



# Regional Sediment Management in the Mid-Atlantic: Conserving Funds and Resources through Coordination

**S**ediment management projects are a critical public works need for coastal communities and businesses. Busy navigation channels must be dredged to make sure ships can safely reach local ports, ultimately keeping the price of goods you buy at the store low. As sea levels rise and climate change fuels more intense storms, beach replenishment has become an increasingly vital defense.

However, disconnects between the parties involved with independent sediment management projects can sometimes result in lost opportunities. Sediments dredged from an inshore channel may be ideal for a nearby wetlands restoration project, but without all sides being aware of each other's work and needs, the material is instead dumped at sea. Understanding how sand moves in a given system can help inform how best to place it to ensure it will naturally disburse along the coast.

**Regional Sediment Management (RSM)** is an approach that promotes greater coordination among all stakeholders to improve the management and use of sediments in coastal environments. RSM ensures private and public sector organizations are on the same page, leading to sustainable environmental, social and economic benefits.

RSM applies the best available science — such as regional expertise on how sediments flow through coastal environments — to better manage projects and activities involving sand and other sediment. It recognizes sediment as a resource that is limited, valuable and integral to economic and environmental vitality.

Employing a regional approach to managing sediment can lower costs, allow the use of natural processes to solve engineering problems, and improve the environment. Under the RSM concept, sediment sources and sinks in a coastal system, such as navigation channels and beach nourishment, are managed in a way that minimizes disruption to natural coastal processes through beneficial dredging, placement and bypassing of sediments. Partnerships between federal, state and local stakeholders are essential to produce viable RSM projects and programs.

## About

This document was produced by the **Monmouth University Urban Coast Institute** and **Mid-Atlantic Regional Council on the Ocean**, and made possible by a grant provided by the **National Oceanic and Atmospheric Administration**.

## Contact

**Dr. Thomas Herrington**, Urban Coast Institute Associate Director,  
[therring@monmouth.edu](mailto:therring@monmouth.edu) or  
(732) 263-5588.

MONMOUTH  
UNIVERSITY

URBAN COAST INSTITUTE

MARCO  
MID-ATLANTIC REGIONAL  
COUNCIL ON THE OCEAN







## Roles and Responsibilities

Interagency and stakeholder collaboration produces opportunities for leveraging financial and labor resources to better define regional sediment processes, identify ways to improve sediment management, overcome challenges, and implement strategies that make the best use of sediment locally and regionally.

- The **US Army Corps of Engineers Regional Sediment Management Program** promotes and implements regional management strategies that link sediment management actions at authorized Corps projects, coordinates management activities with other federal, state, and local governments, and develops tools and technologies to support RSM strategies.
- The **NOAA Restoration Center** is devoted to restoring coastal, marine, and migratory fish habitat in locations around the U.S., including advancing the science of habitat restoration, monitoring the success of restoration projects, and empowering local groups to implement their own community-based restoration projects.
- The **US Geological Survey** conducts fundamental science research on coastal sediment transport, coastal geomorphology, coastal hazards and marine aggregate resources and processes.
- The **Bureau of Ocean Energy Management Marine Minerals Program** partners with communities to address erosion along the nation's coastal beaches, dunes, barrier islands, and wetlands by identifying and leasing offshore sand resources.
- The **Environmental Protection Agency** is responsible for sediment management standards with regard to the movement, disposal and remediation of contaminated sediments.

Federal agency partnership with state and local stakeholders has led to the development of regional sediment management plans in the Mid-Atlantic for the NY/NJ Harbor Estuary Program, the Delaware Estuary, the Atlantic Coast of Maryland, and Long Island, New York.

## RSM Examples

### East Rockaway Inlet, New York

A cost-effective deposition basin was developed to trap sediment from the Rockaway Beach nourishment project, preventing it from filling in the navigation channel and improving circulation in the inlet.

### Manasquan Inlet, New Jersey

When maintenance dredging was conducted in the Manasquan Inlet navigation channel, the sediments were deposited in the littoral zone downdrift of the inlet as a beach nourishment measure.

### Barren Island, Maryland

Sediment dredged from the Honga River and Tar Bay navigation projects was re-used for the cost-effective restoration of Barren Island.