

**SECTION 404(b)(1) EVALUATION REPORT
FOR THE
FEDERALLY AUTHORIZED PASCAGOULA RIVER NAVIGATION PROJECT
CONTINUED OPERATIONS AND MAINTENANCE**

CITY OF PASCAGOULA, JACKSON COUNTY, MISSISSIPPI

I. PROJECT DESCRIPTION:

A. Location. The Federally authorized Pascagoula navigation project is located in the City of Pascagoula, Jackson County, Mississippi (Photograph 1). The navigation project is approximately 40 miles west of Mobile, Alabama and 100 miles east of New Orleans, Louisiana. The Pascagoula River channel begins north of the railroad bridge to just past river mile 10.0. The area proposed for dredging is limited to river mile 0.0 to 5.0. No dredging will be conducted in Escatawpa River under this Section 404(b)(1) Evaluation Report.



Photograph 1: Port of Pascagoula, Mississippi

B. General Description. The proposed action addressed in this Section 404(b)(1) Evaluation is operations and maintenance (O&M) of the river portion of the Federally authorized Pascagoula Harbor navigation project. The Congressionally authorized Pascagoula Harbor, Mississippi navigation project provides for:

- I. An entrance channel 44 feet deep and 550 feet wide from the Gulf of Mexico to Horn Island Pass, including a 2,200-foot long by 200-foot wide sediment trap situated on the east side of the channel, a channel 44 feet deep and 600 feet wide through Horn Island Pass, including a 4,700-foot long sediment trap situated on the east side of the channel 44 feet and 175 feet wide;
- II. A channel 42 feet deep and 350 feet wide in Mississippi Sound and the Pascagoula River to the railroad bridge at Pascagoula, including a turning basin 2,000 feet long and 950 feet wide (including the channel area) on the west side of the river below the railroad bridge;
- III. A channel 42 feet deep throughout and 350 feet wide from the ship channel in Mississippi Sound to the 1,150-foot turning basin at the mouth of Bayou Casotte, then 350 feet wide for about one mile to the northern turning basin, 900 feet wide, and 1,750 feet long;
- IV. A channel 22 feet deep and 150 feet wide up the Pascagoula River from the railroad bridge to the mouth of the Escatawpa River (Dog River), then up the Escatawpa River to the Highway 613 Bridge;
- V. A channel 12 feet deep and 125 feet wide from the Highway 613 Bridge, via Robertson and Bound Lakes, to Mile 6.0 on the Escatawpa River; and
- VI. A channel 12 feet deep by 80 feet by 80 feet extending from deep water in the Pascagoula River to a turning basin in Krebs Lake a distance of about 1,500 feet, then along the south bank of the lake a channel 10 feet deep and 60 feet wide, terminating at a second turning basin, a distance of 2,700 feet from the first.

Project segments described in paragraphs I, II, and III are maintained separately from the River portion and are not included in this Section 404(b)(1) Evaluation. The proposed action involves maintenance dredging and placement activities associated with the Federally-authorized Pascagoula Harbor navigation project, River Portion (Figure 1). The area proposed for dredging is from river mile 0.0 to 5.0 or a distance of approximately 29,500 feet. No dredging is proposed in the Escatawpa River. While the majority of the material removed during the past maintenance cycle was located within two smaller segments of the 5-mile portion of the Pascagoula River, these segments are subject to change and the proposed action may include any segment(s) located within the 5-mile reach. The proposed action requires the dredged material from the 5-mile portion of the Pascagoula Harbor navigation project, River Portion to be placed within any of the nine previously certified upland disposal sites (Figures 2 & 3). The river channel would be dredged to a depth of -16 feet Mean Low Water (MLW) at a bottom width of 70 feet plus an additional allowance of up to two feet advanced maintenance. Based on previous maintenance dredging of the 5-mile segment, it is expected that approximately 50,000 to 70,000 cubic yards of dredged material would be removed from the river channel and placed in any of the previously certified upland disposal sites. Four of the disposal sites are located on the west bank of the river and five are located on the east side of the river. These sites vary in size from two to 18 acres. Disposal sites #2, #3, #4, and #6 (Figure 2) were previously used during maintenance dredging operations of the river channel. Approximately 24.5 acres of dredged material capacity exists within the four proposed dredged material disposal sites. Sites #1, #5, #7, #8, and #9 (Figures 2 & 3) have not been used to date, but may be required depending on shoaling locations.

