DRAFT ENVIRONMENTAL ASSESSMENT

Two-Mile Federal Navigation Project

Apalachicola, Franklin County, Florida

U.S. ARMY CORPS OF ENGINEERS

MOBILE DISTRICT

February 2021

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Acronyms and Abbreviations

CEQ	Council on Environmental Quality
cy	Cubic Yards
EA	Environmental Assessment
EFH	Essential Fish Habitat
F	Fahrenheit
FDEP	Florida Department of Environmental Protection
FMSF	Florida Master Site File
ft	Feet
GIWW	Gulf Intracoastal Waterway
HCD	Habitat Conservation Division
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NERR	National Estuarine Research Reserve
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
OFW	Outstanding Florida Waters
pH	Hydrogen ion concentrations
PRD	Protected Resources Division
SAV	Submerged Aquatic Vegetation
SHPO	State Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

DRAFT ENVIRONMENTAL ASSESSMENT

Two-Mile Federal Navigation Channel

Apalachicola, Franklin County, Florida

1 INTRODUCTION

The Two-Mile Federal Navigation Channel is located in Apalachicola Bay south of the city of Apalachicola, Franklin County, Florida (Figures 1 and 2). The project includes a six-foot-deep by 100-foot-wide channel that parallels the shoreline of Apalachicola and intersects the Gulf Intracoastal Waterway (GIWW) at the mouth of the Apalachicola River. The project also includes a six-foot by 100-foot perpendicular connector that extends approximately 9,000 feet (ft) to the south into Apalachicola Bay.

A previously approved placement area to the northwest of the channel will be utilized for sediment placement. The placement area was constructed in September of 1999. The dikes surrounding the site were constructed to +20 ft Mean Lower Low Water, with a slope of 2:1 and a crown width of 8 ft. The site has four interior cells and four weir boxes, allowing increased settling time for fine-grained sediments. With regular use, the placement area has an expected 50 years of useful life.

Project Location

The upland placement area and Two-Mile Channel are located in the Apalachicola portion of the Apalachicola Embayment region and the Apalachicola Bay respectively. The Apalachicola Embayment encompasses portions of Leon, Wakulla, Gadsden, Liberty, Gulf, Calhoun, Bay and Franklin counties (Pratt, 1996), and the project area is within Franklin County.

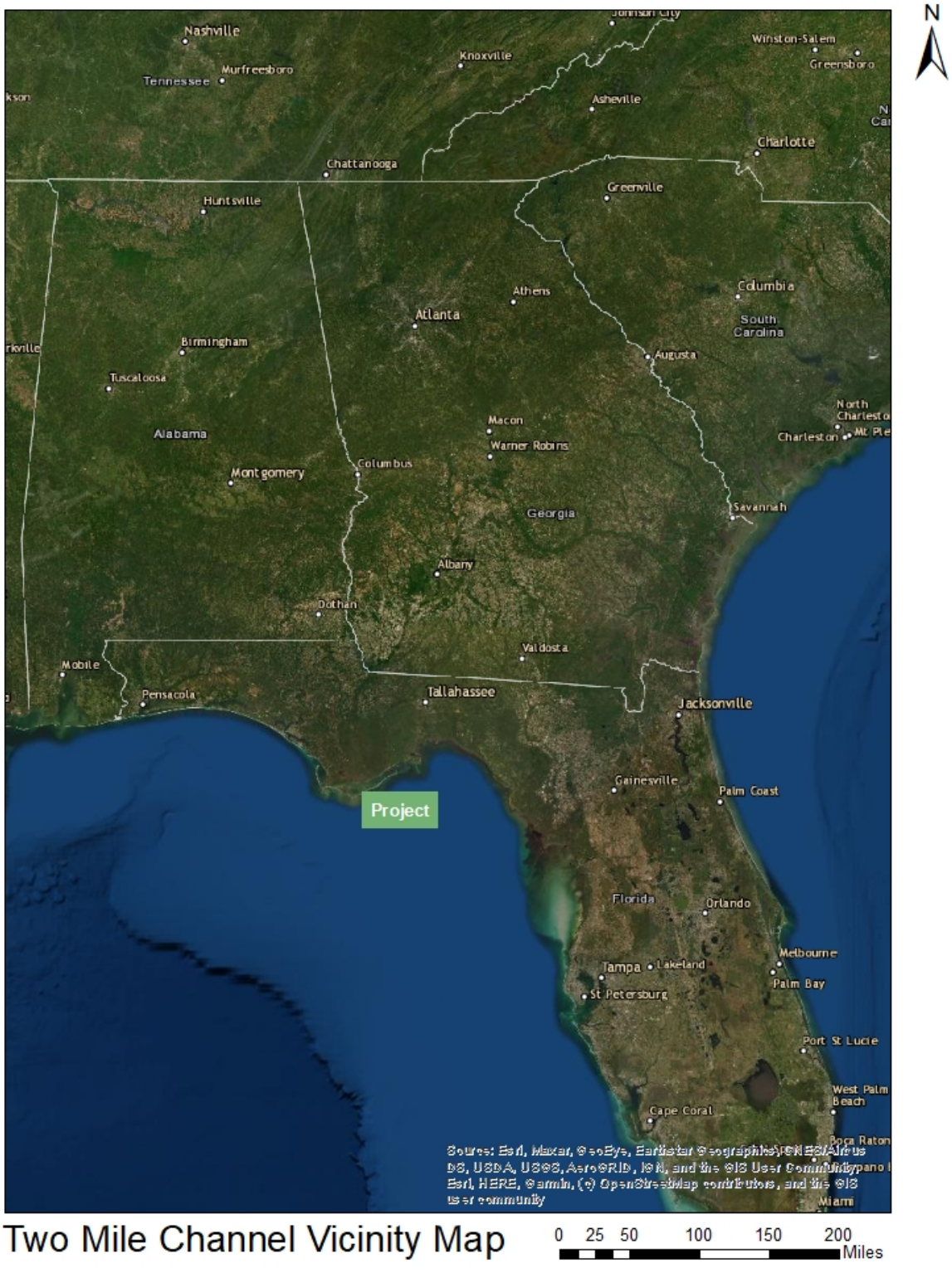

Figure 1: Vicinity Map

Figure 2: Map of Two-Mile Channel

Purpose and Need

The U.S. Army Corps of Engineers (USACE), Mobile District is responsible for maintaining the Two-Mile Federal Navigation Channel, Apalachicola, Florida. The channel is currently infilling with sediment as a result of normal coastal processes. This infilling is causing the channel to become shallower than the federally authorized dimensions. Such shoaling will likely result in decreased safety and navigability in the channel. Proposed dredging and placement activities are required to provide for safe navigation, and maintain the Two-Mile Channel to the federally authorized dimensions.

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2 NATIONAL ENVIRONMENTAL POLICY ACT CONSIDERATIONS

This Environmental Assessment (EA) has been prepared to address the potential impacts associated with the dredging and placement of the material from the Two-Mile Federal Navigation Channel. This EA will be used to support the National Environmental Policy Act (NEPA) compliance requirements for USACE, Mobile District.

The Council on Environmental Quality (CEQ) published its Final Rule: Update to the Regulations Implementing the Procedural Provisions of the NEPA in the Federal Register July 16, 2020. The new CEQ NEPA Regulations went into effect September 14, 2020.

3 PROJECT AUTHORITY

Improvements at Two-Mile were authorized initially 21 November 1963 by Chief of Engineers under authority in Section 107 of the River and Harbor Act of 14 July 1960. Modifications to the Two-Mile project included breakwaters paralleling the existing channels, an extension channel 6 ft deep by 100 ft wide and approximate 9,000 feet long, extending eastward to the GIWW, by the Chief of Engineers under Section 107 authority. Other features of the existing project were authorized by River and Harbor Acts of 3 September 1954 (H. Doc. 557, 82d Congress, 2d Sess.), 3 July 1958, and prior acts.

4 DESCRIPTION OF PROPOSED ACTION

The proposed action consists of removing approximately 450,000 cubic yards (cy) of sediment to bring the channel back to the federally authorized dimensions. Future maintenance dredging to remove approximately 50,000 cy of sediment could likely occur approximately every 5-10 years. Dredging will be conducted either by a hydraulic or/and mechanical dredge(s). The channel will be dredged to a design depth of -6 ft Mean Lower Low Water plus -2 ft. of advanced maintenance and -2 ft for allowable overdepth. Material dredged from the Two-Mile channel will be placed in a 40-acre upland placement site on the Apalachicola Airport property north of U.S. Highway 98. The placement area was constructed in September of 1999. The dikes surrounding the site were constructed to +20 ft Mean Lower Low Water, with a slope of 2:1 and a crown width of 8 ft. The site has four interior cells and four weir boxes, allowing increased settling time for fine-grained sediments. Minor dike rehabilitation will be conducted prior to operational use.

5 ALTERNATIVES

Proposed Alternative

The proposed alternative is the proposed action as described above.

No Action Alternative

The NEPA defines a “no action” alternative 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 with Federal actions are to be evaluated.

The “no action” alternative would consist of sediment continuing to deposit in the Federal navigation channel. This would likely result in shoaling that would likely cause unsafe conditions, or even close the channel to boat traffic. For all these reasons the “no action” alternative was found to be unacceptable and is not the selected alternative.

