

Management of Dredged Materials: Challenges and Opportunities

Jim Walker
Navigation Branch Chief
HQ, USACE

2 May 2012



US Army Corps of Engineers
BUILDING STRONG®



Corps Navigation Mission

Provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of commerce, national security needs, and recreation.



USACE Navigation Assets

COASTAL NAVIGATION

1067 Navigation Projects
19 lock chambers
13,000 miles of channels
929 navigation structures
844 bridges

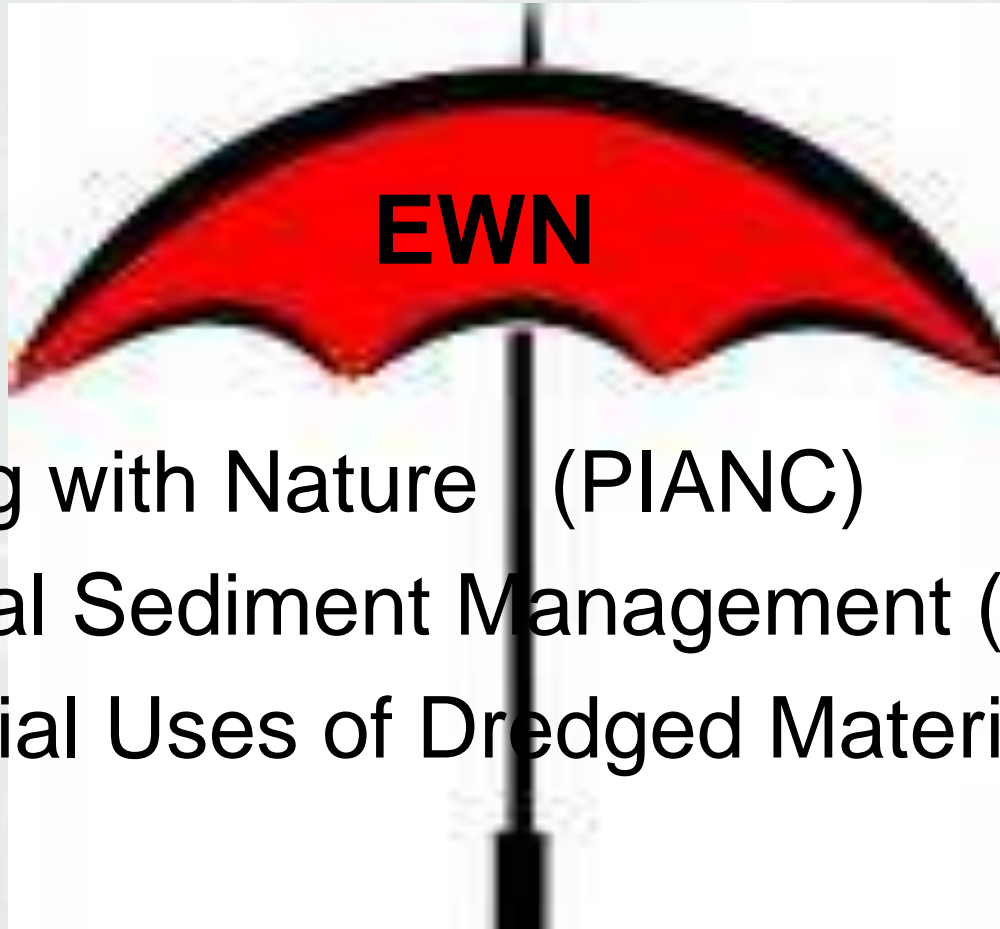


INLAND NAVIGATION

27 Inland River Systems
207 lock chambers @ 171 lock sites
12,000 miles of inland river channels



Engineering with Nature



- Working with Nature (PIANC)
- Regional Sediment Management (RSM)
- Beneficial Uses of Dredged Material



The Essential Ingredients of *Engineering With Nature*

- Use science and engineering to produce operational efficiencies
- Use natural processes to maximum benefit
- Broaden and extend the base of benefits provided by projects
- Use science-based collaborative processes to organize and focus interests, stakeholders, and partners



