West Coast Governors' Agreement:
Draft Action Plan Sustainable Coastal Communities/Sediment

Open for public comment until July 10, 2009
Visit http://westcoastoceans.gov/contact and submit comments to comments@westcoastoceans.gov

Sediment workgroup:
Jim Haussener
Lesley Ewing
Eric Braun
George Domurat
Brian Ross
Brian Lynn
Jennifer Hennessey

POC: Valerie Termini

Table of Contents:

WCGA Action Plan – Sediment Action 7.4

Vision

Develop regional sediment management (RSM) plans along the West Coast region to maximize beneficial use of sediment in an environmentally responsible manner in order to protect and maintain community character, infrastructure, economic development and environmental resources. State policies should acknowledge sediment is an important resource, not a waste product.

Definition of Regional Sediment Management (RSM):
Regional sediment management (RSM) is a system-based approach to optimally manage coastal sediment projects for regional benefits rather than only to solve site-specific problems. RSM recognizes that sand, cobble and fine sediments are important natural resources that are critical to the environmental health and economic vitality of the coastal zone from the watersheds to the offshore areas. Fundamental to RSM is the understanding and knowledge about the interrelationships between inland, coastal and offshore sediments, and sediment pathways to and along the coast. The RSM approach provides opportunities to achieve greater effectiveness and efficiency by improving decision-making with a regional framework, leveraging resources, and forecasting the long-range implications of management actions.

Why RSM matters:
Managing sediment on a regional basis improves the environment, considers use of natural processes in resolving engineering problems, and potentially saves money. RSM plans help protect and enhance the nation's natural resources while supporting infrastructure protection and other economic needs of coastal communities. Some examples of the benefits of RSM include:

- Restoring, maintaining or enhancing fish and wildlife habitats
- Nourishing beaches that are eroding due to reduced sediment transport from watersheds
- Protecting critical coastal infrastructure at risk from global climate change and sea level rise
- Enhancing recreational opportunities
- Protecting and maintaining critical community economic and environmental infrastructure

Geographic Area:

This plan pertains to the coastal zone as defined by each state. It covers the nearshore region of the entire West Coasts of Washington, Oregon and California, including most estuaries, but not entire watersheds throughout the three states.

Individual regional sediment management plans can determine the scale and geographic boundaries that make the most sense. However, they usually encompass shorelands and

drainage basins which have a significant and direct effect on coastal waters. The size of the unit should be adequate to address such important coastal issues as erosion and sedimentation in the coastal estuaries, and to reflect the natural features and processes, such as extensive rainfall, steep slopes, and soil types, which characterize the coast. The individual RSM plan needs to be limited to a manageable geographic and jurisdictional region, so RSM boundaries often may not necessarily encompass entire watersheds.

Summary/Background

Action 7.4 states, Develop regional sediment management plans to maximize beneficial use of sediment in an environmentally responsible manner to protect and maintain critical community economic and environmental infrastructure.

The states will continue progress on regional sediment planning efforts, and will consider and minimize potential environmental impacts of sediment uses. The states will partner with the appropriate entities including US Army Corps of Engineers; US EPA; other relevant local, state and federal agencies; and other interested parties to advance regional sediment management efforts to maximize beneficial uses of sediment throughout the three states.

These plans are to be consistent and coordinated where appropriate, and build upon existing federal, state and local efforts on regional implementation of sediment management policies. Examples include: US Commission on Ocean Policy, Washington's Ocean Action Plan, California Ocean Action Plan, California Sediment Management Working Group, Lower Columbia Solutions Group, The Association of Monterey Bay Area Governments (AMBAG), and the San Francisco Long Term Management Strategy (LTMS).

As a management method, RSM:

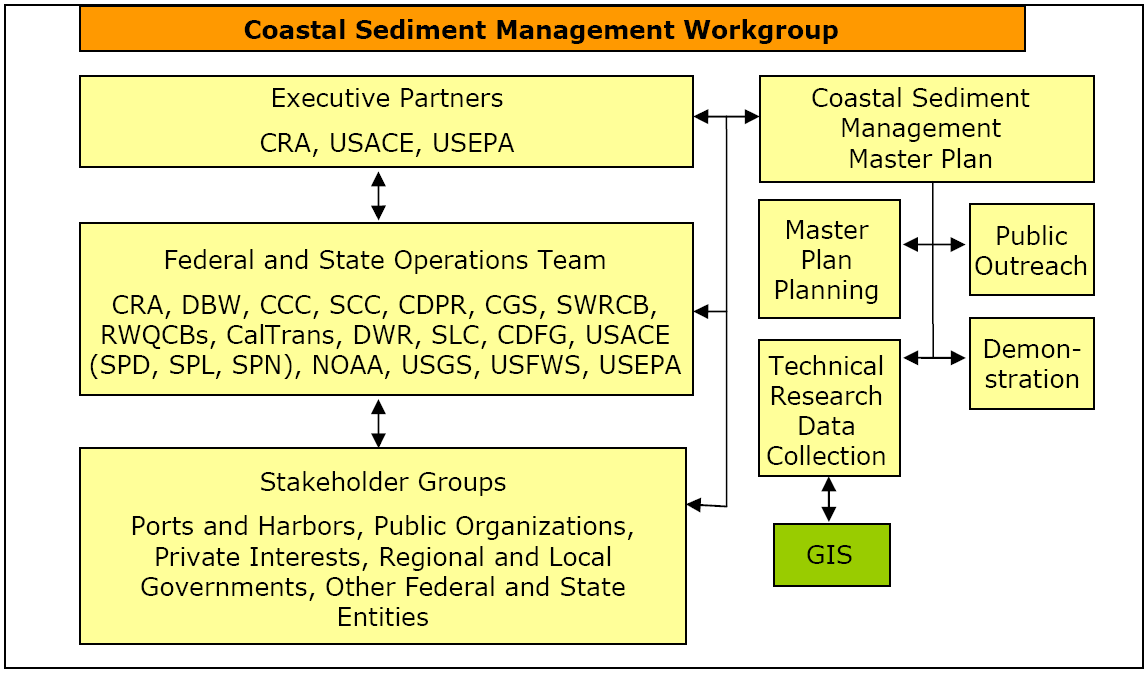
- Includes the entire environment, from the watershed to the sea
- Accounts for the effect of human activities on sediment processes in streams, lakes, bays, and oceans
- Addresses sediment management issues within the context of local constraints and opportunities

All types of Regional Sediment Management (RSM) plans throughout the region should consider:

- Characterizing the types of sediment, issues, and actions (e.g. rivers, beaches, harbors)
- Watershed planning such as how to ensure sediment reaches the coast
- Habitat management including fisheries issues and maintaining adequate sediment for habitats with rising sea-levels
- Mitigation measures to reduce impacts of projects
- Local support for an RSM plan

Examples of RSM planning frameworks and components:
The following flowcharts from the California Coastal Sediment Management Workgroup (1) shows the organizational structure and is provided as an example of the interagency participation that will be part of most RSM efforts and (2) shows many of the topics that have been included in RSM efforts in California to show that RSM can address a broad array of topics and concerns

