**DRAFT**
**SECTION 404(b)(1) EVALUATION REPORT**

**CONTINUED MAINTENANCE DREDGING**
**OF THE**
**FEDERALLY AUTHORIZED EASTPOINT NAVIGATION PROJECT**

**FRANKLIN COUNTY, FLORIDA**

## I. PROJECT DESCRIPTION:

A. **Location:** The federally authorized Eastpoint navigation project site is located in Apalachicola Bay, St. George Sound, Eastpoint, Franklin County, Florida.

B. **General Description:** This project consists of a channel parallel to shore at Eastpoint, Florida that is 6 feet deep, 100 feet wide and approximately 6,000 feet long, with a connecting channel 6 feet deep and 100 feet wide to water of the same depth in St. George Sound (see EA-Figure 1). The maximum dredge depth includes a design depth of -6 feet MLLW, two (2) feet of advance maintenance and a over dredge depth of two (2) feet for a total of ten (10) feet. Maintenance of the project consists of removing approximately 244,000 cubic yards of silt, clay, and sand on an as needed basis. Dredging would be done via a hydraulic pipeline dredge except during emergencies where a mechanical dredge may be used. In addition, a 26 acre open-water disposal site will be constructed to serve as a containment cell. The dredged material containment cell will be constructed of a geotextile-fabric covered sand base, sand-filled geotubes and sand dikes using sandy material from the bottom of St. George Sound adjacent to the sand structures. Dredging is typically done via a hydraulic pipeline or mechanical dredge. The sediment removed during maintenance activities would be placed in the permitted open-water disposal area shown in EA-Figure 2.

C. **Authority and Purpose:** The authority and purpose of the proposed action is described in Sections 2.0 and 4.0 of the EA to which this evaluation is appended.

D. **General Description of Dredged or Fill Material:**

(1) **General Characteristics of Material:** The sediments that would be dredged and placed in newly authorized containment cell consists of sand to clays with various mixtures of sand, silt, and clay located throughout the channel.

(2) **Quantity of Material:** The quantity of material to be dredged is approximately 244,000 cubic yards.

(3) **Source of Material:** The source of the material to be placed in the disposal area is from the Eastpoint navigation channel.

E. **Description of the Proposed Discharge Site:**

(1) **Location:** The designated sediment placement area is located adjacent to the navigation channel on the south side of the existing western Eastpoint breakwater (EA-Figure 2).

(2) **Size:** The size of the containment area is 26 acres.

(3) **Type of Site:** The type of site is a contained sediment placement area. The dredged material containment cell will be constructed of a geotextile-fabric covered sand base, sand-filled geotubes, and sand dikes using sand from the bottom of St. George Sound adjacent to the sand structures.

(4) **Type of Habitat:** The placement site is unvegetated open-water estuarine habitats with a fine to medium grained sandy bottom.

(5) **Timing and Duration of Discharge:** Maintenance dredging and disposal would be performed on an as needed basis and availability of funding. This channel was last dredged in 1984. Maintenance dredging would typically require 2-3 months to complete. At this time, there are zero dollars allocated to dredging shallow draft federal navigation channels in the Mobile District.

F. **Description of the Disposal Method:** The disposal method used will be dredged material placement in the newly authorized contained site. A hydraulic cutterhead dredge would pump material via pipeline into the containment cell. The dredged material will be placed in a uniform manner (one cell at a time) within the 26 acre area to an approximate elevation of +1 to -2 feet above mean lower low water (MLLW).

II. **Factual Determinations (Section 230.11)**:

A. **Physical Substrate Determinations:**

(1) **Substrate Elevation and Slope:** The preferred alternative would have minimal impacts on the existing substrate elevation and slope within the project vicinity. The project would result in the removal of substrate as needed to a depth of -10 feet MLLW which includes two feet of advanced maintenance and two feet of allowable overdepth within the project area.

(2) **Sediment Type:** The dredged material proposed for disposal is composed of primarily sand, silts and clays.

(3) **Dredged/Fill Material Movement**. The material will be hydraulically moved from the navigation channel to the contained sediment placement site.

(4) **Physical Effects on Benthos**. Disruption in the benthic community is expected to be temporary and minimal. Immobile benthic fauna within the proposed project area may be destroyed, but should repopulate within several months of completion. Other mobile benthic fauna will avoid the disturbed area and return upon project completion. Research conducted by

the U.S. Army Corps of Engineers (USACE), 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 effects are anticipated.

