



Regional Sediment Management

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Managing Sediments in the Watershed: Bringing Dredged Material and Watershed Managers Together

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Regional Sediment Management (RSM)



RSM “Approach” - a systems-based approach for collaboratively addressing sediment-related issues within a regional context

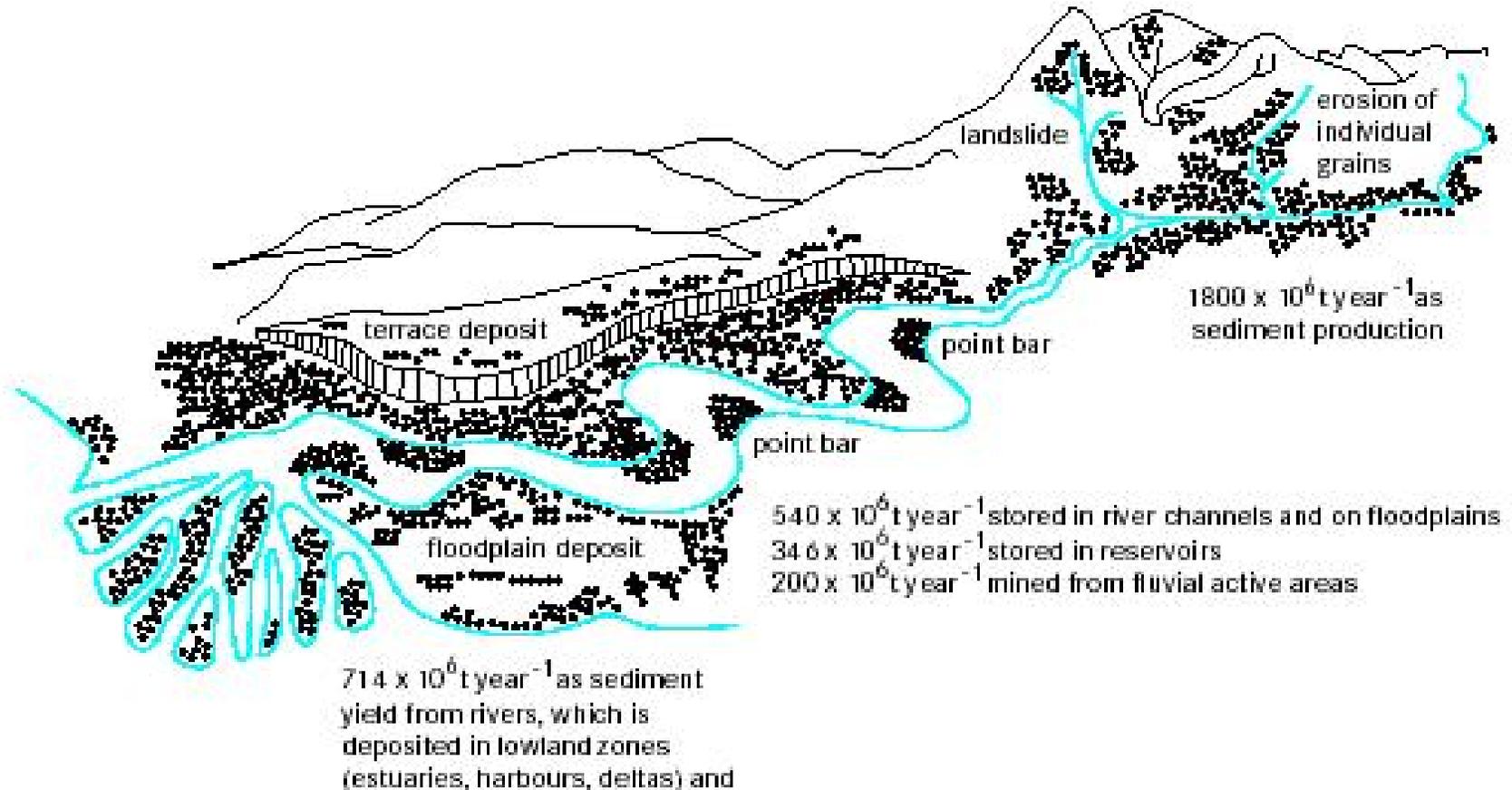
RSM “Demonstration Program” - to examine, apply and evaluate opportunities, practices, tools, benefits and impediments to implementing RSM approach