Figure 1



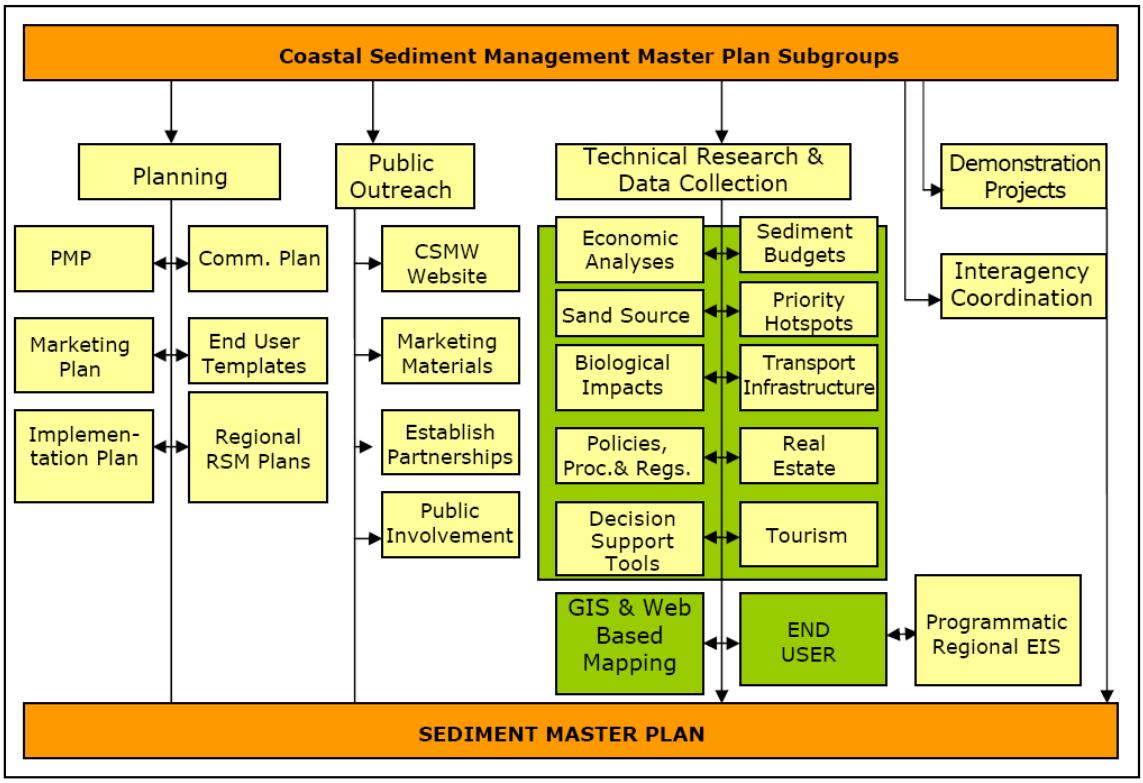


Figure 2

Goals of the implementation plan:

- Improve interstate coordination and consistency with respect to beneficial reuse of suitable sediments.
- Encourage a framework to pro-actively address issues related to contaminated sediments and legacy pollutants, with the goals of removing barriers to actions necessary for viable port and harbor activities (such as the dredging of berths and navigation channels) while preventing resource damages that can occur from release of these contaminates and pollutants to the marine or terrestrial environment.
- Encourage pro-active placement of available suitable sediments in locations that improve or maximize the value of these sediments for coastal recreation, habitat protection or community character.
- Develop sustainable funding mechanisms to support RSM activities.
- Ensure regionally consistent interpretation of federal laws and regulations for placement of dredged material in the coastal zone including the territorial sea that encourages maximum beneficial use.

Other workgroup coordination links:

- Climate Change Group: Sea level rise relates to all of the actions/categories. It influences coastal sediment processes and, therefore, the management of sediment over the long-term.

- Bathymetric and topographic mapping efforts. This information will support planning for climate change impacts such as sea-level rise, as well as development of sediment management plans.
- Maintenance of habitat.
- Maintenance of recreational opportunities.

- Sustainable communities (larger ACT)
  - Work together on overlapping issues, especially on harbors.

- Seafloor Mapping ACT
  - Bathymetric mapping efforts will provide information needed for developing and implementing RSM plans.

TASKS

TASK ONE

Encourage development of RSM plans and projects throughout the states

- Encourage/incentivize maximum beneficial use of sediment in RSMs
    - Develop and advocate for coastal engineering projects and studies to nourish beaches while protecting the marine environment.
    - Develop and support completion of RSM-support tools and studies, such as the Sand Compatibility and Opportunistic Use Program (SCOUP) and Coastal Sediments Benefit Analysis Tool.
    - Develop and maintain three-state data sharing opportunities, such as the Coastal Sediment References Database.

- Identify and secure adequate funding for RSM planning efforts such as:
    - Current planning efforts include; Lower Columbia River Solutions Group and California Sediment Management Workgroup

- Fill data/technology needs and share tools for RSM planning

    - Perform repetitious topographic and bathymetric surveys with sufficient frequency to detect and analyze trends and changes, including LIDAR
        - Acquire, store and manage data with open access for research and coastal management efforts
        - Develop data products that result in better coastal management decisions
        - Develop quick-response, data acquisition capability through development of West Coast data acquisition, storage and management centers.

TASK ONE DELIVERABLES:

1.1: Advocate and write letters for and secure funding for RSM planning in federal budget, complemented when possible by other sources of funds.

- Identify needed funds for West Coast RSM efforts
- Fill data/technology needs and share tools for RSM planning. Identify current sediment budget information and encourage funding of additional information for sediment budgets (LIDAR, other) from NOAA, USGS, other federal agencies, and among state partnerships

1.2: Share case studies in a workshop to address developing RSM plans on innovative technologies and tools to address sediment management:

- Compile information for specific case studies (funding, partnerships, governance, technical)
- Share lessons learned with white papers, website and/or workshop

1.3: Examine reliability of older hard structures, such as jetties and breakwaters, in a white paper and examine their relationship in creating effective regional sediment management plans.

- Inventory older jetties and breakwaters along West Coast and amount of information available on how they interact with sediment processes
- Select a few case studies for older hard structures with active regional sediment management planning efforts to examine in detail for the white paper.

TASK ONE CHART:

Deliverable No.	Deliverable	Lead	Timeline	Resources (needed or existing)
1.1	Advocate to secure funding for RSM efforts	-Three states - NGO's	Ongoing and as needed	Existing resources - Lower Columbia Solutions Group requesting $300k this year
1.2	Compile information to share lessons learned	-Army Corps	Spring 2010	Existing
1.2	-Workshop to share case studies	-Sea Grant -CA Dept of Boating and Waterways	Fall 2010	New resources needed for workshop ($30-50k?)
1.2	White paper or website on lessons learned	- Army Corps	Spring 2011	New Resources $25-50k
1.3	Hard structure study white paper	-Army Corps	Spring 2011	New Resources $100-150k

TASK TWO:

Encourage policies and coordination to maximize implementation of RSM plans and projects

Policy Issues

1. Examine federal policies to facilitate beneficial uses and regional sediment management (e.g. national dredging policies). Develop, coordinate and prioritize tri-state policy responses for consistent and reinforced advocacy to Congress and federal agencies on the needed changes.

