

**SECTION 404(B)(1) EVALUATION REPORT
STABILIZATION AND SHORELINE PROTECTION
FOR
ALABAMA STATE HIGHWAY 193
CEDAR POINT, ALABAMA**

I. DESCRIPTION OF THE PROJECT

a. Location. Highway 193, Cedar Point, Mobile County, Alabama

b. Description of the Proposed Action. The proposed action will provide erosion protection to the eastern side (north bound lane) of Highway 193 from Cedar Point northward to the Heron Bay “Cut-Off” Bridge south of Alabama Point, Mobile County, Alabama (Figure 1). The project consists of installing approximately 7,800 linear feet of vinyl sheetpile bulkhead with a treated wood wale, along the highway (Figure 2). The landside of the project will be backfilled with sand and riprap (13# to 210#) and grass-seeded to provide erosion protection. Existing riprap will be moved bayward of the bulkhead to provide toe protection for the sheetpile bulkhead. The sheetpile bulkhead will be located approximately 20 feet bayward from the edge of the roadway. The sheetpile will be driven by jetting, vibratory hammer, or drop hammer four (4) feet deep into the soil, with four (4) feet extending above the soil line. The top of the bulkhead, at an elevation of +4.0 feet, will be restrained with tiebacks. The tiebacks will be attached to the bulkhead by 12-foot stainless steel bars.

c. Authority and Purpose. The proposed action would be implemented under the authority of Section 14 of the Flood Control Act of 1946 (Public Law 79-526), as amended. Section 14 provides authority for the Secretary of the Army to undertake emergency measures to prevent erosion damages to endangered highways, public works, and non-profit public facilities. In addition to major highway systems of national importance, eligible highways include principle highways, streets, and roads of significant importance to the community, such as arterial streets, important access routes to other communities and adjacent settlements, as well as roads designed as primary farm to market roads.

d. General description of Dredged or Fill Material.

(1) General Characteristics of Material. Stone, sand, sheetpile, riprap, and filter fabric.

(2) Quantity of Material. The material to be used for the construction is stone (5,790 cubic yard), vinyl sheetpile (7,800 linear feet), riprap currently located along the highway edge (1,570 cubic yards), sand (17,140 cubic yards) and filter fabric (8,700 square yards).

(3) Source of Material. All materials would be purchased from a certified commercial dealer.

e. Description of the Proposed Discharge Site(s).

(1) Location. Shoreline along Highway 193 from Cedar Point northward to the Heron Bay "Cut-Off" Bridge south of Alabama Point, Mobile County, Alabama.

(2) Size. Approximately five (5) Acres.

(3) Type of Site. Shoreline of Mobile Bay along Highway 193.

(4) Type of Habitat. The shoreline is mostly a sandy silt that has in the past been protected from the erosive environment by varying sizes of riprap. The erosive environment caused by high water, wind and wave action has caused the need for the proposed action.

(5) Timing and Duration of Discharge. The proposed construction would last from approximately six to 12 month from the initial construction.

II. FACTUAL DETERMINATIONS**a. Physical Substrate Determinations**

(1) Substrate Elevation and Slope. The water depth in the proposed project site is from the shoreline (mean sea level) of the bay to the gradual depth of approximately 2-3 feet deep 20-30 feet out in the bay.

(2) Fill Type. The proposed material for fill would be stone, sand, riprap, and filter fabric.

(3) Dredged/Fill Material Movement. The material used for construction would be placed and backfilled to prevent movement and eliminate the erosive condition presently experienced at the project site.

(4) Physical Effects on Benthos. Some benthic organisms would be eliminated by the proposed action, however, due to dynamic nature of the shoreline, the impacts would not be significant.

(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 determinations.

(1) **Water.** The proposed action would have no significant effects on salinity, water chemistry, odor, color, taste, dissolved gas levels, nutrients and eutrophication. Increases in turbidity will be experienced in the immediate vicinity of the project during construction would cause some reduced clarity due to increased turbidity. This increase in turbidity would be temporary and will return to pre-project conditions shortly after construction completion.

(2) **Current Flow and Water Circulation**

(a) **Current pattern and Flow.** The placement of sheetpile, sand, graded rock, filter fabric and bedding material along the shoreline is not expected to significantly affect current pattern and flow.

(b) **Velocity.** The hard structure provided by the sheetpile is expected to increase the velocity of the water near the structure and flowing away from the structure.

(c) **Stratification.** No significant effects.

(d) **Hydrologic Regime.** No significant effects.

(3) **Normal Water Level Fluctuations.** The action would not change the normal water level fluctuations in the project area.

(4) **Salinity Gradients.** Water depths of the project site would experience a salinity gradient due to the action.

(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 Particulates and Turbidity Levels in Vicinity of Disposal Site.** Construction in the shoreline will entail some increases in turbidity, however temporary and short-termed. No significant effects are anticipated.