- Innovations both internal and external

RSM Approach

- **Recognizes Sediment as a Resource**
 - Integral to economic and environmental vitality
 - Consider the multiple inter-related sediment needs and opportunities
- ****Sediment system provides the context for managing projects/activities involving sand & other sediments**
 - Coastal, river & estuarine systems
 - **Regional sediment system** - Sources, sinks, timing, direction, quantity, quality, ... and factors that influencing each of these...
 - *Influences long-term effectiveness, and helps identify players and stakeholders*
- **Integrates actions that affect the *transport, erosion, removal, and deposition* of sediment in a region (see next slide)**
- **Uses knowledge about the sediment system to inform**
 - local project decisions and longer range strategies
- **Partnerships and collaboration across government levels and w/ private sector are key**
 - To developing regional sediment mgmt strategies, balancing objectives and leveraging implementation

“Sediment Budgets” contribute to understanding of the system



Sediment system can provide a “neutral rallying point” for discussing future management approaches

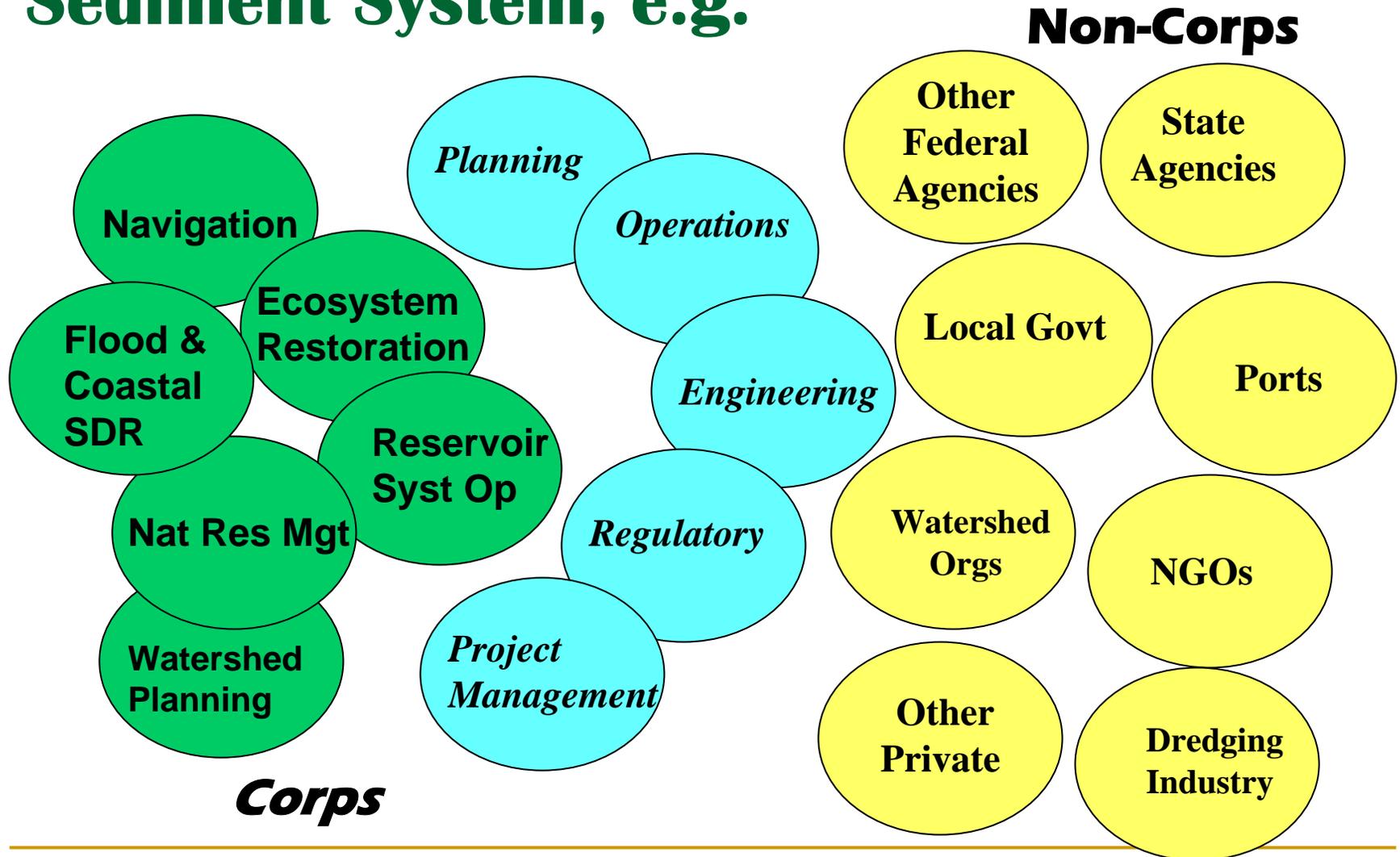
“Sediment Management” Activities

Actions that affect the *transport, erosion, removal, and deposition* of sediment in a region - e.g.

- ❑ Dredging and placement –
 - For navigation, restore reservoir capacity, habitat restoration
- ❑ Diverting, trapping, interrupting sediment flows
- ❑ Erosion protection for riverbanks, shorelines, streambeds
- ❑ Habitat restoration and protection
- ❑ Sand and gravel mining for construction or other purposes
- ❑ Other

...does each “sediment manager” know how he/she relates to other sediment managers w/in a given sediment system??

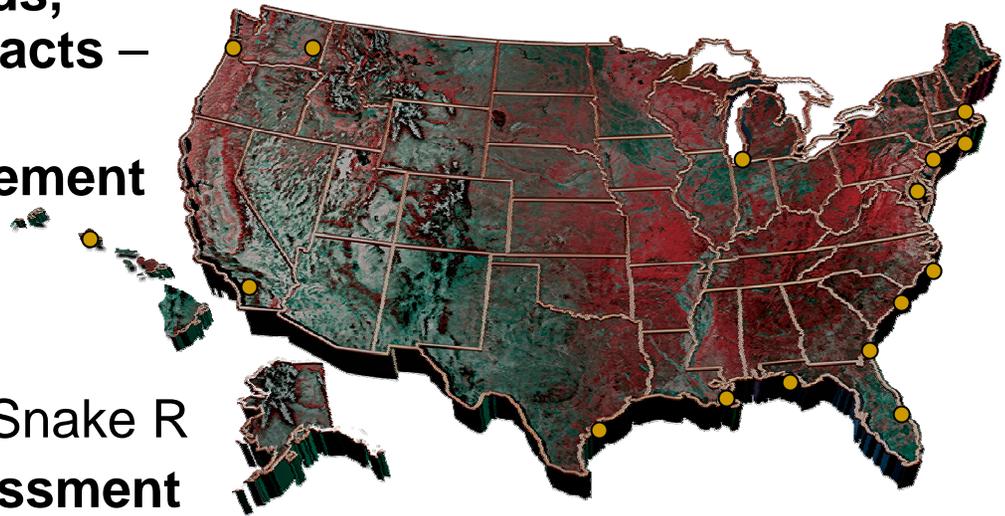
ID Sediment Management roles within Sediment System, e.g.



Essential in defining AND implementing RSM strategies !!

Examples of '06 RSM Demo Efforts

- **Sediment Needs Assessment** – Long Island, NY
- **Beach and inlet management plan** - Wrightsville Beach to Carolina Beach, NC-
- **Inventory of sediment needs, sources, and shoaling impacts** – Great Lakes
- **Regional Sediment Management Coordination Workshops** - Chesapeake Bay
- **Programmatic Sediment Management Plan** - Lower Snake R
- **Watershed Sediment Assessment** - Darby-Cobbs, NJ



