

**Delaware River, Phila to Trenton**

**PA**

**Philadelphia**

**Trenton**

**Schuylkill River**

**Manasquan Inlet**

**Wilmington Harbor**

**Delaware River, Phila to the Sea**

**Barnegat Inlet**

**C&D Canal**

**Salem River**

**NJ**

**Absecon Inlet**

**Baltimore**

**Dover**

**Delaware Bay**

**NJ Intracoastal Waterway**

**Murderkill River**

**Mispillion River**

**Cold Spring Inlet**

**L&R Canal**

**DE**

**Indian River Inlet**

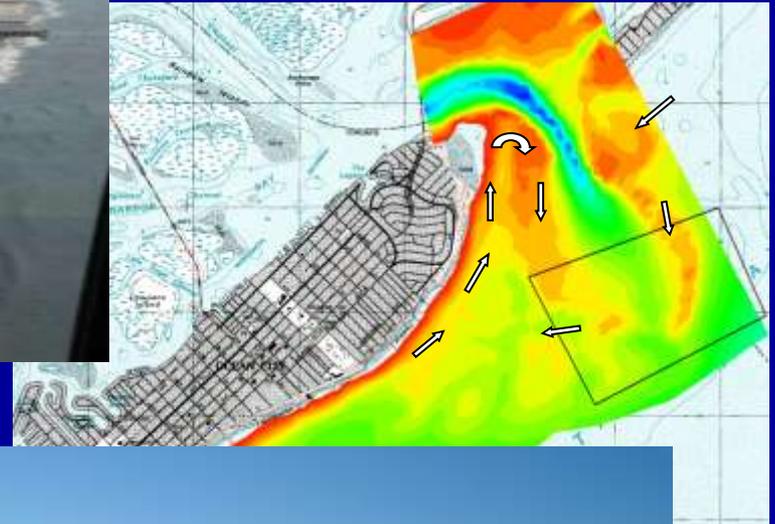
**NAP Navigation Projects**

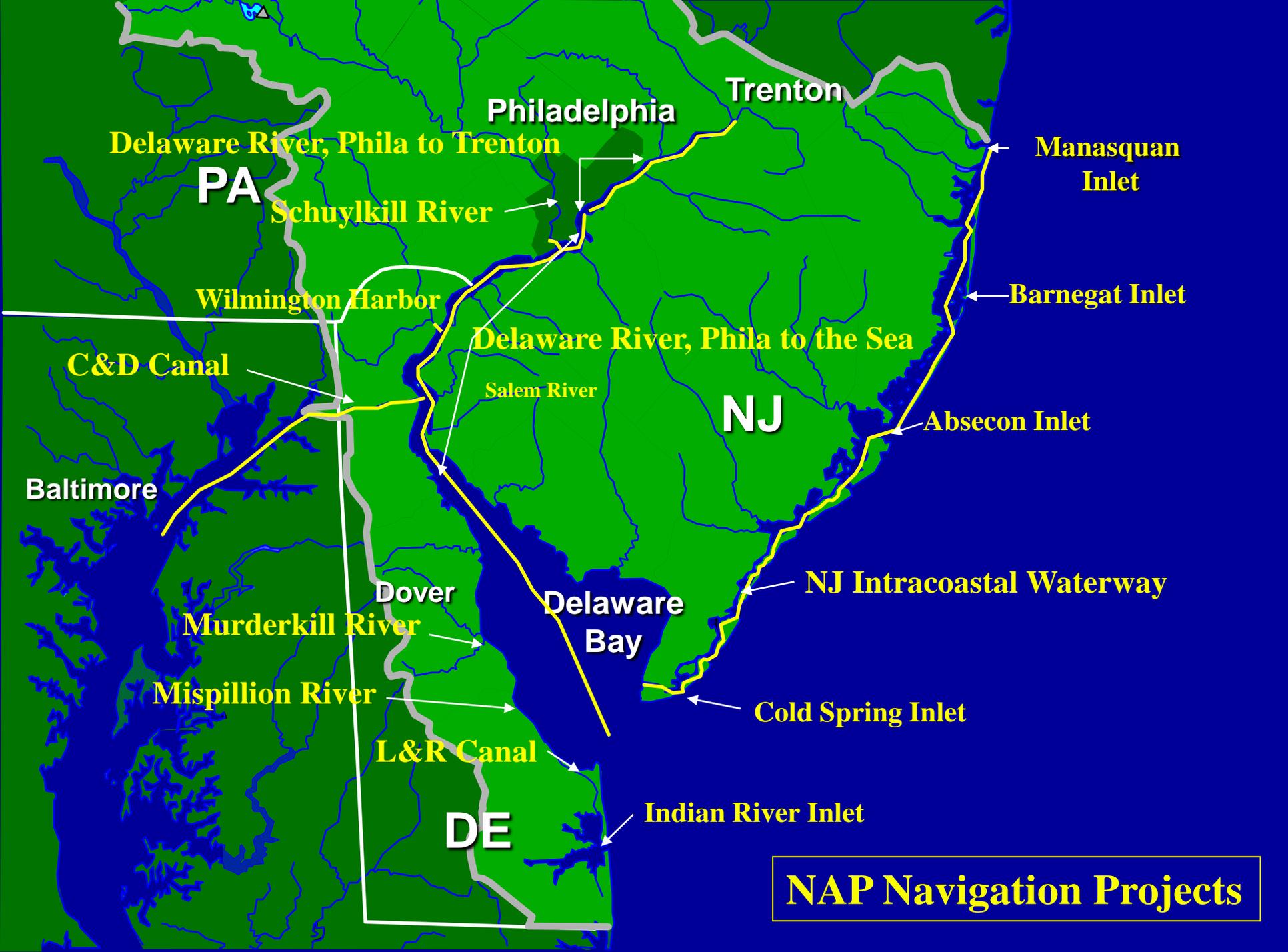


US Army Corps  
of Engineers  
Philadelphia District

# RSM in the Coastal Zone New Jersey and Delaware

- 10 Beach Nourishments
- 11 Tidal Inlets





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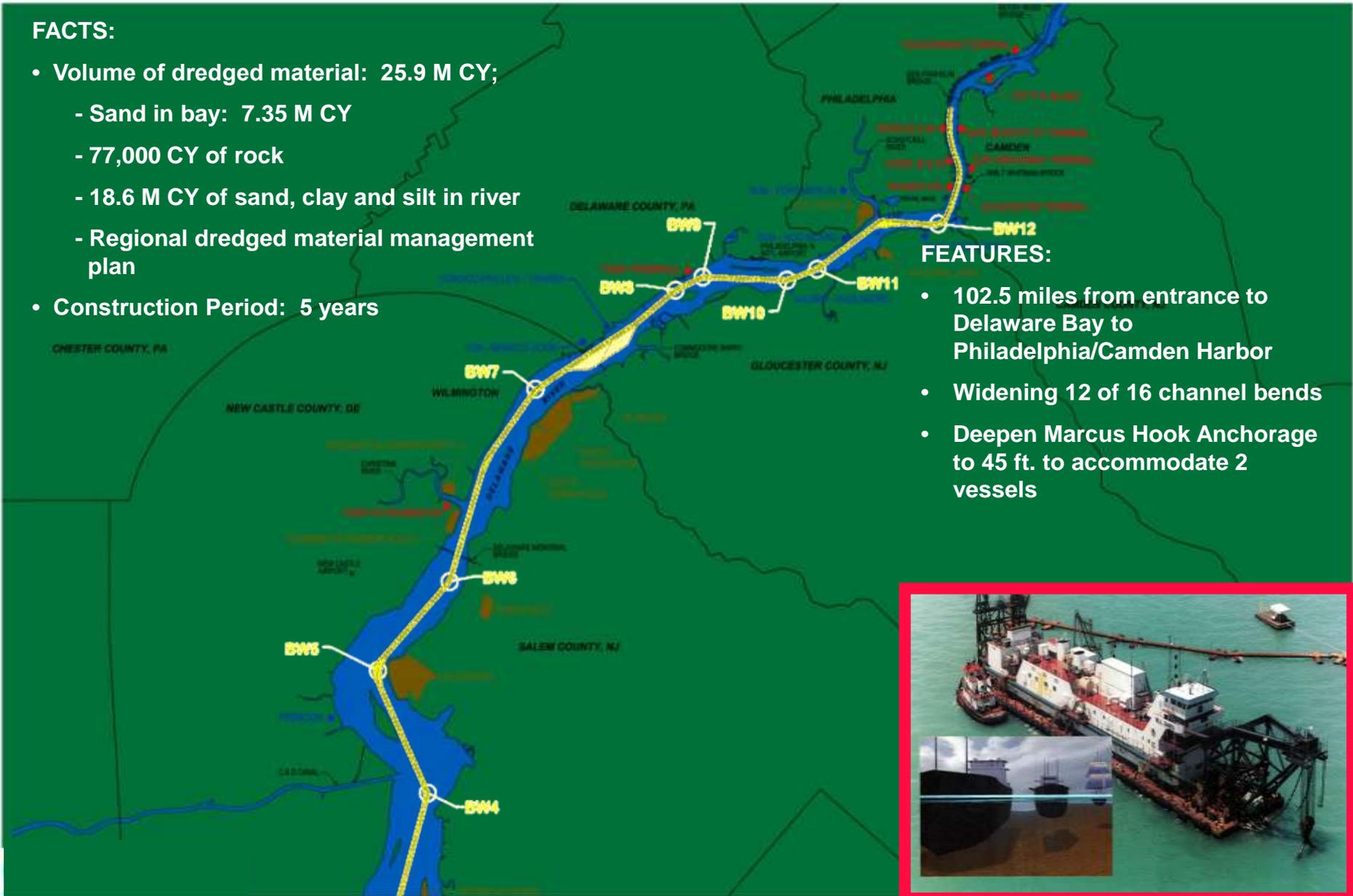
# Deepening the Main Channel to 45': The Project

## FACTS:

- Volume of dredged material: 25.9 M CY;
