

# NAD Regional Sediment Management Update

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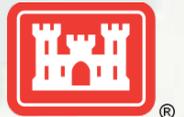


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# Agenda

- **RSM Program Updates for NAD Efforts**
- **Ongoing NAD Sediment Activities**
- **Non-Federal Feedback for Discussion**



# Civil Works Boundary

180,000 sq. miles  
16,700 miles of shoreline  
25% of the US Congress  
28 Senators  
105 Congressional Reps  
14 Governors  
62 Million people, 22% of US

## 14 States covered:

- 1- Connecticut
- 2- Delaware
- 3- Maine
- 4- Maryland
- 5- Massachusetts
- 6- New Hampshire
- 7- New Jersey
- 8- New York
- 9- North Carolina
- 10- Pennsylvania
- 11- Rhode Island
- 12- Vermont
- 13- Virginia
- 14- West Virginia



# RSM Program Updates for NAD Efforts



# NAO Mathews County VA RSM

## DESCRIPTION:

- ▶ The Mathews RSM project groups all the county's Federal Navigation channels and placement sites into a single system to determine a better way to manage sediments within the system boundary.
- ▶ The end goal of the RSM effort is to improve the overall performance of the navigation projects while providing better cumulative management of the dredged material as a beneficial use.
- ▶ 5 of the 6 projects within the system boundary have a capability expressed in future years' O&M budget requests. The Mathews RSM effort is respectful of the needs of the performance-based budgeting EC and seeks to improve the metrics of the individual work packages in the budget.

## FUNDING:

- ▶ Congressional carryover funds an track for expenditure by year end.
- ▶ Mathews RSM Earmarked funding will be depleted by year end.

## TECHNICAL PRODUCT STATUS:

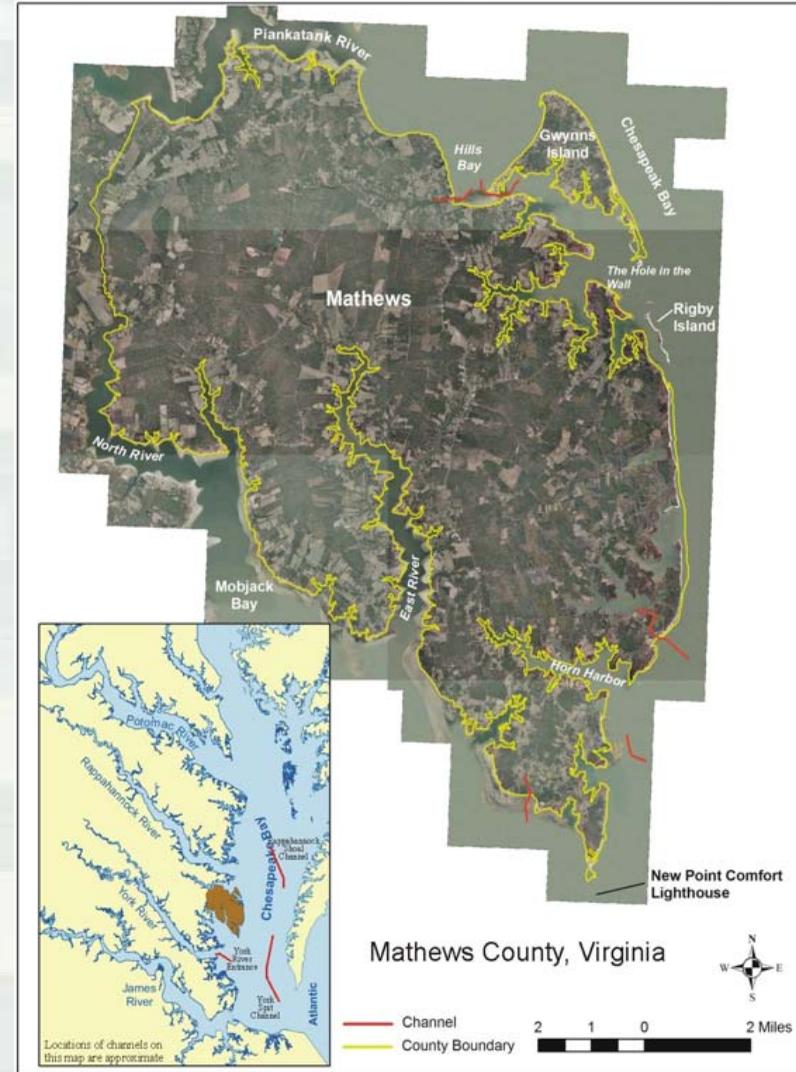
- ▶ VIMS Contract Completion date 31 July 2011
- ▶ Preliminary Sediment Budget and Knowledge Database Work effort finalized at year end

