



**DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
100 W. OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3604**

FINDING OF NO SIGNIFICANT IMPACT

**Savannah Harbor Expansion Project
Fish Passage at New Savannah Bluff Lock and Dam
Richmond County, Georgia and Aiken County, South Carolina**

The U.S. Army Corps of Engineers, Savannah District (USACE) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The final Post Authorization Analysis Report and Supplemental Environmental Assessment (PAAR/SEA) dated 30 August 2019, for the Savannah Harbor Expansion Project Fish Passage at the New Savannah Bluff Lock and Dam addresses mitigation requirements for impacts to two endangered sturgeon species as a result of the Savannah Harbor Expansion Project. The PAAR/SEA supplements the January 2012 Final Environmental Impact Statement for the Savannah Harbor Expansion Project. The final recommendation is contained in the Savannah Harbor Expansion Project, Georgia and South Carolina: Fish Passage at New Savannah Bluff Lock and Dam Integrated Post Authorization Analysis Report and Supplemental Environmental Assessment (PAAR/SEA).

The Final PAAR/SEA, incorporated herein by reference, includes evaluations that USACE performed to identify how the Savannah Harbor Expansion Project fish passage mitigation feature should be modified to meet the requirement in Section 1319 of the Water Resources Development Act of 2016. The recommended plan (2-6d) provides in-channel fish passage that includes:

- A 500 foot width weir with an average crest elevation of 108.2 feet NAVD88 (109.0 feet NGVD29), a 2 percent slope upstream to the weir crest and a 10 percent slope downstream from the crest to the river bend.
- A low-lying floodplain bench approximately 275 feet in width and excavated down to elevation 110 feet NAVD88 on the Georgia side of the existing dam location to provide additional flow conveyance.
- Removal of the lock and dam, including the foundation down to elevation 91.2 feet NAVD88. The resulting concrete rubble will be hauled off and disposed of at a landfill facility unless suitable for use as construction material pending evaluation.
- Acquisition of approximately 10 acres of commercial forested lands and construction of a new boat ramp and parking area to replace the existing boat ramp that will become unusable when the recommended plan is constructed, and conveyance of the approximately 50-acre park to Augusta-Richmond County upon project completion.

In addition to a “no action” plan, seven alternatives were evaluated. The final array of alternatives, described and compared in Section 3.5 of the report, included Alternative 1-1, which consists of repairing the NSBLD gates and piers and the riverside lock wall. Additionally, construction of a 200 foot wide fish ramp structure would be constructed through the lock chamber and into the adjacent area of the park on the Georgia side of the river. The structure would have a 2 percent slope upstream to the weir crest and a 10 percent slope downstream from the crest to the river bed, with an ultimate weir crest elevation of 109.2 feet NAVD88 (110.0 feet NGVD29).

Alternative 2-3 consists of a fixed crest weir with a rock ramp sloping upstream at existing dam location with a 2 percent slope upstream to the weir crest, and a 10 percent slope downstream from the crest to the river bed. The lock and dam would be removed, including the foundation, down to elevation 91.22 feet NAVD88. The weir would be 500 feet in width with an average crest elevation of 106.2 feet NAVD88 (107.0 feet NGVD29).

Alternative 2-6a consists of a fixed crest weir with a rock ramp sloping upstream at the existing dam location, with a 2 percent slope upstream to the weir crest and a 10 percent slope downstream from the crest to the river bed. The fish passage structure would be constructed 500 feet in width as described in Alternative 2-3 but with these changes: The weir would be 500 feet in width with an average crest elevation of 109.2 feet NAVD88 (110.0 feet NGVD29). The lock and dam would be removed, including the foundation down to elevation 91.22 feet NAVD88. A floodplain bench approximately 275 feet in width would be excavated to elevation 110.0 feet NAVD88 (110.8 feet NGVD29) on the Georgia side of the existing dam location to ease the passage of flood waters past that point in the river but would not contain all the flood water. The bench would be grassed or rock lined to prevent erosion. The acquisition of 10 acres of commercial forested land would be needed for the construction of a new boat ramp located just upstream of the existing boat ramp.