6 Environmental Setting

6.1.1 Climate

The climate in the project area is subtropical, warm, and humid with temperatures ranging from highs in the 90ºs Fahrenheit (F) to lows in the 20ºs F. The Florida Panhandle has a rainy season from June to September where it experiences approximately 2/3rds of its approximately 73 annual days of thunderstorms (Jordan, 1973). Apalachicola experiences an average annual rainfall of approximately 57 inches. The region also experiences hurricanes, with 1/3rd of United States hurricane impacts hitting Mississippi, Alabama and the Florida panhandle during the period from 1851 to 2004 (Blake, 2005).

6.1.2 Fluvial Hydrology

The Apalachicola River is a large alluvial river with a wide floodplain at its lower section, with river miles 0-35. The lower section is tidally influenced to approximately river mile 25 (Leitman, 1983) and characterized as having long straight reaches with a few bends. The Apalachicola River is a component of the Apalachicola-Chattahoochee-Flint River System. The basin drains approximately 19,800 square miles in Georgia, southeast Alabama, and the central Florida Panhandle. The basin discharges to the Gulf of Mexico at the Apalachicola Bay. (Edmiston, 2008).

6.1.3 Groundwater Hydrology

The Apalachicola Embayment has three major hydrogeological units available for groundwater supply. They are the deeply buried Floridan Aquifer, a thick Intermediate System, and the Surficial Aquifer. The Floridan is the primary groundwater source in the Apalachicola Embayment (Pratt, 1996).

The United States Geological Survey (USGS) provides a regional interpretation of groundwater flow. At the project area, the USGS describes a southward flow of groundwater to the coast. They also note a low rate of vertical leakage between what they characterize as semi-confining layers separating regional hydrogeologic units (USGS, 1995).

6.1.4 Estuarine Hydrology

The Apalachicola Bay is a mixed tide estuary. The Bay is an example of a transition area between semi-diurnal tides and diurnal tides which results in a number of tides ranging from 1 to 5 daily. It is characterized by a 1 to 2-foot tidal range with a normal maximum of 3 ft (Dawson, 1955) (Gorsline, 1963). Current flow is primarily tidal with velocities ranging from 3.3 ft./sec to 8.2 ft./sec, up to 11.5 ft./sec in extreme cases (Huang, 1997). Net water

flow is from the east with saline waters entering the bay, mixing with fresh riverine waters, and exiting to the west (Edmiston, 2008). The water column is stratified, although the presence of strong winds will mix the Bay's waters (Estabrook, 1973).

6.1.5 Coastal Processes and Geomorphology

The river's inlet has been migrating eastward over time in response to long term trends in longshore sediment transport. The Bay is a structurally downwarped basin, indicated by changes in the direction of the underlying limestone rock (Schmidt, 1984). It is encircled by a chain of sandy barrier islands formed approximately 5,000 years ago. Their shape and distribution are indicative of a mixed-energy hydrodynamic regime.

7 AFFECTED ENVIRONMENT

7.1.1 Water Quality

The waters of the Bay range in temperature from 50º to 78.8º F (Roaza, 1991) with salinity varying from 0 to 33 parts per thousand depending primarily on location, season and weather.

Dissolved oxygen in the bay varies from 4 milligrams per liter to 14 milligrams per liter. Hypoxia is not normally evident, and seasonal variation is the primary driver of change in dissolved oxygen concentrations.

Hydrogen ion concentrations (pH) in the Apalachicola bay range from 6 to 9. Lower pH values tend to be present in the eastern portion of bay and subsequent to storm events.

Turbidity values tend to range from 1 to 70 Nephelometric Turbidity Units. Higher values tend to correspond with increased river flow and storm events. (Edmiston, 2008).

Pollution in the bay tends to come from non-point sources. Rainfall events, flooding and high river flow move pollutants from landforms to the bay. The primary source of pollutant input is freshwater flow from the river (Edmiston, 2008).

Nutrient concentrations are high in the drainage basin, but the lower Apalachicola River has concentrations in the lower quartile of streams nationwide. Concentrations decrease downstream before emptying into the bay (Frick, 1995). Fecal coliform sampling showed spatial distributions in concentration with higher concentrations of bacteria at the river mouth than in estuarine sites (Broutman, 1988).

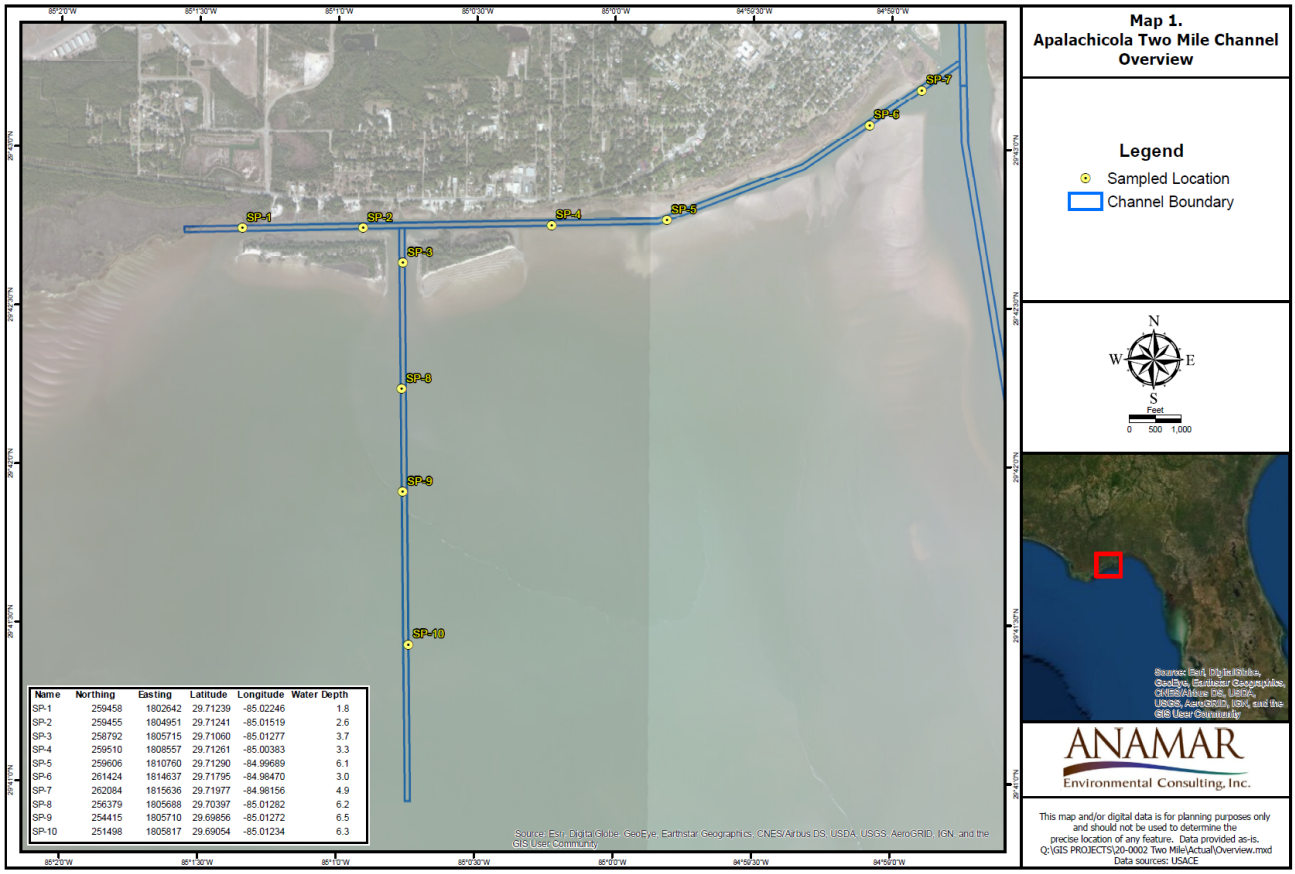
The State of Florida classifies the waters of the Apalachicola Bay as Class II surface waters. Class II waters are defined as "generally coastal waters where shellfish harvesting occurs". The waters in this portion of the bay are further classified as prohibited for shellfish harvesting by Florida's Department of Agricultural and Consumer Services (FDEP, 2020).

The Two-Mile channel is located in the State of Florida's Apalachicola Bay Aquatic Preserve, which is classified as an Outstanding Florida Water (OFW) (FDEP, 2020). OFWs are waters that are designated worthy of special protection due to their natural attributes. This designation is intended to protect existing water quality (FDEP, 2020).

The Two-Mile channel is also located in the Apalachicola National Estuarine Research Reserve (NERR). The reserves system was created by the Coastal Zone Management Act and is managed by a partnership of the National Oceanic and Atmospheric Administration and coastal states. The overall goal of the system is resource protection through education, research, and resource management (Edmiston, 2008). All NERRs are classified as OFWs by the State of Florida.

