres for PA 9.

(3) Type of Site. The disposal sites are sandy shoreline areas where the sand can

be placed to provide beach nourishment and erosion protection.

(4) Type of Habitat. The PAs are characterized by predominantly white fine to medium quartz sand. The beach and near-shore zones are a very dynamic environment that changes drastically as a function of climate and wave conditions. The direction of the long-shore transport is from east to west. Due to the harsh environment within the active near-shore beach zone, the benthic community generally consists of a small number of opportunistic invertebrates. Fish species abundance and diversity are generally lower in near-shore environments such as this. The constantly shifting sediments do not allow aquatic vegetation to become rooted or attached to the unconsolidated sandy substrate. The dynamic nature of the near-shore littoral zone (swash zone, surf zone, and foreshore) is a harsh, unstable environment providing low animal and plant densities.

(5) Timing and Duration of Discharge. The maintenance dredging activities for this project is typically conducted on an as-need basis and availability of funding. The frequency of dredging typically occurs on average once every two (2) to three (3) years. Maintenance dredging cycles typically require several months to complete.

f. Disposal Method. Placement will be accomplished by hydraulic pipeline within the limits of the proposed and previously authorized PAs. It is expected that some support equipment such as bull dozers, etc. may be necessary to move the sand into the proposed configuration.

II. FACTUAL DETERMINATIONS.

a. Physical Substrate Determinations.

(1) Substrate elevation and slope. The preferred alternative would have no adverse impacts on the existing substrate elevation and slope within the vicinity of the project. The project would result in the removal of substrate as needed to a depth of -9 and/or -12 feet Mean Lower Low Water (MLLW). Approximately 350,000 cubic yards of material will be dredged every two (2) to three (3) years and placed in a configuration to achieve the desired profiles as referenced in **Figure 3** of the EA. Should unnatural escarpments develop on the beach areas, earth moving equipment may be deployed to restore the area to a more natural configuration.

(2) Sediment type. All material dredged from the navigation channel and placed on the described disposal sites is fine to medium beach quality quartz sand.

(3) Dredged/fill material movement. The dredged material placed on the beach and in the near-shore would be subject to movement via cross-shore and long-shore transport processes. This movement would occur on a continuous basis depending upon wave climate and the frequency of storm events. The predominant long-shore sediment transport pattern in this area is from east to west. The purpose of placing the sand at the

proposed sites is to allow the sand to return to the littoral system and migrate west, thus, providing benefits to the adjacent downdrift beaches. However, after placement some material may move under storm events outside the designated area.

(4) Physical effects on benthos. Disruption in the benthic community is expected to be temporary and minimal. It is certain that some benthic organisms would be destroyed by the proposed action; however, due to the constant movement of material by currents, benthic organism diversity and abundance would appear to be low. Research conducted by the U.S. Army Corps of Engineers, Engineer Research and Development Center (ERDC) under the Dredged Material Research Program (DMRP) suggests that the benthic community is adapted to a wide range of naturally occurring environmental changes and that no significant or long-term changes in community structure or function are expected.

(5) Other effects. No other significant effects due to movement of the physical substrate are noted.

(6) Actions taken to minimize impacts. No actions, which would further reduce impacts due to the placement of the dredged material are deemed necessary.

b. Water Circulation/Fluctuation, and Salinity Determination.

(1) Water

(a) Salinity. There would be no change in salinity gradients or patterns.

(b) Water chemistry (pH etc.). No effects.

(c) Clarity. Minor increases in turbidity may be experienced in the immediate vicinity of the proposed PAs during placement operations. However, these increases will be temporary and would return to pre-project conditions shortly after completion.

(d) Color. No effects.

(e) Odor. No effects.

(f) Taste. No effects.

(g) Dissolved gases. No effects.

(h) Nutrients. No effects.

(i) Eutrophication. No effects.

(2) Current Patterns and Circulation

(a) Current patterns and flow. Changes in water circulation and flow due to placement of sand on the downdrift beaches are not expected to occur. Natural currents and flow will occur during tidal, wave, and storm activities.

(b) Velocity. No effects.

(c) Stratification. No effects.

(d) Hydrologic effects. No effects.

(3) Normal Water Level Fluctuations. No effects.

(4) Salinity Gradients. The salinities in the project vicinity are highly variable due to the inflow of freshwater from the river and the tidal influence from the Gulf of Mexico. No effect on salinity gradient is anticipated.

(5) Actions That Will Be Taken To Minimize Impacts. No other actions that would minimize impacts on water circulation/fluctuation and salinity are deemed necessary.

c. Suspended Particulate/Turbidity Determinations.

(1) Expected changes in suspended particulate and turbidity levels in the vicinity of the disposal site. Suspended particulate and turbidity levels are expected to undergo minor increases during dredging and placement activities, however, suspended sediment of this type will quickly fall out of the water column and return to normal conditions. No significant effects would occur as a result of these increases. Turbidity during disposal is not expected to violate State water quality certification conditions.

(2) Effects on the chemical and physical properties of the water column.

(a) Light penetration. Increased turbidity levels in the project area as a result of the placement of dredged material would reduce the penetration of light into the water column only slightly and would be a minor short-term impact.

(b) Dissolved oxygen. No effects.

(c) Toxic metals and organics. No effects.

(d) Pathogens. No effects.

(e) Esthetics. The placement of dredged material would likely decrease the esthetic qualities of the project area for a short period of time during and shortly after placement. The PAs equilibrate and rapidly return to normal upon exposure to the wave climate.