Engineering With Nature

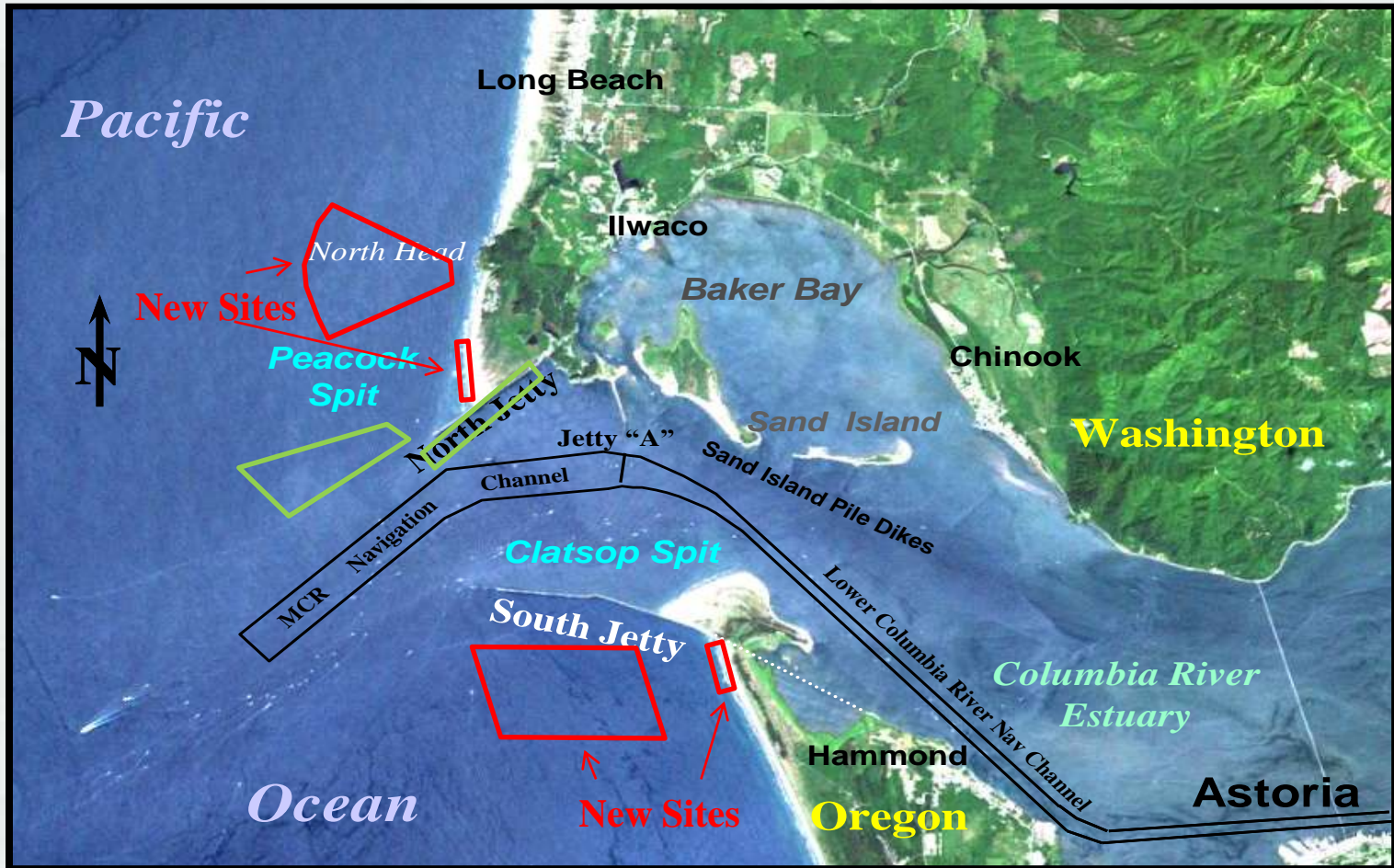
Path Forward

We are implementing *Engineering With Nature* through a series of actions:

1. Establish the foundation of EWN using examples of “best-practice” projects from across USACE
2. Develop and execute a “Strategic Plan for EWN” to expand application within USACE and with our external partners and stakeholders
3. Demonstrate the EWN progression in future project case studies, communicating lessons learned and successes broadly
4. Focus R&D investments to expand technical and communication science needed to advance EWN
5. Establish leadership and partnerships on EWN through effective engagement and application