## OTHER CORPS INITIATIVES with Tie-ins to RSM:

- ▶ Shallow Draft Navigation (SDN) Pilot Projects at Horn Harbor and Queens Creek. Bavon Beach is the preferred local placement site for the Horn Harbor pilot project. RSM facilitates inter-agency habitat restoration effort at Bavon Beach.
- ▶ Middle Peninsula Public Access Authority Section 22 Study (Cost Shared Planning Assistance to States). Provide assistance in outlining future permitting and funding options for Middle Peninsula Shallow Draft Dredging projects.

## NEXT STEPS:

- ▶ RSM funding on the Mathews Project is quickly being expended. FY2012 progress on Mathews RSM is questionable without Program funds.
- ▶ The Mathews RSM efforts needs to continue developing sediment transport modeling that will "communicate digitally" better.
- ▶ Progress on the SDN Pilot Projects will include sources and sinks of sediment that need to be updated into the Mathews RSM plan
- ▶ If pilot projects continue forward there may be significant value produced for the Federal channels at Horn Harbor and Queens Creek (by extending the maintenance cycle and reducing sediment recycling). This value/cost savings/efficiency gain should be credited to RSM efforts. Continued RSM efforts beyond FY2011 could help document this benefit.
- ▶ Explore more into how Mathews RSM could benefit/comply with the Chesapeake Bay Executive Order
- ▶ Explore cross-District (NAO/NAB) benefits potentially available at Baltimore Harbor's Wolf Trap Placement site



# CENAN RSM STUDY– East Rockaway Inlet CMS Modeling Analysis

## Study Methodology:

1. Perform Literature Search, Data Collection of Historical Shoreline, Dredging Records, Existing Channel and Deposition Basins, Dredging Records, Bathymetric Survey Maps;
2. Determine Coastal Processes, Existing Condition Sediment Budget, Setup CMS Nested Model and Calibrate Existing & w/o Project Future Condition Sediment Transport;
3. Perform RSM Alternatives Screening (Periodic Sediment Bypassing, New Deposition Basins, etc.);
4. CMS Model Simulation - Proposed RSM Alternative;
5. Prepare With Project RSM Sediment Budget.

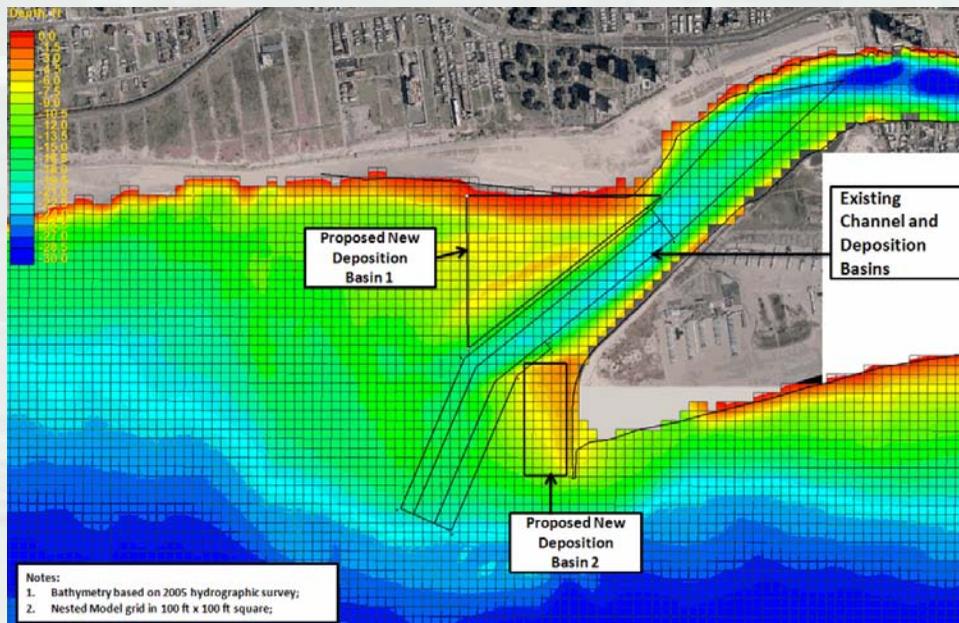


## Challenges:

1. Model Calibration of Existing Condition Sediment Transport and Existing Channel Siltation;
2. CMS Model Simulation of RSM Alternatives and Sediment Transport;

