



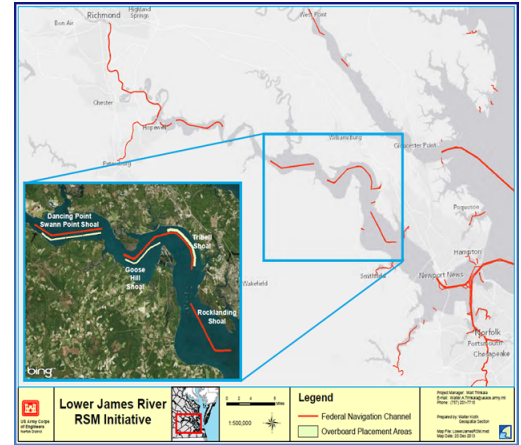
US Army Corps of Engineers
 Engineer Research and Development Center

National Regional Sediment Management Program Norfolk District (NAO):



James River Federal Navigation Channel, Lower Reaches

Description (The work accomplished in previous year helped the James River O&M team to identify the regional problem (apparent changes in shoaling rates in the lower reaches of the James River) and provide base knowledge to improve dredging management along the lower James River. A robust hydrodynamic and sediment transport framework was developed to help understand this system. A comprehensive data set for sediment characterization was collected which can be used for model input.



Issue/Challenge To Address

This work will address several outstanding questions that if answered will support regional sediment management of the area. NAO would like to examine currently utilized placement sites and predict their life cycle as well as optimize the location of placement at Tribell shoals site in the Lower James River Initiative area. This will be accomplished using USACE ERDC developed models that can predict hydrodynamics and sediment transport for the area. Understanding the fate of dredged material placed at these sites will give vital information to the James River O&M team. The end result should help the James River O&M team optimize budget and prepare for future years of dredging as well as perform a risk assessment which may help reduce dredging costs significantly.

Successes Lessons Learned

- (1) Dancing Point Swann Point and Goose Hill Shoal Channel(s) placement site modeling completed
- (2) Addressing sediment transport from each placement site as a regional concern in addition to our local focus.
- (3) Additional lessons learned will be compiled during the duration of this study.

Projected Benefits Cost Savings Value Added

Economic benefits, cost savings
 Dredging Operation efficiency and savings
 Ultimate efficiency of time and money.

Expected Products

- James River Placement Sites Lifecycle Model
- Final Report and Presentation
- Journal Article

Stakeholders/Users

The James River Partnership is already formally organized to examine regional sediment management needs on the lower James. The partnership executive committee was briefed on the direction on the James River RSM effort. Stakeholder participation opportunities will be communicated through the partnership.

Leveraging Opportunities

Partnering Program/Initiative	Leveraging Potential
Virginia Port Authority	Local sponsor is a cost sharing sponsor in dredged material placement; savings in



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	placement costs mean more funds to accomplish much needed dredging
DOER	DOER program completed some preliminary test runs of PTM on Tribell Shoal on the James River in 2013. This work will be expanded and supported by improved hydro and extensive field data collected previously.
O&M General	Operations focused effort provides navigation benefits to the project, seeking to reduce O&M costs on individual components so that funds can be applied elsewhere to better achieve the navigation mission.

Points of Contact

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