

Regional Sediment Management And Engineering With Nature

ERDC

Engineer Research and
Development Center

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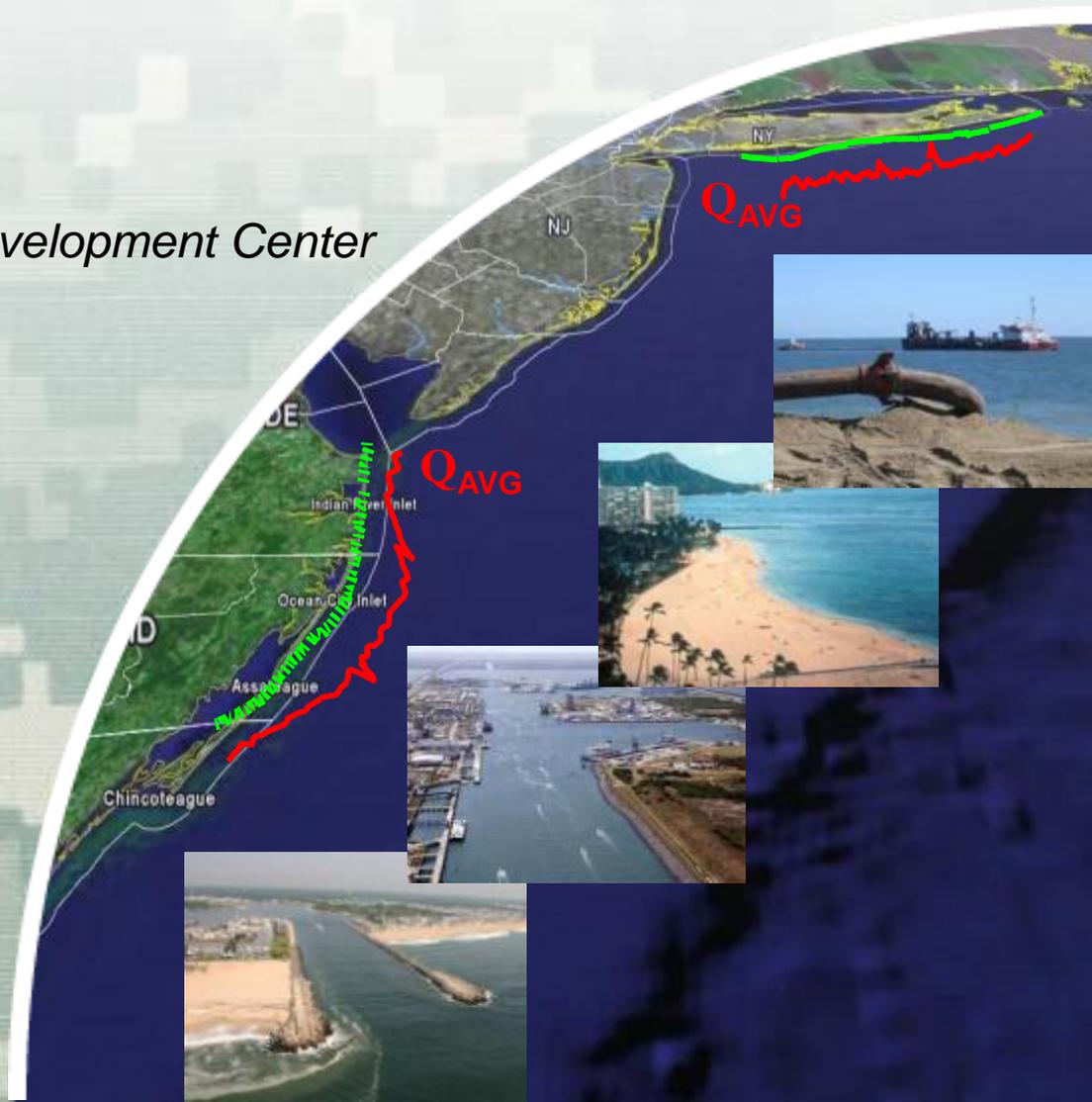
**Flood Risk Management
and
Engineering With Nature
Collaborative Meeting**

**Vicksburg, MS
10-11 June 2014**



®

US Army Corps of Engineers
BUILDING STRONG®



Why RSM?



