

# Regional Sediment Management Program Update

RSM IPR  
Successes & Challenges Meeting  
17-19 May 2016



®



**BUILDING STRONG®**

U.S. ARMY CORPS OF ENGINEERS | REGIONAL SEDIMENT MANAGEMENT



# Regional Sediment Management Program Update

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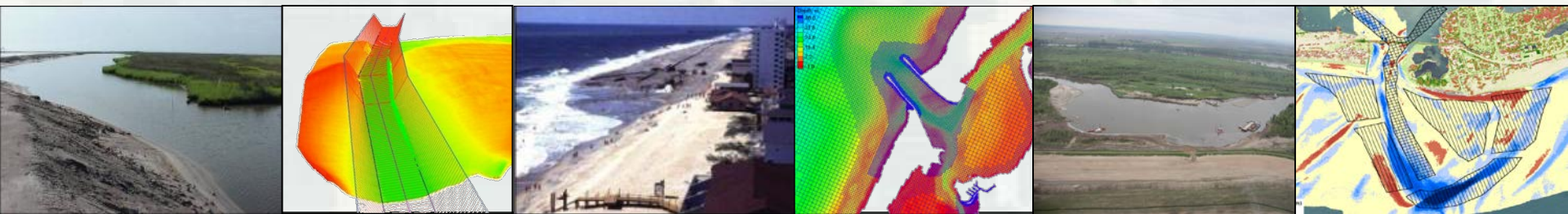


# Regional Sediment Management...

Est 1999, CERB Charge

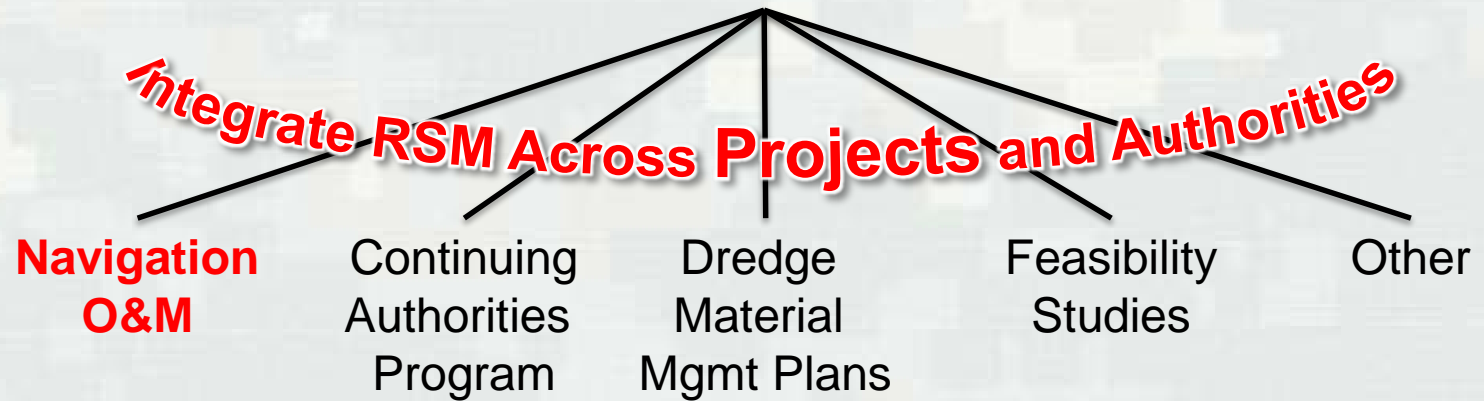
A systems approach to deliberately manage sediments in a manner that maximizes natural and economic efficiencies to contribute to sustainable water resource projects, environments, and communities.