(6) **Actions Taken to Minimize Impacts (Subpart H)**. No other actions to minimize impacts are deemed appropriate for this project.

B. **Water Column Determinations:**

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

(2) **Water Chemistry (pH, etc.)**. No effect.

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

(4) **Color**. No effect.

(5) **Odor**. No effect.

(6) **Taste**. No effect.

(7) **Dissolved Gas Levels**. Temporary decreases in dissolved oxygen could likely result from the operations depending on timing of discharge. If decreases occur, they will be of a short duration. No significant effect to the water column is anticipated.

(8) **Nutrients**. Slight increases in nutrient concentrations may occur; however, these would rapidly return to normal. These described increases would have no significant effect to the water column.

(9) **Eutrophication**. No effect.

C. **Water Circulation, Fluctuation, and Salinity Gradient Determinations:**

(1) **Current Patterns and Circulation.**

(a) **Current Patterns and Flow**. Placement of dredged material into the contained disposal site would have no effect on current patterns and flow in the vicinity of the project area.

(b) **Velocity**. No effect.

(2) **Stratification**. No effect.

(3) **Hydrologic Regime**. No effect.

(4) **Normal Water Level Fluctuations**. No effect.

(5) **Salinity Gradient**. The salinities in the project vicinity are highly variable due to the inflow of freshwater from the Apalachicola River and the tidal influence from the Gulf of Mexico. No effect on the salinity gradient is anticipated.

D. **Suspended Particulate/Turbidity Determination:**

(1) **Expected Changes in Suspended Particulates and Turbidity Levels in Vicinity of Placement Site:** Dredged material consists of fine silt, clays and sandy particles. Impacts from sediment disturbance during dredging operations are expected to be temporary, minimal and similar to conditions experience during past routine operation and maintenance of the channel. Suspended particles are expected to settle out within a short time frame (hours to days), with no long-term significant effects on water quality. Turbidity during placement is not expected to violate State water quality certification conditions because it will be in a contained area. The return water from the dredge material containment cell would consist of clear water and would not have any impacts.

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

(a) **Light Penetration**. No significant effects.

(b) **Dissolved Oxygen**. No significant effects.

(c) **Toxic Metals and Organics**. No effects.

(d) **Pathogens**. No effect.

(e) **Esthetics**. No effect.

(3) **Effects on Biota:**

(a) **Primary Production Photosynthesis**. No significant effects.

(b) **Suspension/Filter Feeders**. No significant effects.

(c) **Sight Feeders**. Sight feeders would avoid the 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 shorebirds tend to be attracted to associated placement activities due to the presence of food items in the sediment.

(4) **Actions Taken to Minimize Impacts (Subpart H)**. No further actions are deemed appropriate.

E. **Contaminant Determinations**. USACE, Mobile District and Florida Department of Environmental Protection (FDEP) have collected a significant number of sediment samples for physical and chemical analysis within the navigation channel. The historical data suggests that these samples are relatively free of any significant contaminants. The area that is designated for disposal is excluded from testing under Section 404(b)(1) guidelines based on three criteria: sediments are far removed from potential sources of contamination, are adjacent to the dredging sites, and consists primarily of sand. In addition, recent sampling by Environmental Protection Agency (EPA) in 2010, following the Deepwater Horizon Spill, demonstrated the sediment was not contaminated by oil or oil related metals. The U.S. Fish and Wildlife Service (USFWS) reported the lowest detectable levels of dioxin and dioxin-like contaminants in the Apalachicola Bay across the Florida Panhandle.

F. **Aquatic Ecosystem and Organism Determinations:**

(1) **Effects on Plankton**. No significant effects.

(2) **Effects on Benthos**. No significant long-term effects would occur to the benthos.

(3) **Effects on Nekton**. No significant effects.

(4) **Effects on Aquatic Food Web**. No significant effects.

(5) **Effects on Special Aquatic Sites**. No effect.

(a) **Sanctuaries and Refuges**. No effect.

(b) **Wetlands**. No significant effects

(c) **Mud Flats**. Not applicable.

(d) **Vegetated Shallows**. No significant impacts to the submerged aquatic vegetation (SAV) were identified in this evaluation. EA-Figure 5 shows the potential location of SAVs sites within the vicinity of the project area. Prior to any dredging or placement activities within these areas, proper coordination with all appropriate agencies will be made, and suitable disposal plans will be determined to avoid adverse impacts.