(f) Others as appropriate. None appropriate.

(3) Effects on biota.

(a) Primary production, photosynthesis. No significant effects.

(b) Suspension/filter feeders. Some local minor increases in suspended particulates may be encountered during the proposed action, but these increases would not cause significant impacts to these organisms unless they are directly covered with sand. If directly covered with dredged material, it is expected that some organisms will be destroyed. Rapid recruitment of these organisms will promote a rapid recovery to normal populations. Overall, the impact to these organisms is expected to be minor and insignificant.

(c) Sight feeders. Sight feeders would avoid impacted areas and return when conditions are more suitable, however, it is difficult to relate the presence or absence of sight feeders in an area to the placement of dredged material. Sight feeders, particularly fishes, may vary in abundance as a result of temperature changes, salinity changes, seasonal changes, dissolved oxygen level changes, as well as other variables. Sight feeders, such as shore birds, tend to be attracted to associated placement activities due to the presence of food items in the sediment. No significant impacts are expected to occur on sight feeders.

(4) Actions taken to minimize impacts. No further actions are deemed appropriate.

d. Contaminant Determination. No significant effects. The dredged material consists of marine sand from sources within the littoral system that are far removed from sources of contamination and therefore is considered free of any contaminants.

e. Aquatic Ecosystem and Organism Determinations.

(1) Effects on plankton. No effects.

(2) Effects on benthos. Benthic organisms would be destroyed by the deposition of dredged material below the waterline in the near-shore placement areas, but no significant long term effects are expected on the benthic community as a result of the proposed action.

(3) Effects on nekton. No effects.

(4) Effects on aquatic food web. No effects.

(5) Effects on special aquatic sites.

(a) Sanctuaries and refuges. Not applicable.

Draft Section 404 (b)(1) Evaluation--Perdido Pass Navigation Project Sediment Placement Areas

January 2015

(b) Wetlands. Not applicable.

(c) Mud flats. Not applicable.

(d) Vegetated shallows. No significant impacts to the submerged aquatic vegetation (SAV) were identified in this evaluation. SAVs are located in Perdido Bay but there are no SAVs within the areas of the proposed PAs.

(e) Coral reefs. Not applicable.

(f) Riffle and pool complexes. Not applicable.

(6) Threatened and endangered species. The majority of the threatened and endangered species listed for Baldwin County are not likely to be in the project area. Past consultation has focused on the West Indian manatees, Gulf sturgeon, sea turtles, piping plovers, least terns and Perdido Key beach mice. The Corps, Mobile District has historically agreed to implement "Standard Manatee Construction Conditions" during similar dredging projects in Alabama. The Corps believes that if these measures are implemented there will be no adverse impact to West Indian manatees. The loggerhead, Kemp's ridley, and green sea turtles could possibly be impacted because they could be found in the area; however, if they are in the vicinity, it is believed that they will avoid the area while dredging and disposal operations are in progress. Dredged material would be removed from the channel by a hydraulic pipeline dredge and discharged through a pipeline to the authorized DAs and proposed beach placement sites. This method is preferable in terms of turbidity reduction and minimizing the potential impact to wildlife, primarily manatees and sea turtles.

Since the proposed PAs are located outside of critical habitat for Gulf sturgeon, it is unlikely that adverse effects to the species' habitat would result. In the unlikely event a Gulf sturgeon is in the area, the proposed action would not adversely affect the species due to the mobile species likely avoiding the project area during dredging and disposal operations. No significant impacts to these species are anticipated.

The project area is in or near the vicinity of the wintering grounds for least terns and critical habitat for piping plover and the Perdido Key beach mouse. Piping plovers and least terns begin arriving on the wintering grounds as early as July with late-nesting birds arriving as late as September. The beach mouse preferred habitat is the sparsely vegetated frontal coastal dunes. In the unlikely event that these species happen to be in the project vicinity, the Corps, Mobile District believes these motile species would avoid the placement operations.

Based on this assessment the Corps, Mobile District determined that no federally-protected species or designated critical habitat were likely to be adversely affected as a result of the proposed project. A letter requesting concurrence with the District's Not

Draft Section 404 (b)(1) Evaluation--Perdido Pass Navigation Project Sediment Placement Areas

January 2015

Likely to Adversely Affect (NLAA) determination will be sent to the NMFS Protected Resource Division (PRD) and U. S. Fish and Wildlife Service (USFWS).

To reduce the likelihood of take the Corps, Mobile District has agreed to incorporate the following conditions during operations and maintenance dredging of Perdido Pass:

- Dredging will be conducted utilizing hydraulic or mechanical methods reducing the potential for entrainment of Gulf sturgeon and sea turtles associated with hopper dredges.
- During active hydraulic dredging operations the cutterhead will be located within the substrate.
- If threatened or endangered species are observed during dredging or placement operations, the operation will be temporarily stopped until the species has left the area.
- Alabama Standard Manatee Construction Conditions will be followed during operations.
- If dredging and placement operations take place during sea turtle nesting season (May 1 through November 30), the USFWS office in Daphne, AL must be contacted to determine if formal consultation is required.

In summary, no threatened or endangered species are anticipated to be significantly impacted by the proposed action.

(7) Other wildlife. No significant effects.

(8) Actions to minimize impacts. No other actions to minimize impacts on the aquatic ecosystem are deemed appropriate.

f. Proposed Disposal Site Determination.

