



FINDING OF NO SIGNIFICANT IMPACT

CRABTREE SWAMP AQUATIC ECOSYSTEM RESTORATION PROJECT HORRY COUNTY, SOUTH CAROLINA

The U.S. Army Corps of Engineers, Charleston District (Corps) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The Final Integrated Feasibility Report and Environmental Assessment (IFR/EA) dated **DATE OF FINAL REPORT**, for the Crabtree Swamp Aquatic Ecosystem Restoration Project addresses aquatic ecosystem restoration opportunities and feasibility for Crabtree Swamp in Horry County, South Carolina. The final recommendation is contained in the report of the Chief of Engineers, dated **DATE OF SIGNED CHIEF'S REPORT**.

The Final IFR/EA, incorporated herein by reference, evaluated various alternatives to restore Crabtree Swamp to a less degraded, more natural condition considering the ecosystem's natural integrity, productivity, stability, and biological diversity in the study area. The recommended plan is the National Ecosystem Restoration (NER) Plan and includes:

Floodplain Benching: Floodplain benching generally consists of excavating a 12-ft wide flat riparian bench followed by a 30-ft wide bench at 1.0% slope with a 1V:1H slope to tie into the natural grade. The benching will occur at four locations along both sides of the channel in Reach 1 and three locations along the south bank in Reach 2. Placement and elevation for each location will differ based on existing conditions. All floodplain benching will be accompanied by revegetation of the excavated areas.

Log-drop Structure: The log drop structure will be 24-inches in diameter, placed across the channel at an elevation that is largely submerged. It will penetrate approximately 10-ft into the bank on each side and will be anchored by approximately 2 cubic yards (CY) of riprap. It will be designed to withstand the 25-year storm velocities and the riprap will be covered with topsoil and revegetated. Log drop structures are proposed at one location in Reach 1 and two locations in Reach 2.

Berm Breaching: Six cuts will be made in the existing berms on the banks along both sides of the channel in Reach 3. The number of cuts and their locations coincide with low areas where erosion is already occurring. The design proposes to remove existing berm material to elevation 6.0-ft NAVD88 and will range in width between 150 linear feet (LF) to 370 LF. The side slopes will be 3H:1V on each side up to grade and will be armored with articulated concrete block mat (ACBM) to prevent erosion. Topsoil will be placed over the top of each berm cut and the area will be allowed to revegetate with volunteer plants.

Monitoring: The Draft Operation, Maintenance, Repair, Rehabilitation and Replacement Manual provided in Appendix G outlines the procedures for documentation of restoration measures and the overall progress towards successfully meeting the goals and objectives of the project. Monitoring is expected to last no more than 10 years.



In addition to a “no-action” plan, seven alternatives were evaluated. The alternatives included various combinations of measures including only log drop structures in one or two reaches, only floodplain benching in two reaches, a floodplain bench in one reach and log drop structures in a separate reach, a floodplain bench in two reaches and a log drop structure in one reach, and a floodplain bench in two reaches with a log drop structure in one reach and 6 berm breaches in a third reach. These alternatives, including the no action alternative were evaluated and compared, and alternative 8 with floodplain benching and one log drop in Reach 1, floodplain benching and two log drop structures in Reach 2 and 6 berm breaches in Reach 3 was selected. These are discussed in Chapter 3 – Plan Formulation, of the IFR/EA.

SUMMARY OF POTENTIAL EFFECTS:

For all alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the recommended plan are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened/Endangered species/critical habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cultural resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous and toxic waste	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Socioeconomics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Transportation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geology and soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. Best management practices (BMPs) as detailed in the IFR/EA will be implemented, if appropriate, to minimize impacts.



COMPENSATORY MITIGATION:

COMPENSATORY MITIGATION NOT REQUIRED:

No compensatory mitigation is required as part of the recommended plan. The recommended plan is expected to result in beneficial effects to waters of the U.S, including wetlands.

PUBLIC REVIEW:

Public review of the draft IFR/EA and FONSI was completed on **DATE COMMENT PERIOD ENDS**. All comments submitted during the public review period were responded to in the Final IFR/EA and FONSI. A 30-day state and agency review of the Final IFR/EA was completed on **DATE REVIEW PERIOD ENDS**. Comments from state and federal agency review did not result in any changes to the final IFR/EA (*to be updated for Final FONSI*).

OTHER ENVIRONMENTAL AND CULTURAL COMPLIANCE REQUIREMENTS:

ENDANGERED SPECIES ACT

INFORMAL CONSULTATION:

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the U.S. Army Corps of Engineers determined that the recommended plan may affect but is not likely to adversely affect the following federally listed species or their designated critical habitat: American wood stork (*Mycteria Americana*), Northern Long-eared Bat (*Myotis septentrionalis*). The U.S. Fish and Wildlife Service (FWS) concurred with the Corps' determination on **DATE OF LETTER** (*to be updated for Final FONSI*).

NATIONAL HISTORIC PRESERVATION ACT

HISTORIC PROPERTIES NOT ADVERSELY AFFECTED:

Pursuant to section 106 of the National Historic Preservation Act of 1966, as amended, the U.S. Army Corps of Engineers determined that historic properties would not be adversely affected by the recommended plan. The South Carolina State Historic Preservation Office concurred with the determination on **DATE OF LETTER** (*to be updated for Final FONSI*).

CLEAN WATER ACT SECTION 404(B)(1) COMPLIANCE

Pursuant to the Clean Water Act of 1972, as amended, the discharge of dredged or fill material associated with the recommended plan has been found to be compliant with section 404(b)(1) Guidelines (40 CFR 230). The Clean Water Act Section 404(b)(1) Guidelines evaluation is found in Appendix F of the IFR/EA.

CLEAN WATER ACT SECTION 401 COMPLIANCE

401 WQC OBTAINED:

The project has been determined to be consistent with the terms and conditions of Nationwide Permit Number (NWP) 27. The South Carolina Department of Health and Environmental Control issued a 401 Water Quality Certification without conditions for



Nationwide Permit 27 on April 23, 2012. All conditions of the water quality certification shall be implemented in order to minimize adverse impacts to water quality.

COASTAL ZONE MANAGEMENT ACT

CZMA CONSISTENCY PENDING:

A determination of consistency with the South Carolina Coastal Zone Management program pursuant to the Coastal Zone Management Act of 1972 will be obtained from the South Carolina Department of Health and Environmental Control, Office of Coastal Resource Management prior to construction. All conditions of the consistency determination shall be implemented in order to minimize adverse impacts to the coastal zone.

OTHER SIGNIFICANT ENVIRONMENTAL COMPLIANCE:

All applicable environmental laws have been considered and coordination with appropriate agencies and officials has been completed.

FINDING

Technical, environmental, and cost effectiveness criteria used in the formulation of alternative plans were those specified in the Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on this report, the reviews by other Federal, State and local agencies, Tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date

Rachel A. Honderd, PMP
Lt Colonel, Corps of Engineers
District Commander