<u>Sites</u>	<u>Location</u>	<u>Site size</u>
1	East Bank	10 acres
2	West Bank	18 acres
3	East Bank	10 acres
4	East Bank	7 acres
5	East Bank	2 acres
6	East Bank	6 acres
7	West Bank	3 acres
8	West Bank	14 acres
9	West Bank	7 acres

The proposed maintenance dredging and placement sites were most currently certified as described in Mississippi Department of Environmental Quality (MDEQ), Office of Pollution Control (OPC) – Mississippi Department of Marine Resources (MDMR) – U.S. Army Corps of Engineers (USACE), Mobile District Joint Public Notice number FP97-PA05-9.

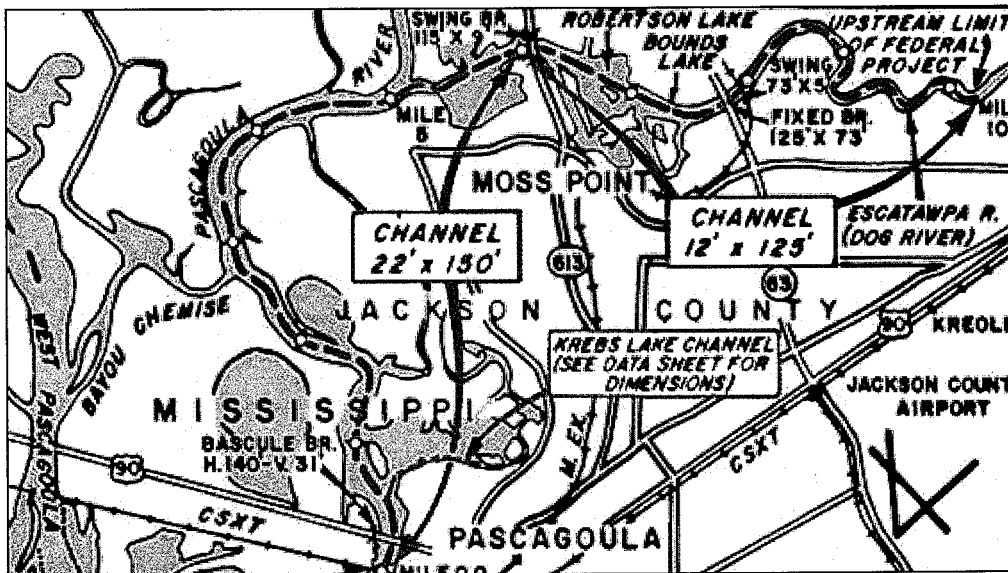
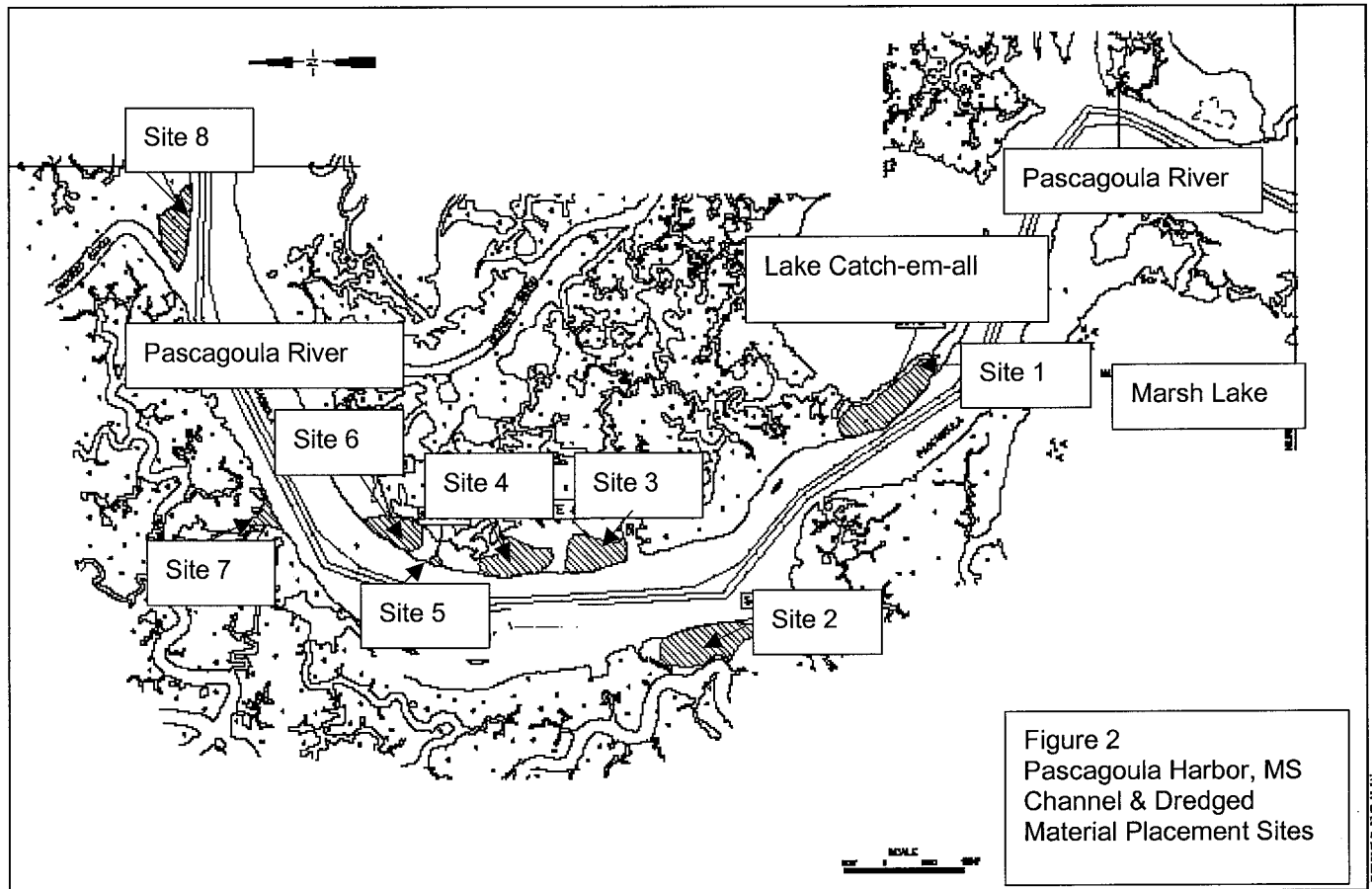
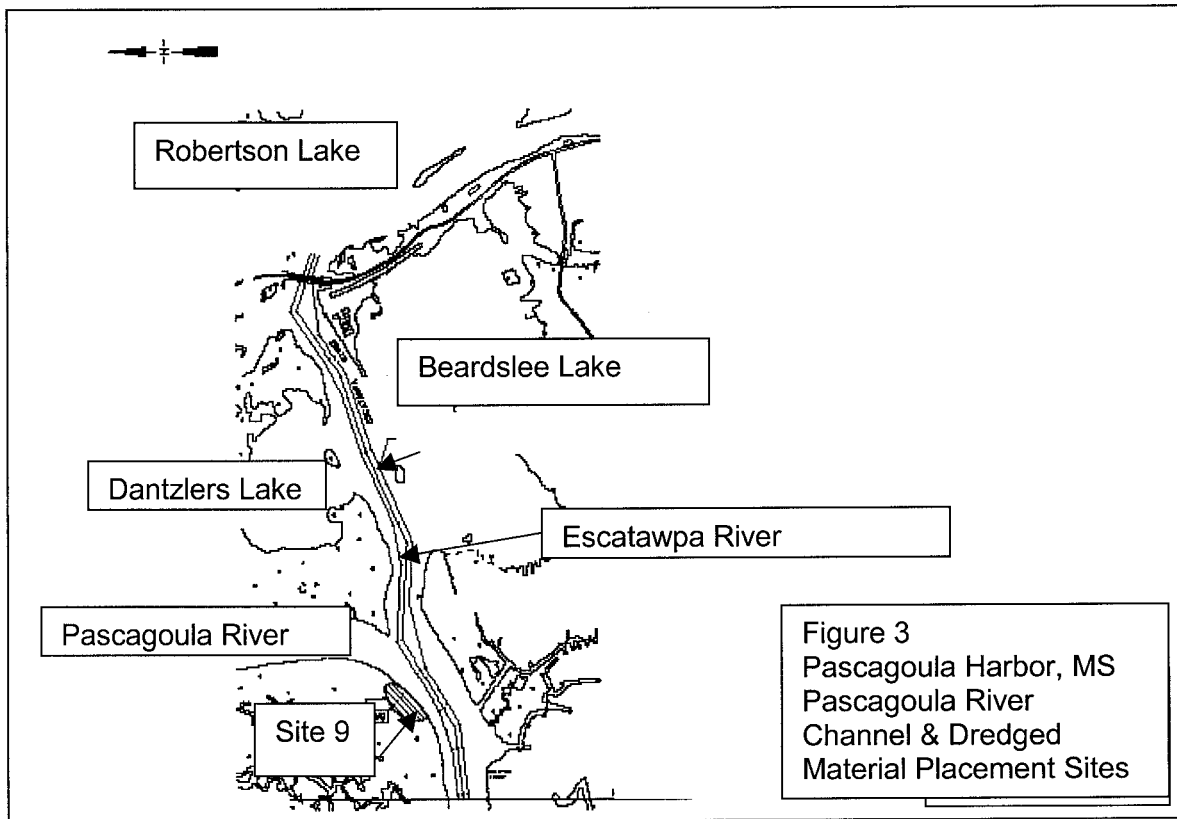