7.1.2 Sediments and Sediment Quality

The sediments of the dredge channel vary, with clayey sands dominating at the ends of the channel and clays dominating the interior. Physical grain size analyses were performed by a USACE contractor (USACE, 2020). All samples contained less than 90% sand (greater than 10% fines passing #200 mesh sieve); therefore, all samples were analyzed for sediment chemistry. Samples SP-2, SP-3, SP-4, SP-8, and SP-10 were composed of predominately fine-grained material with silt and clay ranging from 80.9% to 98.0% (Figure 3). These samples were classified as clay of high plasticity, elastic silt (CH). Samples SP-1 Top, SP-1 Bottom, SP-5, SP-6, SP-7, and SP-9 were composed of predominately sand material ranging from 54.4% to 85.4%. These samples were classified as clayey sand (SC). The percentage of finer-grained material appears to become higher in areas closer to the "T" intersection and in stations located offshore.



Name	Northing	Easting	Latitude	Longitude	Water Depth
SP-1	259458	1802642	29.71239	-85.02246	1.8
SP-2	259455	1804951	29.71241	-85.01519	2.6
SP-3	258792	1805715	29.71060	-85.01277	3.7
SP-4	259510	1808557	29.71261	-85.00383	3.3
SP-5	259606	1810760	29.71290	-84.99689	6.1
SP-6	261424	1814637	29.71795	-84.98470	3.0
SP-7	262084	1815636	29.71977	-84.98156	4.9
SP-8	256379	1805688	29.70397	-85.01282	6.2
SP-9	254415	1805710	29.69856	-85.01272	6.5
SP-10	251498	1805817	29.69054	-85.01234	6.3

Figure 3 Sediment Sample Locations

The dredged material within the channel was tested in 2020 (USACE, 2020). Test results overall indicate that the majority of the sediments are suitable for open-water placement and that all of the sediment is suitable for placement within the designated upland placement area.

Sediment and elutriate chemistry tests were run on samples of channel sediments and site waters in 2020. Sediment chemistry results showed that there were some metals and Total Petroleum Hydrocarbon with concentrations that were above the residential exposure criteria or the default leachability criteria. Therefore, additional testing was conducted to further assess the dredged material and determine its suitability for upland disposal. Mercury was the only metal detected in elutriate chemistry testing. Synthetic precipitation leaching procedure tests detected chromium, but the result did not exceed the groundwater quality criteria. No metals exceeded Florida's Class II surface water quality criteria. Total petroleum hydrocarbons were not detected during elutriate testing and no results for them exceeded marine surface water quality criteria. Results from those additional analyses indicate that the dredge material meets residential exposure criteria, default leachability criteria, and marine surface water and groundwater criteria, as applicable (USACE, 2020).

Based on all of the results of this testing, all sediment analytes are within applicable Florida Department of Environmental Protection (FDEP) regulatory criteria. All of the material is suitable for placement in the proposed placement area (USACE, 2020).

7.1.3 Terrestrial Wildlife

Wildlife that may be found within the upland placement area consists of a wide variety of birds, mammals, reptiles, and amphibians. Birds include the common loon, horned grebes, American coots, and numerous ducks. Mammals include the white-tailed deer, racoon, bobcat, fox, opossum, striped skunk, cotton rat, cotton mouse, spotted skunk and feral hogs.

Some of the highest diversity of reptiles and amphibian groups in the U.S. exists within this region. Those that may be found in the project area include black racer, oak toad, chorus frog, eastern diamondback rattlesnake, coachwhip, green anole, six-lined racerunner, broadhead skink, eastern glass lizard, eastern mud turtle, eastern box turtle, southern toad and oak toad.

7.1.4 Terrestrial Vegetation

The upland placement area was vegetated prior to the time of construction with herbaceous grasses (Bahiagrass and Bermudagrass). A field investigation of the placement area was performed by Mobile District staff. Volunteer species recruitment in the non-inundated portions of the placement area include immature slash pine, black willow, and various shrubs (wax myrtle, groundsel, and alder). Herbaceous species inhabiting wetter areas include nut sedges, bull paspalum grass, barnyard grass, and few forbs.

Figure 4: Photo of placement area Vegetation and placed material by USACE Mobile District Staff (2019)

7.1.5 Wetlands

The estuarine drainage area surrounding Apalachicola Bay has the tenth highest amount of total coastal wetlands in the continental United States. Wetlands in the vicinity of the project are primarily brackish marshes. A brackish marsh is located west of, and outside of, the authorized Federal navigation channel. These marshes contain a mix of freshwater vegetation such as sawgrass and brackish water species such as *Spartina* and *Juncus* (Edmiston, 2008).

7.1.6 Migratory Birds

Table 1 provides the migratory birds identified as possibly being in the vicinity of the project area.

Common Name	**Scientific Name**
American Kestrel	*Falco sparverius paulus*
American Oystercatcher	*Haematopus palliatus*
Bald Eagle	*Haliaeetus leucocephalus*
Black Skimmer	*Rynchops niger*
Bonaparte's Gull	*Chroicocephalus philadelphia*
Brown Pelican	*Pelecanus occidentalis*
Clapper Rail	*Rallus crepitans*
Common Ground-dove	*Columbina passerina exigua*
Common Loon	*gavia immer*
Double-crested Cormorant	*phalaxrocorax auritus*
Dunlin	*Calidris alpina arcticola*
Gull-billed Tern	*Gelochelidon nilotica*
Herring Gull	*Larus argentatus*
Least Tern	*Sterna antillarum*
Lesser Yellowlegs	*Tringa flavipes*
Marbled Godwit	*Limosa fedoa*
Nelson's Sparrow	*Ammodramus nelsoni*
Red-breasted Merganser	*Mergus serrator*
Ring-billed Gull	*Larus delawarensis*
Royal Tern	*Thalasseus maximus*
Ruddy Turnstone	*Arenaria interpres morinella*
Semipalmated Sandpiper	*Calidris Pusilla*
Short-billed Dowitcher	*Limnodromus Griseus*
Swallow-tailed Kite	*Elanoides forficatus*
Whimbrel	*Numenius phaeopus*
Willet	*Tringa semipalmata*
Wilson's Plover	*Charadrius wilsonia*

Table 1: Migratory Birds

7.1.7 Aquatic Biological Resources

7.1.7.1 Marine Mammals

The Marine Mammal Protection Act protects marine mammals of all species. The act prohibits taking marine mammals unless exempted or authorized by permit. The only federally listed protected marine mammal that is likely to be in the project area is the West Indian Manatee. The Manatee is federally listed as a threatened species and is described further in section 7.1.7.2 below.

