

US Army Corps of Engineers. Engineer Research and Development Center

Regional Sediment Management Program

RSM Regional Center of Expertise: RSM Optimization Tool



Description

The Regional Sediment Management (RSM) Optimization Tool was developed to help define sustainable solutions across USACE missions and to support regional implementation strategies across multiple projects and business lines. The goals of the tool are to: (1) develop and provide an actionable and optimized RSM strategy that will most efficiently execute the Navigation (NAV) and Flood Risk Management (FRM) program budgets, and (2) maximize the amount of dredging while also increasing the amount of RSM opportunities implemented to create value for the nation. The tool provides placement options and associated project costs for NAV, FRM, and ECO for projects, providing decision-makers with the information they need to manage and execute RSM.

The RSM Project Dashboard was developed in FY16 to visualize RSM opportunities and value at the project level and summary statistics at the project, district, division, and national levels (top).

For FY17, the RSM **Optimization Submission** Tool was developed to more efficiently capture project level data and facilitate standardization of data entry and use of authoritative **USACE** data sources (bottom). The Submission Tool includes CAC authentication, data entry and editing functionality, and a graphical interface of sediment sources and placement areas to define RSM opportunities and value. The RSM Regional Center of Expertise (RCX) is working with the Mobile District Spatial Data Branch to incorporate the Project Dashboard and Optimization



Submission Tool on the USACE Navigation Portal by the end of FY17.

Products

- Optimization Project Dashboard
- RSM Optimization Submission Tool
- Database of all project data including project costs and contract costs
- Estimates of RSM Optimization value for NAD



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Stakeholders/Users	Stakeholders include all USACE decision makers from district project managers and engineers to HQ personnel that need information regarding dredged material placement strategies, project costs, and RSM value. Information can also be used to inform sponsors and other interested parties about associated costs and value of RSM opportunities.
Projected Benefits Value Added	The initial FY16 effort in SAD quantified RSM value of approximately \$100 million/year and estimates of value for NAD are likely equal to or greater than that of SAD. The Optimization Submission Tool provides an intuitive interface that allows users to visualize sediment sources and placement opportunities and record project information into a database in a web-based application. The project information will be incorporated into the Navigation Data Integration Framework (NDIF) to support other applications across the Navigation Portal platform.
Leveraging Opportunities	The RSM Optimization Submission Tool utilizes several authoritative national data sources including the eHydro, National Channel Framework, Placement Area database, Coastal Systems Portfolio database, and Ecological Restoration areas database. Other databases and relevant information such as shoaling rates derived from the Corps Shoaling Analysis Tool (CSAT) can be included in the application once established within the NDIF. Linking to data within the NDIF will facilitate updates to the Optimization tools as other authoritative data sources are updated.
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