DRAFT

SECTION 404(b)(1) EVALUATION REPORT FOR THE PROPOSED MAINTENANCE AND DISPOSAL OF DREDGED MATERIAL FOR THE BON SECOUR RIVER NAVIGATION PROJECT BALDWIN COUNTY, ALABAMA

A FEDERALLY-AUTHORIZED NAVIGATION PROJECT

1. **PROJECT DESCRIPTION:**

A. **Location:** The Bon Secour River Navigation Project, Gulf of Mexico, Intracoastal Waterway, Bon Secour River, Baldwin County, Alabama (**Figure 1**).

B. **General Description:** The U.S. Army Corps of Engineers (Corps), Mobile District proposes the continued maintenance dredging and disposal operations of the Bon Secour River Navigation project in Baldwin County, Alabama. The authorized project provides for a channel -10 feet deep and 80 feet wide extending from the Gulf Intracoastal Waterway (GIWW) through Bon Secour Bay to and up Bon Secour River to the vicinity of Swifts' Landing (lower river section), thence -6 feet deep and 80 feet wide to a point about 600 feet above Oak Landing (upper river section), with two turning and maneuvering areas 150 feet wide and 1,100 to 1,200 feet long opposite Swifts' Landing and the ice loading dock. The overall length of the project is approximately 4.7 miles. The project was modified to include a channel -10 feet deep and 80 feet wide extending from the Bon Secour Channel down the South Fork Channel, a distance of approximately 1.14 miles and ending at a 150-foot by 150-foot turning basin. A depth of -2 feet of advanced maintenance dredging will be added, and required to be removed, including side slopes of 1:5 extending from those total depths. The dredging will also allow up to -2 additional feet of dredged depth for dredging inaccuracy. The final channel depths would be approximately -14 feet from the GIWW through Bon Secour Bay and up Bon Secour River to the vicinity of Swifts' Landing and -10 feet above Oak Landing. Each dredging cycle (approximately every 2-3 years) would involve removal of approximately 350,000 cubic yards (cy) of dredged material from anywhere within the project limits. The dredged material would be placed in a previously used, certified upland disposal area. The disposal area is provided by the local sponsor, Baldwin County, Alabama and is located south of County Road 49 in Township 8 South, Range 3 East, and Section 26 (**Figure 2**).

C. **Authority and Purpose:** The Bon Secour River project was federally authorized 16 May 1963 by the Chief of Engineers under authority contained in Section 107 of the River and Harbor Act of 14 July 1960. The project provides for a channel -10 feet deep and 80 feet wide extending from the GIWW through Bon Secour Bay to and up Bon Secour River to the vicinity of Swifts' Landing (lower river section), thence -6 feet deep and 80 feet wide to a point about 600 feet above Oak Landing (upper river section), with two turning and maneuvering areas 150 feet wide and 1,100 to 1,200 feet long opposite Swifts' Landing and the ice loading dock. The overall length of the project is approximately 4.7 miles. The project was modified to include a channel -10 feet deep and 80 feet wide extending from the Bon Secour Channel down the South Fork Channel,

a distance of approximately 1.14 miles and ending at a 150-foot by 150-foot turning basin. Plane of reference is mean lower low water (MLLW).

The proposed maintenance activities are necessary to maintain navigation of the federally authorized project which provides access to commercial fishery facilities in the Bon Secour area. Such access aids in transport of perishable seafood cargo from oyster reefs and fishing grounds in Mobile and Bon Secour Bays, and the Mississippi Sound.

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

(1) General Characteristics of Material: The composition of the material from the Bon Secour River consists of approximately 20% sand, 51% silt and 29%clay. The individual particle size analyses of the bottom material samples, as well as elutriate testing, were taken in 1980 as part of the 1989 Environmental Assessment (EA) prepared for the maintenance dredging of the Bon Secour River. The material from the South Fork channel is expected to be similar to that from the river; therefore, no chemical or physical analyses were performed.

(2) Quantity of Material: An estimated quantity of 350,000 cy of material would be removed initially from the river and the South Fork and disposed of at the current upland disposal site. Subsequent dredging intervals would occur approximately every 2-3 years, or as needed due to hurricane storm events.

(3) Source of Material: The source of the material is the maintenance material from the Bon Secour River and South Fork.

E. **General Description of Discharge Sites:**

(1) Location: The proposed disposal site is located south of County Road 49 in township 8 south, range 3 east and section 26 in south Baldwin County, Alabama (**Figure 2**).

