



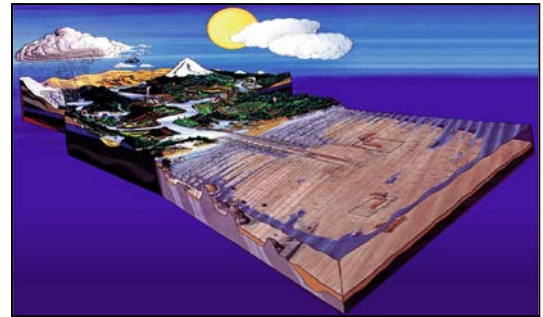
## Regional Sediment Management Program



### Description

Regional Sediment Management (RSM) addresses sediment issues and supports sustainable solutions to meet the needs across the Corps missions including navigation and dredging, flood and storm damage reduction, and ecosystem restoration while also considering the expectations and requirements of partnering organizations and governments. The goal is to create short- and long-term cost savings and increase economic and environmental benefits through adaptive management of sediments from a regional perspective. Benefits of the RSM approach are reduced lifecycle costs, improved partnerships with stakeholders and partners, improved regional and project sediment management, and improved environmental stewardship.

RSM utilizes knowledge of the regional sediment transport dynamics for managing projects and activities involving sand and other sediment. It recognizes sediment as a resource that is integral to economic and environmental vitality. Stakeholder teams identify inter-related sediment resource needs and opportunities and collaboratively leverage programs, projects, data,



information and other resources to balance sediment related objectives and take action to optimize the use of sediments both locally and regionally.

RSM has been shown through many examples to lead to significant cost savings when fully exercised with the tools, lessons learned, and District commitment. The program continues to work closely with Districts to share knowledge, experience, and best practices while addressing issues and solving regional sediment management challenges.

### Issue

Historically, the Corps has managed sediments and projects on a project-by-project basis. This approach may lead to unanticipated consequences if local project decisions do not consider the sediment transport within a regional context. To address these concerns, the Corps initiated the RSM program in 1999 with the objectives to implement regional management strategies that link the sediment management actions at authorized Corps projects with one another and to coordinate management activities with other Federal agencies, State, and local governments within the boundaries of physical systems including inland watersheds, rivers, estuaries, and the coast. In 2014, The Corps established the RSM Regional Center of Expertise to operationalize RSM by providing assistance to Districts in the implementation of RSM, quantifying value added and benefits of the RSM approach, identifying and outreaching RSM successes, and addressing RSM challenges.

### Users

RSM benefits Corps practitioners with environmentally and economically balanced and sustainable solutions in managing sediments. These results will also benefit other agencies and stakeholders who work with sediment management.



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**Products** The CE-Dredge enterprise Geographic Information System (eGIS) with analysis and visualization tools to assist in making management decisions and increase benefits resulting from improved sand management throughout the region. The Sediment Budget Analysis System for GIS (SBAS-Arc10) for developing and visualizing regional sediment budgets. Enhancements to 3D Lidar analysis capabilities, numerical models, and tools to assist in implementing regional approaches. Guidance for nearshore placement to improve the use of sediments, reduce shoreline erosion, and benefit the environment.

**Benefits** Managing sediment as a resource to benefit a region potentially lowers cost, allows use of natural processes to solve engineering problems, and improves the quality of the environment for projects and programs implemented by the U.S. Army Corps of Engineers. Under the RSM concept, sediment is considered a natural resource that provides environmental and economic benefits when it is managed effectively on a regional basis. The following are examples of benefits realized from RSM measures:

- Cost savings result from reduced rehandling of material; extended dredging cycles; sharing equipment in linked projects; shared information; and avoided duplication of data collection.
- Improved environmental conditions based on reintroduction of sediment into “sand starved” littoral systems reduce the requirement for beach nourishment and sustain habitat for threatened and endangered species.
- Shared regional-scale data management systems, models, and other tools improve project-level decisions and help achieve greater consistency in analytical results among studies and projects within a region.
- Improved interagency and stakeholder relationships produce opportunities for collaboratively leveraging financial and manpower resources to better understand the regional sediment processes, identify opportunities to improve the management of sediments, overcome challenges, and take action to implement and streamline strategies to optimize utilization of sediment locally and regionally.

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### Partners

Corps MSCs and Districts; Coastal and Hydraulics Laboratory (CHL); Environmental Laboratory (EL); Information Technology Laboratory (ITL); Navigation Program; Flood Risk Management Program; Environmental Restoration Program; Emergency Management; Engineering With Nature (EWN); Joint Airborne Lidar Bathymetry Technical Center of Expertise (JALBTCX); Coastal Inlets Research Program (CIRP); Dredging Operations and Environmental Research Program (DOER); Institute for Water Resources (IWR); National Dredging Team (NDT); other Federal, State, and local agencies and partners.