Helpful to recognize

- RSM approach not limited to coastal
 - Being applied in riverine, estuarine and coastal regions
 - Some interpret “watershed” as “inland” - those working in “coastal regions” may not “see themselves” in efforts labeled “watershed”
 - Many don’t see their activities as part of a “sediment system”
 - Laws, policies, programs seldom integrated, but could be...
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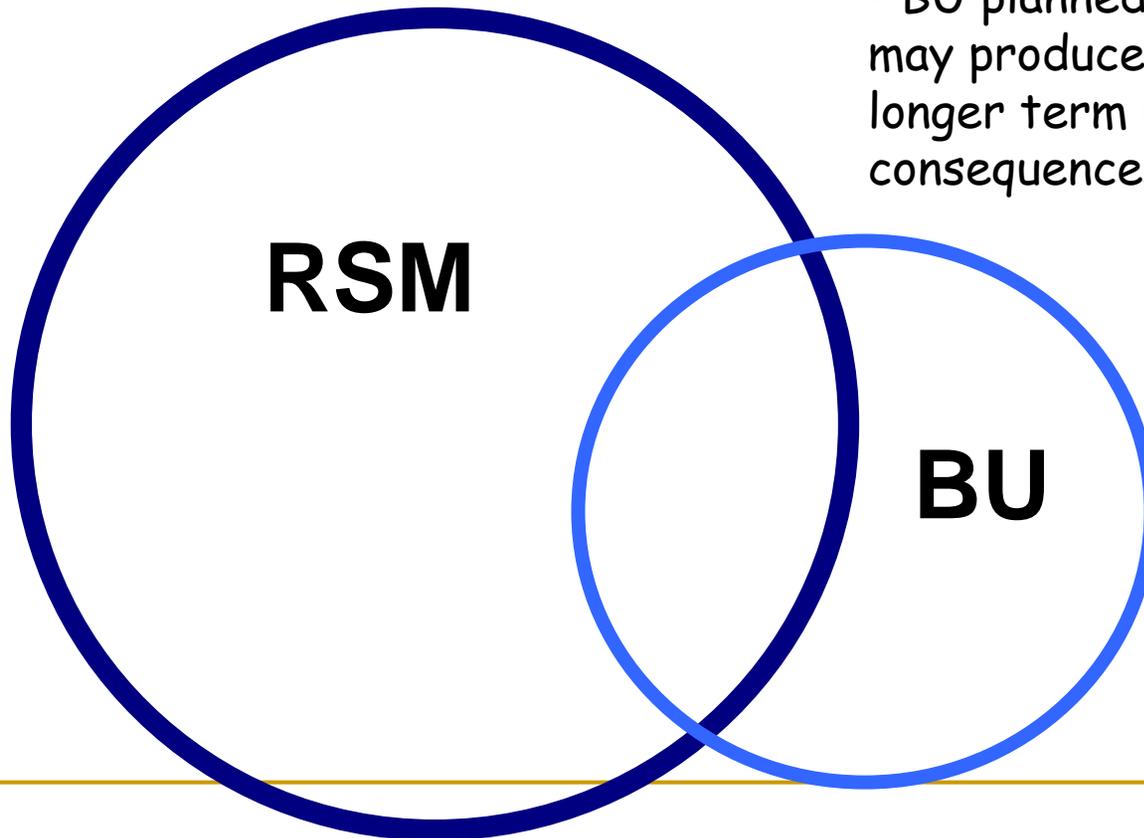
Beneficial Use and RSM

✓ - **Sediment as a resource**

? - **Implications on sediment system**

- Some BU removes sediment from the system - e.g. construction materials, capping, top soil, upland habitat restoration

- BU planned w/out system context may produce short term benefits, but longer term undesirable consequences, lost opportunities,...