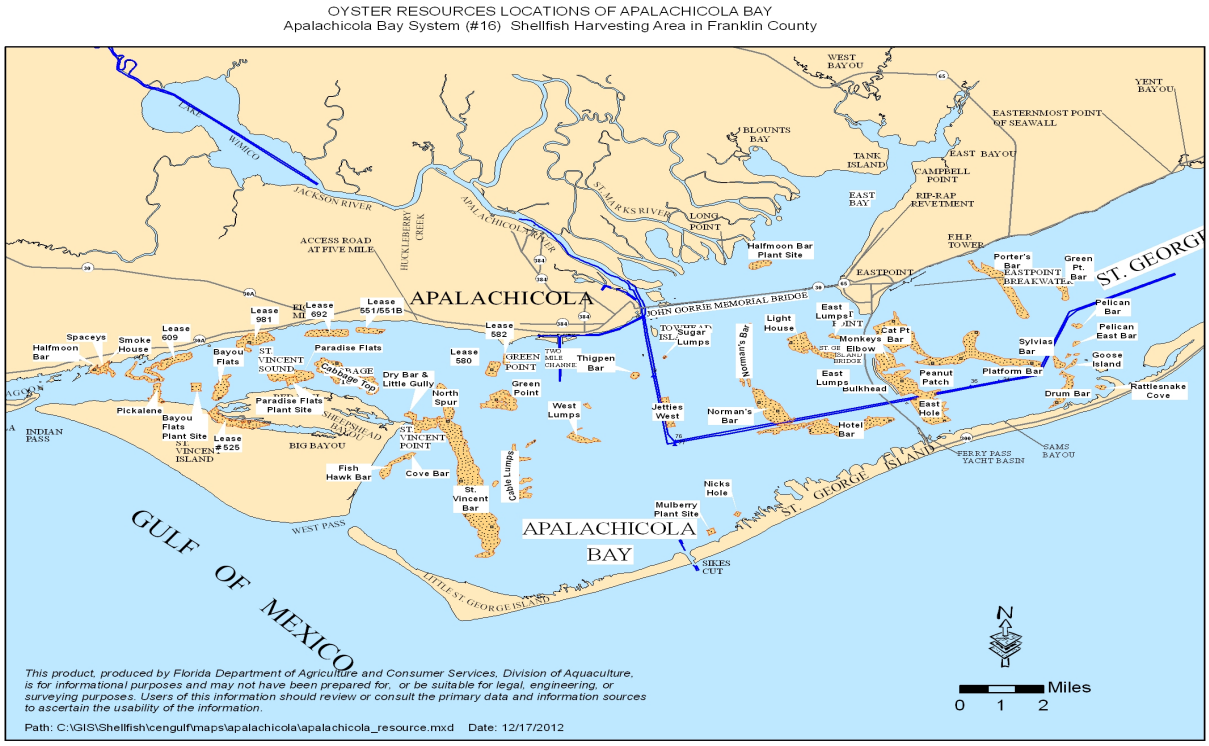


Figure 5: Historical Oyster and Lease Map

Aquaculture Use Zone in Franklin County with Existing Leases

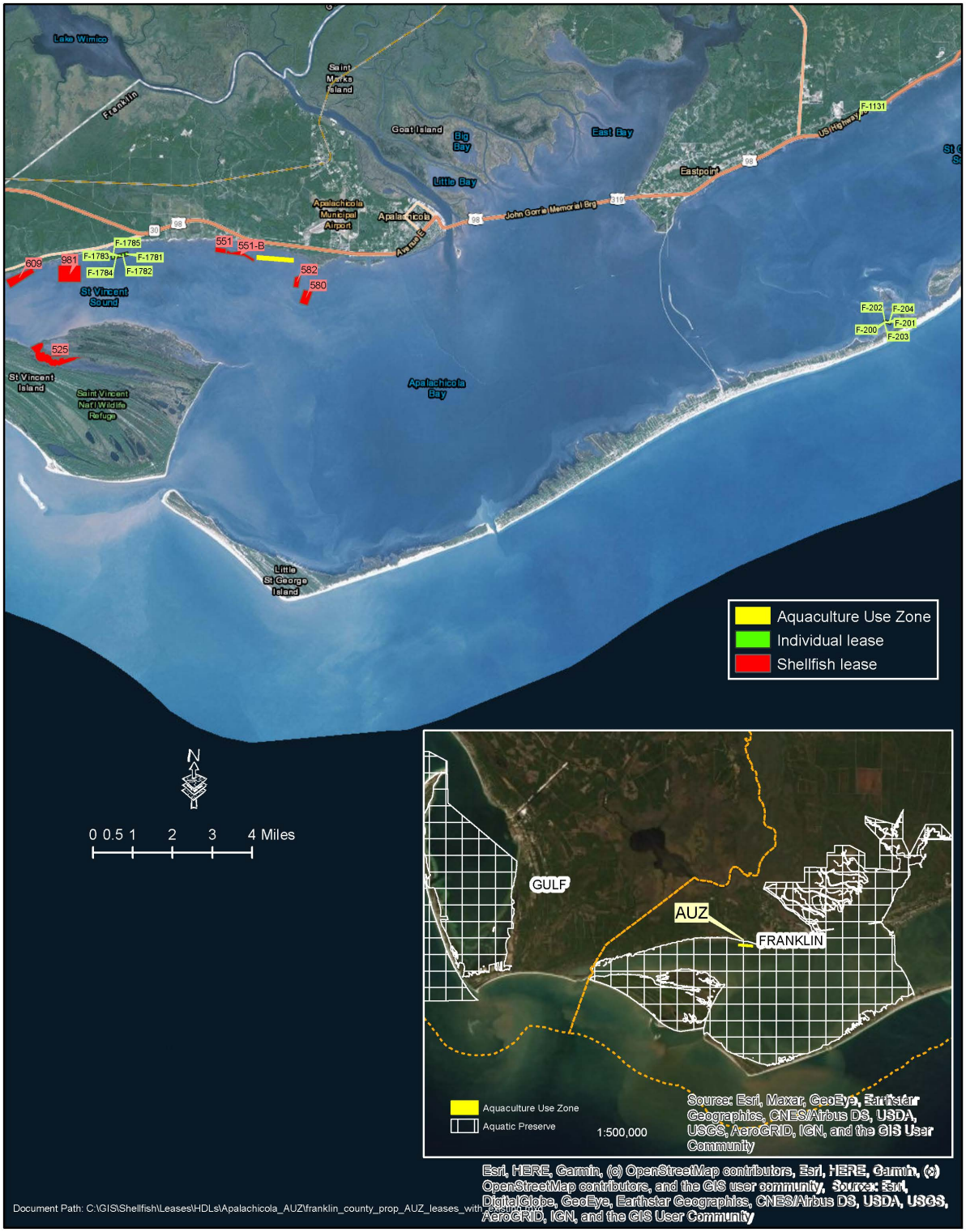


Figure 6: Map of Franklin County Aquaculture Use Zones

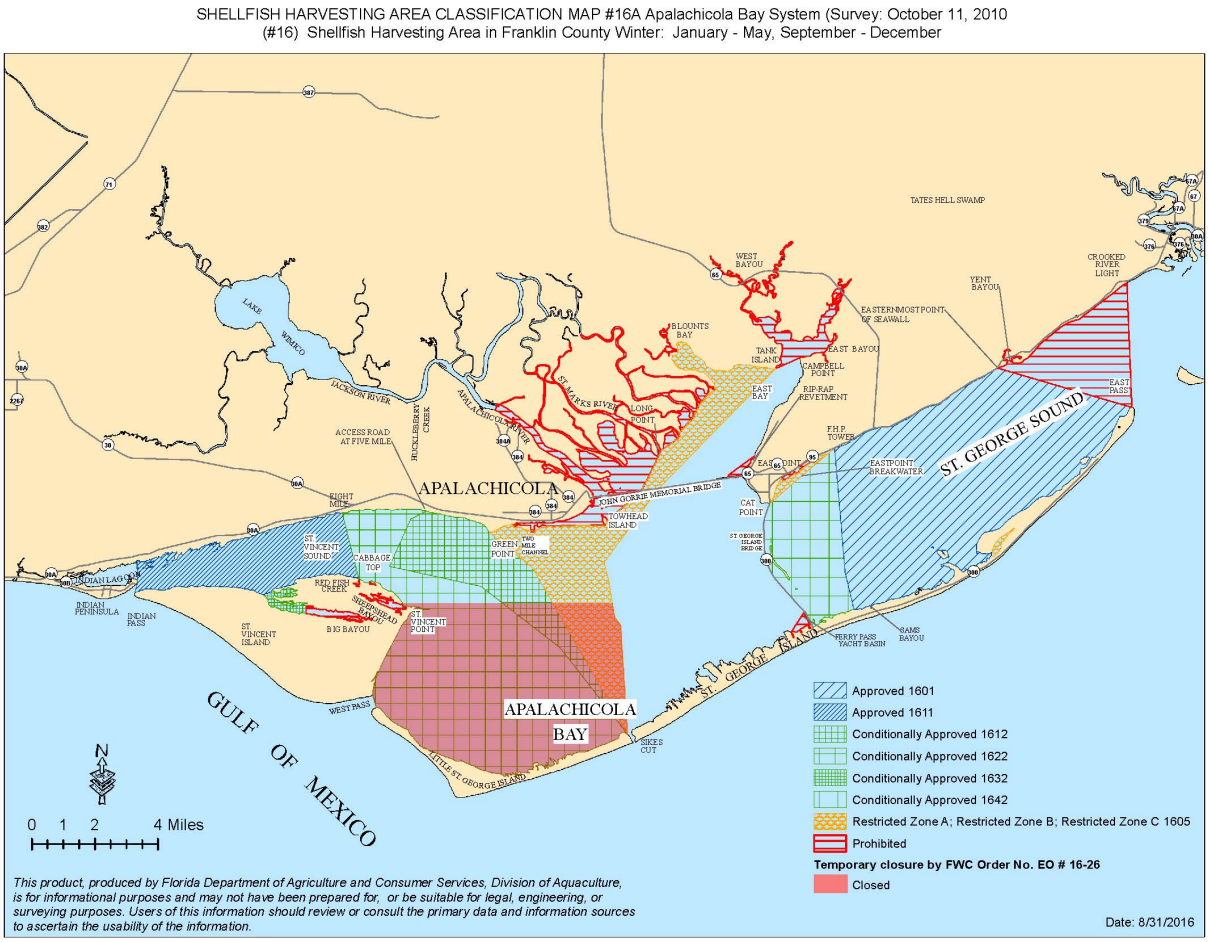


Figure 7: Shellfish Harvesting Area Classification Map 16

7.1.7.2 Fisheries, Crustaceans, and Mollusks

The types of fisheries of that are found in this area include: oysters, shrimp, crab, clams, and various types of finfish. Approximately 60-85 percent of the local population have historically derived an income from fishing (Rockwood, 1977), and provided half of Franklin County's income.

Oysters are an important commercial fishery in the area and provide approximately $30 million worth of economic benefits (Edmiston, 2008). Oysters are common in the Bay and are often found aggregated as subtidal bars (Figures 5 and 6). The primary species found in the bay is the American Oyster (*Crassostrea virginica*) and is the dominant species in the bars. Coon oyster, not suitable for harvest, are also present in the Bay. Oyster bars are typically found on late Holocene delta deposits, modern dredge material deposits and flood tidal delta deposits (Edmiston, 2008). Oyster predators are associated with these bars and include, the boring clam, snail, crown conch, blue crab, stone crab, mud worm, flatworm, southern oyster drill, and the boring sponge (Pearce, 1938) (Menzel, 1966). An oyster hatchery is located along the shoreline landward of the authorized channel. The Florida Department of Agriculture and Consumer Services currently prohibits the harvesting of shellfish within the project area (Figure 7).

Other organisms found in the soft sediment of the Bay include shrimp, blue crabs, polychaetas and amphipods (Edmiston, 2008). There is also a recreational clam fishery in the Bay.

The shrimp fisheries are also of economic importance, specifically white, pink, and brown shrimp. Shrimp represent one-third to one-half of dollar value of all of Franklin County's seafood landings (Cato, 1977). Blue crab is a minor commercial fishery. It is also important to local recreational sportsmen (Edmiston, 2008). These benthic organisms attract bottom feeding fish such as the Atlantic croaker and spot.

