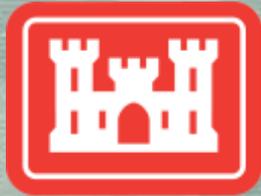


Regional Sediment Management Program

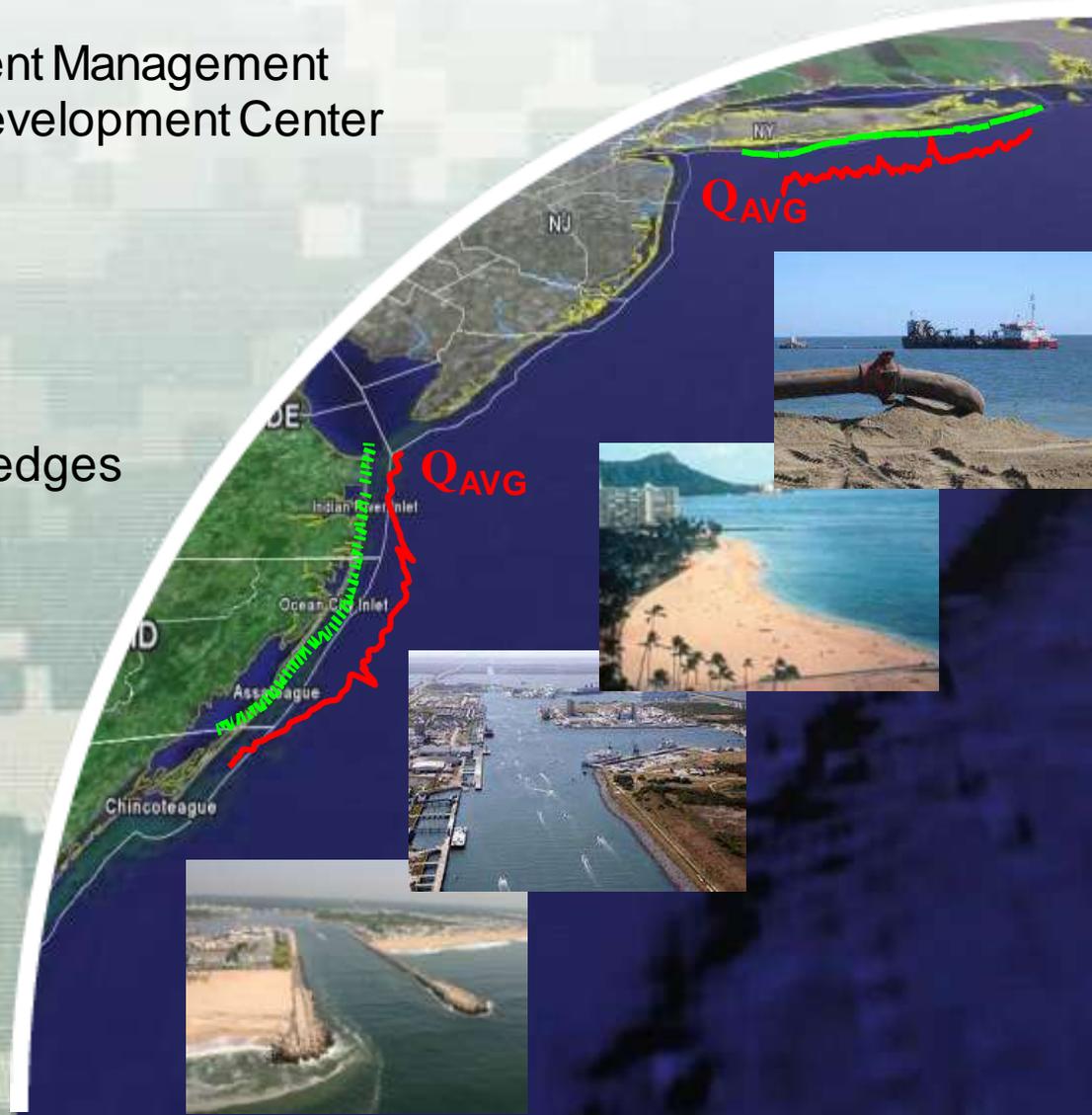
Linda S. Lillycrop
Program Manager, Regional Sediment Management
US Army Engineer Research and Development Center
Coastal and Hydraulics Laboratory

Evaluation of RSM Actions
Using Government Shallow Draft Dredges
Atlanta, GA
18-19 January 2012