Alternative 2-6b consists of a fixed crest weir with a rock ramp sloping upstream from the existing dam location with a 2 percent slope upstream to the weir crest, and a 10 percent slope downstream from the crest to the river bed. The lock and dam would be removed, including the foundation, down to elevation 91.22 feet NAVD88, and the fish passage structure would be constructed 500 feet in width as described in Alternative 2-3 with the following changes: The weir would have an average crest elevation of 106.2 feet NAVD88 (107.0 feet NGVD29). A floodplain bench approximately 275 feet in width would be excavated to elevation 110.0 feet NAVD88 on the Georgia side of the existing dam location. The bench would ease the passage of flood waters past that point in the river. The floodplain bench would be partially inundated for the 1-yr return interval flow of 16,500 cfs. The acquisition of 10 acres of commercial forested land would be needed for the construction of a new boat ramp located just upstream of the existing boat ramp.

Alternative 2-6c consists of a fixed crest weir with a rock ramp sloping upstream from the existing dam location. The structure would have a 2 percent slope upstream to the weir crest, and a 10 percent slope downstream from the crest to the river bed. The lock and dam would be removed, including the foundation, down to elevation 91.22 feet NAVD88 and the fish passage structure would be constructed 500 feet in width as described in Alternative 2-3 with the following changes: The weir would have an average crest elevation of 107.2 feet NAVD88 (108.0 feet NGVD29). A floodplain bench approximately 275 feet in width would be excavated to elevation 110.0 feet NAVD88 on the Georgia side of the existing dam location. The bench would ease the passage of flood waters past that point in the river. The floodplain bench would be partially inundated for the 1-yr return interval flow of 16,500 cfs. The acquisition of 10 acres of commercial forested land would be needed for the construction of a new boat ramp located just upstream of the existing boat ramp.

Alternative 2-8 consists of a fixed weir with a rock ramp at the existing dam site with an active flood passage structure in an excavated bypass channel through the park on the Georgia side of the river. The structure would have a 2 percent slope upstream to the weir crest, and a 10 percent slope downstream from the crest to the river bed. The lock and dam would be removed including the foundation down to elevation 91.22 feet NAVD88, and the fish passage structure would be constructed 500 feet in width as described in Alternative 2-3. The structure in the bypass channel would consist primarily of two - 50 foot wide, 40 foot high gates used to pass high flows. The bypass channel would be operated to pass high flows by fully lifting the gate(s) out of the water during high flows and otherwise remain closed to maintain the pool elevation during low and normal flow conditions. The acquisition of 10 acres of commercial forested land would be needed for the construction of a new boat ramp located just upstream of the existing boat ramp.

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
Aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic resources/wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fish and wildlife habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Threatened/Endangered species/critical habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic properties	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other cultural resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Floodplains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous, toxic & radioactive waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public infrastructure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Socio-economics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tribal trust resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate change	<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 PAAR/SEA will be implemented, if appropriate, to minimize impacts. Measures to minimize impacts are part of the Environmental Design Commitments.

The following commitments are an integral part of the proposed action:

1. If the proposed action is changed significantly or is not implemented within one year, Savannah District will coordinate with the U.S. Fish and Wildlife Service and National Marine Fisheries Service to ensure that the proposed action would not adversely affect any Federally-listed threatened or endangered species, or the designated critical habitat of such species.
2. If any unrecorded cultural resources are determined to exist within the proposed project boundaries and ground disturbance is required, then no work will proceed in the area containing these cultural resources until a Savannah District staff archaeologist has been notified and final coordination with the State Historic Preservation Officer and Tribal Historic Preservation Officer has been completed.