Finfish fisheries include mullet, flounder, spotted seatrout, menhaden, Spanish mackerel, shark, redfish, pompano, grouper, amberjack, and snapper. They have fallen off as a commercial fishery after changes were made to fishing regulations. Finfish are now primarily of importance as a recreational fishery although some commercial fishing still occurs. Industries involving recreational salt-water fishing on the bay employ approximately 1,960 individuals and contributes approximately $155 million dollars to the local economy annually (Edmiston, 2008).

7.1.7.3 Submerged Aquatic Vegetation

Submerged aquatic vegetation (SAV) is a diverse assemblage of rooted macrophytes that grow below the surface in shallow water under the water bodies. Under Federal regulations, SAV beds are considered special aquatic sites (40 C.F.R. 230 § 404(b)(1)).

A SAV survey was performed by USACE Engineer Research and Development Center staff in conjunction with Mobile district employees. The report found no SAV in the federal navigation channel (ERDC, 2019). Figure 5 shows the location of SAV relative to the federal navigation channel.

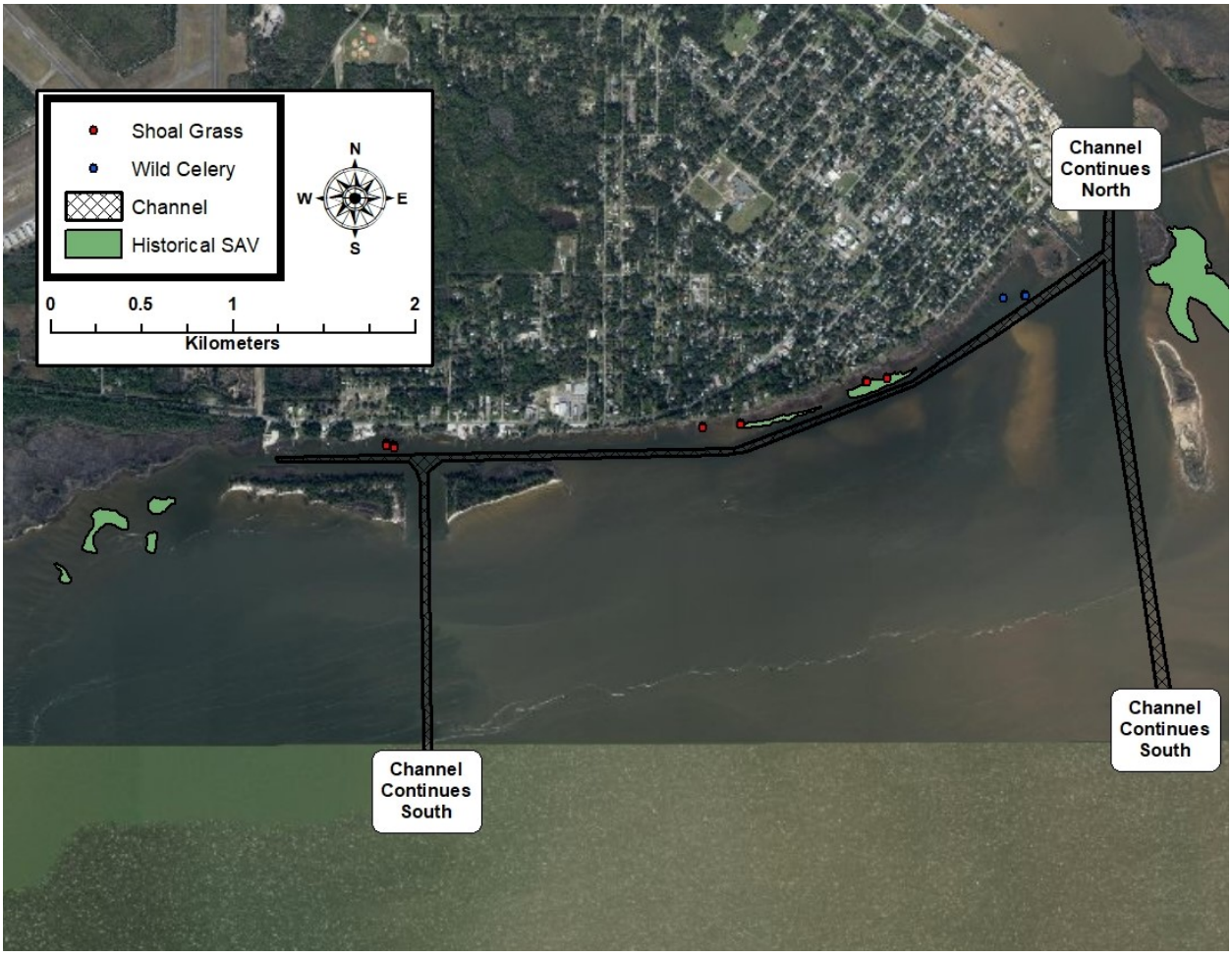


Figure 8: USACE Seagrass Survey

7.1.7.4 Benthics

Benthic species are those species that live in, on, or near water bottoms. These include the American Oyster, Coon oyster, the boring clam, snail, crown conch, blue crab, stone crab, mud worm, flatworm, southern oyster drill, and the boring sponge (Pearce, 1938) (Menzel, 1966). Other organisms found in the soft sediment of the Bay include shrimp, blue crabs, polychaetas and amphipods.

Benthic invertebrates act as reliable indicators of habitat quality in aquatic environments. Exposure to contaminants and oxygen stress are most frequent in these sediments. Some immobile benthic invertebrates also indicate local conditions as they have cannot migrate to avoid stressful situations. They are ecologically important, affecting nutrient recycling and serving as food for bottom-feeding fish. Coastal embayments often have a high biomass of benthic invertebrates. This will decline if poor water quality affects the communities. Apalachicola Bay has a viable benthic community due to the outstanding water quality.

7.1.7.5 Essential Fish Habitat

Essential Fish Habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act 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 National Marine Fisheries Service (NMFS) Habitat Conservation Division (HCD) 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. Table 2 provides a list of the species that NMFS-HCD manages under the federally implemented Fishery Management Plans in the Gulf of Mexico.

The Gulf of Mexico Fishery Management Plans (2012) identifies EFH in the project area to be inter-tidal wetlands, SAV, non-vegetated bottoms, shell reefs and the estuarine water column. Major fisheries landed along the Gulf Coast include red drum, mullet, croaker, shrimp, blue crab, and oyster. Habitat associated with these species include estuarine areas, such as estuarine emergent wetlands, seagrass beds, algal flats, and mud, sand, shell, and rock substrates. The habitat within the vicinity of the project consists of estuarine waters, shell, sand, and silt substrate, estuarine emergent wetlands, seagrass beds, and oyster reefs.

Management Plan	Common Name	Scientific Name
Coastal Migratory Pelagic	King mackerel	*Scomberomorus cavella*
	Spanish mackerel	*Scomberomorus maculatus*
	Cobia	*Rachycentron canadum*
Red Drum	Red drum	*Sciaenops ocellatus*
Snappers	Queen snapper	*Etelis oculatus*
	Mutton snapper	*Lutjanus analis*
	Blackfin snapper	*Lutjanus buccanella*
	Red snapper	*Lutjanus campechanus*
	Cubera snapper	*Lutjanus cyanopterus*
	Gray (Mangrove) snapper	*Lutjanus griseus*
	Lane snapper	*Lutjanus synagris*
	Silk snapper	*Lutjanus vivanus*
	Yellowtail snapper	*Ocyurus chrysurus*
	Wenchman	*Pristipomoides aquilonaris*
	Vermillion snapper	*Rhomboplites aurorubens*
Groupers	Speckled hind	*Epinephelus drummondhayi*
	(Atlantic) Goliath grouper	*Epinephelus itajara*
	Red grouper	*Epinephelus morio*
	Yellowedge grouper	*Hyporthudus flavolimbatus*
	Warsaw grouper	*Hyporthudus nigritus*
	Snowy grouper	*Hyporthudus niveatus*
	Black grouper	*Mycteroperca bonaci*
	Yellowmouth grouper	*Mycteroperca interstitialis*
	Gag grouper	*Mycteroperca microlepis*
	Scamp grouper	*Mycteroperca phenax*
	Yellowfin grouper	*Mycteroperca venenosa*
Tilefishes	Goldface tilefish	*Caulolatilus chrysops*
	Blueline tilefish	*Caulolatilus microps*
	Tilefish	*Lopholatilus chamaeleonticeps*
Jacks	Greater amberjack	*Seriola dumerili*
	Lesser amberjack	*Seriola fasciata*
	Almaco jack	*Seriola rivoliana*
	Banded rudderfish	*Seriola zonata*
Triggerfishes	Gray triggerfish	*Balistes capriscus*
Hogfish	Hogfish	*Lachnolaimus maximus*
Shrimp	Brown shrimp	*Penaeus aztecus*
	White shrimp	*Penaeus setiferus*
	Pink shrimp	*Penaeus duorarum*
	Royal red shrimp	*Pleoticus robustus*

Table 2: Managed Fisheries for the Gulf of Mexico

7.1.8 Threatened and/or Endangered Species

Table 3 provides the species listed by NMFS Protected Resources Division (PRD) as either threatened, endangered, or a candidate for Federal protection most likely to be found in the Gulf of Mexico along the Florida Panhandle.

