



Description

The U.S. Army Corps of Engineers (USACE), Baltimore District (NAB) will continue a tiered approach of updating a holistic sediment budget for the portion of the Maryland shoreline adjacent to the Atlantic Ocean. This initiative consists of updating a series of sediment budgets for the entire coastal area along the Atlantic Ocean within the NAB Area of Responsibility (AOR). This includes the sediment budget for the Atlantic Coast of Maryland Shoreline Protection Project for the 2008-2012 timeframe and the sediment budgets for the Ocean City Inlet and the Assateague Island Environmental Restoration Project. In the future, the results of this effort will ideally be incorporated into efforts completed by neighboring USACE Districts (Norfolk & Philadelphia) to culminate in a macro-scale regional coastal sediment budget. This initiative also included NAB training on the Sediment Budget Analysis System (SBAS) and the Regional Morphology Analysis Program (RMAP) via a Dredging Operations Technical Support (DOTS) request.



Issue/Challenge To Address

By developing an updated regional sediment budget, NAB may optimize dredging activities and renourishment operations by working with natural processes within the system. Results from analyses of beach profiles and multibeam bathymetric surveys will be integrated into the Sediment Budget Analysis System (SBAS) which will aid in the generation of a sediment budget in order to complete the stated objectives.

Successes Lessons Learned

Successes completed to date were increasing technical competencies within NAB to develop sediment budgets and use a variety of new software packages. NAB successfully updated the Atlantic Coast of Maryland Shoreline Protection Project Sediment Budget in FY2013 and has gained insight into hotspots, nodal points, and end losses.

Expected Products

- Sediment budget for the Atlantic Coast portion of the Baltimore District
- Derivation of coastal processes (i.e. hot spots, nodal points, littoral transport)
- Documentation of study findings via an RSM Coastal Hydraulic Engineering Technical Note (CHETN)

Stakeholders/Users USACE Baltimore District

Projected Benefits The District will be able to execute periodic renourishment efforts for the Atlantic Coast of Maryland Shoreline Protection Project and evaluate how the placement material is performing relative to historic findings.

Leveraging Opportunities This initiative will combine the datasets collected by three projects Atlantic Coast, Ocean City Inlet, and Assateague Island to provide an overall regional sediment management approach to the coastal projects within the NAB AOR. This sediment budget will be used to maximize placement of materials during bypassing efforts.

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Participating Partners Maryland Department of Natural Resources; Assateague Island Environmental Restoration Project, National Park Service; Engineer Research and Development Center, Coastal and Hydraulic Laboratory.