



Northeast Florida RSM - A Guide to Using Dredged Materials for Estuarine Restoration

Description

This effort develops an RSM Guide to assist stakeholders in the evaluation and implementation of beneficial use alternatives to restore back bay/estuarine habitat. By supporting stakeholders' RSM efforts, this guide will benefit Corps' missions and advance implementation of RSM in Northeast Florida.



Figure 1. Northeast Florida counties included in the study area (Nassau, Duval, St. Johns, Flagler, and Volusia Counties).

Issue/Challenge To Address

To develop, permit, and fund their own Regional Sediment Management (RSM) actions, stakeholders need information from USACE on available sediments and how to access them. This effort develops an RSM Guide to assist stakeholders in the evaluation and implementation of beneficial use alternatives to restore back bay/estuarine habitat. It capitalizes on the Northeast Florida Estuarine Restoration Team's (NERT) ongoing multi-year strategy for restoration projects in the region. NERT partners have requested the proposed guide to help determine sediment availability, suitability, and rough-order-of-magnitude costs to evaluate the feasibility of restoration efforts.

Results of this effort have the potential to benefit the Corps' navigation, environmental restoration, and flood risk management mission areas. The guide would focus on sediment suitability for back bay/estuarine environmental restoration. Such sediment often has higher fines content and is placed in dredged material management areas (DMMA). Facilitating the beneficial use of such material would free DMMA capacity and result in cost saving for Corps navigation projects. In addition to ecosystem restoration, use of the material to restore back bay marshes in proximity to developed areas could maintain or improve storm surge damage reduction benefits provided by coastal marshes and other back bay environments.

Successes Lessons Learned

Lessons learned will be compiled during the duration of the study and summarized in the final report.



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Projected Benefits Cost Savings Value Added

This effort benefits all Corps mission areas:

Navigation – Reducing lifecycle costs by potentially reducing DMMA capacity demands. Material from active dredging projects can be beneficially used rather than going into a DMMA and/or DMMA capacity can be created by offloading sediment. In both cases, stakeholders would fund the cost difference above the federal standard.

Ecosystem Restoration - by supporting stakeholder efforts to restore ecosystem function and structure which has been degraded.

Flood Risk Management – facilitating restoration potentially improves storm damage reduction functions of ecosystems (e.g. storm surge mitigation provided by marshes).

Multiple value-added opportunities exist. Leveraging SACS data and compiling these data with additional information into a format useful for stakeholder efforts to facilitate implementation of RSM is a significant cost savings to NERT on the order of thousands of dollars. Implementation of beneficial use actions resulting from the information is on the order of millions of dollars in environmental benefits. Creating or sustaining capacity in USACE DMMA's results in millions in costs savings by eliminating the need to expand DMMA's or to develop additional upland disposal areas.

Expected Products

- Coordination Meetings with Stakeholders
- Northeast Florida RSM Guide and Technical Note
- Presentation of Findings

Stakeholders/Users

NERT is a multi-agency stakeholder group that facilitates coordination of environmental restoration initiatives in estuarine and back bay areas of northeast Florida. Stakeholders represented by NERT that will utilize the information developed include the U.S. Fish and Wildlife Service, the National Park Service, NOAA's National Estuary Research Reserve System, Florida Fish and Wildlife Conservation Commission, Florida Department of Environmental Protection, and Florida Park Service, as well as other local government entities.

Leveraging Opportunities

This proposal leverages efforts by the NERT to develop a long-term restoration strategy for northeast Florida back bay and estuarine environmental resources, and ongoing efforts associated with the Corps' South Atlantic Coastal Study (SACS). NERT would provide the data compiled for the restoration strategy and information on restoration opportunities in the study area. SACS is a comprehensive analysis of coastal storm risk throughout the South Atlantic Division (SAD) focusing on the increase of coastal storm impacts as sea levels rise to populations, infrastructure, and environmental and cultural resources. SACS will be collecting and evaluating information on sediment availability and characteristics from deep draft navigation channels and dredged material disposal areas (DMMA's) for the purpose of beneficial use. Such information will be available for incorporation into this effort. Conversely, the SACS Northeast Florida Focus Area will leverage data from this effort to develop strategies for actions identified during stakeholder workshops.

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Participating Partners

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