- Recognizes sediment as a valuable resource for Healthy Systems
- Regional strategies across multiple projects and business lines to achieve short & long-term economic & environmental value & benefits
- Enhances relationships with stakeholders & partners to better manage sediments across a region (local actions w/regional benefits)
- Share data, tools, technology, and lessons learned



# RSM

## Districts

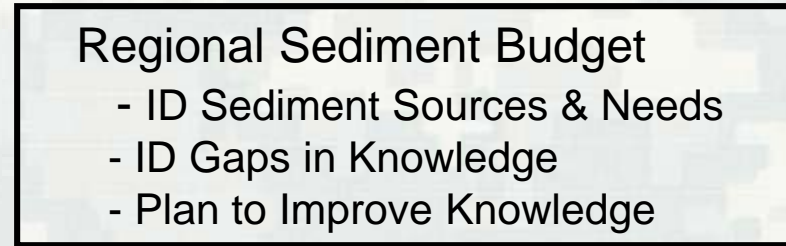


## ***Construction***

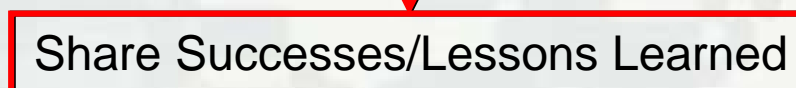
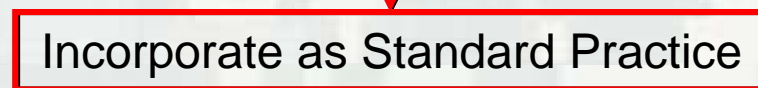
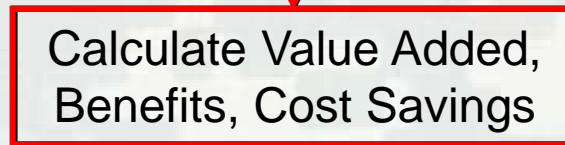
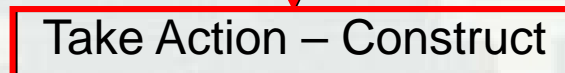
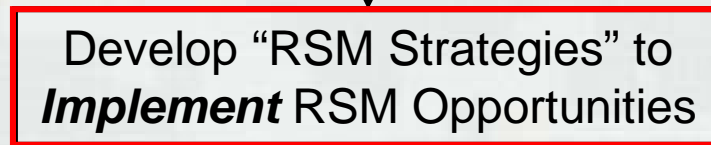
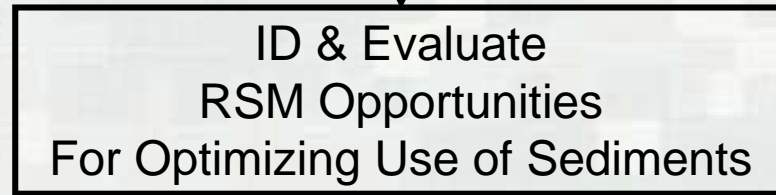


# RSM Process

**Understand  
the Region**



**Opportunities  
Strategies**



Communication  
Coordination  
Collaboration

USACE  
(Planning,  
Engineering,  
Operations...)