(1) Mixing zone determinations. The Alabama Department of Environmental Management (ADEM) delineates mixing zones on a case-by-case basis. Any requirements placed on the project would be followed to the maximum extent practicable.

(2) Determination of compliance with applicable water quality standards. The proposed action is in compliance with all applicable water quality standards. The operation and maintenance of the Perdido Pass navigation project has been recently certified by the ADEM. The tracking code is 2015-041-COEP-CZM and WQC. Certification was issued on November 25, 2014 and expires on November 26, 2019.

(3) Potential effects on human use characteristics.

- (a) Municipal and private water supply. No effects.
- (b) Recreational and commercial fisheries. No effects.
- (c) Water-related recreation. No effects.
- (d) Esthetics. No effects.
- (e) Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves. Not applicable.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. No significant cumulative effects on the aquatic ecosystem would occur as a result of the proposed action.

h. Determination of Secondary Effects on the Aquatic Ecosystem. No significant effects.

III. FINDING OF COMPLIANCE.

a. No significant adaptations of the Section 404(b)(1) guidelines were made relative to this evaluation.

b. The proposed project represents the least environmentally damaging practicable alternative.

c. The planned addition of two sediment placement areas for dredged materials would not violate any applicable Section 401 State water quality standards; nor will it violate the Toxic Effluent Standard of Section 307 of the Clean Water Act (CWA).

d. Use of these new proposed sediment placement sites will not jeopardize the continued existence of any federally-listed endangered or threatened species or their critical habitat provided the specified conditions in this document are implemented during normal maintenance dredging and disposal operations. Sufficient safeguards exist to protect federally-protected species which may enter into the project area.

e. The proposed activity would not result in any significant adverse effects on human health or welfare, including municipal or private water supplies, recreation and commercial fishing, plankton, fish, shellfish, and wildlife. The life stages of aquatic life and other wildlife would not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values would not occur. No wetlands would be impacted by the proposed action.

f. Appropriate and practicable steps will be taken to minimize potential adverse

Draft Section 404 (b)(1) Evaluation--Perdido Pass Navigation Project Sediment Placement Areas

January 2015

impacts of the discharge on the aquatic ecosystem.

DATE: _____

Jon J. Chytka
Colonel, Corps of Engineers
District Commander



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

**PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC**

March 13, 2015

JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS
AND
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
FOR
PERDIDO PASS NAVIGATION PROJECT
PROPOSED ADDITION OF SEDIMENT PLACEMENT AREAS FOR DREDGED
MATERIAL
BALDWIN COUNTY, ALABAMA

A FEDERALLY AUTHORIZED PROJECT

Interested persons are hereby notified that the U.S. Army Corps of Engineers (USACE), Mobile District, proposes to add two additional dredged material sediment placement areas (PAs) to the federally authorized Perdido Pass Federal navigation project in Baldwin County, Alabama.

This public notice is issued in accordance with rules and regulations published in the Federal Register on 26 April 1988. These regulations provide for the review of the dredging programs for federally authorized projects. These laws are applicable whenever dredged or fill materials may enter waters of the United States or for the transportation of dredged material for the purpose of placement into ocean waters. The recipient of this notice is requested specifically to review the proposed action as it may impact water quality, relative to the requirements of Section 404(b)(1) of the Clean Water Act. Comments on any other potential impacts are also requested.

WATERWAY AND LOCATION: Perdido Pass, Baldwin County, Alabama

DESCRIPTION OF THE ENTIRE AUTHORIZED PROJECT: This project was federally authorized by the Rivers and Harbors Act of October 27, 1965. The existing Perdido Pass Federal navigation project consists of the following channels (**Figure 1**):

PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC

March 13, 2015

a). A channel 12 feet deep and 150 feet wide for approximately 1,300 feet from the Gulf of Mexico into the inlet including a deposition basin, thence 9 feet deep and 100 feet wide for approximately 2,200 feet to the Alabama Highway 182 bridge.

b). The channel thence branches into two channels, each having dimensions of 9 feet deep and 100 feet wide, one of which extends approximately 3,400 feet into the northern portion of Terry Cove (Terry Cove channel) and the other approximately 3,200 feet into the southern portion of Perdido Bay (Bayou St. John channel).

c). The project also includes a 450-foot long crossover channel connecting the Terry Cove channel and the Bayou St. John channel. Channel dimensions are 9 feet deep and 100 feet wide.

d). The project also includes two jetties into the Gulf of Mexico spaced 600 feet apart at the seaward end. Top elevation of the jetty is six feet mean low water (MLW). The east jetty was originally designed with a low weir section 1,000 feet long to permit passage of littoral drift into a dredged material deposition basin 800 feet by 1,200 feet, located between the east jetty and the navigation channel; however, this weir was reduced to a length of 600 feet in 1980.

DESCRIPTION OF THE PROPOSED ACTION: The proposed action involves adding two dredged material sediment PAs referred to as PA 5 and PA 9 (Figure 4). These areas are needed to restore eroded coastal shoreline areas. Use of the proposed PA 5 would aid in the restoration and maintenance of the southwest end of Robinson Island, providing a wider buffer to protect the shoreline and upland habitat against excessive erosion. Use of the proposed PA 9 would aid in the renourishment of the Florida Point southern shoreline due east of Perdido Pass and PA 6. This PA consists of shoreline habitat east of PA 6 to the Alabama-Florida state line. The action would also provide numerous other environmental benefits such as increased habitat for various shorebirds and many other sand dwelling organisms. It would also aid in the protection of the existing reconstructed sand dunes and beach mouse habitat along Florida Point. The cumulative impacts of the overall action are considered to be beneficial to the local ecosystem.