(e) **Coral Reefs**. Not applicable.

(f) **Riffle and Pool Complexes**. Not applicable.

(6) **Effects on Threatened and Endangered Species**. The USACE, Mobile District believes that the majority of the threatened and endangered species listed for Franklin County

(EA-Table 4) are not likely to be in the project area. For example, the red-cockaded woodpecker prefers old-growth pines and pine/hardwood stands. This habitat does not occur in the area. 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. The Eastern indigo snake is largely restricted to the vicinity of sandhill habitats occupied by Gopher tortoises. The frosted flatwoods salamander inhabits slash and longleaf pine flatwoods that have a wiregrass floor and scattered wetlands. No such habitats occur in this area. In summary, the marine open-water setting and developed shoreline environment is not suitable habitat for the above mentioned species.

Past consultation has focused on the West Indian manatees, Gulf sturgeon, sea turtles, and piping plovers. The USACE, Mobile District has historically agreed to implement "Standard Manatee Construction Conditions" during similar dredging projects in Florida. The Mobile District believes that if these measures are implemented there will be no adverse impact to West Indian manatees. In addition, it is anticipated these species would avoid the construction areas due to noise and activity. The loggerhead, Kemp's ridley, hawksbill, leatherback, and green sea turtles could possibly be impacted because they may 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.

(7) **Effects on Other Wildlife**. No significant effects.

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

G. **Proposed Disposal Site Determinations:**

(1) **Mixing Zone Determination**. The project lies within the following special resource area: Class II waters designated for shellfish propagation and harvesting within Apalachicola Bay. Turbidity must not exceed 29 nephelometric turbidity units (NTUs) above background at the edge of 150 meter mixing zone boundary at any time.

(a) **Depth of water at the disposal sites**. Elevations within the contained open-water placement site in range from approximately -1 to -4.5 feet.

(b) **Current velocity, direction, and variability at the disposal site**. Not significant.

(c) **Degree of turbulence**. Not significant.

(d) **Stratification attributable to causes such as obstructions, salinity or density profiles at the disposal site**. No effect.

(e) **Discharge vessel speed and direction, if appropriate**. No effect.

(f) **Rate of discharge**. Rate of discharge will vary according to the particular

type of dredge disposing of the material.

(g) **Ambient concentrations of constituents of interest**. Not applicable.

(h) **Dredged material characteristics, particularly concentrations of constituents, amount of material, type of material (sand, silt, clay, etc.) and settling velocities.** The proposed action would involve maintenance dredging and disposal operations for the Eastpoint navigation channel in the State of Florida. The quantity of material is approximately 244,000 cys. The type of material removed would consist of clay, silt and fine sand. Settling of particles is anticipated.

(i) **Number of discharge actions per unit of time**. The number of discharge actions per unit of time will vary depending upon the particular disposal activity.

(2) **Determination of Compliance with Applicable Water Quality Standards**. The proposed activity is in compliance with all applicable water quality standards.

(3) **Potential Effects on Human Use Characteristics**.

(a) **Municipal and Private Water Supply**. No effect.

(b) **Recreational and Commercial Fisheries**. Recreational and commercial fishing would be temporarily impacted primarily as a result of the physical presence of heavy equipment during operation activities. However, the area is large enough so that recreational and commercial boats will be able to maneuver around the dredge and its pipeline in most instances.

(c) **Water Related Recreation**. No significant effects.

(d) **Aesthetics**. No significant effects.

(e) **Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves**. No effect.

(f) **Other Effects**. No effect.

H. **Determination of Cumulative Effects on the Aquatic Ecosystem**. The proposed action is not expected to have significant cumulative adverse impacts.

I. **Determination of Secondary Effects of the Aquatic Ecosystem**. The proposed action is not expected to have any significant secondary adverse effects on the aquatic ecosystem.

III. **Finding of Compliance with the Restrictions on Discharge:**

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

B. The proposed discharge represents the least environmentally damaging practicable alternative.

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

D. Use of the newly authorized open-water placement site 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 maintenance dredging and disposal operations.

E. The proposed placement of fill material will not contribute to significant degradation of waters of the United States, nor will it result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation and commercial fishing; life stages of organisms dependent upon the aquatic ecosystem; ecosystem diversity, productivity and stability; or recreational, aesthetic or economic values.

F. Appropriate and practicable steps will be taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

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Jon J. Chytka
Colonel, Corps of Engineers
District Commander