Partners  
Stakeholders

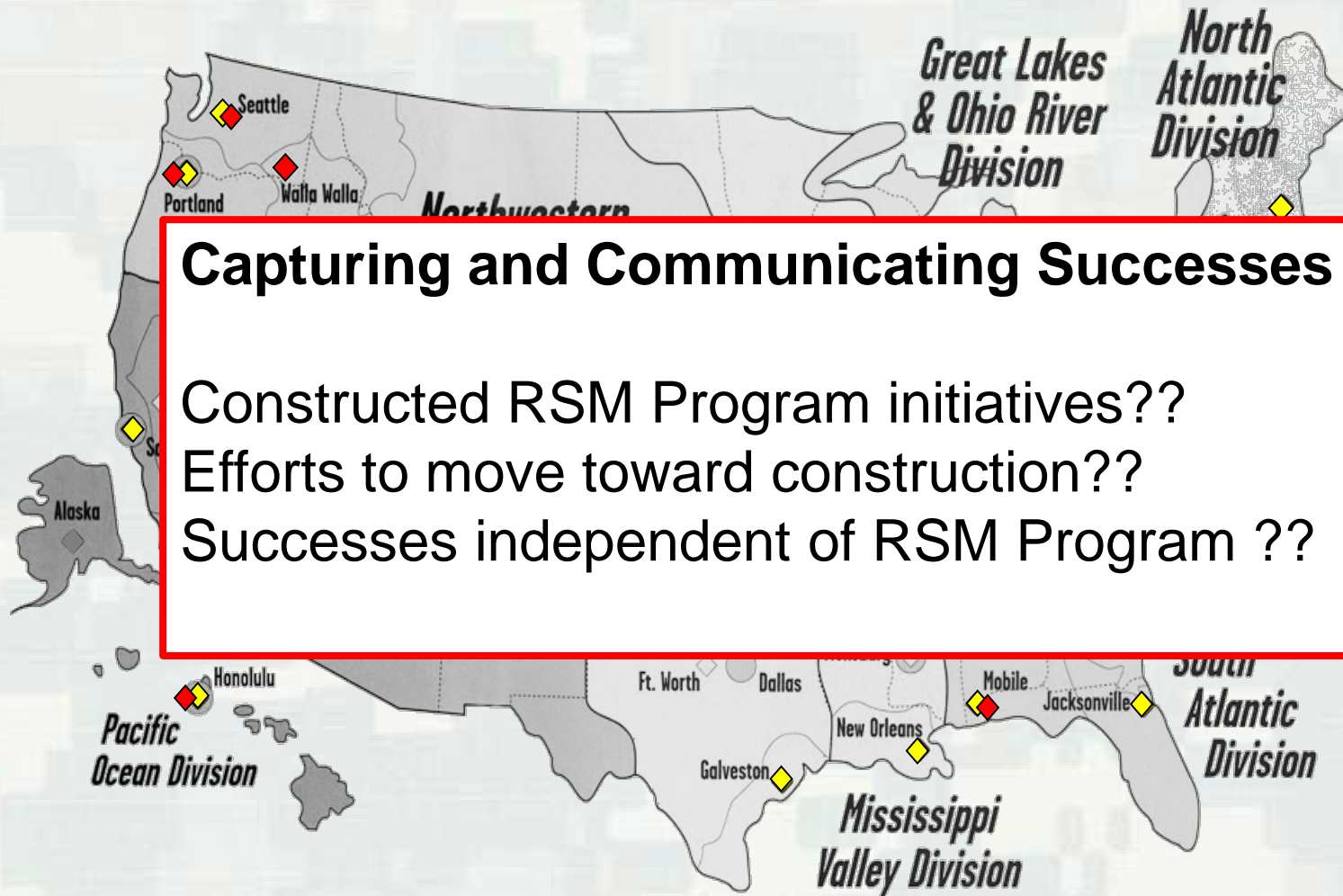
Resource  
Agencies

**Implement  
Construct**





# RSM Participation (2000-2016)



## Capturing and Communicating Successes

Constructed RSM Program initiatives??

Efforts to move toward construction??

Successes independent of RSM Program ??

28 Districts

◆ 20 Coastal

◆ 8 Inland

◆◆ 7

Coastal/Inland

ERDC IWR-HEC



## FY16 RSM

### Districts

LRB Lake Erie Sediment Budget Report  
LRC IL North Shore Sediment Budget & RSM Strategy  
POH Sunset Beach Oahu Sediment Budget & RSM Strategy  
NAE Saco Bay Sediment Budget & RSM Strategy  
SAJ Puerto Rico Sediment Budget & RSM Strategy  
SAW Carolina Beach Inlet Sediment Budget & RSM Strategy  
NAP Barnegat Inlet & Bay System Sediment Budget/Strategy  
NWP Lower Columbia River RSM Strategy  
NAO James River Navigation Channel, RSM Strategy  
POH American Samoa Utulei Beach RSM  
SAJ Tampa Bay RSM Ecosystem Restoration Strategies  
SWG GIWW-Corpus Christi Ship Channel Shoaling Reduction & Tools  
LRC Improving Effectiveness Nearshore Placement S Lake MI  
SAJ Palm Beach Harbor/Lake Worth Inlet Nearshore Placement  
SAM/SAJ Eval FL Turbidity Compliance Issues w/Nav Projects  
SAM BU Dredged Material: Fill Oyster Dredge Holes Mobile Bay  
SAD RSM Strategy Pilot Tool  
NAO Lower Chesa Bay/Eshore Cost Analysis local vs regional approaches  
SAJ/ERDC True Cost of Dredging Analysis  
NAP Data Management Major NAP Navigation Projects  
MVR Sangamon/Illinois River Sedimentation Reduction  
NWS Feas Skagit Bay nearshore placement downdrift Swinomish Nav Ch  
NWO Evaluating Impacts of Increased Sediment Load MO/MI Rivers  
SAM Alternate Training Work Construction Methods Using Dredge Material  
NWK Milford Lake Reservoir Sediment Mgmt Workshop/solutions  
NWP Optimizing Fall Creek Reservoir Flush TMDL's  
NWS Ediz Hook post-dam removal shoreline change  
NAN Stakeholder Mtg Sandy Hook Channel Sediment Mgmt