PA 5: PA 5 would be located on the southwest end of Robinson Island (Figure 4). The size of the area is approximately one-half acre. Sand from maintenance dredging of the navigation channel due north of Highway 182 Bridge would be placed as needed along the end of the island. The placement of this material would occur from the existing shoreline seaward to -3 to -4 foot elevation contours mean high water (MHW). Placement would be allowed to equilibrate to a natural slope. Although any or all of this new area may be used for placement, the intent is to provide for erosion protection of the island. An adaptive management approach will be implemented to continually adjust the dredged material placement activities so that the desired objectives are achieved.

**PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC**

March 13, 2015

PA 9: PA 9 would be located due east of Perdido Pass and PA 6 along the entire southern shoreline of Florida Point (Figure 4). The size of the area is approximately 100 acres. Sand from the navigation channel south of Highway 182 Bridge would be placed where needed along any eroded sections of the southern shoreline due east of PA 6. The placement of this material would occur from the existing shoreline to between the +7 and -15-foot elevation contours MHW extending eastward for approximately 10,000 feet to the Alabama-Florida state line. The placed material would be contoured to a natural slope with heavy equipment. A typical cross section for PA 9 is also presented in Figure 3.

See Environmental Assessment (EA) on the web at address <http://www.sam.usace.army.mil/Missions/PlanningEnvironmental.aspx> for additional details.

EXISTING SEDIMENT PLACEMENT AREAS: Currently there are seven approved sediment PAs associated with the project and recognized under current Alabama Department of Environmental Management (ADEM) Water Quality Certification (WQC) and Coastal Zone Consistency (CZC) certification as defined by Public Notice FP14-PP14-05 and ADEM permit number 2015-041-COEP-CZM. Each of the existing PAs are illustrated in Figures 2 and 3. Continued maintenance of the channel is anticipated to be required every three to five years based on previous records.

WATER QUALITY CERTIFICATION: Pursuant to the requirements of the Clean Water Act, State Water Quality Certification is required for the proposed action. Modification to the existing water quality certification will be requested from the Alabama Department of Environmental Management (ADEM) for a period of 10-years. A decision relative to water quality certification will be made by ADEM upon completion of the required comment period for this public notice.

COASTAL ZONE CONSISTENCY: Pursuant to the Coastal Zone Management Act, the proposed action is consistent with the Alabama Coastal Management Program to the maximum extent practicable. Concurrence with this determination will be requested from ADEM for a period of 10-years. Upon completion of the required 30 day comment period for this public notice, a decision relative to coastal zone consistency permit modification will be made by ADEM.

USE BY OTHERS: The proposed action is not expected to create significant impacts on land and water use plans. Use of the waters in the vicinity of the project area includes commercial fishing and recreational boating.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) CONSIDERATIONS: An Environmental Impact Statement (EIS) was prepared in 1976 for the operation and maintenance dredging activities for the portion of the waterway within the USACE, Mobile District's jurisdiction. In 1983, an EA for the continued maintenance of the project was prepared. An EA for the Regional Sediment Management Demonstration Downdrift Placement of Maintenance Dredged Material West of the Perdido Pass

**PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC**

March 13, 2015

Navigation Project, Baldwin County, Alabama was prepared in 2002. A Statement of Findings for this same project was completed in March 2005. During the dredging recertification process in 2009, a Finding of No Significant Impact (FONSI), EA and Section 404(b)(1) Evaluation Report were also completed for this project. These same documents were used in 2014 to recertify the project. A Draft EA addressing the new PAs being proposed in this Public Notice (No. FP15-PP15-05) is on file and available for review at the USACE, Mobile District web address:

<http://www.sam.usace.army.mil/Missions/PlanningEnvironmental.aspx>. Based on comments to this public notice and EA, the District Commander will determine the need to incorporate those comments and update the NEPA documents.

SECTION 404(b)(1) EVALUATION REPORT: Water quality impacts associated with the proposed action have been identified in an evaluation report prepared in accordance with Public Law 92-500, Section 404 (b)(1) Guidelines promulgated by the U. S. Environmental Protection Agency under the Clean Water Act. A Section 404 (b)(1) Evaluation Report prepared for this project is on file in the USACE, Mobile District office and is available for review at webpage:

<http://www.sam.usace.army.mil/Missions/PlanningEnvironmental.aspx>. Based on comments to this public notice, the District Commander will determine the need to incorporate those comments and update the NEPA documents. Should comments be received that warrant consideration, the Section 404(b)(1) report will be updated.

ENDANGERED/THREATENED SPECIES: Pursuant to Section 7 of the Endangered Species Act, the proposed project is being coordinated with the U.S. Department of Interior, Fish and Wildlife Service. Based on review of the threatened and endangered species that could occur within the project area, the USACE Mobile District has determined that the proposed action may affect but is not likely to adversely affect any listed species or adversely modify associated critical habitat. Initial coordination of threatened and endangered species in the project area will be based on this public notice and official letter. Additional information pertaining to this subject is contained within the EA.