Common Name	**Scientific Name**	**Status**
Green sea turtle	*Chelonia mydas*	Threatened
Kemp's ridley sea turtle	*Lepidochelys kempii*	Endangered
Leatherback sea turtle	*Dermochelys comacea*	Endangered
Loggerhead sea turtle	*Caretta*	Threatened
Hawksbill sea turtle	*Eretomchelys imbricata*	Endangered
Gulf sturgeon	*Acipenser oxyrinchus desotoi*	Threatened
Giant manta ray	*Manta birostris*	Threatened
Fin whale	*Balaenoptera physalus*	Endangered
Sperm whale	*Physeter macrocephalus*	Endangered
Sei whale	*Balaenoptera borealis*	Endangered
Gulf of Mexico Bryde's Whale	*Balaenoptera edini*	Endangered
Smalltooth sawfish	*Pristis pectinata*	Endangered

Table 3: NMFS List of Threatened/Endangered Species

Table 4 provides the species listed by the U.S. Fish and Wildlife Service (USFWS) as either threatened, endangered, or protected, and lists any designated critical habitat.

Common Name	**Scientific Name**	**Status**
West Indian Manatee	*Trichechus manatus*	Threatened, Critical Habitat
Red Knot	*Calidris canutus rufa*	Threatened
Wood Stork	*Mysteria americana*	Threatened
Eastern Indigo Snake	*Drymarchon corais couperi*	Threatened
Gopher Tortoise	*Gopherus polyphemus*	Candidate
Gulf Sturgeon	*Acipenser oxyrinchus desotoi*	Threatened, Critical Habitat
Florida Skullcap	*Scutellaria floridana*	Threatened
Godfrey's Butterwort	*Pingulcula ionantha*	Threatened
Harper's Beauty	*Harperocallis flava*	Endangered
Telephus Spurge	*Euphorbia telephioides*	Threatened
White Birds-in-a-nest	*Macbridea alba*	Threatened

Table 4: USFWS List of Threatened/Endangered Species

The federally listed species that are listed but are not found within the vicinity of the project area include: leatherback sea turtle (*Dermochelys coriacea*), hawksbill sea turtle (*Eretomchelys imbricate),* red knot (*Calidris canutus rufa*), gopher tortoise (*Gopherus polyphemus),* eastern indigo snake (*Drymarchon corais couperi*), Giant manta ray (*Manta birostris*), smalltooth sawfish (*Pristis pectinate*), and the whale species.

Leatherbacks do forage in the Gulf of Mexico but spend most of their time near the continental slope. They are not likely to found near the project area. Hawksbill sea turtles are highly migratory species. These turtles generally live most of their life in tropical waters, such as the warmer parts of the Atlantic Ocean, Gulf of Mexico, and the Caribbean Sea. However, it is unlikely that Hawksbill sea turtles would be found in the project area since they are mainly found in tropical waters.

The red knot is a robin sized shorebird that may winter along the Gulf coast of the United States amongst other wintering grounds. Red knots spend their winters on open, sandy beaches, and there is no suitable habitat within the affected project area. The gopher tortoises primarily live in well-drained sandy soils associated with longleaf pine and dry oak sandhills and the eastern indigo snake's habitat includes high pinelands (sandhills, scrub, etc.), flatwoods, and most types of hammock in Florida and southeastern Georgia. The eastern indigo snake species is found near wetlands and in association with gopher tortoise burrows. None of these habitats are found in the vicinity of the project, making the presence of these species unlikely.

Giant manta ray and whale species are usually found offshore in productive open, deep ocean waters. Smalltooth sawfish prefer waters warmer than 64° F and are most often found off the southwest coast of Florida, from Charlotte Harbor south through the Everglades. The project areas' shallow depths and cooler (down to 50° F) water temperatures make it unlikely for these species to be found in the vicinity of the project.

However, Gulf sturgeon *(Acipenser oxyrinchus desotoi)*, loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), West Indian manatee (*Trichechus manatus)*, and wood stork (*Mycteria americana*) are likely to be found within the project area. A review of the listed plant species for the project vicinity indicated a low likelihood of occurrence of listed species within the project area.

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

7.1.8.1 Gulf Sturgeon

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 scale less, 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 proposed action is found within designated 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.

Generally, adults and subadults could be described as opportunistic benthivores typically feeding on benthic marine invertebrates including amphipods, lancelets, polychaetas, 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 preserve 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.

The Two-Mile navigation channel is located within one of the fourteen units designated as Gulf sturgeon critical habitat Unit 13 Apalachicola Bay.

Unit 13 Apalachicola Bay - Unit 13 encompasses a total of 168,773 acres within the main body of Apalachicola Bay and the adjacent sounds, bays, and nearshore waters of the Gulf of Mexico. This unit provides winter feeding and migration habitat for juvenile and adult species from the Apalachicola River Gulf sturgeon subpopulation. Gulf sturgeons have been documented by sightings, incidental captures, and telemetry studies throughout Apalachicola Bay, East Bay, St. George Sound, St. Vincent Sound, and Indian Lagoon. The project site is located within this unit.

7.1.8.2 West Indian Manatee

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. A few may remain year-round in Cumberland Sound, southeastern Georgia, where factory warm-water outfalls allow survival of colder winter months. 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.

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.

7.1.8.3 Sea Turtles

Sea turtles may be found in the Apalachicola Bay, specifically juvenile and adult loggerhead, kemp's ridley and green sea turtles. These turtles forage and migrate throughout the bays of coastal Florida. Loggerheads are found in shallow inland bays and juvenile Kemps have been found in Apalachicola Bay. Greens were found in Saint Joseph's Bay. Leatherbacks and hawksbills are not likely found in this area, as they are mostly found in the tropical waters of southwest Florida and Mexico (Burger Joanna, 2017).

7.1.8.4 Wood Stork

Wood storks are large, long-legged wading birds, about 50 inches tall, with a wingspan of 60 to 65 inches. The plumage is white except for black primaries and secondaries and a short black tail. The head and neck are largely unfeathered and dark gray in color. The bill is black, thick at the base, and slightly decurved. Immature birds are dingy gray and have a yellowish bill. The wood stork is primarily associated with freshwater habitats for nesting, roosting, foraging, and rearing. The USACE, Mobile District is not aware of any nesting by the species in the project area.

7.1.9 Cultural Resources

The Two-Mile channel, as a portion of the GIWW, appears to be first constructed around 1966. Subsequent channel maintenance and disposal occurred periodically within the last 50 years. The Florida Master Site File (FMSF) records 16 terrestrial cultural resources within a one-mile radius of the Two-Mile Channel maintenance project. Three of these, both historic and prehistoric archaeological sites, are eligible for listing on the National Register of Historic Places (NRHP). No underwater cultural resources are recorded by the FMSF within the Two-Mile channel construction footprint.

The placement area was surveyed in 1999 (*Phase I Cultural Resources Survey of the Proposed Upland Disposal Site for Two-Mile Channel, Apalachicola Bay, Franklin County, Florida*) and no cultural resources were discovered. The negative results of the survey and use of the placement area was consulted on with the Florida State Historic Preservation Officer (SHPO) on August 31, 1999 and a no historic properties affected determination was concurred upon (October 27, 1999-DHR #996529).

A portion of the existing pipeline corridor to the placement area was surveyed in 2015 (*An Archaeological and Historical Survey of Five Selected Site Locations of Proposed Deepwater Horizon NRDA Early Restoration Phase III Projects: Bald Point SP, FR, Beacon Hill Co Recreation Facility, GU, Deer Lake SP, WL, Oak Shore Dr Fishing Pier, Bay*

County) and a multicomponent archaeological site, the Two-Mile Site (8FR854) was discovered approximately 100 ft to the east of the existing pipeline area. This site was determined ineligible for the NRHP. There are no historic properties within the Area of Potential Effect for the Two-Mile Channel maintenance and placement area.

7.1.10 Noise

Noises in the project area consist of natural background sounds (e.g., the ocean, coastal winds, and fauna) and anthropogenic noise sources (e.g., fishing/shrimp boats, pleasure craft, and shipping traffic).

7.1.11 Aesthetics

Aesthetic resources in the project area consist of the Apalachicola NERR, the Apalachicola Bay Aquatic Preserve, and the natural features of the bay. The bay and adjacent lands are utilized for recreational boating, fishing, shell fishing, watersports, and hunting (Edmiston, 2008) (NMFS, 2006).

7.1.12 Air Quality

The Clean Air Act requires the U.S. Environmental Protection Agency to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS include two types of air quality standards. Primary standards protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly. Secondary standards protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The U.S. Environmental Protection Agency has established NAAQS for six principal pollutants, which are called “criteria pollutants.” Criteria pollutants include carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide. Areas that meet the air quality standard for the criteria pollutants are designated as being “in attainment.” Areas that do not meet the air quality standard for one of the criteria pollutants may be subject to the formal rule-making process and designated as being “in non-attainment” for that standard.

Sources of air pollution in the project area are minor and mainly due to non-point sources, such as boat motors and vehicular traffic emissions. According to the monitored ambient air quality measurements, Gulf County is considered in attainment for all monitored pollutants including Carbon Monoxide (CO), Ozone (O_3), Particulate Matter (PM-10), Sulfur Dioxide (SO_2), and Lead (Pb).

