

## A Regional Sediment Management Approach to Coastal Projects: Restoring Navigation and Enhancing Coastal Resilience following Hurricane Sandy

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The U.S. Army Corps of Engineers (USACE), Philadelphia District has been participating in the national Regional Sediment Management Program (RSM) for over twelve years demonstrating significant accomplishments using sediment as a resource and developing strategies for future dredging and placement activities. After Hurricane Sandy impacted the Philadelphia District region, a need existed to remove critical shoals that were impeding navigation while at the same time adjacent beaches and environmental resources required repair. Navigation managers from the Philadelphia District took a proactive approach and quickly partnered with USACE's Engineering Research and Development Center to utilize RSM and Engineering with Nature (EWN) strategies for post-Sandy recovery efforts. Post-storm dredging of federal coastal channels and placement operations began in December 2012 and continued through March 2016.

Several examples of recent projects that utilized dredged material to replenish shorelines and restore wetlands in New Jersey will be presented including marsh restoration projects near Mordecai Island, Ring Island, Avalon and use of the shallow draft government dredges to support beach nourishment. Design and construction techniques for these projects will be discussed. Monitoring is ongoing and lessons learned are being developed that will contribute to long-term RSM strategies and the implementation of future projects that continue to build coastal system resilience for the region.

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