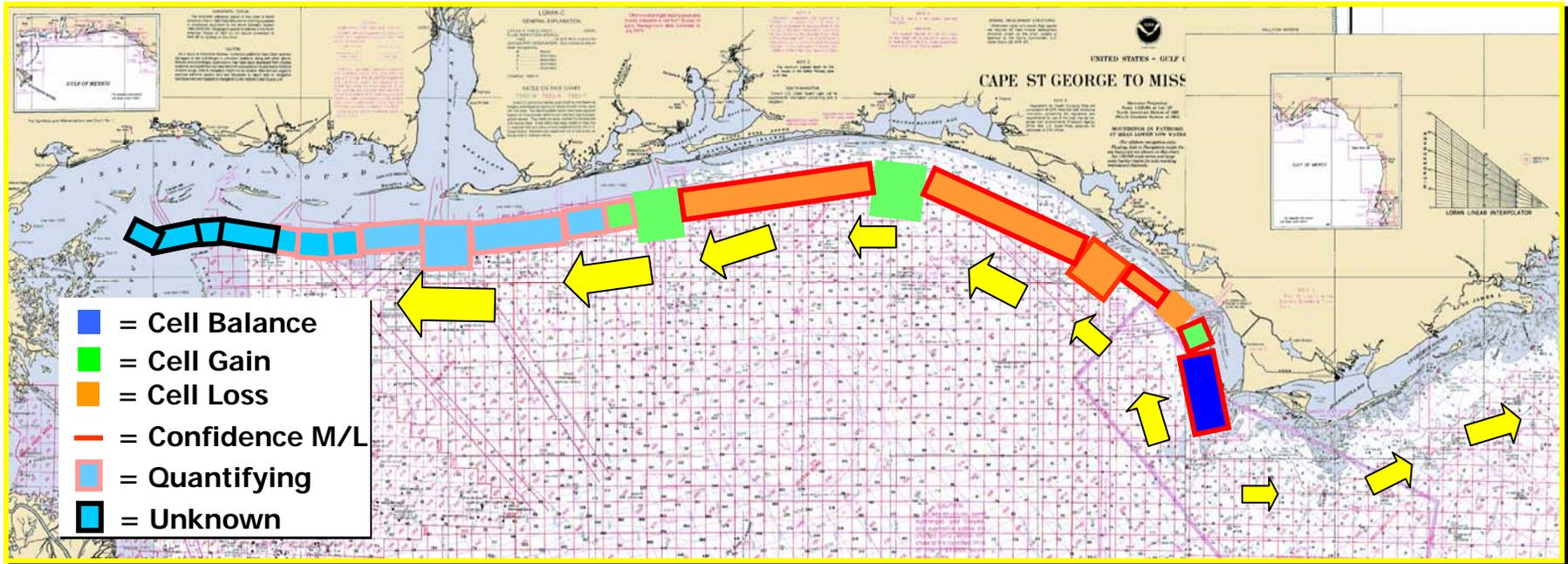
RSM Approach and Watershed Approach

- Both are collaborative, system approaches
 - Beneficial to collaboratively work:
 - With mutual stakeholders, e.g.
 - watershed planning groups, port development and management interests, estuary programs, fishery and other resource managers, the dredging industry, NGOs, other
 - RDTs and LPGs
 - Existing programs, e.g.
 - State CZM Programs, Urban Rivers Restoration Initiative, Regional river basin organizations, Estuary Programs
 - To develop and implement regional sediment mgmt strategies that address multiple economic and environmental objectives
 - To share data, information, analytical tools
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Together can improve

- Dredged Material Management Planning
 - Support Regional DMMPs
 - DMMPs or LTMS or PSMMP
 - Not only address capacity needs, but also
 - Consider sediment system influences
 - Links among projects in region – Regional DMMPs
 - Sediment management in the watershed or region
 - Beneficial use of dredged material
 - Increase beneficial use of dredged material
 - Address perceptions that limit possibilities:
 - “Spoil”, “Dumping” – perception: “bad stuff”
 - Use of multiple agency authorities to accomplish strategies; integrated approaches to regulatory mandates
 - Moving from “opportunistic action” to “strategic implementation”
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Together can Address Technological Challenges



- Establishing/Improving sediment system understanding
 - Regional sediment budgets – need to fill gaps
 - Regional sediment transport, circulation, and system response models for assessing management alternatives
- Linking and sharing agency data and info on system processes, resource conditions, needs, etc -- web-based GIS and databases

Additionally

- Challenge – performance measures - hard for an “approach” (RSM or Watershed), but perhaps easier for implementing “plans”
 - Dredging contractors – we need to share strategies for managing sediment differently – get their input
 - Sec 319, and Targeted Watershed Grants, NRCS, NOAA, FWS programs – help build capacity in state and local RSM partners
 - TMDLs – RSM potentially assist in development and implementation
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**Regional sediment systems can provide helpful
the context for**

- Exploring management alternatives, and
- Managing projects and activities involving sediments