7.1.13 Economic Activity

Silviculture accounts for the largest economic activity by land use but employs only a small portion of the population (Edmiston, 2008). The dominant economic activity in the area is commercial fishing. Recreational fishing is also an important economic component with the State of Florida leading the nation for the number of recreational marine fishing trips taken. Commercial fishing in the Bay accounted for approximately $134 million dollars of annual

economic output. It also accounted for approximately $71 million in value added benefits (Crist, 2007).

7.1.14 Land Use

The project area is within northwest Florida's coastal region. The panhandle of Florida is generally rural with an overall population density less than 75 persons per square mile. Only 6 percent of northwest Florida is comprised of urban areas. High population densities exist mainly along the coast in Pensacola, Fort Walton Beach vicinity, and Panama City. (Pratt, 1996).

The project area is within Franklin County, which is overwhelmingly rural. Approximately 96 percent of the total county area is zoned as conservation or agricultural (forestry) (Edmiston, 2008). Lands in the area include the Apalachicola NERR, the Apalachicola Aquatic preserve, forested and non-forested wetlands (Rains, 1993), state parks, reserves and wildlife management areas, and the City of Apalachicola. The placement area is southeast of the Apalachicola Regional-Cleve Randolph Field airport.

8 ENVIRONMENTAL EFFECTS

8.1.1 Water Quality

Proposed Alternative: Little to no impacts to water resources is anticipated under the proposed action. Localized increases in turbidity and decreases in dissolved oxygen may occur during dredging and placement activities. These impacts are likely to be minimal and temporary in nature. Turbidity levels would be monitored to ensure compliance with FDEP's state water quality certification. The placement area will have monitoring personnel on site during dredge placement operations. They will ensure that at least two feet of freeboard is maintained at all times in order to prevent a breach or overtopping of the dikes. All FDEP guidelines would be maintained during the proposed action.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. There would be little to no impacts to water resources.

8.1.2 Sediments and Sediment Quality

Proposed Alternative: No adverse impacts to sediment quality are likely to occur from the dredging and placement of dredged material from maintenance operations. The sediments of the dredge channel vary, with clayey sands dominating at the ends of the channel and clays dominating the interior. Its placement in the contained upland placement areas would have no long-term impacts on the environment.

No-Action Alternative: Under the no-action alternative the channel would continue to infill with sediments. The placement area surface sediment would continue to be comprised of material from the prior placement. Little to no impacts to sediments and sediment quality would be expected.

8.1.3 Terrestrial Wildlife

Proposed Alternative: As a result of this evaluation, no adverse impacts to the terrestrial ecosystem located in the vicinity of project were identified. Dredged material placement activities would occur within a pre-approved contained placement area. Containment dikes would be constructed around the proposed placement area so there will be minimal impacts to the adjacent terrestrial environment.

No-Action Alternative: The placement area would continue in its present state. Wildlife would continue to use the site as habitat.

8.1.4 Terrestrial Vegetation

Proposed Alternative: As a result of this evaluation, no adverse impacts to the terrestrial ecosystem located in the vicinity of project were identified. Dredged material placement activities would occur within a pre-approved contained upland placement area. Minor rehabilitation of already constructed containment dikes would occur around the proposed placement area so there will be minimal impacts to the adjacent terrestrial environment.

No-Action Alternative: The placement area would continue in its present state. Vegetation would continue to colonize the material from the prior placement.

8.1.5 Wetlands

Proposed Alternative: As a result of this evaluation, no adverse impacts to wetlands are anticipated to occur with the implementation of the proposed action. No wetlands are located within the boundaries of the authorized channel. Best management practices would be implemented to protect the wetlands found outside of the channel. These may include the use of turbidity curtains to protect the wetlands. Turbidity levels would be monitored to ensure compliance with FDEP's state water quality certification and prevent encroachment of material into the wetlands.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. There would be little to no impacts to wetlands.

8.1.6 Migratory Birds

Proposed Alternative: No adverse impacts to nesting migratory shorebirds are anticipated with the implementation of the project.

The placement area is located near an airport and there are special concerns regarding the possible interactions between migratory birds and aircraft. Past consultations with the

Federal Aviation Administration have resulted in recommendations for bird monitoring during placement activities.

Monitoring will be done before and during dredging to determine if nesting is present. If the area has nesting, a buffer zone would be established in coordination with the FWC. Communication with the Federal Aviation Administration has been initiated and will continue prior to dredging and placement activities.

The placement area contains a small portion of coarse material, which is likely to settle out of the pumped flow near the pipe opening. It also contains finer sediments, such as silt and clay, which tend to continue to spread out and suspend within the ponding water. Coarse sands, therefore, are not expected to contribute meaningfully, or at all, to the region's habitat for species such as the laughing gull or royal turns. If birds are present, best management practices would be done to deter birds from aggregating or nesting in the placement area. Therefore, no adverse impacts are anticipated.

No-Action Alternative: The placement area would continue in its present state. Vegetation would continue to colonize the material from the prior placement. Migratory birds that may utilize the placement area would continue to use the site as habitat. No impacts to migratory birds would be expected.

8.1.7 Aquatic Biological Resources

8.1.7.1 Marine Mammals

Proposed Alternative: No adverse impacts to marine mammals are expected as a result of the dredging activities. Species present in the area will likely exit the area when dredge operations begin. West Indian Manatees are addressed under threatened and/or endangered species below.

No-Action Alternative: Under the no-action alternative the channel would continue to infill with sediments. This could result in a reduction of habitat for marine mammals if the channel was to continue to shoal and create less open water.

8.1.7.2 Fisheries, Crustaceans, and Mollusks

Proposed Alternative: Motile benthic and pelagic fauna such as crabs, shrimps, and fishes, would likely avoid the area in part and return shortly after project completion. These organisms' larval and juvenile stages may not be able to avoid the project area given their limited mobility. Turbidity monitoring would occur during dredge operations to decrease the likelihood of impacts to fauna.

No oysters were detected during channel sediment sampling although they are present in the vicinity of the project site. A 150-meter mixing zone, FDEP's standard size for this type of activity, would be utilized. Turbidity curtains may be utilized to protect reefs or leases if

any are found to fall withing the mixing zone, but none are expected to do so. Turbidity curtains would be used at the hatchery to protect its intake pipe, located at the seaward end of the dock. Dredging of the channel would not impact the overall population of oysters in any significant way.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. This infilling would be slow relative to the rate of benthic colonization of the new material. Motile benthic organisms would be able to relocate onto the surface of the shoaling channel. Fish may lose habitat as waters are displaced by shoaling seabed.

8.1.7.3 Submerged Aquatic Vegetation

Proposed Alternative: It is unlikely, but possible, that increased turbidity due to the proposed action could temporarily impact SAVs outside of the channel, as shown on Figure 5. To minimize impacts, turbidity would be monitored during dredging operations. Also, Best Management Practices would be utilized.

No-Action Alternative: Under the no-action alternative the channel would continue to infill with sediments. No vegetation is present in the channel and no impacts to vegetation would be expected.

8.1.7.4 Benthics

Proposed Alternative: Benthic fauna in the area that are non-motile would be destroyed by dredging and placement. It is highly likely that the number of affected organisms would be proportionately minimal when compared to the total population of the bay. They would likely repopulate the area within 6 to 12 months of project completion (Culter, 1982), (Saloman, 1982).

With the small area of ecosystem (percentage wise) that will be affected, and the relatively rapid recovery rate, no significant long-term impacts to benthic fauna are expected to occur as a result of the proposed action.

No-Action Alternative: Under the no-action alternative the channel would continue to infill with sediments. This infilling would be slow relative to the rate of benthic colonization of the new material. Motile benthic organisms would be able to relocate onto the surface of the shoaling channel. No impacts to benthic organisms would be expected.

8.1.7.5 Essential Fish Habitat

Proposed Alternative: In accordance with the Magnuson-Stevens Fishery Conservation and Management Act, the Gulf of Mexico Fishery Management Council developed management plans for the following fisheries: shrimp, red drum, reef fish, stone crab, spiny lobster, coral and coral reef and coastal migratory pelagic species. EFH in the area is identified by the

Gulf of Mexico Fishery Management Plan (2017) as intertidal wetlands, non-vegetated bottoms, shell reefs, SAV, and estuarine water column.

The proposed project is not likely to significantly impact coastal habitat identified as EFH in the project area as the impacts will likely be of a temporary nature. Motile species present in the area will likely exit the area when dredge operations begin. Non-motile benthic invertebrates will be temporarily impacted by the project. These species are likely to re-colonize the area at the end of dredge operations as described under the benthic effects section above. There are unlikely to be any long-term adverse impacts on EFH as a result of the project. Coordination with the NMFS-HCD will be initiated.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. This infilling would be slow relative to the rate of benthic colonization of the new material. Motile benthic organisms would be able to relocate onto the surface of the shoaling channel. Fish may lose habitat as waters are displaced by shoaling seabed.

8.1.8 Threatened and/or Endangered Species

Proposed Alternative: The USACE, Mobile District anticipates that most of the threatened and endangered species listed are not likely to be in the project area.