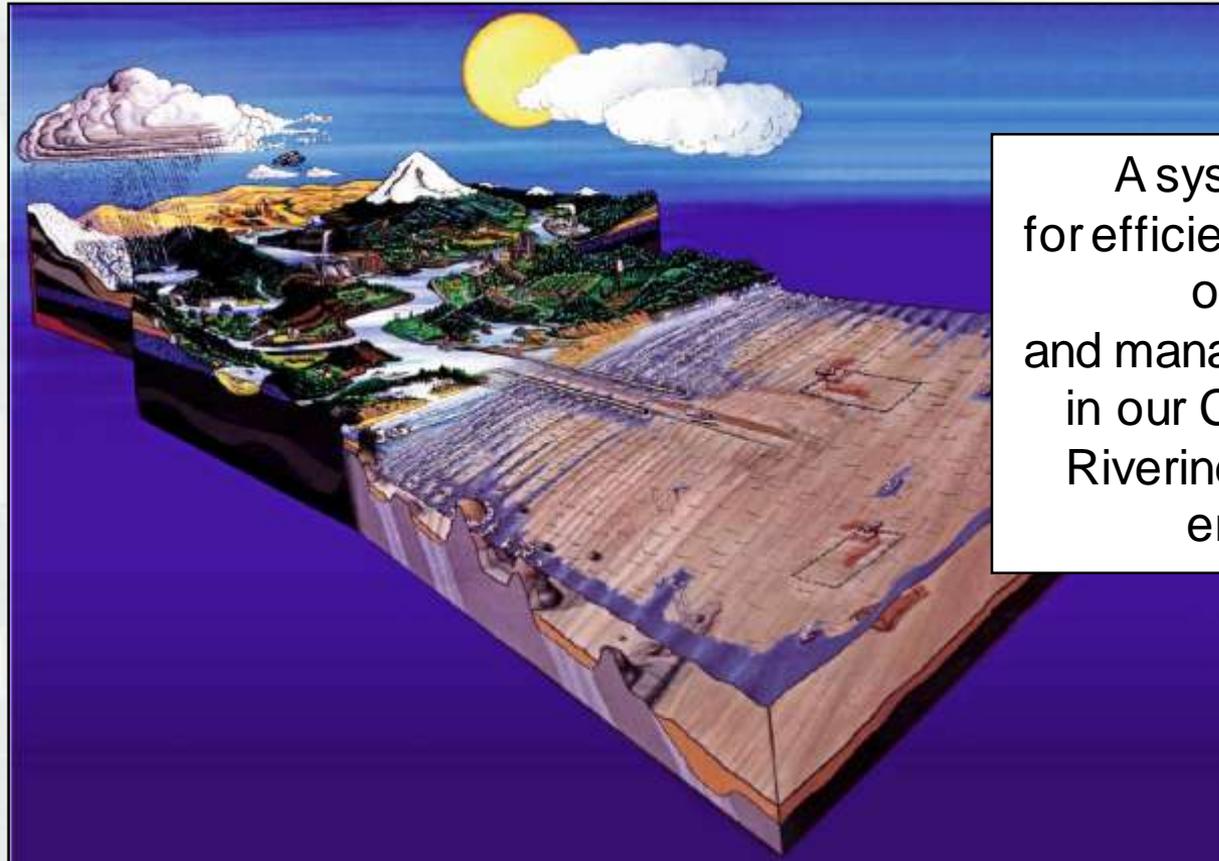


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Regional Sediment Management



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



Regional Sediment Management

Goal:

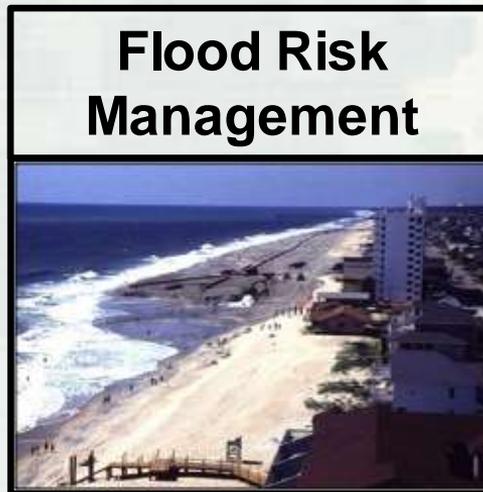
- Get more from our O&M funds
- Maximize beneficial use of sediments;
- Integrate to operations practices;
- Minimize environmental impacts;

Objectives:

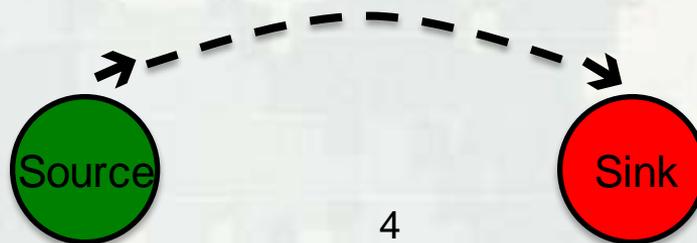
- Implement RSM Practices
- Improve economic performance by linking projects
- Develop new engineering techniques to optimize/conserves sediment
- ID/overcome bureaucratic obstacles
- Manage in concert with environment
 - ▶ Engineering With Nature