Figure 1: Pascagoula River Navigation Project, Mississippi





C. **Authority and Purpose.** The Pascagoula Harbor navigation project was Federally authorized by Congress through the River and Harbor Acts of 4 March 1913, 4 March 1915, 17 May 1950, 3 September 1954, 3 July 1958, 14 July 1960, 23 October 1962, 23 September 1965, 10 February 1971, and 23 June 1971. Modifications to the Federal navigation project were authorized by Section 202(a) of the Water Resources Development Act (WRDA) of 1986.

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

- (1) **General Characteristics of Material.** Bottom sediments along the navigation channel consist of a sand.
- (2) **Quantity of Material.** Approximately 50,000 to 70,000 cubic yards of material will be dredged from the Pascagoula River navigation project on an as needed basis.
- (3) **Source of Material.** The area proposed for dredging is from river mile 0.0 to 5.0. No dredging is proposed in the Escatawpa River.

E. Description of the Proposed Discharge Site.

(1) **Location.** The previously certified upland disposal sites, located on the west and east banks of the East Pascagoula in the vicinity of the proposed dredging, are identified in Table 1 and Figures 2 & 3.

Table 1:

Pascagoula River Certified Upland Disposal Sites	
Sites	Location
1	East Bank
2	West Bank
3	East Bank
4	East Bank
5	East Bank
6	East Bank
7	West Bank
8	West Bank
9	West Bank

(2) **Size.** The upland disposal sites for the Federally authorized Pascagoula River navigation project vary in size from 2 to 18 acres. Table 2 provides a detailed description of each disposal sites' size.

Table 2:

Pascagoula River Certified Upland Disposal Sites	
Sites	Site size
1	10 acres
2	18 acres
3	10 acres
4	7 acres
5	2 acres
6	6 acres
7	3 acres
8	14 acres
9	7 acres

(3) **Type of Site.** Contained upland disposal sites are located on either bank of the East Pascagoula River.

