

**SECTION 404 (b)(I) EVALUATION REPORT
EASTPOINT CHANNEL
FEDERALLY AUTHORIZED NAVIGATION PROJECT
APALACHICOLA BAY FRANKLIN COUNTY, FLORIDA**

1. DESCRIPTION OF AUTHORIZED FEDERAL PROJECT.

The Eastpoint Channel is located in Saint George Sound of Apalachicola Bay within Franklin County, Florida. The Eastpoint Channel Navigation Project is a part of the Federally authorized Apalachicola Bay Project. The overall project is described as a channel parallel to shore at Eastpoint, Florida that is 6- feet deep, 100- feet wide and approximately 6,000 feet long. The existing project was authorized by the River and Harbor Acts of 3 September 1954. Construction of the project was completed in October 1954. Subsequent maintenance of the channel was last conducted in 1984.

a. **Location.** The Eastpoint Channel is located in the Saint George Sound of Apalachicola Bay, Eastpoint, Florida.

b. **Description of the Proposed Action.** The proposed action consists of performing routine operation and maintenance dredging of the Eastpoint Federal Navigation Channel to maintain the authorized channel to a depth of 6 feet plus 2 feet of advanced maintenance and 2 feet allowable over depth for a total of -10 feet mean lower low water (MLLW). The navigation channel is 100 feet wide and approximately 6,000 feet long, with a connecting channel 6 feet deep and 100 feet wide. The placement consists of approximately 245,000 cubic yards of silts and clayey dredged material from the navigation channel in open-water to create a 26-acre beneficial use (BU) "containment cell" site into Saint George Sound. The dredged material would be used as a beneficial use opportunity site for Franklin County, the local non-Federal sponsor, to provide an opportunity for marsh vegetation establishment via natural colonization. This area could also be a future placement for potential operations and maintenance of the Federal navigation channel, if there is sufficient capacity.

Approximately 65,500 cubic yards of medium to fine grained sand material will be excavated from within the BU site to construct the containment dikes. The elevation of the containment dikes will be approximately +3 feet MLLW, the crown width will be approximately 10 feet wide and have a 4H:1V slope to the interior and 30H:1V slope to the exterior of the site. The BU site will be approximately 2,500 feet long and between 500 and 600 feet wide (Figure 2). The berm materials will be excavated from borrow areas within the interior of the BU cell either mechanically or using a small hydraulic cutterhead dredge and a marsh excavator will be used to shape the berm into the initial configuration. Based on the geotechnical sampling and analyses conducted, the medium to fine-grained sand that makes up the site is suitable for berm creation without the use of non-native materials and will maintain the natural make-up of the existing

shoreline. Characteristics of the berm design and construction sequence includes, 18 acres of the BU cell, 8.0 acres of the berm, and an initial crest width of 60 to 80 feet. The crest will naturally flatten by the predominate waves to a base width of 120 to 150 feet and a final 10-foot wide crest. The crest width will be maintained during marsh fill placement and weirs will be placed within the berm to accommodate dewatering of the dredged material. No temporary flotation channels will be dredged to facilitate construction of the berm. The wave climate of the site will naturally degrade the containment berm after completion of the dredging, pushing the upper sands into the marsh fill. The final marsh platform will fall within the 0.0 to 1.0 ft MLLW elevation range that matches existing coastal marshes east and west of the site. The marsh area will encompass a thin beach along the seaward edge.

The project will be conducted within Saint George Sound, a Class II Outstanding Florida Waterbody, Prohibited and Restricted for Shellfish Harvesting.

c. **Authority and Purpose.** The Federal navigation project for the Eastpoint Channel was authorized by the River and Harbor Acts of 3 September 1954. In 1954, Congress authorized U.S. Army Corps of Engineers (USACE) to dredge a channel along the Eastpoint waterfront for the benefit of the fishing community. The purpose of the proposed action is to maintain the authorized depth of Eastpoint Channel in order to facilitate navigation.

d. **General Description of Dredged or Fill Material.**

(1) **General Characteristics of Material.** The principle sediment type in the cell footprint is medium to fine-grained sand that will be dredged to construct the dikes; operation and maintenance silts with clayey material and high plasticity in the east and west channel segments will be dredged from the Federal channel to fill the site. A hydraulic cutterhead and/or mechanical dredge will be used. Sand size analysis of the Apalachicola Bay indicated that the median diameter of the sampled sand is approximately 0.26 mm.

(2) **Quantity of Material.** The quantity of material proposed for placement in the cell containment is approximately 245,000 cubic yards of dredged material. Approximately 65,500 cubic yards of medium to fine grained sand material will be excavated from within the BU site to construct the containment dikes.