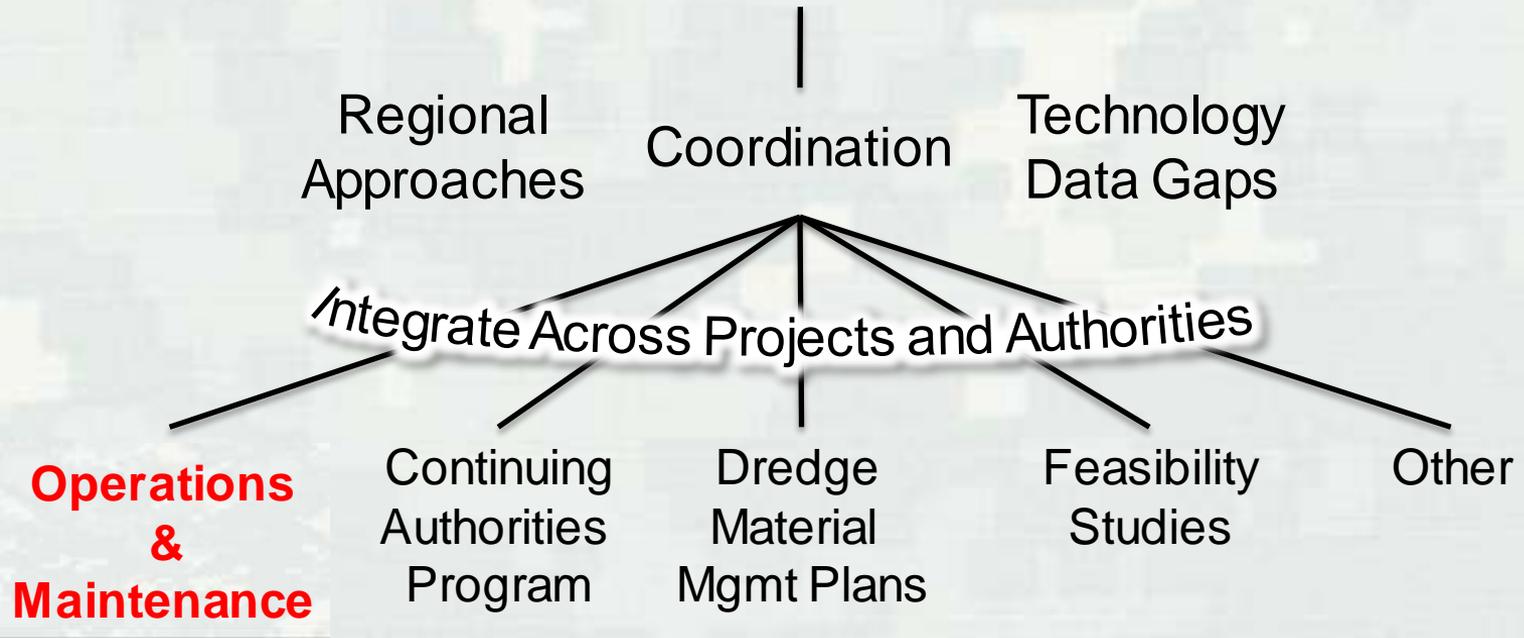
RSM = Sustainable Solutions for.....



- Sediments are a regional resource
- Local sediment actions which benefit the region
- Improve operational efficiencies, optimize use of sediments
- Enhance the environment
- Optimize natural exchange of sediments
- Link and leverage across multiple projects, business lines, authorities
- Communicate and collaborate – USACE, Stakeholders, Partners



RSM Program

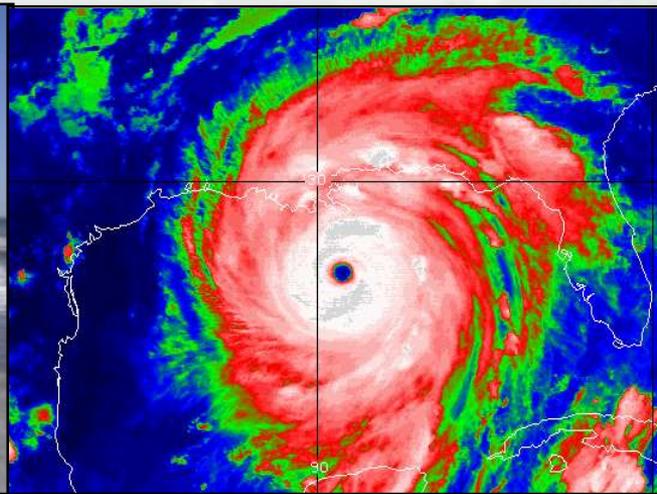


Construction



Why RSM is Important to Navigation

- Improve channel availability
- Reduce dredging expenses: frequency/quantity
- Link projects, leverage funding, reduce timelines
- Optimize use of sediments through adaptive Management
- Environmental stewardship
- Improve partnerships and collaboration