Regional Sediment Management



A systems approach
for efficient and effective use
of sediments
and management of projects
in our Coastal, Estuarine,
Riverine, and Watershed
environments



RSM = Sustainable Solutions for.....

Navigation/ Dredging



Flood Risk Management

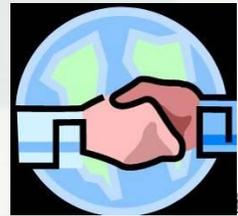


Environmental Restoration



RSM Operating Principles:

- Recognize sediments as a regional resource; prioritize use
- Link and leverage across multiple projects, business lines, authorities
- Improve operational efficiencies & natural exchange of sediments
- Economically viable, environmentally sustainable solutions
- Local sediment actions which benefit the region, consider regional impacts
- Enhance technical knowledge/tools for regional approaches
- Share information and data
- Communicate and collaborate – USACE, Stakeholders, Partners



USACE RSM Participation (2000-2014)



CODS/CFDC

NCDB

MCNP

WOTS



7 Division, 25 Districts (20 Coastal/5 Inland), ERDC, IWR

Understand Region

- Sediment Budget
 - Beach Morphology
 - Landcover Type
 - Coastal/Inland Processes
- Holistic/Systems Approach*

Identify Gaps/Improve Knowledge

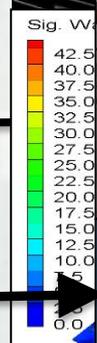
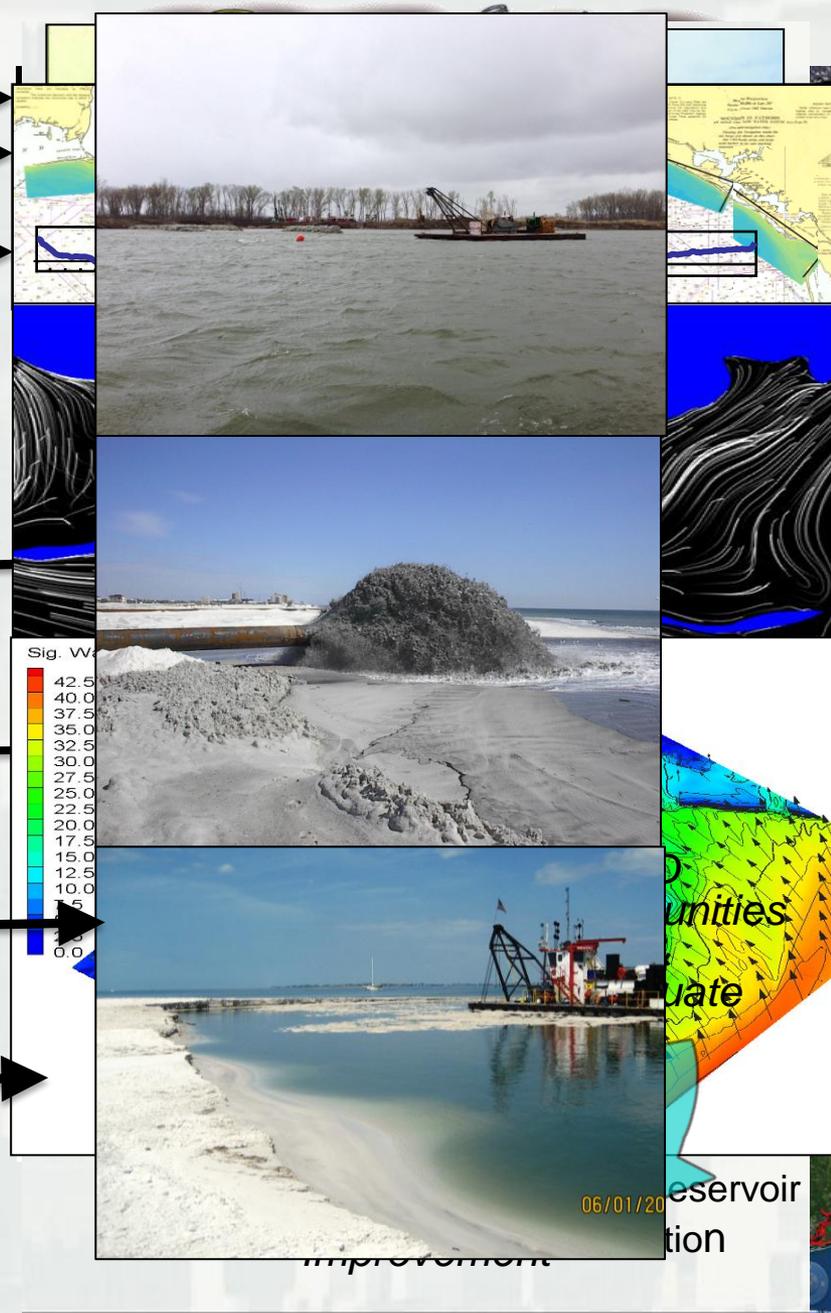
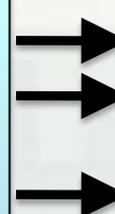
Data Management/Regional Tools
Collaborative w/Partners