(3) **Source of Material.** The source of material is the Federal Navigation Channel and from within the containment site.

e. **General Description of the Discharge Site.**

(1) **Location.** The 26-acre dredged material containment cell is located on the south side of the existing western Eastpoint breakwater.

(2) **Size.** The containment cell will be approximately 2,500 feet long and between 500 and 600 feet wide.

(3) **Type of Discharge Site.** The discharge site is an open-water site that is confined by containment dikes. The dredged material would be used as a beneficial use opportunity site for Franklin County, the local non-Federal sponsor, for a marsh or wetland creation via natural colonization.

(4) **Types of Habitats.** The site consists of an estuarine bay habitat.

(5) **Timing and Duration of Discharge.** This proposed action would require several weeks to complete.

(6) **Description of Disposal Methods.** Material would be placed within the BU containment site either via a mechanical or hydraulic dredge. A marsh excavator may be used to reshape the containment dikes.

2. FACTUAL DETERMINATIONS.

a. Physical Substrate Determinations.

(1) **Substrate elevation and slope.** The elevation of the containment dike will be approximately +3-feet MLLW, the crown width will be approximately 10-feet wide and have a 4H:1V slope to the interior and 30H:1V slope to the exterior of the site. The final marsh platform will fall within the 0.0 to 1.0 ft MLLW elevation range that matches existing coastal marshes east and west of the site. The marsh area will encompass a thin beach along the seaward edge.

(2) **Sediment type.** Previous testing within the channel indicates dredged material are silts with clayey material. The materials from the east and west channels were predominately high plasticity silts and clays with less than 10% sand. The median diameter of sediment is 0.26 mm.

(3) **Dredged/fill material movement.** The dredged/fill material would be subject to movement by wave, wind, and currents. Erosion would occur under these conditions but should not cause serious adverse effects.

(4) **Physical effects on benthos.** There would be temporary disruption of the aquatic community. Non-motile benthic fauna within the project area will be lost due to proposed operations but should repopulate within several months after dredging 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. The overall impact to these organisms is expected to be temporary and insignificant.

(5) **Other effects.** No other effects are anticipated.

(6) **Actions taken to minimize impacts.** Buffer zones will be implemented to further minimize impacts due to placement of dredged material in the containment cell. Additionally, 660-foot buffers in between placement area and oyster reefs, will be implemented to ensure avoidance of any adverse impacts to oyster reefs and prevent any turbidity impacts to oysters.

b. Water Circulation/Fluctuation, and Salinity Determination.

(1) **Water.** The dredged material placement site would have no significant impact on salinity, water chemistry, clarity, color, odor, taste, dissolved gas levels, nutrients, or eutrophication characteristics of the adjacent areas. There may be some short-term impacts involving increased, localized turbidity and decreased dissolved oxygen associated with dredging and disposal operations. However, these impacts are expected to be temporary and minimal. During dredging and disposal operations, turbidity levels would be monitored to ensure compliance with the state water quality certification from the State of Florida Department of Environmental Protection (FDEP).

(2) **Current patterns and circulation.** No significant effects.

(3) **Normal water level fluctuations.** No significant effects.

(4) **Salinity gradients.** No significant effects anticipated.

(5) **Actions that will be taken to minimize impacts.** No actions regarding the disposal of dredged material would be conducted that would further minimize the impacts on current patterns, circulation, and salinity in the project area.

c. Suspended Particulate/Turbidity Determinations.

(1) **Expected changes in suspended particulate and turbidity levels in the vicinity of the disposal site.** During dredging, suspended particles will cause turbidity in the water column. Turbidity is expected to increase temporarily, but levels will be monitored to ensure that levels meet state water quality standards.

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

(a) **Light penetration.** Light penetration would be decreased during the actual dredging and disposal of dredged material but would be temporary.

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

(c) **Toxic metals and organics.** A sediment analysis was

conducted on the channel sediments in 2005. Total organic carbon ranged from 0.19-4.15%. Metals were found in at least trace amounts for all samples. Iron was found in one sample to exceed the water quality criteria (WQC) but the amount of iron found is less than the amount found in the site water sample.

Polynuclear Aromatic Hydrocarbons (PAH) were detected in some samples. No sample exceeded the WQC for any individual PAH, but the sum of PAH's in one sample did exceed the WQC. Trace amounts of pesticides were found in three samples in addition to the site water sample.

No Polychlorinated Biphenyls were detected in any sample. Three semi-volatile organic compounds were found, primarily in trace amounts. No semi-volatile organic compounds exceeded the WQC in any sample. The chemical evaluation of these sediments indicates that the sediment contains no significant levels of contaminants.