### \*R&D/Tech Transfer

Nav Data Integration Framework  
RSM Strategy Tool  
RSM Implementation Database/Tool  
RSM Portal  
Sediment Budget Analysis System  
CE-Dredge Dredging Manager  
CE-Dredge Decision Support Tool  
Sediment Analysis & GeoApp  
Nearshore Berm Guidance/Tools  
Sediment Mobility Tool  
Depth of Closure Database  
Benthic Mapping Demonstration  
CIRP/NCMP/NavSYS/DOER Applications

\*Collaboration w/ Districts & R&D Programs



### 28 District RSM Initiatives

Sediment Budget/RSM Strategy  
Reduce River Sedimentation

Address RSM Issue  
Reservoir

Assist Implementation



# Outreach

## Stakeholder/Training Workshops

MVR Governors Conference Mgmt of IL River System, Oct 2015  
CHL AdH Hydrodynamics and Sediment Workshop, SPA, Dec 2015  
SAJ Tampa Bay RSM Ecosystem Restoration Strategies Workshop, Jan 2016  
SAJ Puerto Rico Workshop, Jan 2016  
NAD Coastal Mayors Mtg, Mar 2016  
CHL LTFATE/PTM training, NAO, May 2016  
NWP Mouth of Columbia River Science & Policy Workshop, May 2016  
POH American Samoa Workshop, July 2016  
NWK Reservoir Sedimentation Workshop, July 2016  
LRE Interpreting Sediment in the Field: Theory & Methods, July 2016  
SAM Mobile Bay Interagency Working Group, Quarterly

## Articles

Collaboration & Public Participation COP Newsletter: RSM on the IL River, MVR, Jan 2016  
ASBPA Coastal Voice Newsletter:  
    CHL/SAJ, Research on Nearshore Placement at Vilano Beach, Feb 2016  
NWO/HEC - LAO People's Democratic Republic: RSM, Reservoir Sediment Mgmt

## Conferences

ASBPA Conference, New Orleans, Oct 2015  
ASBPA Summit, Washington, DC, Jan 2016  
TRB-Committee on Marine Transportation, DC, June 2016  
River Flow 2016, St Louis, MO, Jul 2016  
CERB, Puerto Rico, Aug 2016  
ASBPA Conference, Long Branch, NJ, Oct 2016