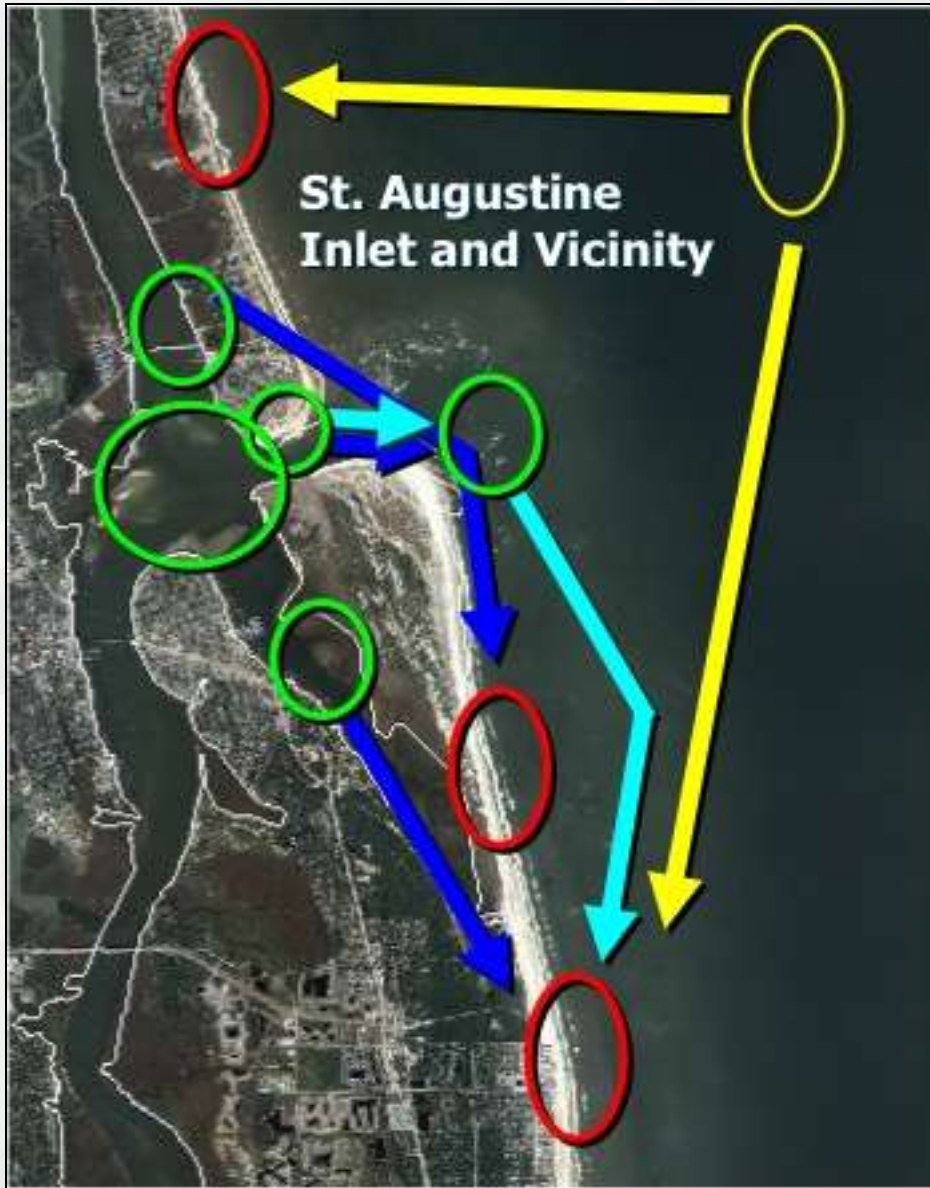


Mouth of Columbia River RSM success



St. Augustine Inlet, FL and Vicinity

Combining multiple projects



-  **Erosion**
-  **Shoaling (maintenance)**
-  **Borrow (beach nourishment)**
-  **inlet bypassing**
-  **beneficial use**
-  **beach nourishment**

\$5-7M mob/demob savings
Reduced dredging/environmental impact
Combined permit
Emergency sand sources

Expectations

- Improve channel availability
- Reduce dredging and/or dredging cost
- Improve environmental quality
- Focus on commercial use nav projects
- Practice 'Adaptive Management'
- Incorporate RSM as standard business practice
- Good program execution



Collaboration

- Constrained funding necessitates collaboration
- Geographic - Watershed based
- Within USACE – Nav, Coastal Storm Damage Reduction, Environmental Restoration
- Cross agency – USACE and DoT
- Improve collaboration processes – accept \$



Manage Stakeholder Expectations

- Building trust based relationships takes time (years)
- Stakeholders getting to collaboration takes time
- Demonstration projects – be willing to try
- Be transparent
- Deliver on commitments
- Communicate, communicate, communicate