RSM Strategies



Reduce Offshore Placement



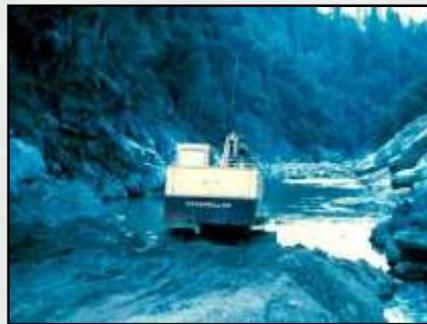
Nearshore/Beach Placement



Bypass Optimize Placement



Reduce CDF Placement Utilize to improve system



Reduce Sediments at the Source



Ecosystem Restoration w/partners

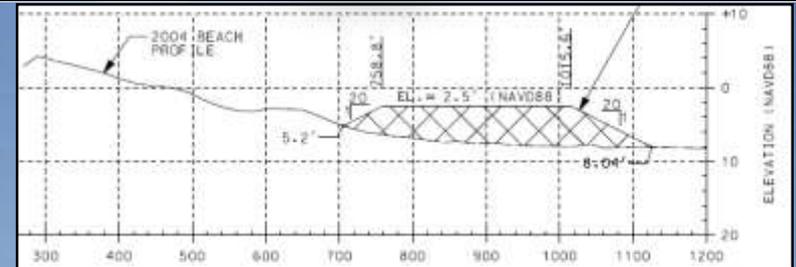


Nearshore Berms



Guidance and Tools needed for:

- Design
- Operations & Placement
- Evolution
- Benefits



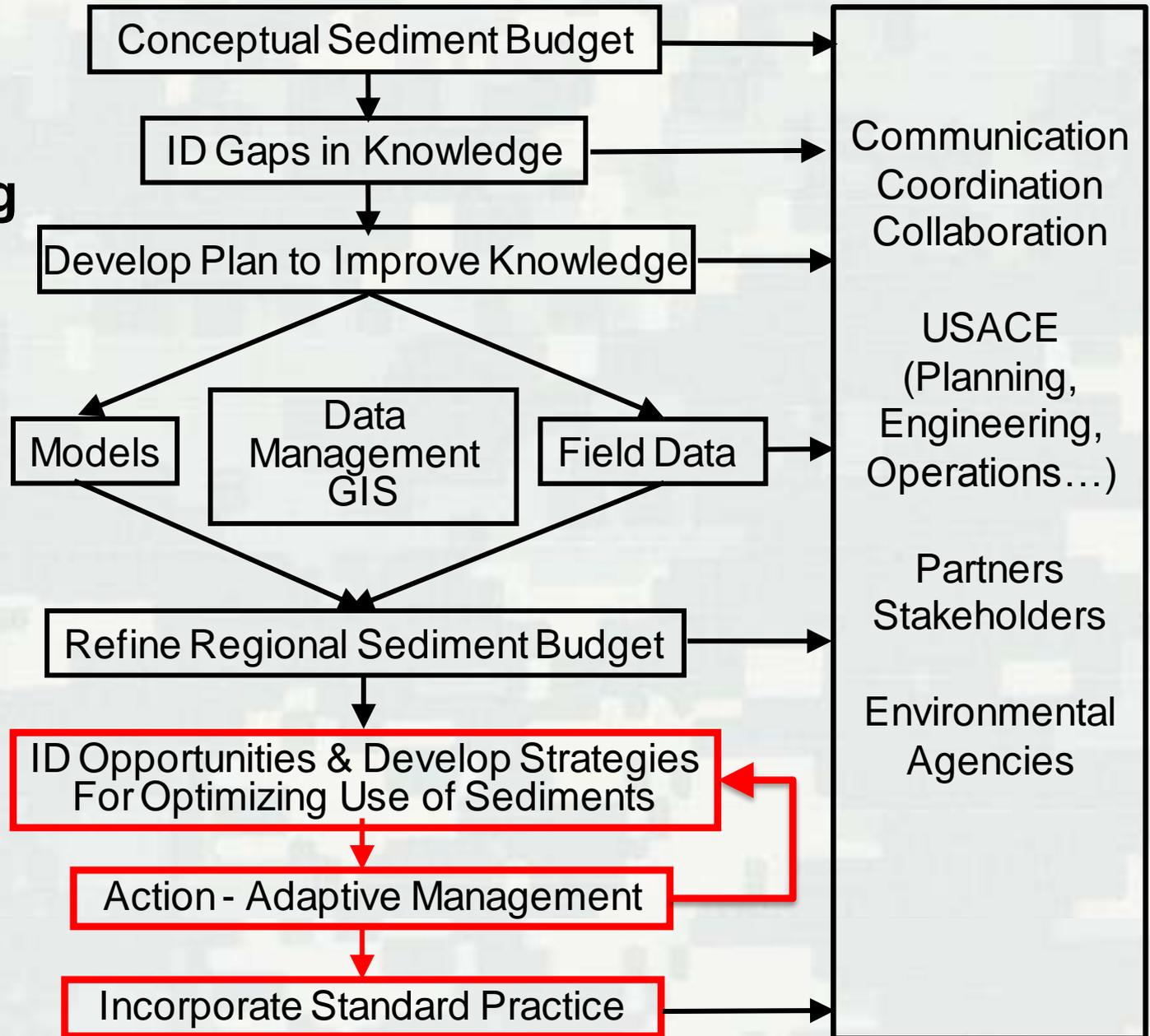
Nearshore Berm

*Federal standard: *Least cost, environmentally acceptable*

**FL: *>10% fines cannot be placed on beach*

RSM Progression

Regional Understanding



Adaptive Management

RSM Plans

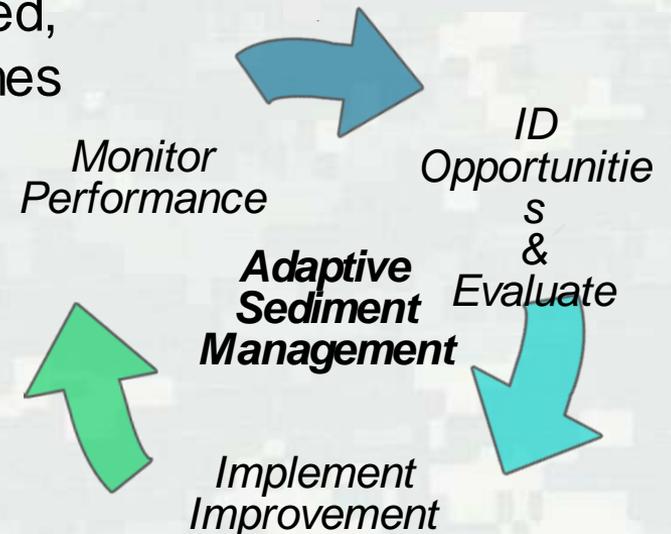
- 3-5 (or greater) year studies
- Expensive \$\$\$\$
- Lack coordination (authorities, cost share, permits, overcome hurdles)
- Do not result in construction -
Not moving sediment or no sand on the beach



RSM Evaluations*

Practical actions that can be planned, evaluated, coordinated, and constructed in short timeframes (1-3 years).

*Win-Win for everyone



RSM FY00-FY11 Participation



MCNP
CFDC
NCDB



District RSM PDTs

Operations Division:

Chief, Technical Support Branch, Navigation Section

Chief, Coastal Branch

Chief, Spatial Data Branch

Beneficial Uses Project Manager

Dredging Project Manager

Area Office Representative, Coastal

Area Office Representative, Inland

Engineering Division:

Chief, Hydrology & Hydraulics Branch

Coastal Engineer

Planning Division:

Physical Scientist, Coastal

Physical Scientist, Coastal

Inland Environment Team Leader

Biologist, Inland

Office of Counsel

.....



Stakeholder/Partner Collaboration

Working Together To:

- Identify Opportunities and Solutions
- Make Decisions
- Overcome Obstacles
- Take Action
- Leverage Resources to Make It Happen



RSM Program Funding Process

Presidents Budget O&M (Base)

Request for Proposals (29 July 2011)

Submittal through
District Chief, Operations
MSC RSM POC

Review Team:
4-Districts; CWG Lead, R&D
PMs:

RSM PM:
Review, Program & Budget Formulation

Recommendations to:
ERDC TD Navigation
HQ Navigation BLM

Quarterly Progress Reports, Fact Sheets, In-Progress-Review

Congressional Adds O&M

Assign PI:
*PI Team, Management,
Tech Support & Transfer

Develop PMP (District, PI)

*Submittal through
District Chief, Operations
MSC RSM POC



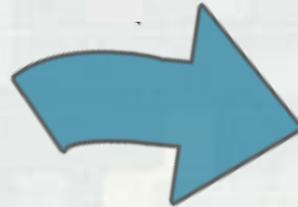
RSM FY11/12 Proposal Criteria

Review criteria:

- Improve lifecycle costs/benefits
(channel avail, reduce dredging expenses, etc)
- Improve environmental quality using current dredging dollars
- Focus on commercial use navigation projects
- Discuss 'Adaptive Management' strategies
- Incorporate RSM as standard business practice
- Utilize existing/upgrading Corps Navigation/Flood & Coastal Program tools
- Integrating existing/new USACE/Stakeholder data
into Navigation/RSM databases, data management structure, format
- Building Corps Capability
- Coordination among Corps team members, agencies, stakeholders
- Leveraging RSM funds w/other USACE, Federal, non-Federal programs
- Provide National significance & product transferability