(2) Size (acres): The approximate size of the disposal area site is 76 acres. The approximate dimensions of the disposal area are 1300 feet wide and 2500 feet long.

(3) Type of Site: The disposal site is a predominantly upland disposal area.

(4) Types of Habitats: The disposal site has predominantly upland habitat.

(5) Timing and Duration of Discharge: Bon Secour River and South Fork are presently scheduled to be dredged on a cycle of every 2-3 years, or as needed du to hurricane events. The duration of the discharge is approximately one month.

(6) Description of Disposal Methods: The material would be placed in the disposal site by hydraulic pipeline dredge.

2. FACTUAL DETERMINATIONS:

A. Physical Substrate Determinations:

(1) Substrate Elevation and Slope: The substrate elevation of the proposed disposal area ranges from 12.7 to 15 feet.

(2) Sediment Type: The dredged material is predominantly silt with some sand and clay.

(3) Dredged/fill material movement: There would be minor siltation from the return water. This impact would minor and short in duration.

(4) Physical Effects on Benthos: No significant impacts.

(5) Other Effects: Not applicable.

(6) Actions taken to minimize impacts: No other actions to minimize impacts to the physical substrate are deemed appropriate for this project.

B. Water Circulation/Fluctuation, and Salinity:

(1) Water:

(a) Salinity: No significant impacts.

(b) Water Chemistry: No significant impacts.

(c) Clarity: No significant impacts.

(d) Color: No significant impacts.

(e) Odor: No significant impacts.

(f) Taste: No significant impacts.

(g) Dissolved Gases: No significant impacts.

(h) Nutrients: No significant impacts.

(i) Eutrophication: No significant impacts.

(2) Current Patterns and Circulation:

(a) Current Patterns and Flow: No significant impacts.

(b) Velocity: No significant impacts.

(c) Stratification: No significant impacts.

(d) Hydrologic Effect: No significant impacts.

(3) Normal Water Level Fluctuations: No significant impacts.

(4) Salinity Gradients: No significant impacts.

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

C. **Suspended particulate/Turbidity Determinations:**

(1) Expected Changes in Suspended Particulate and Turbidity Levels in the Vicinity of the Disposal Site: An increase in turbidity and suspended particulates would result due to the return water from the contained area. These increased levels should subside shortly after disposal concludes. No significant effects are expected as a result of this action.

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

(a) Light Penetration: No significant impacts.

(b) Dissolved Gases: No significant impacts.

(c) Toxic Metals and Organics: No significant impacts.

(d) Pathogens: No significant impacts.

(e) Aesthetics: No significant impacts.

(f) Others as appropriate: No significant impacts.

(3) Effects on Biota:

(a) Primary Production, Photosynthesis: No significant impacts.

(b) Suspension/Filter Feeders: No significant impacts.

(c) Sight Feeders: No significant impacts.

(4) Actions Taken to Minimize Impacts: No further actions are deemed appropriate.

D. **Contaminant Determination:** Based upon elutriate analyses; the sediments are suitable for disposal in the proposed location.

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

(1) Effects on Plankton: No significant impacts.

(2) Effects on Benthos: No significant impacts.
(3) Effects on Nekton: No significant impacts.

(4) Effects on Aquatic Food Web: No significant impacts.

(5) Effects on Special Aquatic Sites:

(a) Sanctuaries and Refuges: No impacts.

(b) Wetlands: No impacts.

(c) Mud Flats: No impacts.

(d) Vegetated Shallows: No impacts.

(e) Coral Reefs: No impacts.

(f) Riffle and Pool Complexes: No impacts.

(6) Threatened and Endangered Species: Results of the coordination with the National Marine Fisheries Service (NMFS) is expected to indicate that there would be no adverse effect on any listed endangered, threatened or proposed species or their critical habitat in the vicinity of the Bon Secour project. Coordination with the U.S. Fish and Wildlife Service (USFWS) on threatened and endangered species will be done through the public notice coordination process.

(7) Other Wildlife: No significant impacts.

(8) Actions to Minimize Impact: A search was conducted to identify upland disposal sites. The proposed site was determined to be the most acceptable environmentally. No other actions to minimize impacts on the aquatic ecosystem are deemed appropriate.

F. **Proposed Disposal Site Determinations:**

(1) Mixing Zone Determinations: Not applicable.

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

(3) Potential Effects on Human Use Characteristics:

(a) Municipal and Private Water Supply: No impacts.

(b) Recreational and Commercial Fisheries: No significant impacts.

