Savannah Harbor Expansion Project
Environmental Features

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG ®**

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Overview

The U.S. Army Corps of Engineers Savannah District released its final report on the Savannah Harbor Expansion Project in April 2012. The final report—consisting of a General Re-evaluation Report (GRR) and an Environmental Impact Statement (EIS)—concludes that deepening the harbor to 47 feet is economically viable, environmentally sustainable, and in the best interests of the United States. The final report recommends the 47-foot plan, which is also the "National Economic Development" Plan. The Corps recommended implementation of that plan to Congress. Congress passed the Water Resources, Reform and Development Act (WRRDA) in May 2014 and the President signed it into law in June 2014. The passage of the WRRDA 2014 bill authorizes the construction of the SHEP at a cost of $706 million.

Environmental Review

Agency coordination on the report included the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries, state agencies in Georgia and South Carolina, and others. Substantial coordination with the public also occurred through multiple meetings of a Stakeholders Evaluation Group. The process included both the normal steps followed during a typical Corps of Engineers' civil works study as well as additional steps to meet the unique congressional authorization, which stipulated the final report must be approved by the four federal agencies.

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From a broad perspective, environmental mitigation planning consists of three major steps:
1) avoid impacts, 2) reduce impacts, and;
3) mitigate/compensate for unavoidable impacts.

The final report concludes that the environmental impacts of deepening the shipping channel to 47 feet can be mitigated to an acceptable level. Mitigation features account for *about half* of the total project cost. The final report addresses these environmental mitigation features:

Flow Re-routing and Freshwater Marsh

The 47-foot plan includes several modifications to tidal creeks in the upper harbor. These changes will re-direct the flow of freshwater to significantly reduce the amount of impacts to freshwater marsh, which the Wetlands Interagency Coordination Team determined to be the highest priority wetland natural resource in the Savannah River Basin. That team included representatives from Georgia, South Carolina, USEPA, USFWS and NOAA Fisheries. The flow re-routing plan essentially will direct more freshwater into the Back River area on the South Carolina side of the river.

Without flow re-routing, the harbor deepening would increase salinity in 1,177 acres of freshwater tidal wetlands, converting it to brackish marsh. However, with flow re-routing, the project will only convert 223 acres of freshwater wetlands to brackish marsh. The additional freshwater may also convert 740 acres of salt marsh to brackish marsh. This conversion will be mitigated with the acquisition and preservation of 2,245 acres of freshwater wetlands for the Savannah National Wildlife Refuge. The USFWS previously identified the lands to be acquired as valuable additions to the refuge.

Marsh Restoration

The 47-foot plan would excavate 16 acres of tidal brackish marsh to remove Back River tide gates and expand the Kings Island Turning Basin. To mitigate for those impacts, 28 acres of brackish marsh will be restored on Onslow Island, a dredged material disposal site in the upper portion of the harbor.

Striped Bass Stocking

The Striped bass, a popular game fish, is making a comeback in the lower Savannah River as a result of a Georgia Department of Natural Resources stocking program. The deepening project would provide $3.3 million in funds for additional stocking to compensate for increased salinity in areas used by this species for spawning. The plan also includes construction of a boat ramp to restore boating access for fishermen on the Back River, at the request of the South Carolina Department of Health and Environmental Control.

Artist's Rendering: Fish passage design at the New Savannah Bluff Lock & Dam near Augusta, Georgia.

Fish bypass at New Savannah Bluff Lock and Dam

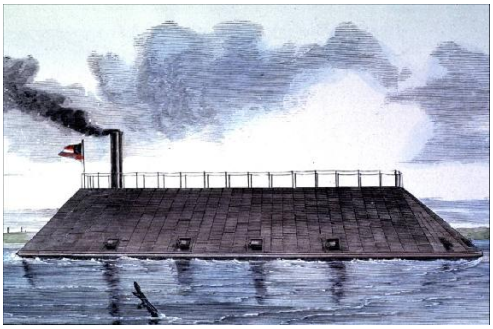
Harbor deepening would allow additional saltwater to enter the harbor and travel further upstream into areas currently used by endangered sturgeon species. The increased salinity would reduce the suitability of some of these areas. To compensate for those impacts, the project includes construction of a large fish bypass around the first dam up the Savannah River (New Savannah Bluff Lock and Dam). The design will enable the sturgeon and other species to swim upstream, as well as restore access to historical sturgeon spawning grounds. The gates at the dam will remain closed at flows less than 9,000 cubic feet per second (cfs) to allow 100 percent of the river flow to pass through the off-channel rock ramp. The design was coordinated closely with NOAA Fisheries and other natural resource agencies. NOAA Fisheries provided a Biological Opinion concluding that with the mitigation plan, the project will have no significant impact to these species.

Dissolved Oxygen System

The deepening project includes the installation, operation and maintenance of 12 devices called Speece Cones, which will inject oxygen into the river to maintain necessary dissolved oxygen (DO) levels during hot, dry months, when oxygen levels typically drop. Two of the 12 Speece Cones will serve as back-up units. The modeling that indicates oxygen levels would be impacted by harbor deepening also indicates that DO levels would exceed the existing conditions in well over 90 percent of the estuary with the DO system in place.

Recovering the CSS Georgia

The historic ironclad CSS Georgia rests some 40 feet below the river's surface on the channel side slope and at the edge of the navigation channel. The harbor deepening plan calls for the data recovery, removal and conservation of this cultural resource before dredging in that area begins.



Historical illustration of the CSS Georgia.

Post-Construction Monitoring and Adaptive Management

The final report identifies a post-construction monitoring period of 10 years (increased from 5 years in the draft report at the request of USEPA, USFWS, and NOAA Fisheries). This period provides the Corps of Engineers increased time and resources to monitor the various mitigation features and make adjustments as necessary.

More at: http://www.sas.usace.army.mil/Missions/CivilWorks/SavannahHarborExpansion.aspx