*Monitor
Performance*



*ID Opportunities
Evaluate*

***Adaptive
Sediment
Management***



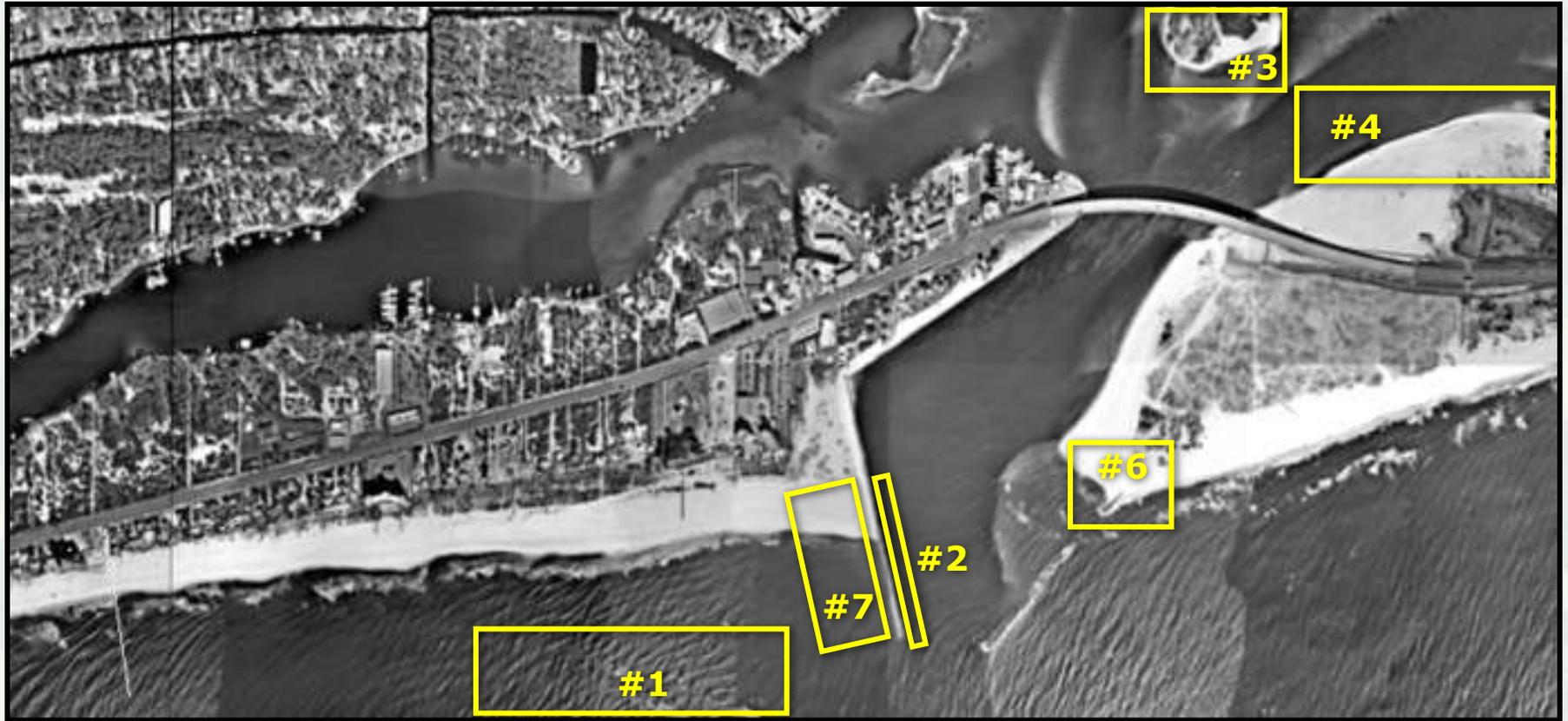
*Implement
Improvement*



Case Studies



Perdido Pass, AL



Conclusions/Recommendations: Perdido Pass Bypassing

- Re-handling material under present practices
- Bypass material beyond ebb shoal 0.5 to 0.75-mi west of jetty.
- Bypassing > 1.25-mi west of jetty ineffective bypassing.
- Monitor to optimize bypass operation.