**Send info!!  
Agendas, briefs,  
papers, etc**



# FY15/16 Program Publications – 18 Technical Notes, 6 Technical Reports

CHETN-XIV-40	Saco Bay, Maine: Sediment Budget for Late-20th Century to Present	NAE/ERDC
CHETN-XIV-41	Regional Sediment Management (RSM) Strategy for Mobile Bay, Alabama	SAM/ERDC
CHETN-XIV-43	Reservoir Sediment Mgmt Workshop for Tuttle Creek Lake & Perry Lake Reservoirs KS River Basin	NWK
CHETN-XIV-44	Alts Reduce Shoaling GIWW & Prevent Erosion of Barrier Islands along N Shoreline W Galveston Bay	SWG/ERDC
CHETN-XIV-45	Identification of Alternatives to Reduce Shoaling in the Galveston Entrance Channels, Texas	SWG/ERDC
CHETN-XIV-46	Flocculation and Settling Velocity Estimates for Reservoir Sedimentation Analysis	ERDC
CHETN-XIV-47	Potential RSM Projects; West Maui Region, Maui, Hawaii	POH
ERDC/CHL TR-16-3	NE Florida RSM Implementation Strategies & Recommendations Nassau & Duval Co, Florida	SAJ
ERDC/CHL TR-15-9	Modeling of Nearshore Placed Dredged Material	CHL/LRB
	<b>In Publication</b>	
Technical Note	Applying 1D Sediment Models to Reservoir Flushing Studies: Measuring, Monitoring, and Modeling Spencer Dam Sediment Flush with HEC-RAS	NWO/IWR
Technical Note	Environmental Benefits of Restoring Sediment Continuity to the Kansas River	NWK
Technical Note	Reservoir SEDiment MANagement (SEDMAN) Technologies Interactive Web Interface: An Overview	ERDC
Technical Note	Benefits & Lessons Learned: Maintenance Dredging Projects using Gov't Shallow-Draft Dredges SAJ	SAJ/ERDC
Technical Note	Beach and Morphology Change Using Lidar	SAJ
Technical Note	Regional CMS Modeling; Southwest Florida Gulf Coast	SAJ
Technical Note	Regional Sediment Management (RSM) Assessment of Longboat Pass, Manatee County, FL	SAJ
Technical Note	Passage Key Inlet, Florida; CMS Modeling and Borrow Area Impact Analysis	SAJ
Technical Note	Identification of Challenges and Opportunities for RSM and EWN within Inland USACE Districts	ERDC/NWO/NWK
Technical Note	Atlantic Coast of MD, Sediment Budget Update: Tier 2, Assateague Island & Ocean City Inlet	ERDC/NAB
Technical Note	Charleston Harbor Dredged Material Beneficial Nearshore Placement	SAC
Technical Report	RSM Strategies for the Vicinity of St. Augustine Inlet, St. Johns County, Florida	SAJ
Technical Report	Sediment Transport Analysis; Port Orford, Oregon	NWP
Technical Report	Sediment Budget Analysis; Masonboro Inlet, North Carolina	SAW
Technical Report	Charleston Harbor Dredged Material Beneficial Nearshore Placement	SAC



# RSM Inland Meeting, March 15-16, 2016

## Actions

- Section 14 Emergency Streambank and Shoreline Protection
  - Capture lessons learned
- ID risks as dredging costs increase
- ID benefit river sediment mgmt upstream to downstream system
- Outreach need for RSM before it has to be dredged
- ID Future impacts if RSM is not implemented
- Capture past RSM for sediment use
- Pilot projects to address challenges
- True cost of reservoir bypassing or not
- Regulatory standardization across states
- Reservoir Sustainability Plans
- *RSM University: Corps and Stakeholder Education and Training*



**ASBPA 2016 USACE Award  
Mobile District & Interagency Working Group  
RSM Teams**





# **RSM FY17 Proposals: Due 22 July 2016**

- **Supports RSM Principles and Practices**
- **Takes action to optimize and move sediment**
- **Reduces lifecycle costs/Increases benefits or value added**
- **Innovative solutions:**
  - Links multiple projects, business lines, programs, projects
  - Develops new capabilities or techniques.
- **Utilizes existing/enhances Corps tools & builds Corps expertise**
- **National significance & product transferability**
- **Technical Transfer:**
  - Communicate lessons learned / Publish results
  - Calculate benefits/value-added
  - Participation in Annual RSM IPR & Workshop
- **Establish/Participate Interagency/Stakeholder Working Group**
- **Past Performance: Completed Products, Milestones, Participation**



## RSM Technical Notes, Reports, Manuals, Conference Papers

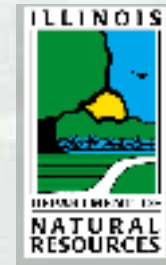
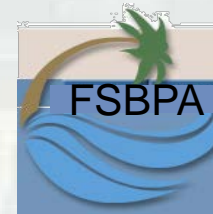
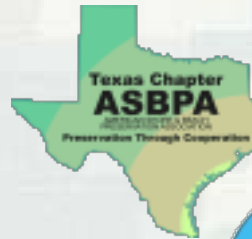


## Bi-Monthly RSM Conference Calls Webinars



## Special Topic Webinars Tools, Technologies, Implementation





*rsm.usace.army.mil*

