

Habitat Restoration in the Satilla River Estuary – Noyes Cut

The US Army Corps of Engineers (USACE), Georgia Department of Natural Resources, and Satilla Riverkeeper are working to restore estuarine marsh-creek ecosystem by closing two obsolete navigation cuts and an old creek channel. Over the past century, altered tidal flow due to these artificial cuts has degraded fish and shellfish habitat by obliterating the salinity gradient and increasing sedimentation that reduces access of aquatic species and recreational anglers. **These closures are expected to return a natural salinity gradient to the tidal creeks and halt a shoaling issue that has restricted access for aquatic species and anglers alike.**



Above: The impacted area is located in the northern part of Camden County at the mouth of the Satilla River.

Noyes Cut is an unmarked portion of the Intracoastal Waterway (ICW) under the authority of USACE. Prior to USACE's involvement, Noyes Cut was said to have been a shallow ditch hand dug in 1910 by local interests to float logs across the marsh at high tide.

Noyes Cut is now approximately 3,100 ft long and 500 ft wide, and it continues to get wider and deeper with the action of the tides.

The Alternate ICW Cut has made Noyes Cut obsolete for navigation.



The three closures mapped above are expected to restore over 4,500 acres of Essential Fish Habitat for **brown and white shrimp**, and the snapper/grouper complex including: **juveniles of black sea bass, gag grouper, lane snapper, gray snapper, sheepshead, and Atlantic spadefish.**

Atlantic coast diadromous fish should benefit: **Striped bass, American shad, Hickory shad, Alewife, Blueback herring, and American eel.**

Other recreational and commercial species to benefit: **spotted seatrout, red drum, summer flounder, blue crabs, and possibly eastern oyster.**

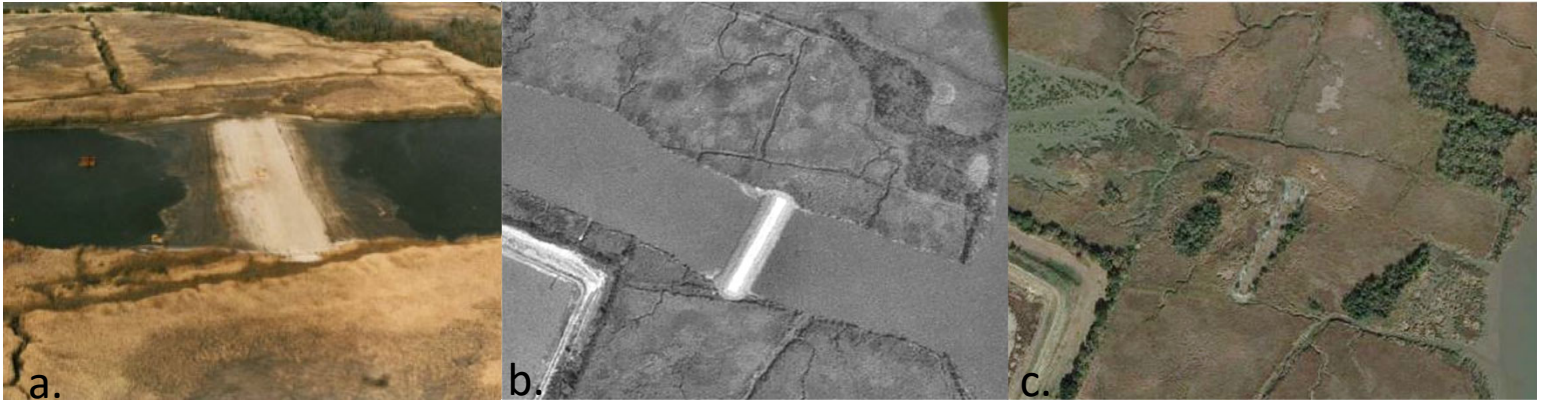
Threatened species should benefit from deeper passage and complete salinity gradients: **West Indian manatee** in search of food and fresh water, and **wood storks** foraging in expanded brackish and fresh tidal wetlands.

In 2013, the Georgia Legislature passed a joint resolution (SR 267) requesting USACE to close Noyes Cut for **the twin purposes of improving fish habitat and boater access in the Satilla River estuary**. This project was re-authorized under Section 1135 Continuing Authorities Program (CAP), and USACE conducted a thorough feasibility study, resulting in the plan to close Noyes Cut, Dynamite Cut, and an old creek channel. The Georgia Department of Natural Resources provided the required 50% match of USACE funds for the feasibility study, with the State of Georgia and the Satilla Riverkeeper as co-sponsors. This is a highly cooperative project in which the goals align among local residents and fishers, the environmental community, fisheries managers, and USACE. *Everyone is on the same page.*

The USACE is ready to move into the Design and Implementation phase of the project. Cost sharing requires a 25% non-federal match to the 75% cost contributed by USACE under Section 1135 CAP.

Non-federal=\$1,901,250 Federal= \$5,703,750 Total Project Cost=\$7,605,000

The state of Georgia has provided the Non-federal match through the Georgia Outdoor Stewardship Program. As a stakeholder, Satilla Riverkeeper is looking to ensure the federal funding is available so this impactful, shovel-ready estuarine restoration project can move forward.



Images above illustrate a USACE closure at New Cut in the Savannah River Estuary. Closures will be constructed of rip rap and bedding stone, and will be tied into the marsh with sheet pile, similar to New Cut closure shortly after construction (a., b.). Wetland habitat is expected to fill in naturally on the low-energy side of the closures, as shown in c., approximately 20 years after construction of New Cut closure. (Figures 17, 18, 19 of USACE Feasibility Study Report, 2018)

Habitat restoration adds economic value: Noyes Cut impacts an estimated 10,000 acres of tidal marshes and 50 miles of tidal creeks – a little over 2.5% of Georgia’s total marshlands. Coastal fishery managers believe the presence of this kind of habitat accounts for a commercial and recreational fishery that **adds over \$240 million per year to Georgia’s economy**. Just an 8% improvement in fishery output from the area impacted by Noyes Cut **should return a half-million dollars per year in added fishery value**.

Innovative solution to widespread issue: This case should demonstrate a novel way to restore estuarine habitat, including diadromous fish habitat. In the last two centuries, literally thousands of shortcuts have been made in tidal creeks along the eastern seaboard of the United States. Some are likely to have caused habitat damage by obliterating salinity gradients and triggering shoaling, ultimately hindering fish access to the upper reaches of small estuarine creeks. Shallow, low salinity headwater regions are of special importance for survival and growth of the youngest juveniles of many estuarine animal species, including many commercially and recreationally valuable fishes, crabs, and shrimps. **Closing key cuts all along the eastern seaboard could revive estuarine animal populations decimated by numerous alterations to estuarine habitats.**

Ecological data, including fish sampling by gill nets and trawls, has been collected approximately monthly for five years (through 2019) at two points in tidal creeks within the 4,500-acre project area, and two points outside the area. We anticipate that sampling will continue post-project for comparison. This sampling by a research team from Augusta University and Georgia Southern University will help assess the success of restoration efforts.



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The full report can be downloaded by clicking on the title “Noyes Cut, Satilla River Basin, Georgia - Final Integrated Feasibility Study and Environmental Assessment and Finding of No Significant Impact” at the Plans and Reports website of the Savannah District: <http://www.sas.usace.army.mil/About/Divisions-and-Offices/Planning-Division/Plans-and-Reports>