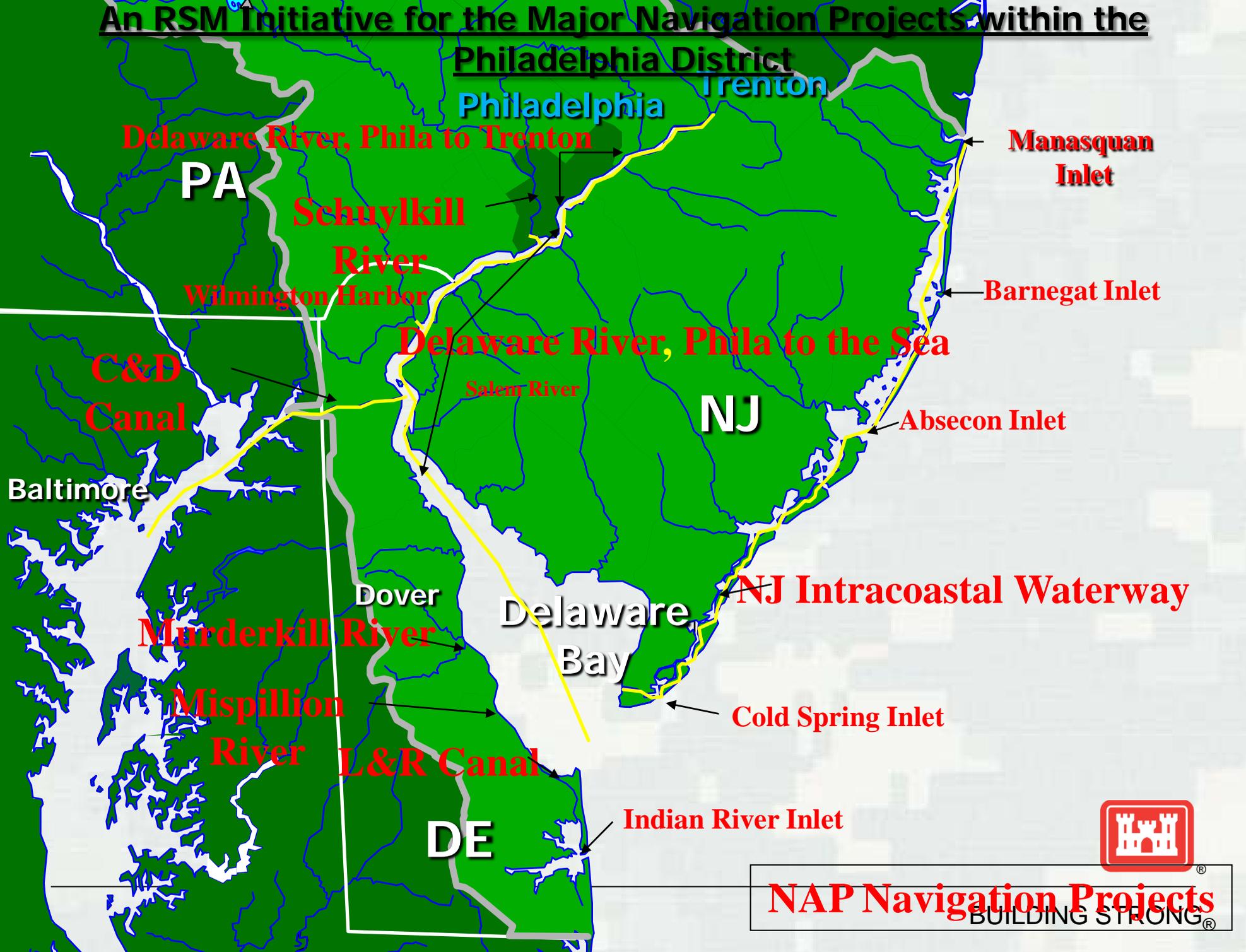
## Expected Results:

1. RSM Sediment Budget;
2. Estimated Siltation Rates;
3. Technical Note.



**An RSM Initiative for the Major Navigation Projects within the**

**Philadelphia District**



**NAP Navigation Projects**  
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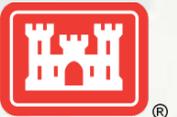
# **An RSM Initiative for the Major Navigation Projects within the Philadelphia District**