Identify/Evaluate Opportunities to Optimize Use of Sediments Across Multiple Projects
Innovative, Efficient/cost effective, Science-based

Take Action: Construct Pilot Projects
Collaborative w/Partners

Monitor: Evaluate Performance
Adaptive Management

Incorporate Standard Practice
Sustainable



06/01/20

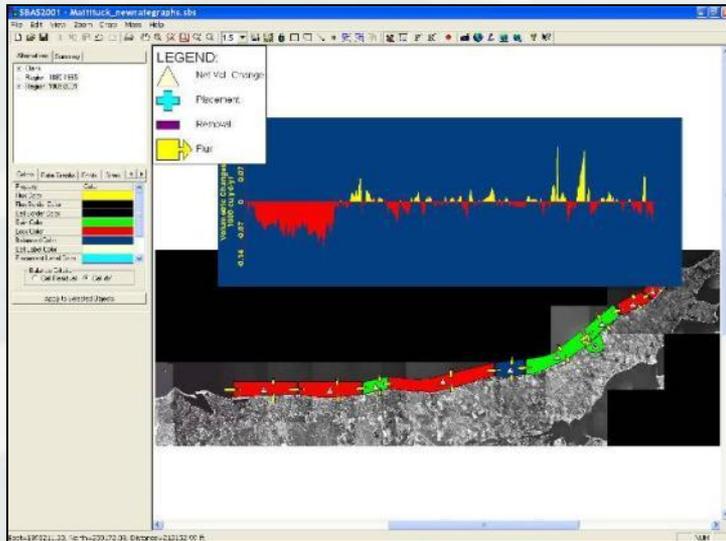
improvement

Reservoir
ation

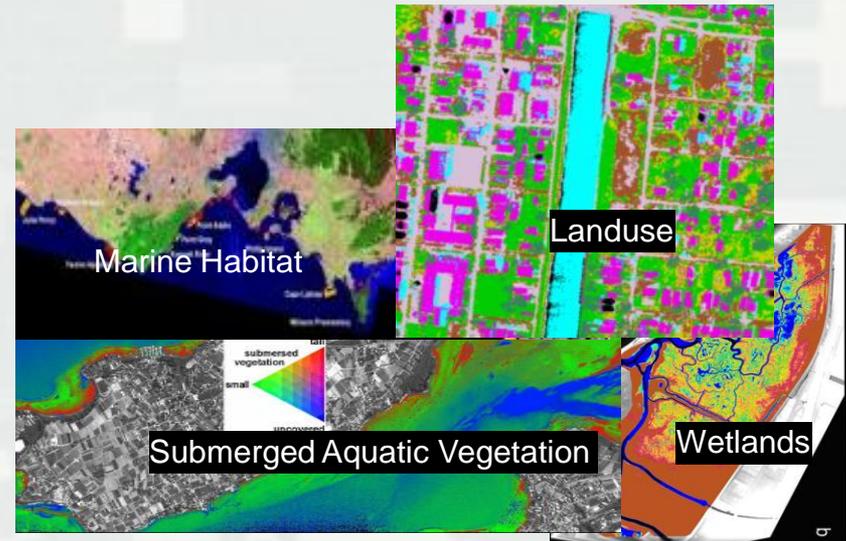
RSM Long-Term Goal

Link with Engineering With Nature

Bridge Regional Sediment Processes
with
Regional Environmental/Ecosystem Processes