Additional chemical testing of channel sediments was conducted in 2012. The Site Investigation Section of the FDEP assisted the Florida Geological Survey to collect sediment cores at predesignated locations within the Eastpoint Channel. Low-level PAH analysis of sediment samples were collected and tested. Most PAH samples were reported as non-detection levels. Samples that were detectable were not considered exceedances. Therefore, sediments were found to be of acceptable quality for their intended use.

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

(e) **Esthetics.** No long-term esthetic changes will result from the proposed action.

(f) **Others as appropriate.** None.

(3) **Effects on biota.**

(a) **Primary production, photosynthesis.** Primary production and photosynthesis would not be significantly impacted.

(b) **Suspension/filter feeders.** No significant impacts.

(c) **Sight feeders.** The activities would not likely adversely affect any sight feeders.

(4) **Actions taken to minimize impacts.** No special activities are anticipated to be required to minimize impacts on biota.

(5) **Contaminant Determination.** No significant effects.

d. **Aquatic Ecosystem and Organism Determinations.**

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

(2) **Effects on benthos.** There would be temporary disruption of the aquatic community. Non-motile benthic fauna within the project area will be lost due to the proposed operations but should repopulate within several months after dredging 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. The overall impact to these organisms is expected to be temporary and insignificant.

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

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

(5) **Effects on special aquatic sites.** No seagrass or oyster reefs are found within the affected project area. However, there are a significant amount oyster reefs in Apalachicola Bay that are near the vicinity of the project site.

(a) Sanctuaries and refuges. The action is to take place within the Apalachicola Bay Aquatic Preserve. The effects of the proposed action on the preserve would not be significant.

(b) **Wetlands.** No wetlands would be impacted during the proposed activity.

(c) **Mud flats.** No significant effects.

(d) **Vegetated shallows.** No significant effects.

(e) **Coral reefs.** Not applicable to this area.

(f) **Riffle and pool complexes.** Not applicable to this area.

(6) **Threatened and endangered species.** Under Section 7 of the Endangered Species Act, USACE, Mobile District, requested concurrence from the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) on its may affect but not likely to adversely affect listed species

and is not likely to destroy or adversely modify Gulf sturgeon critical habitat.

(7) **Other wildlife.** No significant effects.

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

e. Proposed Disposal Site Determinations.

(1) **Mixing zone determinations.** Turbidity will be monitored and will not exceed state standards. The material is composed of silts and clays and will be contained within the BU site during disposal operations. Disposal of this material would not likely pose any long-term adverse impact to the water quality of the Apalachicola Bay.

(2) **Determination of compliance with applicable water quality standards.** An updated application was submitted to FDEP requesting modification to the disposal area configuration. All conditions of that certification will be followed.

(3) **Potential effects on human use characteristics.**

(a) **Municipal and private water supply.** No significant effects.

(b) **Recreational and commercial fisheries.** No significant effects.

(c) **Water-related recreation.** No significant effects.

(d) **Esthetics.** The area would be restored to the pre-shoaling conditions and as a result the esthetic quality of the area, which existed prior to shoaling, would be restored.

(e) **Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves.** The project would not pose significant adverse effects on the human use characteristics of this preserve.

f. **Determination of Cumulative Effects on the Aquatic Ecosystem.** All data and information presented suggests the dredged material placement area would have no significant cumulative adverse effects on the aquatic ecosystem.

g. **Determination of Secondary Effects on the Aquatic Ecosystem.** No significant secondary effects on the aquatic ecosystem are expected.

3. FINDING OF COMPLIANCE.

a. No significant adaptation to the guidelines was made relative to this evaluation.

b. No significant cumulative impacts are expected from this proposed action. The implementation of the proposed action would not have a significant adverse impact on the quality of the environment.

c. One of the alternatives to the proposed method of accomplishing the action is available. This alternative is the "no action" alternative. The implementation of the "no action" alternative would result in the Eastpoint Channel not being dredged to project depth. This alternative would not provide the necessary conditions for safe navigation of commercial and recreational boats through the channel. Therefore, the "no action" alternative was deemed unacceptable and not considered further.

d. The proposed action would not violate any applicable state water quality standards. Water quality certification has been applied for.

e. The proposed action would not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.

f. As required by the Coastal Zone Management Act, the proposed action is consistent with the Florida Coastal Program to the maximum extent practicable.

g. No federally protected species or their critical habitat would be impacted or modified by the proposed action. The services concur with our finding of "not likely to adversely affect" to listed species.

h. 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, wildlife, and special aquatic sites. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values would not occur.

i. On the basis of the guidelines, the proposed activities are specified as complying with the requirement of these guidelines with the inclusion of appropriate and practical conditions to minimize adverse effects to the aquatic ecosystem.

DATE _____

Sebastien P. Joly
Colonel, U.S. Army
District Commander