(4) **Type of Habitat.** These sites are contained upland disposal sites. All of these sites have been historically designated and some utilized for disposal of dredged material.

(5) **Timing and Duration of Discharge.** Timing and duration of the proposed action are dependent upon where and when shoaling occurs in the navigation project.

F. **Description of Disposal Method.** Typically, a hydraulic pipeline is used to maintain the project utilizing the previously designated upland disposal sites. In rare instances, a mechanical dredge is used to maintain depths of the project.

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

A. **Physical Substrate Determinations.**

(1) **Substrate Elevation and Slope.** The dikes surrounding the upland disposal sites vary in elevation and slope but typically have a 1:4 slope with about a +14-foot elevation.

(2) **Sediment Type.** Dredged material proposed for disposal consists of sand.

(3) **Dredged/Fill Material Movement.** Disposal of dredged material at upland sites would be confined to within the diked areas. The residence times of the return water within the material placement sites would be such that no impacts would result from the movement of materials.

(4) **Physical Effects on Benthos.** The return water from the proposed upland sites would have no impact on benthos.

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

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

B. **Water Column Determinations.**

(1) **Salinity.** No effect.

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

(3) **Clarity.** Particles in the return flows from the upland disposal sites would have adequate time to settle out before entering the surrounding waters. Thus, no adverse impact is anticipated.

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

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

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

(7) **Dissolved Gas Levels.** No effect.

(8) **Nutrients.** No effect.

(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 confined diked areas is not anticipated to affect flows due to the upland location of these sites. The subsequent return water flows are not anticipated to affect 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.** No effect.

D. Suspended Particulate/Turbidity Determination:

(1) **Expected Changes in Suspended Particulates and Turbidity Levels in Vicinity of Placement Site.**
No significant effect.

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

(a) **Light Penetration.** The return water from the upland sites is not anticipated to adversely impact light penetration.

(b) **Dissolved Oxygen.** No effect.

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

(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.** Shorebirds tend to be attracted to disposal sites and placement activities due to the presence of food items in the dredged material. The impact of disposal operations at the upland sites on sight

feeders is expected to be a beneficial, short-term impact.

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

E. **Contaminant Determinations.** The materials proposed for placement are naturally occurring materials. Based on the lack of sources, there is no reason to believe that the materials are unsuitable for placement. Therefore, the materials are excluded from testing under Section 404(b)(1)(d).

F. **Aquatic Ecosystem and Organism Determinations.** No effect.

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

(2) **Effects on Benthos.** Return water from the upland disposal sites is anticipated to have no effect on 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 applicable.

(a) **Sanctuaries and Refuges.** Not applicable.

(b) **Wetlands.** No effect.

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

(d) **Vegetated Shallows.** Not applicable.

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

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

(6) **Effects on Threatened and Endangered Species.** The USACE, Mobile District does not anticipate any adverse impacts to occur to any known listed species. In the letter dated 25 September 2002, the U.S. Fish and Wildlife Service concurred with the District's determination of no adverse impact.

(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 State of Mississippi will specify a mixing zone not to exceed ambient turbidity by more than 50 nephelometric turbidity units at the outer limits of 750-foot for turbidity compliance. No adverse impacts are anticipated from disposing of material at the upland sites due to the fact that the proposed action places material in diked upland areas, and that sufficient retention time would be provided for the return water. Thus, no mixing violations are expected.

(2) **Determination of Compliance with Applicable Water Quality Standards.** The proposed activity has been determined to be in compliance with all applicable water quality standards.

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

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

(b) **Recreational and Commercial Fisheries.** No effect.

(c) **Water Related Recreation.** No effect.

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

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

(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).

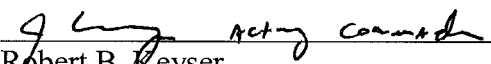
D. Use of the proposed disposal sites will not jeopardize the continued existence of any Federally-listed endangered or threatened species or their critical habitat.

E. The proposed placement of dredged 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 11/27/02


Robert B. Keyser
Colonel, Corps of Engineers
District Engineer