  - Sand in bay: 7.35 M CY
  - 77,000 CY of rock
  - 18.6 M CY of sand, clay and silt in river
  - Regional dredged material management plan
- Construction Period: 5 years

## FEATURES:

- 102.5 miles from entrance to Delaware Bay to Philadelphia/Camden Harbor
- Widening 12 of 16 channel bends
- Deepen Marcus Hook Anchorage to 45 ft. to accommodate 2 vessels



# RSM FY12 IPR

## An RSM Initiative for the Major Philadelphia District Navigation Projects Larry Cocchieri & Rich Thorsen, NAD; Monica Chasten and Tim Rooney, NAP

### Description/Challenge

Development of a systems approach for operating and management of the major navigation projects within the Philadelphia District

### Goals/Issues to Address

- Improve data management & visualization for more efficient RSM
- Better understanding of national and regional science and practices to improve RSM and EWN efforts in NAP
- Most material is not “fluffy white beach sand”, grain-size challenged riverine sediments, but try to keep it in the system
- Improve RSM coordination within NAP and with project stakeholders



**BLUF:** Improved data and project management through tool and process developments. Improve knowledge, “trust” and develop RSM strategies within the organization and with RDT stakeholders

# RSM FY12 IPR

## An RSM Initiative for the Major Philadelphia District Navigation Projects

### District PDT Members

- Monica Chasten, Project Manager, Operations
- Tim Rooney, Project Manager, Operations
- Tim Kelley, Project Manager, Operations
- Charles Myers, Project Manager, Operations
- Mike Landis, Chief, Technical Support Branch
- Jeff Gebert, Planning (HH&C, Engineering)
- Colleen Rourke, GIS Coordinator, Planning
- Jerry Pasquale, Environmental Resources, Planning

