

FY15 RSM-EWN IPR

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Development of RSM & EWN Actions and Strategies for the Barnegat Inlet and Bay System

BLUF: USACE and NJDOT require a more detailed and long-term evaluation of all federal and state channels in the Barnegat system as well as evaluation of beneficial use of dredged material alternatives that would benefit the entire region.

Problem Statement/Issue

- Navigation Mission difficult to maintain for so many channels in such a dynamic sediment system
- Sediment System is active, but not well understood
- Traditional Placement Areas filling up
- Beneficial Use of Dredged Material can be difficult in NJ
- Need to maintain missions and build system resilience but need better technical understanding and decision support tools



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Approach to Address Problem

- Leverage work already ongoing, fill knowledge gaps
- Sediment Budget for the Barnegat Inlet System
- Design Alternatives for Beneficial Use of Dredged Material (BUDM) within the Barnegat Inlet System
- RSM Implementation

Approach to Address Problem (Tools, Models, Technologies)

- Sediment Budget for Inlet and Channel System (A. Frey, A. Morang, K. Brutsche) with epoch of 1992 to present
- BU-ADMM: a decision support tool for beneficial use (Candice Piercy)
 - Repeatabile and transparent tool for downselecting potential options
 - Being developed under the DOER program



BU-ADMM: a decision support tool for beneficial use



LBI beach/dune



Use geomorphic classification of landscapes to identify natural and “nature-based” geomorphic features compatible with BU



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USACE RSM PDT

- NAP
- ERDC (CHL & EL)
- SAW (Currituck)
- Dredge Contractor



Stakeholders/Partners

- NJ Department of Transportation
- NJ Department of Environmental Protection
- US Coast Guard
- US Fish & Wildlife Service
- Commercial and Recreational Boaters
- Others (BBP, NMFS, etc)

What key leveraging opportunity(s) did stakeholders/partners provide?

- Partnering on Placement Areas
- Communicating RSM & EWN Actions
- Resilience, Resilience, Resilience...riding the wave



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UPs – 3 Positives from effort

- Moving Sand
- Looking at Building Better Habitat
- Developing better understanding of system to become more proactive and less reactive; developing tools so that techniques can be used in other places



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DOWNs – 3 Negatives from effort

- **Stubborn stakeholder making technically inaccurate and reactive decisions, could give BU/RSM a bad name**
- **Lack of data in back bay sediment system limit the proposed budget**
- **Conflicts between resource agencies persist and prevent consideration of all potential beneficial use actions**



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Value to the Nation

- Cost savings (Currituck vs. Contract Dredge); System Approach to better handle sediment will improve cost effectiveness
- Value added
 - Sediment added to shore protection system
 - Difficult for \$ value since not direct on beach or saving from borrow
- \$/habitat credits
- Environmental benefits
- BUADDM Savings? Portfolio Framework for BUDM?
- Improved partnerships, happy stakeholders (commercial and boaters)
- Permitting and compliance requirements improved (cost savings from reduction in requirements)?? Probably



Stone Harbor Habitat Creation