3. The use of explosives to demolish the dam will not be used.
4. As a result of the second amendment to the 2011 Biological Opinion from National Marine Fisheries Service received on 10 October 2017, the proposed project includes the following measures to minimize potential impacts to sturgeon:
 - a. Construction of the fish passage shall commence prior to January 2021 and be completed within three years.
 - b. To minimize effects to spawning sturgeon and their offspring, no in-water fish passage construction downstream of the NSBLD shall occur between August 15 and April 15 of any year. In-water construction of the fish passage may be performed downstream of the dam between April 16 and August 14 of any year, and upstream of the dam throughout the year.
 - c. In addition, the following protection measures during the construction of the fish passage will be completed:
 - Appropriate erosion and turbidity controls shall be utilized wherever necessary to limit sediments from entering the water.
 - Dredging and construction shall be conducted with minimum environmental impact.
 - No construction debris shall be allowed to enter the water.
 - To ensure passage throughout the habitat, adequate pathways must be provided at all times so that fish can migrate between foraging habitat and spawning habitat; no blocking of the channel is allowed.
 - Normal river stage (~ 113 feet NAVD88) must be maintained throughout construction of the fish passage.
 - The USACE shall not reduce flows during spring/early summer to aid in the construction of the fish passage.

COMPENSATORY MITIGATION:

The recommended plan will result in unavoidable adverse impacts to wetlands within the project area as a result of the footprint of the construction of the fish passage structure. Wetlands impacts due to the Recommended Plan are very similar to the impacts covered by SHEP 2012 FEIS and Appendix C. Mitigation for 0.41 acres of wetlands would be required, and the USACE is looking at two potential mitigation banks located in the vicinity of the project area to mitigate for those impacts.

Public review of the draft PAAR/SEA and FONSI was completed on 16 April 2019. All comments submitted during the public review period were responded to in the Final PAAR/SEA and FONSI. A 30-day state and agency review of the Final PAAR/SEA was completed on 16 April 2019. Comments from state and federal agency review did not result in any changes to the final PAAR/SEA.

ENDANGERED SPECIES ACT***FORMAL CONSULTATION:***

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the National Marine Fisheries Service (NMFS) issued a biological opinion, dated 13 October 2017, that determined the recommended plan will not jeopardize the continued existence of the following federally listed species or adversely modify designated critical habitat: shortnose and Atlantic sturgeon. All terms and conditions, conservation measures, and reasonable and prudent alternatives and measures resulting from these consultations shall be implemented in order to minimize take of endangered species and avoid jeopardizing the species.

NATIONAL HISTORIC PRESERVATION ACT***HISTORIC PROPERTIES 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 will be adversely affected by the recommended plan. The South Carolina and Georgia SHPOs concurred with this determination and that mitigation would be required. USACE has executed a Programmatic Agreement for the Savannah Harbor Expansion Project in February 2012 that addresses compliance and mitigation for archaeological resources that may be affected by the deepening project, which includes the construction of mitigation features. The Corps is currently in consultation with the South Carolina and Georgia SHPOs on a Memorandum of Agreement (MOA) to carry out mitigation that will be executed prior to construction of the fish passage component of SHEP. This MOA describes the mitigation requirements for the adverse effect to the New Savannah Bluff Lock and Dam structure, which is eligible for listing on the National Register of Historic Places under Criteria A and C. All conditions contained in the agreement shall be fully implemented in order to mitigate adverse effects to the historic property.

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 C.F.R. Part 230). The Clean Water Act Section 404(b)(1) Guidelines evaluation is found in Appendix C3 with a 404(b)(1) evaluation of the PAAR/SEA.

CLEAN WATER ACT SECTION 401 COMPLIANCE:

401 WATER QUALITY CERTIFICATION OBTAINED:

A water quality certification pursuant to section 401 of the Clean Water Act was obtained from the states of South Carolina and Georgia for the Savannah Harbor Expansion Project and all of its mitigation features, which includes the Fish Passage feature at the New Savannah Bluff Lock and Dam. The proposed project is determined to be consistent with applicable state water quality standards as described in SHEP 2012 FEIS. 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:

Although the project is not in a coastal zone, indirect or direct effects on the coastal zone were evaluated to determine effects to the coastal zone. A determination of consistency with the Coastal Zone Management programs of the States of South Carolina and Georgia was provided to Georgia Department of Natural Resource, Coastal Resources Division and South Carolina's Department of Health and Environmental Control on 13 March 2019 and 29 March 2019, respectively. Pursuant to Section 307 of the Coastal Zone Management Act of 1972, as the project is outside of the Coastal Zone and also has no indirect impacts to the Coastal Zone, it was determined to be consistent with both coastal zone programs.

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.

10/29/19

Date



Daniel H. Hibner, PMP
Colonel, U.S. Army
Commanding