ESSENTIAL FISH HABITAT ASSESSMENT (EFH): EFH is defined in the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) as "those waters and substrate necessary to fish spawning, breeding, feeding, or growth to maturity." The Gulf of Mexico Fishery Management Council, in accordance with the MSFCMA (PL 94-265), has developed management plans for the following fisheries: shrimp, red drum, reef fish, stone crab, spiny lobster, coral and coral reef and coastal migratory pelagic. The USACE had determined that this project will not significantly affect these species. The NMFS has identified EFH habitats for the Gulf of Mexico in its Fishery Management Plan Amendments. These habitats include estuarine areas, such as estuarine emergent wetlands, seagrass beds, algal flats, mud, sand, shell, and rock substrates, and the estuarine water column. The maintenance dredging and placement of the dredged material within these proposed PAs will not significantly affect coastal habitat identified as EFH in the Perdido Pass area. Based on the extent of this habitat in the general vicinity of the project, the overall impact to fisheries resources is considered

**PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC**

March 13, 2015

negligible. Initial coordination of EFH in the project area will be based on this public notice and official letter. Additional information pertaining to EFH is contained within the EA.

CULTURAL RESOURCES CONSIDERATION: USACE is not aware of any known historic properties within the proposed sediment placement areas and no cultural interest is known to occur in the PAs proposed for use. No sites occurring in the project area are listed on the National Register of Historic Places and no previous recorded cultural resources are within the project area. However, by copy of this public notice, USACE is providing information for review. Our final determination relative to historic resource impacts is subject to review by and coordination with the State Historic Preservation Officer (SHPO) and those federally recognized tribes with concerns in Alabama and the impacted. A copy of the Public Notice is being provided to the local tribes and Alabama SHPO for their review.

CLEAN AIR ACT: Air quality in the vicinity of the proposed PAs would not be significantly affected with the proposed action. The equipment and machinery would generate some air pollution during sediment placement activities, such as increased particulate levels from the burning of fossil fuels. However, these impacts would be minor and temporary in nature. The proposed action is in compliance with the Clean Air Act, as amended. The proposed area is currently in attainment with the National Ambient Air Quality Standards parameters. The proposed action would not affect the attainment status of the project area or region. A State Implementation Plan conformity determination (42 United States Code 7506(c)) is not required since the project area is in attainment for all criteria pollutants.

EVALUATION: The decision whether to proceed with the proposed action would be based on an evaluation of the overall public interest. That decision would reflect the national concerns for both protection and utilization of important resources. The benefits that may be expected to accrue from this proposal must be balanced against its reasonably foreseeable detriments. The decision whether to proceed, and the conditions under which the activity would occur, would be determined by the outcome of this general balancing process. All factors that may be relevant to the proposal would be considered. Among these are conservation, economics, esthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the public. The proposed action would proceed unless it is found to be contrary to the overall public interest. Inasmuch as the proposed work would involve the discharge of materials on to the shoreline and into navigable waters, specification of the proposed PAs associated with this Federal project is being made through the application of guidelines promulgated by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army. If these guidelines alone prohibit the specification of any PA, any potential impairment of the

**PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC**

March 13, 2015

maintenance of navigation, including any economic impacts on navigation and anchorage that would result from the failure to use this site would also be considered.

COORDINATION: Among the agencies receiving copies of this public notice are:

Region 4, U.S. Environmental Protection Agency
Field Representative, Fish and Wildlife Service, Daphne, Alabama
Regional Director, National Park Service
Regional Director, National Marine Fisheries Service
Commander, Eighth Coast Guard District
Alabama State Historic Preservation Officer
Alabama Department of Environmental Management
Alabama Department of Conservation and Natural Resources
Gulf of Mexico Fishery Management Council
Federal Emergency Management Agency
U.S. Department of Commerce, National Oceanic and Atmospheric Administration,
National Marine Fisheries Service, Protected Species and Habitat Conservation
Divisions St. Petersburg Florida and Galveston, Texas.

Other Federal, State, and local organizations, affiliated Indian Tribe interests, and U.S. Senators and Representatives of the State of Alabama are being sent copies of the notice and are invited to participate in coordinating this proposed work. The USACE, Mobile District requests the information contained in this notice be communicated to any other parties who may have an interest in the proposed action.

CORRESPONDENCE: Any person who has an interest that may be affected by the proposed activity may request a public hearing. Any comments or requests for a public hearing must be submitted in writing to the District Commander within 30 days of the date of this public notice. A request for a hearing must clearly set forth the interest that may be affected and the manner in which the interest may be affected. You are requested to communicate the information contained in this notice to any other parties who may have an interest in the proposed activities. Correspondence concerning the public notice should refer to Public Notice No. FP15-PP15-05 and should be directed to the Commander, U.S. Army Engineer District, Mobile, P.O. Box 2288, Mobile, Alabama 36628-0001, ATTN: CESAM-PD-EC. For additional information please contact Mr. Michael Malsom at (251) 690-2023 or michael.f.malsom@usace.army.mil.