(2) **Effects on Chemical and Physical Properties of the Water Column.** Light penetration due to temporary increases in turbidity during construction is anticipated. The long-term effects on light penetration will be reduced after construction due to the anticipated reduction in shoreline erosion and hence, reduced turbidity and sediment load. No significant effects are anticipated due to dissolved oxygen, toxic metals and organics, pathogens and aesthetics.

(3) Effects on Biota.

(a) Primary Production, Photosynthesis. No significant effects caused by the proposed action to the primary production or photosynthetic processes.

(b) Suspension/Filter Feeders. These organisms in the immediate vicinity of the project would be disrupted, but due to the dynamic environment, would be reestablished within six months to a year of the construction completion.

(c) Sight Feeders. The shoreline construction of the proposed action would not affect the sight feeders in the project area.

(4) Actions Taken to Minimize Impacts. No other action deemed necessary to minimize the impacts of suspended particulate and turbidity determinations.

d. Contaminant Determinations. The fill materials to be used for this construction are expected to be reasonably removed from sources of pollution such that no significant impacts would occur from the placement of these materials.

e. Aquatic Ecosystem and Organism Determinations

(1) Effects on Plankton. No significant effects.

(2) Effects on Benthos. Waterbottoms and shoreline in the vicinity of the proposed action would be impacted by the placement of the fill materials disrupting the benthic community. The impacts are short-term and temporary and would be reestablished in a short time.

(3) Effects on Nekton. No nekton is expected to remain in the project area after construction begins.

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

(5) Effects on special Aquatic Sites. No significant effects.

(a) Sanctuaries and Refuges. No significant effects.

(b) Wetlands. No significant effects.

(c) Mud Flats. Not applicable.

(d) Vegetated Shallows. Not applicable.

(e) Coral Reefs. Not applicable.

(f) Riffles and Pool complexes. Not applicable.

(6) Threatened and Endangered Species. No known threatened and/or endangered species exist within the project area. The proposed action has been coordinated with the U.S. Department of the Interior, Fish and Wildlife Service (FWS) and the U.S. Department of Commerce, National Marine Fisheries Service (NMFS). Both Services concurred with our determination that the proposed action would not impact federally protected species or their critical habitat. Possible transient threatened and/or endangered species may occasionally visit the vicinity include numerous species of sea turtles, the peregrin falcon and bald eagle. None of the species are endemic to the area and are known to actually utilize the area.

(7) Other wildlife. No significant effects.

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

f. Proposed Disposal site Determinations

(1) Mixing Zone Determination. No mixing is required for the proposed action since the fill is sheetpile, sand, graded rock, filter fabric, and bedding.

(2) Determination of compliance with applicable Water Quality Standards. The proposed action would be in compliance with all applicable state water quality standards. State water quality standards will be monitored during construction and maintained to less than 50 NTUs downstream from the site.

(3) Potential Effects on Human Use Characteristic.

(a) Municipal and Private Water Supply. No municipal or private water supply exists within the project area.

(b) Recreational and Commercial Fisheries. The proposed action would not affect recreational or commercial fisheries in the area.

(c) Water Related Recreation. No significant effects.

(d) Aesthetic. The temporary loss of aesthetic quality would occur as a result of the proposed action due to construction equipment, noise and air degradation. The project area would return to its original aesthetic quality after construction.

(e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. Not applicable.

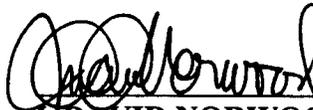
g. Determination of Cumulative Effects on the Aquatic Ecosystem. The proposed action is not expected to have significant cumulative adverse impacts. The action would have cumulative beneficial impacts on the reduced amount of erosion in the area.

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

III. FINDING OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE

- a. No significant adaptations to the guidelines were made relative to this evaluation.
- b. Two alternatives to the proposed action were: 1) No Action Alternative and 2) Riprap Alternative. Based on the finding of this Environmental Assessment, the proposed action would have similar impacts to placement of riprap and is the least costly.
- c. Pursuant to the Clean Water Act (CWA), Section 401, State Water quality and Coastal Zone Consistency Certifications have been requested from the State of Alabama, Department of Environmental Management. No action would take place until the certifications are received.
- d. The proposed action is not expected to harm endangered or threatened species or their critical habitats that may exist within the project area. The activity has been coordinated under Section 7 of the Endangered Species Act of 1973, as amended.
- e. The proposed action would not result in any significant adverse effects on: 1) human health or welfare, including municipal or private water supplies, recreation and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites; 2) the life stages of aquatic life and other wildlife dependent on aquatic ecosystems; 3) the aquatic ecosystems diversity, productivity and stability; and 4) recreational, aesthetic, and economic values. Appropriate and practicable steps will be taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.
- f. No wetlands would be destroyed by the proposed action.
- g. The proposed action is specified as complying with the requirements of these guidelines, with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem.

DATE 11. June. 1999



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