(c) Water-related Recreation: Temporary constraints would be placed on the use of the dredging area for navigation. This impact would be short-term.

(d) Aesthetics: Only temporary degradation to the aesthetic environment would occur as a result of the proposed disposal action. Impacts would

primarily occur as a result of the physical presence of the dredge, pipeline, and other equipment.

(e) Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves: No impacts.

G. **Determination of Cumulative Effects on the Aquatic Ecosystem:** The use of the disposal area would have no significant cumulative adverse impacts on the aquatic ecosystem.

H. **Determination of Secondary Effects on the Aquatic Ecosystem:** No significant secondary impacts on the aquatic ecosystem are expected to occur as a result of the disposal action.

3. **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. Several alternatives to the proposed method of accomplishing the action are available. These alternatives were discussed in the EA to which this evaluation is appended and are given as follows:

(1) No Action.

(2) Other upland disposal areas.

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 proposed disposal site will not jeopardize the continued existence of any Federally-listed endangered or threatened species or their critical habitat.

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.

DATE_____ _____

Byron J. Jorns
Colonel, Corps of Engineers
District Engineer

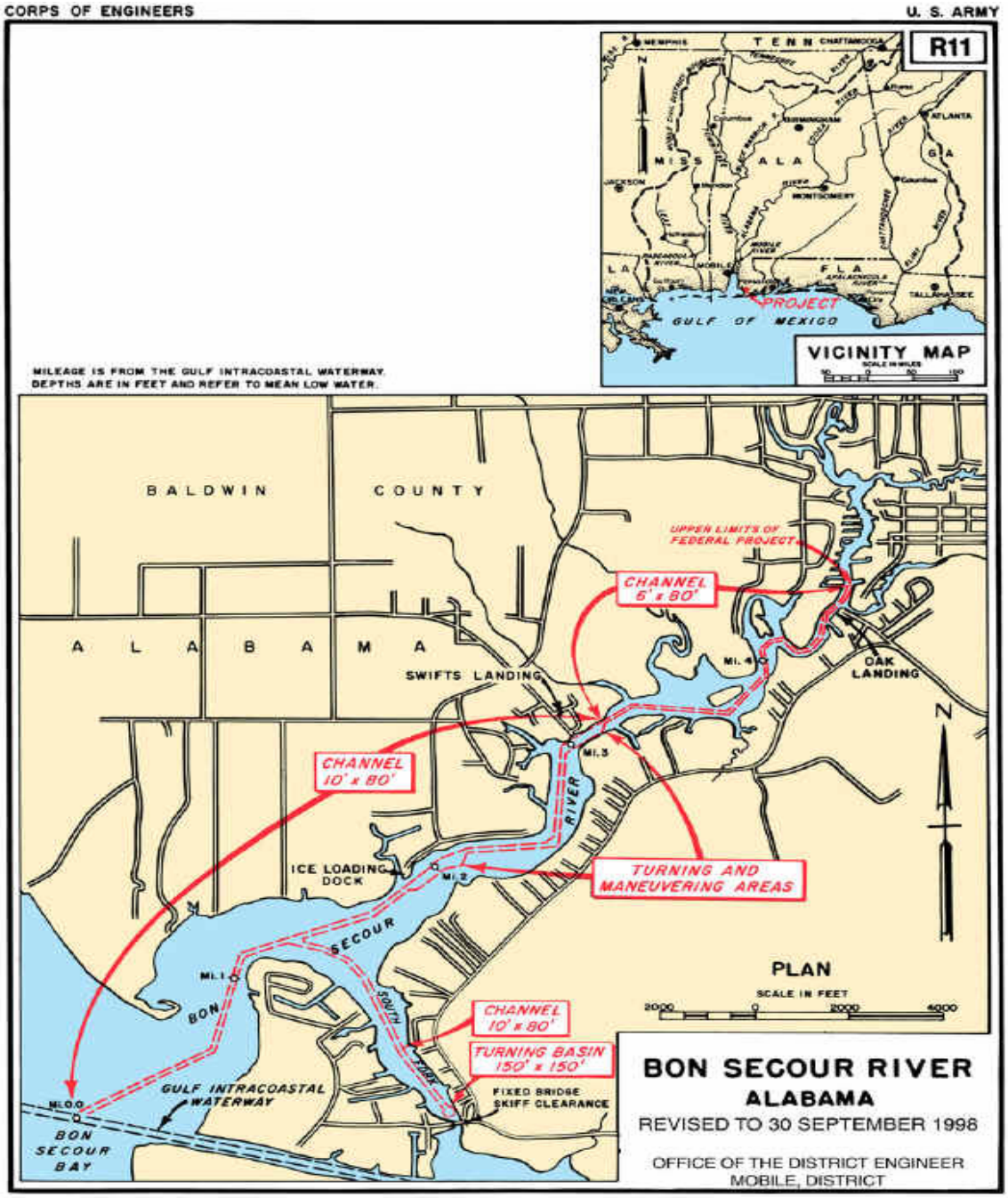

Figure 1: Vicinity Map of the Bon Secour River navigation project

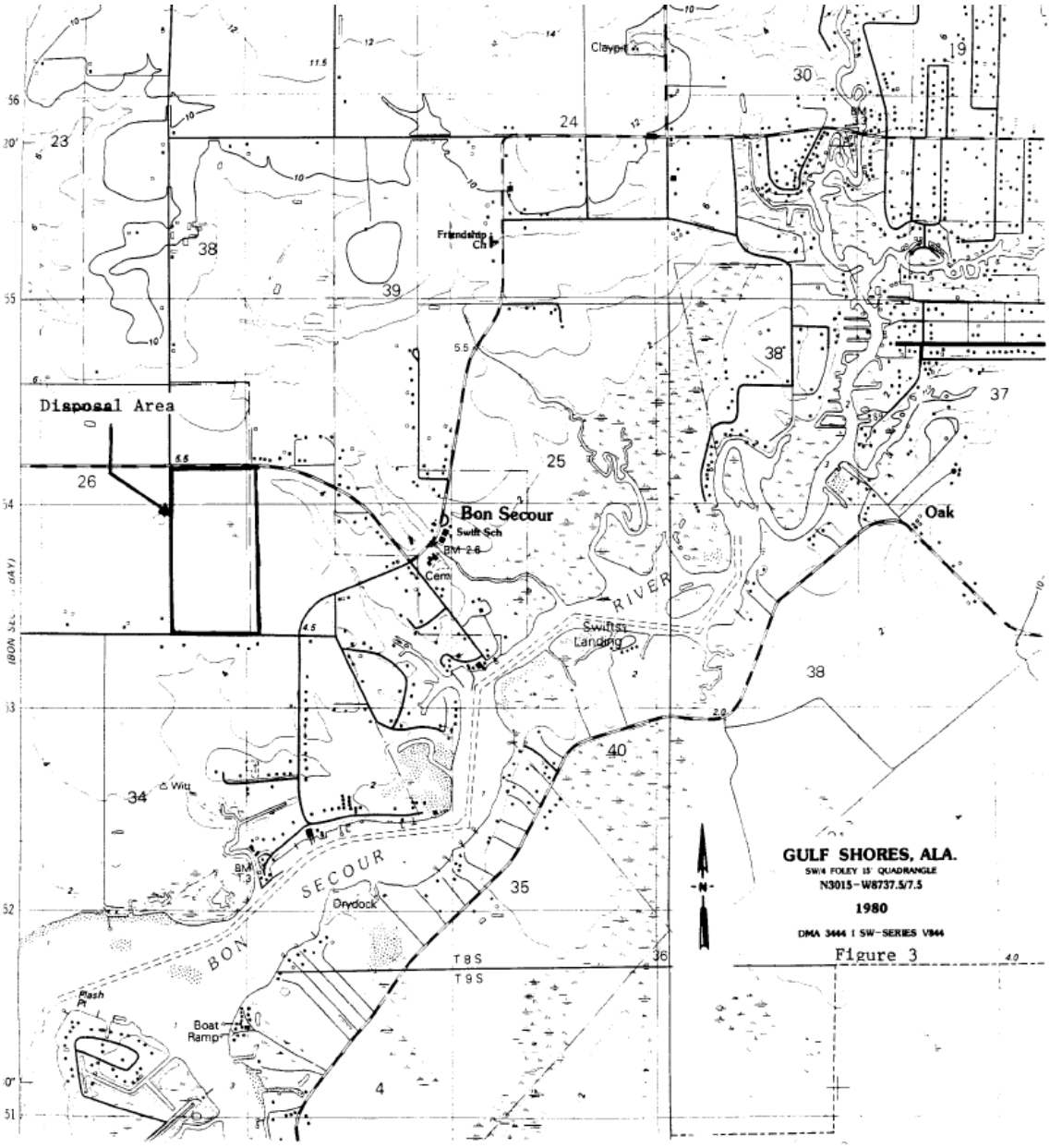

Figure 2: Upland disposal area location