CURTIS M. FLAKES
U.S. Army Corps of Engineers
Mobile District

Enclosures

PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC

March 13, 2015

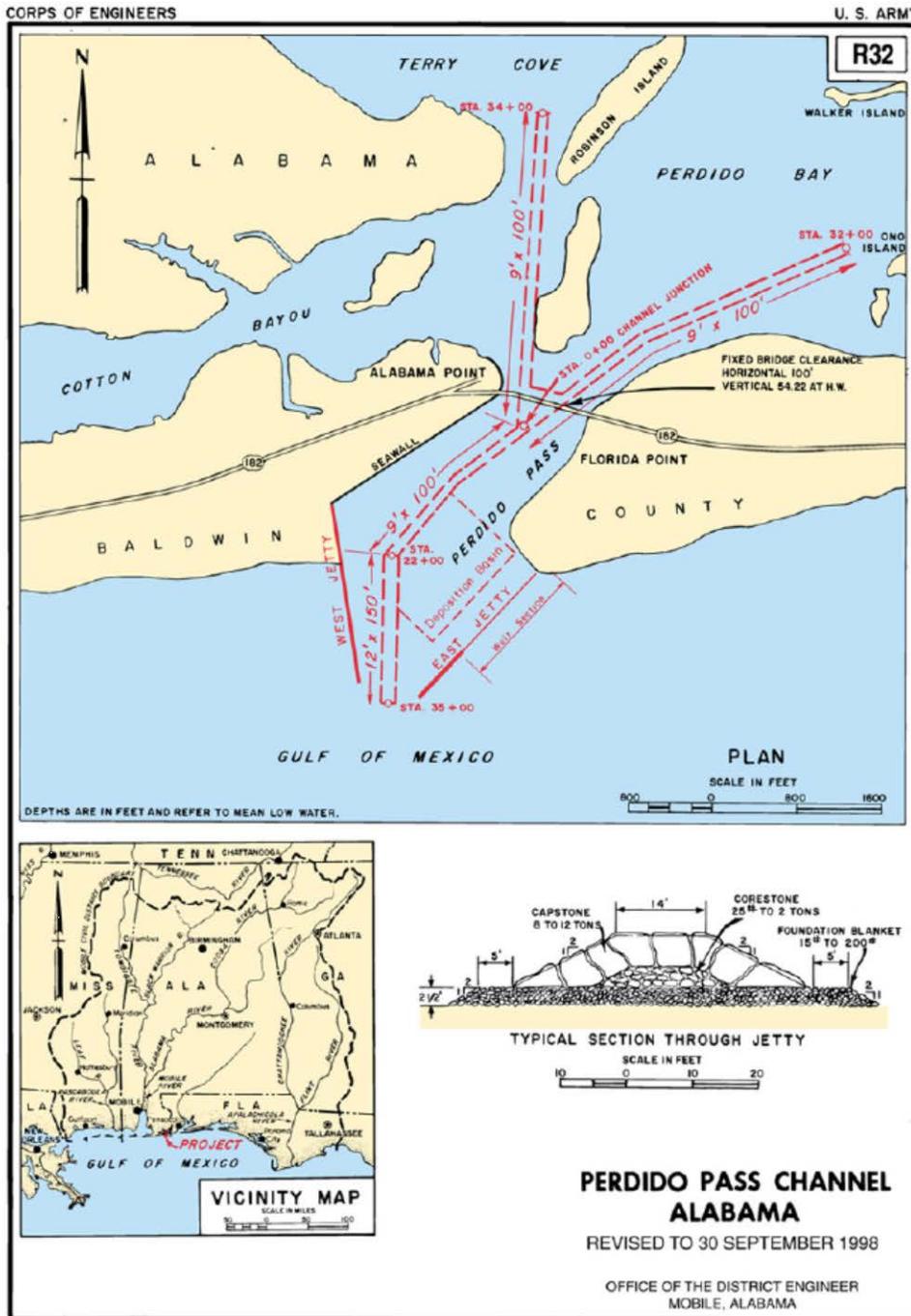


Figure 1. Perdido Pass Federal Navigation Project Map

PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC

March 13, 2015

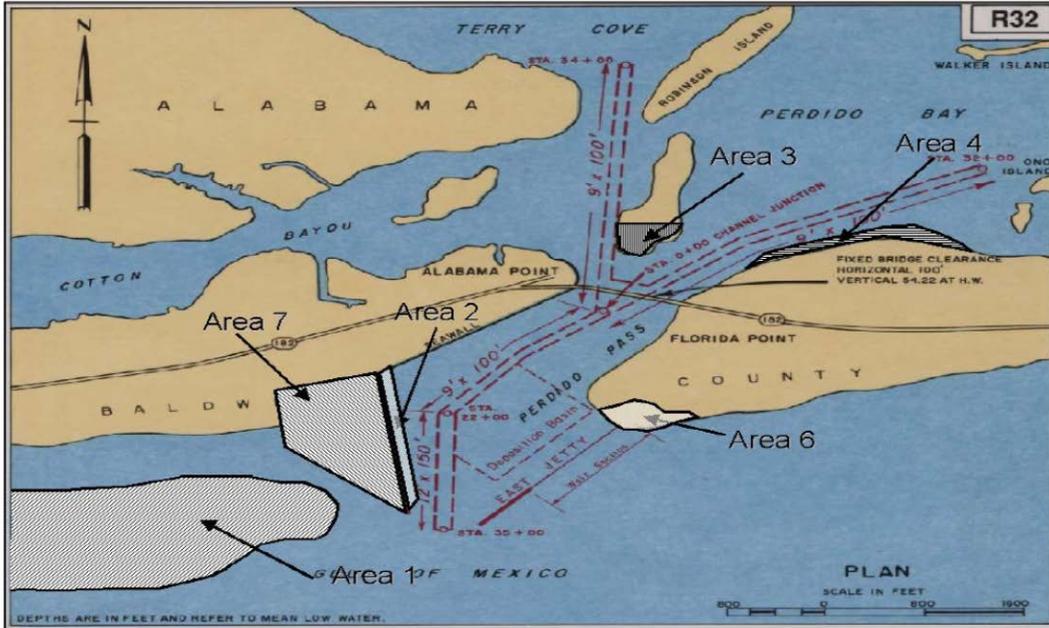


Figure 2. Existing approved sediment placement areas for the Perdido Pass project

PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC

8

March 13, 2015

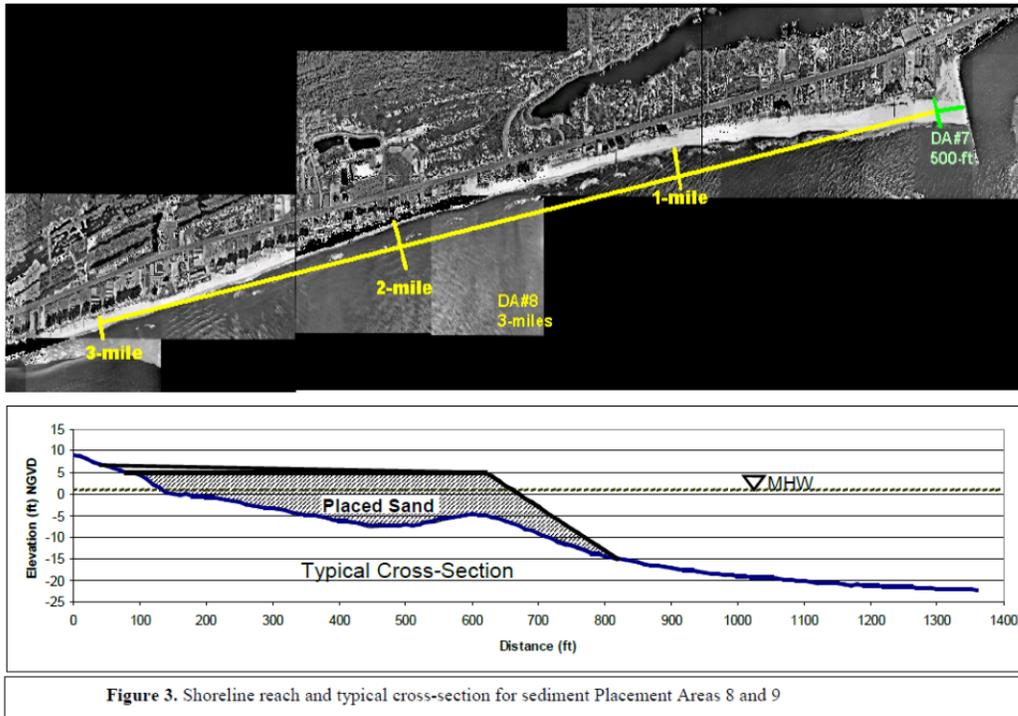
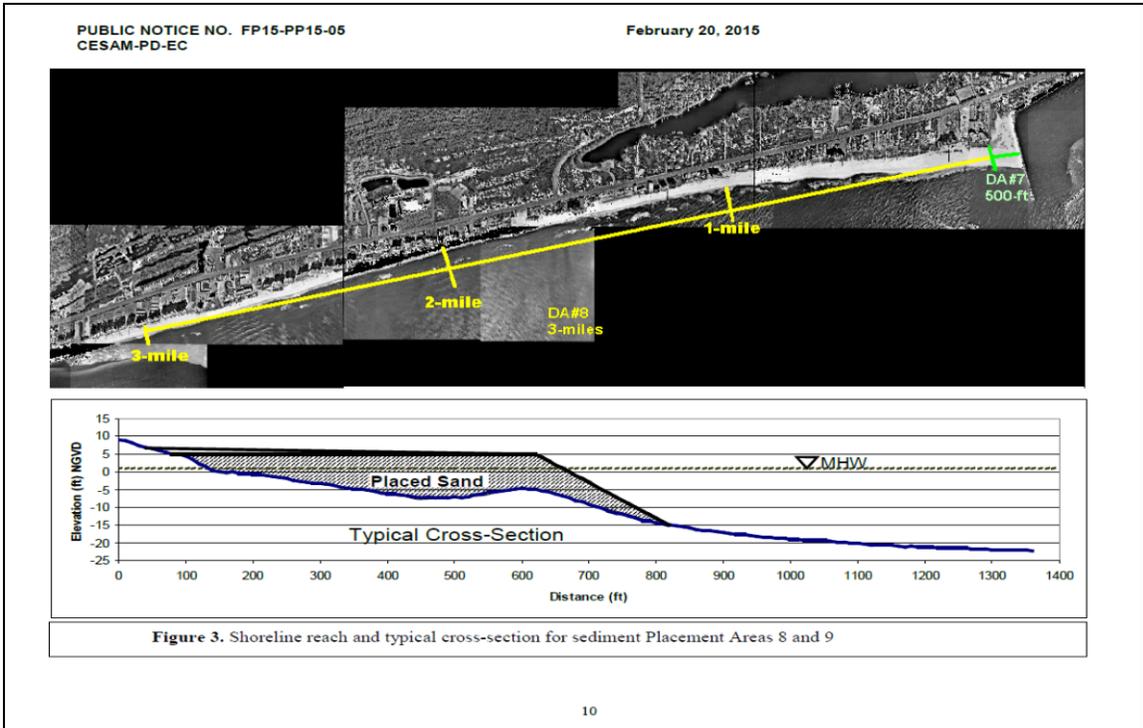
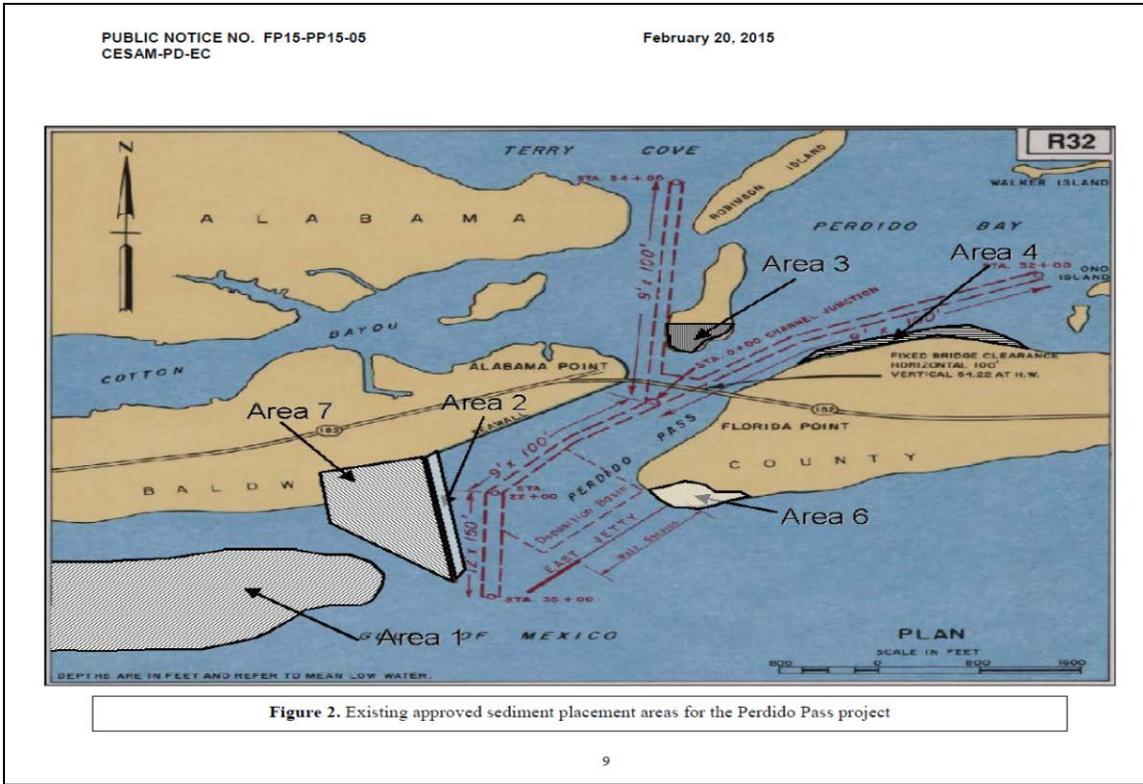