Sediment/Engineering



Environmental/Ecosystem



RSM and EWN Successes



Perdido Pass, AL

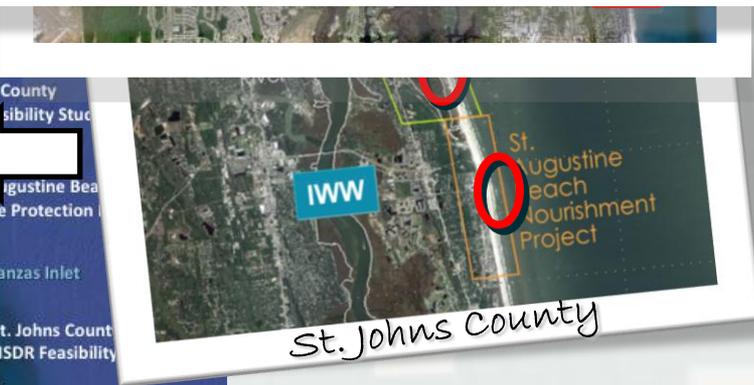
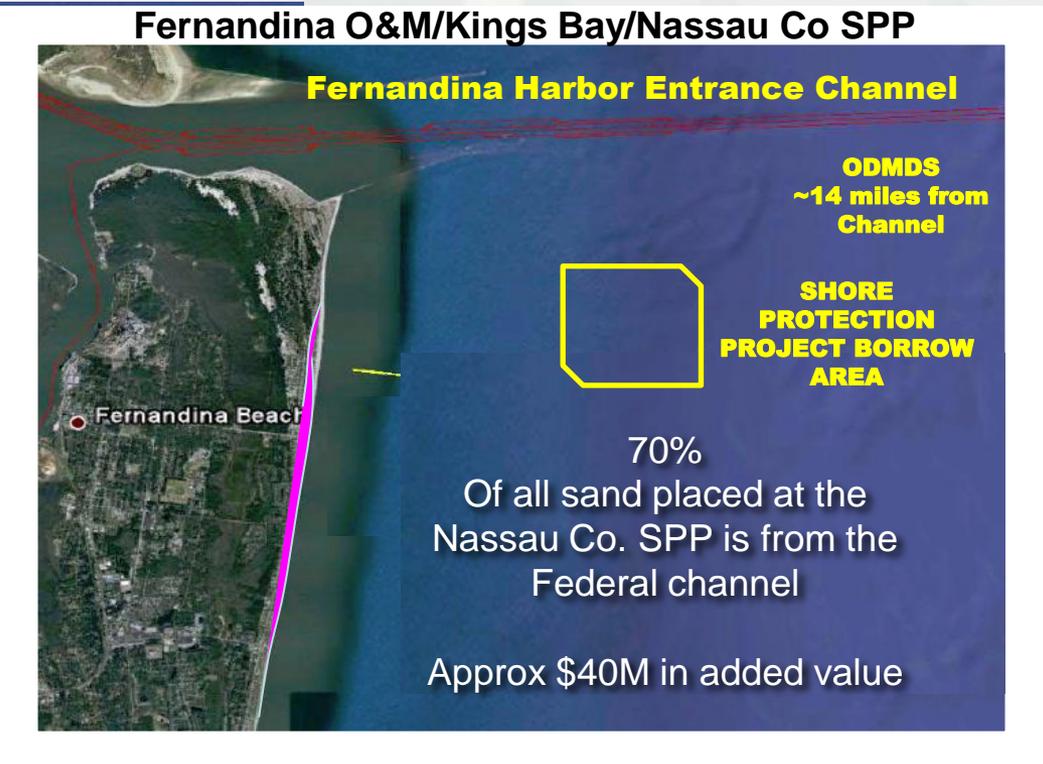
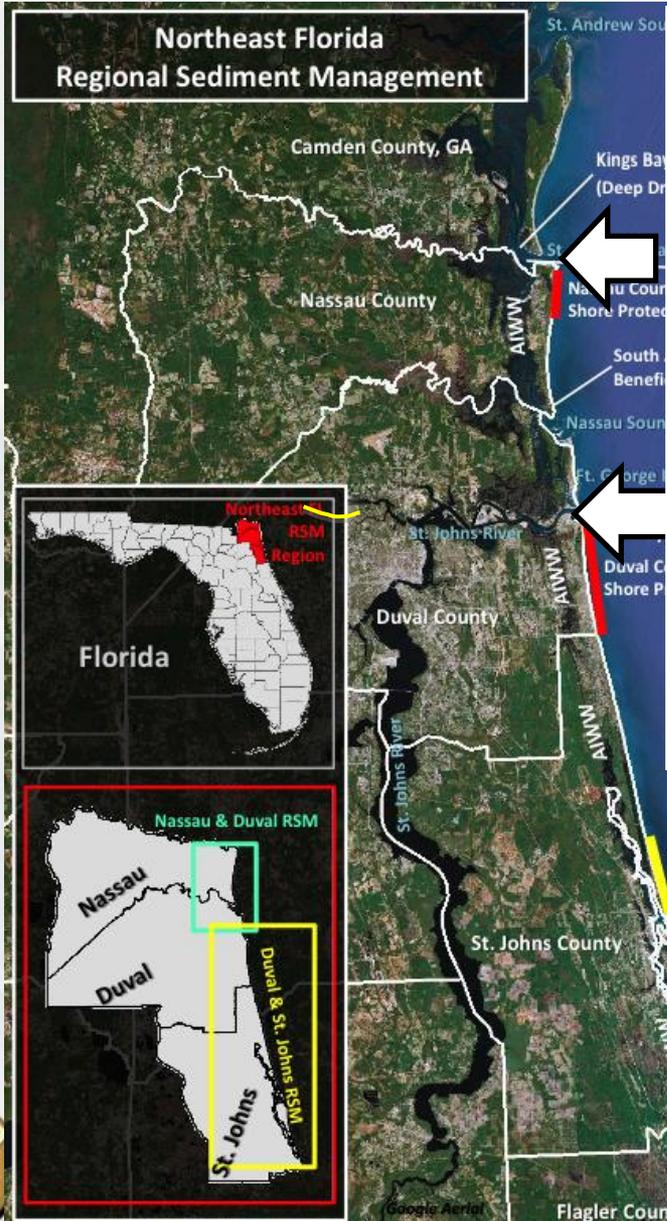


