Navigation RD&T Highlights

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Navigation R,D&T Guiding Documents
Navigation RD&T Strategic Needs & Priorities
FY14

• Extend the useful life of existing navigation infrastructure

• Operate and manage national waterborne transportation assets as an integrated system

• Optimize and prioritize channel availability for commercial freight movement

• Engineering with nature to enhance ecosystem and project processes, benefits and services

• Implement eNavigation throughout the National MTS

• Deliver sound engineering and scientific solutions to align with the Planning Modernization initiative
Navigation RD&T Portfolio

Dredging Operations and Environmental Research
Dr. Todd Bridges

Coastal Inlets Research Program
Dr. Julie Rosati

Navigation Structures

Navigation Systems
Mr. Eddie Wiggins

Regional Sediment Management
Ms. Linda Lillycrop

Monitoring Completed Navigation Projects
Dr. Lyn Hales

Dredging Operations Technical Support
Ms. Cynthia Banks

Dredging Innovations Group
Ms. Jennifer Gerhard-Smith

Inland Electronic Navigation Charts
Dr. Bob Mann / Ms. Denise LaDue

National Coastal Mapping Program
Ms. Jennifer Wozencraft
FY13 Highlights*

- Inland Navigation Design Center
- Extend the Life of Infrastructure Document
- Infrastructure R&D initiated early
- Engineering With Nature
- Natural & Nature-based Features
- CERB Charge
- Additional funding
- Composite demonstrations
- Trunnion Rod Testing
- Lots of publications and products!

* Presented to: Navigation Research Area Review Group
RSM FY14 Participation

RSM FY14: 21 Districts, ERDC, IWR/HEC
Navigation Data Integration Framework

Navigation DIF Components
- Source Databases
- Hub Catalog
- Tools
- Web Services
- Portals

Navigation Sub-categories
- Dredging
- River Information Services
- Surveying & Mapping
- Infrastructure & Asset Management
- Engineering With Nature & Regional Sediment Management
- Marine Transportation System
Engineering With Nature

…the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental and social benefits through collaborative processes.

- Science and engineering that produces operational efficiencies
- Using natural process to maximum benefit
- Expanding the benefits provided by projects
- Science-based collaboration
Azimuth Check on Response to 2013 CERB Charge: *Integration of Risk and Resilience in the USACE’s Coastal Mission Area*

**Resilience:** the ability of a *system* to anticipate, resist, recover, and adapt to achieve functional performance under the stress of disturbances.
CW R&D Technology Transfer
Summary of FY13 Products

- 69 Webinars
- 122 Tech Reports and Tech Notes
- 142 Conferences & Workshops
- 30 Software Releases
- 65 Journal Articles
- 41 Hosted Workshops
- 55 DOTS requests / 26 Districts
- 32 WOTS requests / 18 Districts
- 100 Federal Agencies Collaborations
- 100 State & Stakeholder Collaborations
- 86 University Collaborations
- 33 Web services or tools
- 22 Guidance Documents
- Other Highlights
  - 22 Interagency Committees
  - >1M Data downloads
  - 7 Book chapters
  - Dissertation (Dr. Alex Sanchez)
Research Area Review Group Responsibilities

• Provide Statements of Need

• Participate in RARG 3-day Meeting
  Program status
  Technology Transfer
  Discuss & Prioritize

• Collaborate with an ERDC PI

• Help with Tech Transfer!
Statements of Need
how it all begins

• Title
• Need that Drives Requirement
• Extent of Need Across USACE
• Requirement
• Consequences if Requirement Not Met
• Product Recommendation
• Originator

7-9 April 2015
Thank You!