Figure 3. Shoreline reach and typical cross-section for sediment Placement Areas 8 and 9

9



PUBLIC NOTICE NO. FP15-PP15-05
CESAM-PD-EC

March 13, 2015

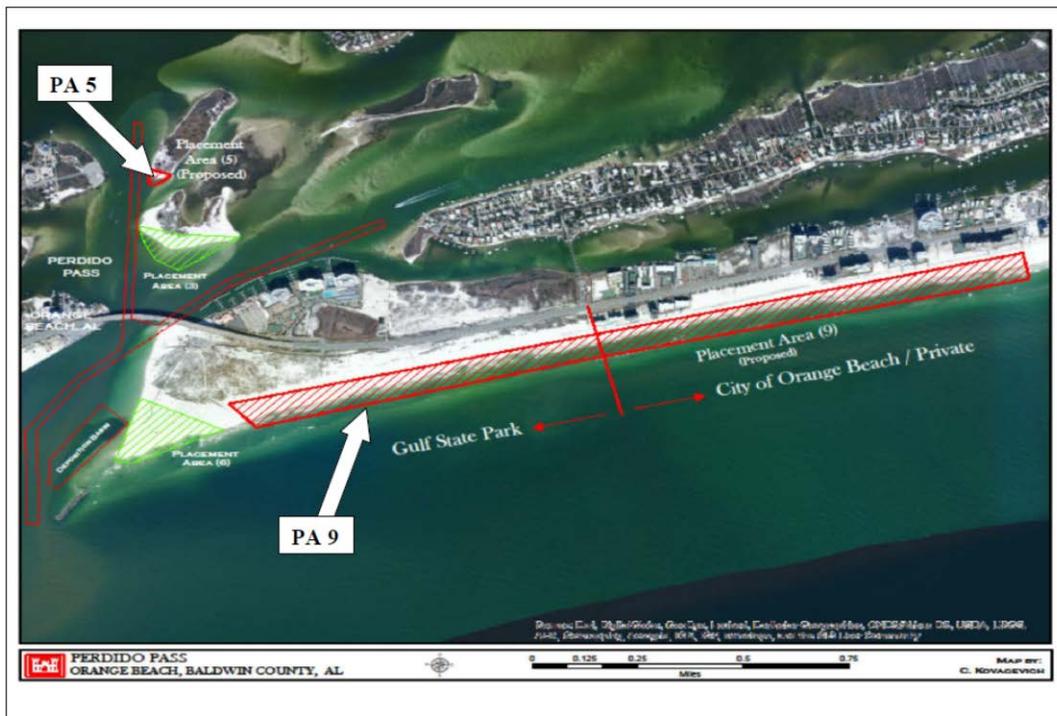


Figure 4. Aerial View of Perdido Pass Proposed Sediment Placement Areas 5 and 9, Baldwin County, Alabama

Last Page of Draft EA