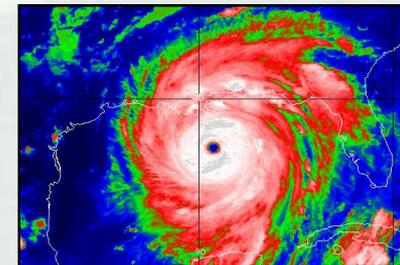
Construction April-May 2003



Benefits



\$



Jacksonville District St. Johns Co. RSM

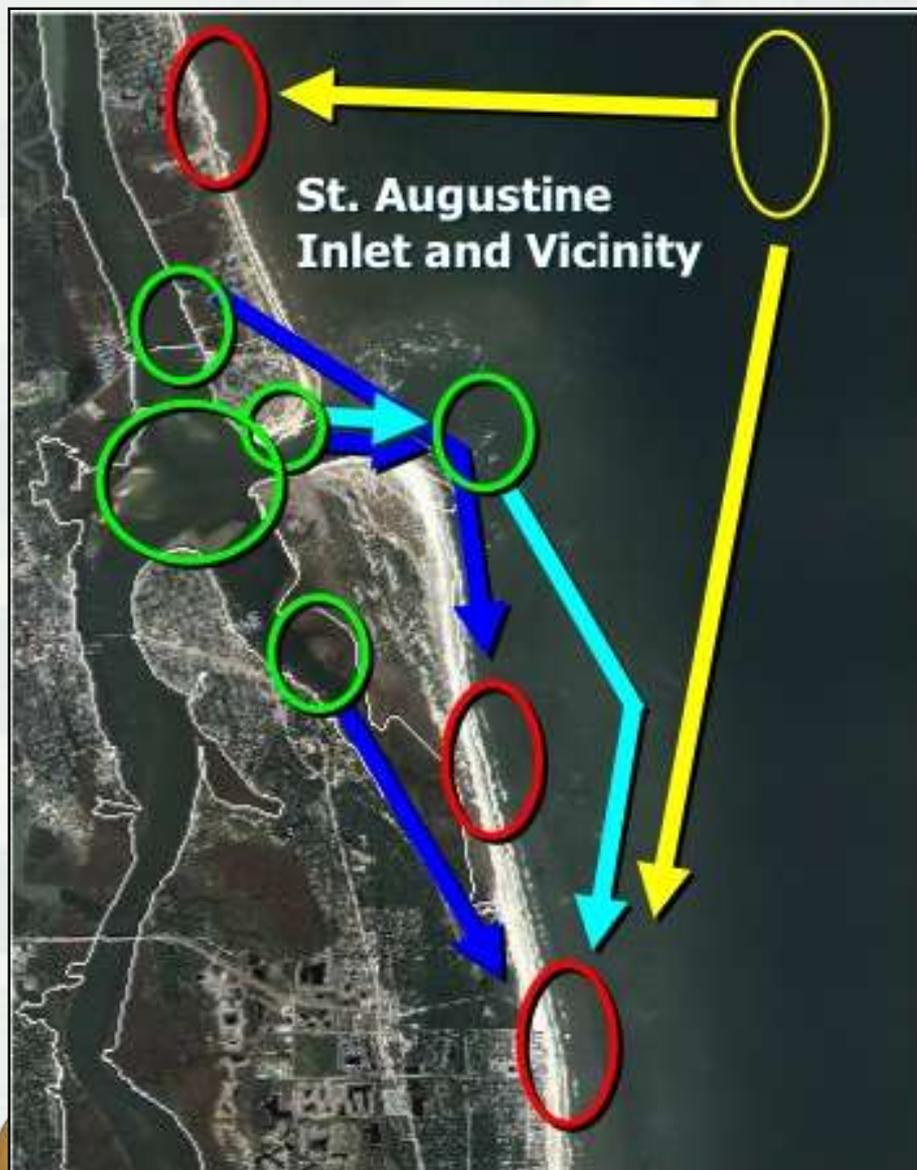


- **Intracoastal Waterway (IWW)**
- **San Sebastian River**
- **St. Augustine Inlet**
- **St. Augustine Beach SPP**
- **Vilano Beach (Feasibility Study)**
- **Anastasia State Park**