Past consultation with the USFWS and NMFS-PRD has focused on the West Indian manatees, Gulf sturgeon and sea turtles. The USACE, Mobile District has historically agreed to implement “Standard Manatee Construction Conditions” during similar dredging projects in Florida. The Mobile District anticipates that if these measures are implemented, the activities may affect but are not likely to adversely affect West Indian manatees. In addition, it is anticipated these species would avoid the construction areas due to noise and activity.

Dredged material would be removed from the channel by a hydraulic pipeline or mechanical dredge and placed in a confined disposal area. The action may affect, but is not likely to adversely affect sea turtles and Gulf sturgeon since dredging would be done via a hydraulic cutterhead pipeline dredge, and impacts from this type of dredge have been discountable (NMFS, 2003). Impacts associated with activities should be temporary and isolated to actual construction limits.

Gulf sturgeon Critical Habitat

The project is located inside of Gulf sturgeon critical habitat Unit 13 which encompasses a total of 168,773 acres. Gulf sturgeon has been documented by sightings, incidental captures, and telemetry studies throughout Apalachicola Bay and St. George Sound. This unit provides winter feeding and migration habitat for juvenile and adult species from the Apalachicola River Gulf sturgeon subpopulation.

The primary constituent elements that are of concern for unit 13 include: abundant prey items and migratory pathways. Potential impacts of the primary constituent elements are analyzed below.

Migratory Pathway: The operation of the dredging equipment is not expected to create barriers to the migration of the species. The bay portion of the project provides sufficient width and appropriate habitat depth for sturgeon passage and foraging around the dredging activities.

Prey Abundance: Unit 13 provides foraging habitat for the Gulf sturgeon. Upon exiting the rivers where the Gulf sturgeon have spent the summer months foraging sparingly in freshwater, the species initially concentrate around the mouths of the rivers, lakes, and bays; then disperse into nearshore areas. It is unlikely that Gulf sturgeon would forage in the channel. Sturgeons are typically found foraging in depths between 6.0 to 19 feet and feed on sandy bottoms. The sediments of the dredge channel vary, with clayey sands dominating at the ends of the channel and clays dominating the interior. It is unlikely, given these sediment types, that Gulf sturgeon would forage in the channel area. Sturgeons are typically found foraging in depths between 6.0 to 19 feet and feed on sandy bottoms. Dredging is expected to create some degree of turbidity in excess of the natural condition. 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 channel.

During dredging and placement operations, turbidity levels would be monitored, to ensure compliance with state water quality criteria. The USACE, Mobile District does not expect measurable impacts to Gulf sturgeon critical habitat as a result of water quality impacts related to the proposed action.

- Based on this assessment the USACE, Mobile District has determined that the proposed project will not likely result in the destruction or adverse modification of Gulf sturgeon critical habitat.

These determinations regarding threatened and/or endangered species will be coordinated with USFWS and NMFS-PRD.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. Motile organisms would be able to relocate as the sediment deposits slowly relative to their ability to relocate. Manatee may lose habitat as waters are displaced by the shoaling seabed.

8.1.9 Cultural Resources

Proposed Alternative: Consultation with the Florida SHPO will be conducted for the proposed project and a no historic properties affected determination will be consulted upon for the upcoming maintenance and placement activities with the understanding that the proposed activities are within the previous project footprint. Use of the existing placement

area for the proposed project will not affect any historic properties. The Two-Mile Site (8FR854), 100 feet to the east of the existing pipeline to the placement area, was determined ineligible for the NRHP and will not be affected by the proposed project.

No-Action Alternative: Under the no-action alternative the channel would continue to infill with sediments. It is unlikely that any cultural resources would be impacted.

8.1.10 Noise

Proposed Alternative: Operation of the dredge and other job-related equipment is expected to result in a temporary increase of noise in the project vicinity during the proposed operations. There is potential for birds within the upland placement site to experience short-term disruption of foraging, roosting, or nesting behavior from construction-related noise. Marine organisms in the vicinity of sediment removal areas face potential short-term impacts to foraging behavior. Local fauna in the vicinity of the upland placement area will also be temporarily impacted due to construction and placement activities. Impacts would be limited to the periods of active construction and dredging activities. Noise levels will return to pre-project levels once construction and dredging activities are completed. No long-term increase in noise is likely to occur in or around the project area.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. Utilization of the channel would become increasingly difficult as the channel shoal restricts boating access. Noise would likely decrease negligibly with the decrease in boating traffic.

8.1.11 Aesthetics

Proposed Alternative: Access to the project area would be temporarily restricted during active dredging. Short-term impacts to onshore and in-water recreational activities are likely to occur as a result. These impacts would be limited to the period of dredging activities and no significant, long-term impacts are likely to occur.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. Utilization of the channel for recreational activities would become increasingly difficult as the channel shoal restricts boating access.

8.1.12 Air Quality

Proposed Alternative: The project area is in attainment with the NAAQS parameters. The proposed action would not affect the attainment status of the project area or region. A State Implementation Plan conformity determination (42 U.S. Code 70569(c)) is not required since the project area is in attainment for all criteria pollutants.

There would be minor, short term effects on air quality near the dredge and other equipment as a result of fuel combustion and the resulting engine exhausts. These exhaust emissions are insignificant in light of prevailing breezes and when compared to existing fumes generated from other vessels and/or vehicles using the project area. Conditions would return to normal once dredging and placement activities have ceased.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. Utilization of the channel would become increasingly difficult as the channel shoal restricts boating access. Air quality would likely increase negligibly with the decrease in boating traffic.

8.1.13 Economic Activity

Proposed Alternative: Florida leads the nation in recreational marine fishing trips. Commercial fishing and its related industries are the primary economic activity for the majority of the local people. The proposed action will benefit the regional and local economies by ensuring a safe and navigable channel is available for use by recreational and commercial boats.

No-Action Alternative: Under the no-action alternative, the channel would continue to infill with sediments. Utilization of the channel would become increasingly difficult as the channel shoal restricts boating access. Fuel costs may increase, and impact economic activity, as alternate routes for vessel traffic will need to be utilized.

8.1.14 Land Use

Proposed Alternative: The channel will continue to be managed as a Federal navigation channel. The placement area will continue in its current state as a previously utilized placement area. No adverse impacts to land use are anticipated from the proposed action.

No-Action Alternative: Under the no-action alternative the channel would continue to infill with sediments. No impacts to land use are anticipated.

9 REASONABLY FORSEEABLE ENVIRONMENTAL TRENDS AND PLANNED ACTIONS

The proposed action covers a negligible volume of Franklin County, the GIWW and Apalachicola Bay. The dredge interval will result in a period of activity of approximately two months followed by an interval period of no activity lasting 5-10 years. Dredging will likely result in temporary impacts to terrestrial wildlife, vegetation, and migratory birds during dredging operations. Environmental laws and commitments would be adhered to during operations and no long-term impacts to marine mammals, EFH, and fisheries are likely.

The Two-Mile channel is unlikely to be dredged again during a five-year period as there is a planned interval of 5-10 years between operations. Similarly, the nearby Eastpoint channel is, likely to be dredged during the next five to 10 years, depending on need. Effects are likely to be temporary and minor, and of the type and character of the past dredging discussed above. The cost advantages of using the same dredge for both channels makes concurrent dredging unlikely. Consecutive dredging schedules will prevent exacerbation of temporary adverse effects.

Therefore, the effects from the proposed action are not expected to result in significant adverse impacts on biological resources, when considered with reasonably foreseeable future actions.

10 ADDITIONAL CONSIDERATIONS

10.1.1 Water Quality Certification

Water Quality Certification under Section 401 of the Clean Water Act is being obtained from the State of Florida for the proposed action. All FDEP guidelines shall be followed during the proposed action.

10.1.2 Coastal Zone Consistency

Coastal Zone Consistency under Section 307 of the Coastal Zone Management Act is being obtained from the State of Florida for the proposed action. USACE, Mobile District determined the proposed action to be consistent with the Florida Coastal Program to the maximum extent practicable.

10.1.3 Protection of Children

Executive Order 13045, The Protection of Children from Environmental Health Risks and Safety Risks, was issued April 23, 1997. Executive Order 13045 applies to significant regulatory actions that concern an environmental health or safety risk that could disproportionately adversely affect children.

Environmental health risks or safety risks refer to risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest. The proposed action would not impact the health and safety of children. Barriers, site workman, and other measures would be implemented to provide protection to non-project workers.

10.1.4 Environmental Justice

The Executive Order 12898, Federal Actions to Address environmental Justice in Minority and Low-Income Populations (February 11, 1994), requires that Federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin. The proposed project is not designed to create a benefit for any group or individuals. The proposed construction activities do not create disproportionately high or adverse human health or environmental impacts on any low-income populations of the surrounding area. Review and evaluation of the proposed project have not disclosed the existence of identifiable minority or low-income communities that will be adversely affected by the proposed project.

11 Coordination

This EA and a Section 404(b)(1) report will be made available on the USACE website for a 30-day public and agency review period. Any comments on the action will be addressed in the final EA.

12 Conclusion

The proposed action is expected to result in short term, minor adverse impacts to the environment that will be managed through the implementation of best management practices. Mitigation actions are not required for this project. An Environmental Impact Statement is not required as the project would not have any significant adverse impact on the quality of the environment.

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