- **FY 11 Proposal & Funding**
  - ▶ **Task 1: Develop a Regional Sediment Manager Tool and a Regional Channel Prioritization Tool (CPT) for NAP Navigation Projects ( NAP \$60k)**
  - ▶ **Initiated Task 2: Environmental Resource Practices and Standards for Efficient Regional Sediment Management at NAP Navigation Projects ( NAP \$10k)**
  - ▶ **Deferred Task 3: Develop RSM Strategies and Alternative Placement Locations/BU/Adaptive Management Opportunities for NAP Navigation Projects.**



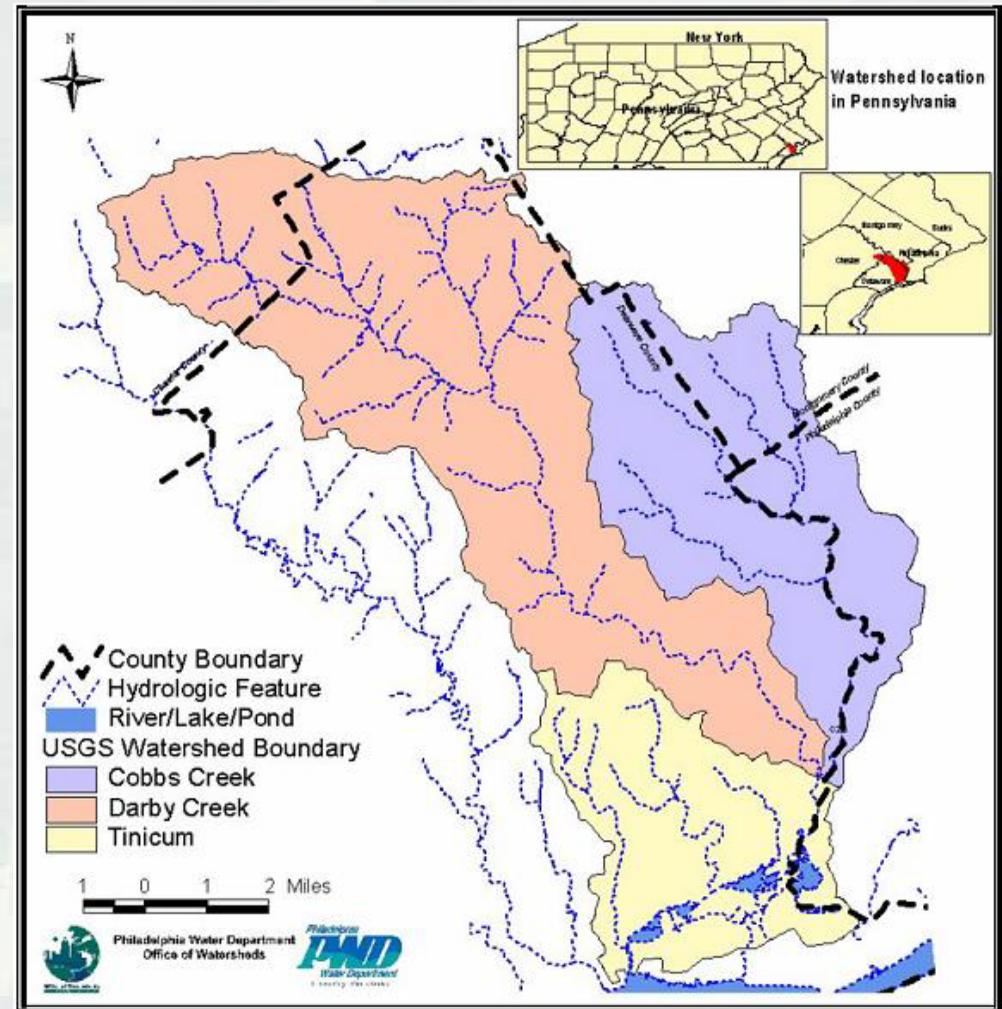
# NAB RSM FY11: Chesapeake Bay

- Received \$15K primarily for internal program management actions (e.g., reporting to ERDC and PDT coordination).
- Develop Tech Note on FY10 VIMS sediment work in Chesapeake Bay tributaries and add loadings to SBAS\*. Due end of FY 11.
- Potential Tech Note on OPs funded sediment work (primarily NAV funded). Due end of FY 11.
- Develop FY 12 RSM proposals and identify future projects.
- Develop NAB PgMP to ensure effective execution.