Jacksonville District Integrated Dredging Program

- Navigation Projects
- HSDR Projects



Jacksonville District - St Johns, Duval, Nassau Counties



Portland District - Mouth of the Columbia River, OR

Collaboration 2002:

District & Stakeholders

- Leverage:

Projects, Resources, Models,
Tools, Data Collection...

- Long-term strategy

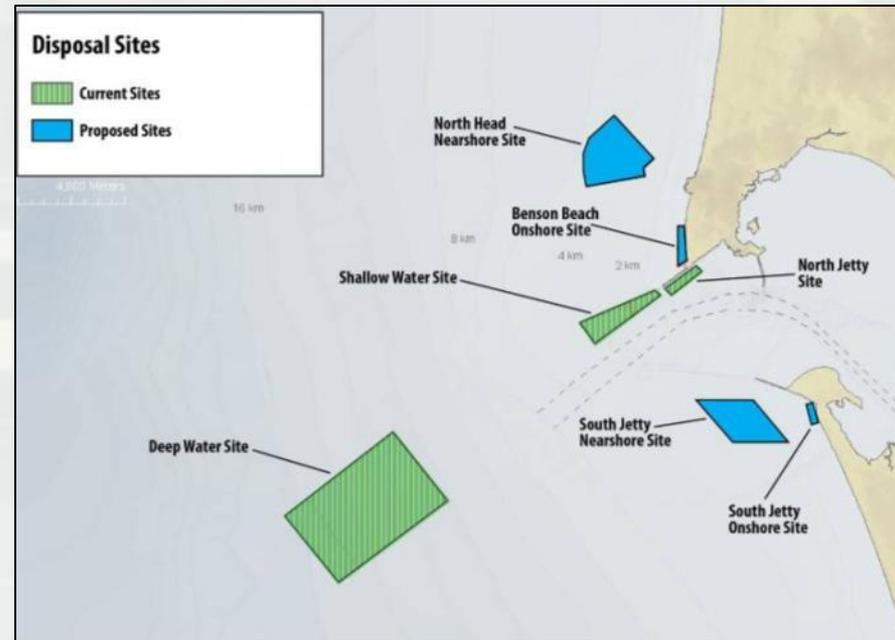
- Construction 2012

- Monitoring 2013-2014



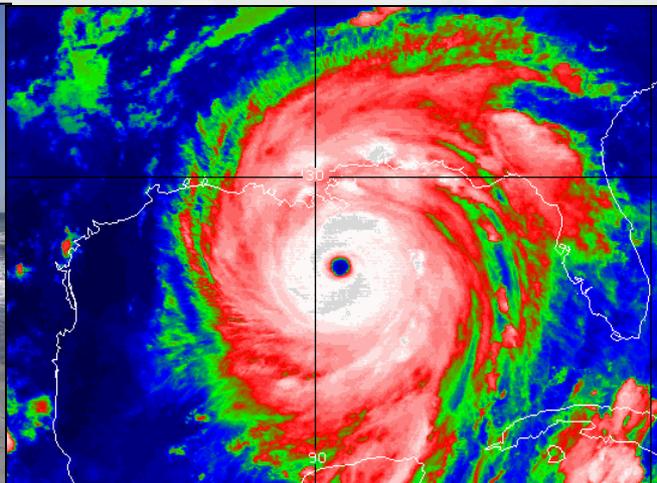
Benefits

- 4 New nearshore BU sites
- Reduced dredging costs
- Protect navigation structures channel system
- Stabilize Inlet morphology
- Reduce shoreline erosion
- Environmental habitat



Why RSM is Important & Supports EWN

- Improve utilization of sediments - local & regional
- Link multiple projects & authorities, leverage funding, reduce timelines
- Increase benefits while reducing/maintaining costs
- Share data, tools, and capabilities
- Improve partnerships and collaboration
- Pilot Projects/Adaptive Management - Improve channel availability, shoreline erosion/flood protection, environmental habitat



Regional Sediment Management (RSM) Program

Managing sediment to benefit a region potentially saves money, allows use of natural processes to solve engineering problems, and improves the environment. As a management method, RSM:

- Includes the entire environment, from the watershed to the sea
- Accounts for the effect of human activities on sediment erosion as well as its transport in streams, lakes, bays, and oceans
- Protects and enhances the nation's natural resources while balancing national security and economic needs

The Corps of Engineers holds in trust and manages lands and waterways across the U.S. Using regional sediment management concepts will significantly improve the Corps' mission accomplishment. The Corps' engineers and scientists develop new technologies through research to make management decisions more accurate and efficient. Simultaneously, they evaluate RSM concepts through projects that highlight and improve sediment management activities.

What's New?

- [RSM/EWN Inland Working Meeting](#)
- [RSM/EWN In-progress Review and working meeting](#)
- [USACE Navigation R&D Strategic Vision Document](#)
- [FY14 Request for Proposals](#)
- [RSM Successes](#)
- [Technical Notes](#)
- [District Project Templates:](#)
 - [Fact Sheets](#)
 - [Quarterly Reports](#)
- [SBAS for ArcGIS 10 Admin \(.zip\)](#)
- [User's Guide \(.pdf\)](#)
- [RSM Calendar](#)

Partnering with EWN
ENGINEERING WITH NATURE

HQ USACE Oversight Navigation Business Line Manager
Jeffrey A. McKee

Technical Director, Navigation R&D
Jeff Laythrop, ERDC-CHL

RSM Program Manager:
[Linda Lillycrop](#), ERDC-CHL

RSM Technical Notes, Reports, Manuals, Conference Papers



Tools and Data

Sediment Budget Analysis System (SBAS)
 CE-Dredge-RSM Dredging Manager & Viewer
 Models and Databases
 Etc...



14th Annual RSM and EWN In-Progress-Review and Workshop

22-24 July 2014
Vicksburg, MS



2013 RSM and EWN IPR and Workshop
Coastal and Hydraulics Laboratory, Vicksburg



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