### Leveraging/Collaborative Opportunities

- ERDC, DOER Program with assistance from DOTS program ( Dr.Todd Bridges, John Childs, Paul Schroeder)
- Mobile District, Spatial Data Analysis Branch, & Dredging Managers (Teresa Parks, Clint Padgett & team)
- New York District (Rose Dopsovic efforts)
- Baltimore District, Steve Brown, Operations
- Wilmington District, RMS, Sheila Figgins
- Ned Mitchell, Channel Portfolio Tool Development
- NJDOT, Office of Maritime Resources

### Stakeholders and Partners

- NJ Department of Transportation, Office of Maritime Resources
- NJ Department of Environmental Protection, Bureau of Coastal Engineering
- Regional Dredging Team members (PA, NJ, DE)

### Milestones/Deliverables

- CE-Dredge Tool-OPJ Coordination & Plan Development (Ongoing)
- Coordination of Channel Prioritization Tool incorporating NAP (Regional) And Dredging Tool
- Efforts/Leveraging of Tools with NAB (Ongoing)
- Coordination of Tools to Project Stakeholders & other USACE (Ongoing)
- Report/RSM TN-CDF BMPs for the Delaware River (1st Quarter FY13)
- Report/RSM TN-RSM Strategies, Actions for NAP Navigation Projects (1<sup>st</sup> Quarter, FY13)
- Coordinate implementation/construction of RSM Action(s) in FY13-14

# RSM FY12 IPR

## An RSM Initiative for the Major Philadelphia District Navigation Projects

### Approach

- Development of a Regional Dredging & Placement Area Management Tool and a Regional Channel Prioritization Tool for NAP
- Coordination of Environmental Resource Practices for Efficient Regional Sediment Management at NAP Navigation Projects
- Develop RSM Strategies and Alternative Placement Locations/Beneficial Use/Adaptive Management Opportunities for Nav Projects

### Benefits to O&M, FRM, Environmental

- Improved data management and visualization tools; share technologies
- Identification and optimization of sand management and Best Management Practices
- Innovative techniques for moving sand
- Ultimately lead to O&M cost savings, more reliable navigation channels and environmental benefits

### Models, Tools, Databases, etc Used

- CE-Dredge Dredging Histories Tool (etc.)
- Channel Portfolio Tool
- Channel Framework
- RMS
- DQM (future)
- DOER & DOTS programs



# RSM FY12 IPR

## An RSM Initiative for the Major Philadelphia District Navigation Projects

### Opportunities to take action:

- Currituck, Shallow Draft Projects especially NJIWW
- Delaware Deepening
- Delaware River - Dredge McFarland
- Still working through other Delaware River opportunities with RDT

### Accomplishments

- CE-Dredge/Dredge Histories Tool
- Coordination Meetings/Webinars with SAM, NAB, NAP, and ERDC (Jan, June, Aug 2012)
- CPT Demonstration & Coordination at NAP (Sept 2011)
- Regional Dredging Team Meeting at NAP (March 2012) and workshop with ERDC (Sept 2012)
- Coordination with DOER and EWN (July 2011 & Sept 2012)

### Volume of Sediment Moved (strategy)

- Delaware River, DE, PA, NJ
  - Phila to Sea
  - Phila to Trenton
  - Deepening
- C&D Canal, DE & MD
- Wilmington Harbor, DE
- NJIWW
- Schuylkill River, PA
- Coastal Inlets (shallow draft)

### Lessons Learned

- Differences in Dredging Contract Management across USACE, RMS
- Databases
- Changing technologies, need the experts
- Changing “the way we’ve always done it” is not so easy, requires organizational buy-in
- Collaboration with stakeholders & Regional Dredging Team vs. RSM experience
- Contracting & Regulatory Processes