# Darby-Cobbs Watershed: NAP

- Darby-Cobbs Watershed discharges to the Delaware Estuary. 80 mi<sup>2</sup> area of southeastern Pennsylvania
- Urban sprawl, bank erosion/sediment deposition, degraded habitat, multiple stakeholders with conflicting interests, multiple problems- flooding, limited space.
- Develop comprehensive watershed plan based that will recommend appropriate methods for immediate and long-term solutions.
- Coordination with multiple stakeholders, Watershed group partnership.
- State and county agencies- PADEP, Delaware County, Delaware County Conservation District, Philadelphia Water Dept., regional watershed group.



# Ongoing NAD Sediment Activities



# COASTAL SYSTEMS PORTFOLIO INITIATIVE (CSPI)



- CSPI effort is being performed under the *National Shoreline Management Study*.
- Take *regional approach to improve efficiencies and effectiveness* of our projects.
- Incorporate **multiple business lines** (coastal storm damage reduction, navigation and coastal ecosystem restoration), identify the program need and demonstrate possible efficiencies.
- Develop the CSP within the context of Regional Sediment Management (RSM) to **collaboratively resolve sediment-related issues**.
- Gives Congressional staffers and local sponsors the information necessary to **make informed budgetary decisions**.
- Annual Technical Review Document summarizes existing conditions, estimated future federal costs, risk elements, and opportunities for action for all shore protection, navigation, and coastal ecosystem restoration projects. Projects mapped using Google Earth interface – transitioning to CorpsMap.
- Contact; Donald Cresitello, NAN



# Long Island Sound DMMP

- In 2005, EPA designated two open-water dredged material disposal sites (CLIS & WLIS in Long Island Sound to provide long-term, environmentally acceptable disposal options for potential use by federal, state, municipal and private entities.
- DMMP Requested by Connecticut and New York.
- DMMP is a joint effort of NAE & NAN. Multi-agency participation.
- A Dredging Needs Assessment and an Inventory of potential Upland Placement underway. Additional work is planned or underway related to updating economic benefits of the navigational industry on local economy, developing a cultural inventory and an environmental inventory to be used in screening efforts, and an investigation of potential federal and state programs or regulations related to dredging that would affect navigational facilities.



# Chesapeake Bay Watershed

- **The largest estuary in the United States, with a watershed of over 64,000 square miles, and a shoreline of over 11,600 miles.**
- **Chesapeake Bay Program sets goals and objectives for protection and restoration.**
- **Home to more than 15 million people and 3,600 species.**
- **A major link in the Atlantic flyway.**
- **Supports more than 350 species of finfish and one of the largest naturally reproducing populations of Striped Bass.**
- **Produces about \$200 million dollars in commercial harvesting of fish and shellfish annually.**
- **Executive Order 13508, Chesapeake Bay Protection and Restoration (May 15, 2009).**
- ***NAB's Mid-Bay Island Ecosystem Restoration Study and Chesapeake Bay RSM activities.***



# NAE RSM Activities

## 1. Rhode Island RSM – Congressional add project – no FY11 funds.

Used carryover FY10 funds for the following: \$600,000 data contract wrapping up - products in Fall 11. Also, Waves, Water levels, Weather data, Inlet velocity data and Beach profile data

Other activities:

- PMP revisions
- Local meeting attendance
- Project coordination and upkeep
- Several publications produced
- FY 12 proposal in for National RSM Program

## 2. CAP Section 204 (Beneficial Re-use projects)

- Stage Harbor, Chatham, MA – sand back passing
- Merrimack River Inlet, Newburyport, MA – best use placement for dredged material





# Yellow Bar Hassock

## Jamaica Bay Marsh Islands, Brooklyn, NY

- Jamaica Bay is situated within the Boroughs of Brooklyn and Queens, New York City. Approximately 8 miles long by 4 miles wide, it covers 26 square miles.
- The bay's fragile ecosystem has been degraded through human encroachment and increased urbanization. Combined Sewer Outfall (CSO) discharges have also exacerbated these effects.
- Analyses conducted by the New York State Department of Environmental Conservation (NYSDEC) confirmed the loss of intertidal salt marsh on these islands and the effect this may have on the ecosystem if the trend continues.
- Yellow Bar Hassock construction has been proposed through the *beneficial use of dredged material* from the New York & New Jersey Harbor Navigation Project per Section 2037 authority and in cooperation with The Port Authority of New York & New Jersey, the non-Federal sponsor.
- Approximately 47 acres of salt marsh habitat is proposed for restoration via placement of approximately 380,000 cubic yards of dredged material. Existing salt marsh plants will be re-planted within the new, elevated substrate.
- Contact: Ms. Karen Ashton, NAN



# Questions?