St. Augustine Inlet, FL and Vicinity

Combining multiple projects (CG, O&M), sand bypassing, shoreline erosion



\$2M cost savings

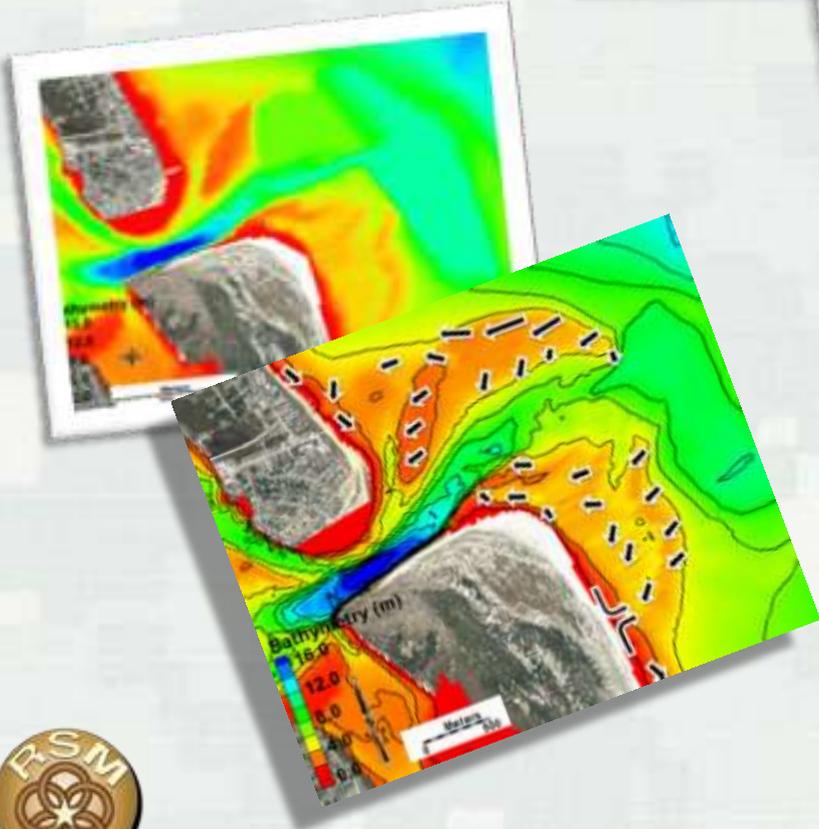
Reduced dredging/environmental impacts

Combined permit

Emergency sand sources

Jacksonville District

Duval and St Johns Counties



Annual RSM Workshop & In-Progress-Review

August 10-12, 2011

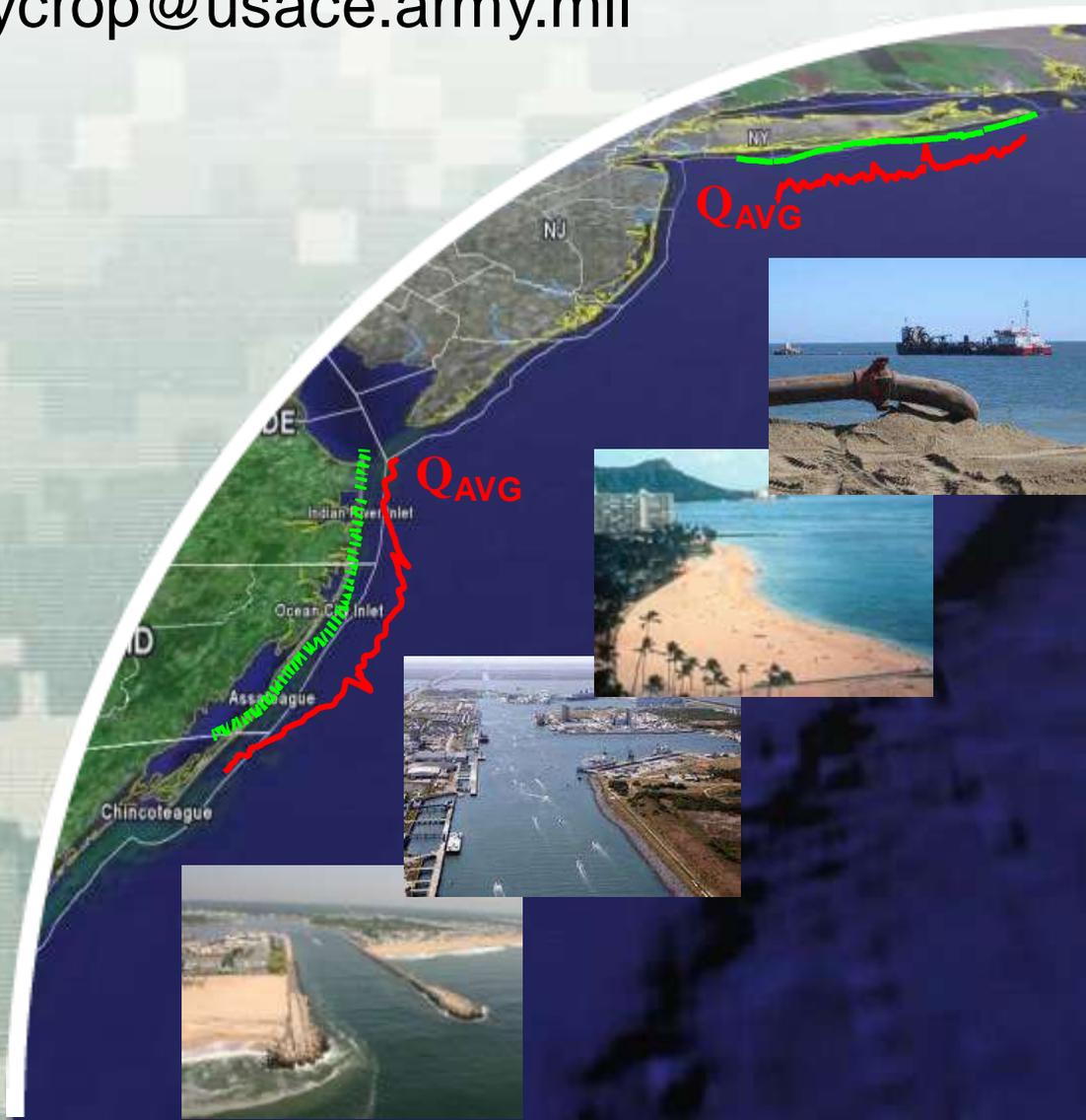
Coastal and Hydraulics Laboratory
Vicksburg, MS

Linda.s.lillycrop@usace.army.mil



Thank you

Linda.S.Lillycrop@usace.army.mil



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FY12 (FY11) Program Goals

- Re-engage/Benefit O&M in addition to FRM, ER
- Focus on adaptive management
- Take Action – move sediments
- Leveraging and supplementing
- Build Corps capability & sustainable RSM programs
- Execute what is planned within funding timeline
- Lessons Learned local and national perspectives
(Document and share knowledge gained)