2. Analyze and coordinate existing state policies:
    - Regional Water Quality Control Board's policies
    - Coastal Zone Management Act implementation
    - Identify opportunities for interpretation and application between the tri-state region in various state requirements
    - Identify and recommend lessons learned that can benefit the three states' RSM efforts and, as appropriate, provide consistency across the states.

TASK TWO DELIVERABLES

- 2.1: The states will seek improvements to the national dredging policy and other opportunities that support collaborative multi-state efforts to resolve conflict and establish sustainable regional sediment management plans.

- 2.2: Encourage Congress to augment funding for placement of dredged sediments in locations identified as most beneficial for RSM purposes, (i.e. fund the revised section 204 of Water Resources Development Act (WRDA) of 2007 that authorizes funding for RSM projects).
    - Change cost sharing formula
    - Encourage Congress to authorize and appropriate funds to support West Coast RSM efforts. (i.e., fund revised sections of 204 WRDA 2007 that authorizes RSM projects and planning).

- 2.3: Letter to advocate for revision of metrics used by OMB and US Army Corps for budgeting priorities

- 2.4: Comment letter on US Army Corps' Principles and Guidelines revisions
    - Review and share policy responses among states
    - Develop shared or coordinated response

- 2.5: Maximize efficiencies of dredging opportunities by creating regional dredging partnerships – such as sharing dredging equipment on West Coast.

-EX: Use three state partnership to encourage cooperation between states and ports, find some way to cooperate on acquisition and availability of basic infrastructure

- 2.6: The states will also partner with federal agencies to leverage resources to effectively address legacy pollutants.

- 2.7 Review, analyze and share state policies, funding, and research regarding regional sediment management. Develop shared or coordinated approaches, as appropriate.
    - Identify funding for research on sediment characteristics including:
        - Grain size of sediment
        - Smell
        - Angularity

TASK TWO CHART:

Number	Deliverable	Lead	Timeline	Resources (needed or existing)
2.1	Seek improvements to the national dredging policy and other opportunities.	- Sediment group	Monitor and ongoing	Existing
2.2	Encourage Congress to augment funding for placement of dredged sediments in locations identified as most beneficial for RSM purposes.	- Three state leads	- As part of appropriations process: monitor and engage annually throughout federal budget process..	- Existing
2.3	Letter to OMB and Corps concerning budget metrics.	- Sediment group - Executive Committee	Ongoing	Existing
2.4	Comment on revisions to Corps' Principles and Guidelines	-Sediment Group	Monitor and Ongoing	Existing
2.5	Maximize efficiencies of dredging opportunities by creating regional dredging partnerships – such as sharing dredging equipment on West Coast.	-NGOs	Ongoings	- existing Port groups
2.6	The states will also partner with federal agencies to leverage resources to effectively address legacy pollutants.	Army Corps, L. A. District	Spring 2011	Needed

Number	Deliverable	Lead	Timeline	Resources (needed or existing)
2.7	White Paper Identify funding for research needs	Coastal Conservancy	Spring 2010	Existing
2.7	Review, analyze & share state policies.	- Sediment Group	Spring 2010	Additional (there will be a need for research, once identified)

KNOWLEDGE GAPS:

Gaps in knowledge/future research needs:

Case studies and or technical needs with relevance to RSM implementation by the three states

- Developing Sediment Budgets and associated monitoring of them.
- Determine influence of hard structures, such as jetties and breakwaters on current sediment transport patterns and other RSM concerns, and conduct an analysis of long-term reliability of structures with respect to both RSM and their intended purpose.

Needs

Outlined below are needs of the states based upon their shared common gaps related to sediment management

- Increase agency staff participation: need an Oregon sediment person
- Conduct research on planning needs, funding for RSM planning and projects, reliability of older hard structures (jetties, breakwaters), and beach nourishment
- Improve information sharing: through such means as RSM atlases, IMS efforts, Tri-State workshops and meetings, web sites for public outreach and such.

Stakeholders

The list of stakeholders (anyone affected by and/or interested in the project) is extensive. Among them are:

- Local Municipalities in OR, CA, and WA
- Ports
- Fishing industries (fishermen, shellfish aquaculture, and processing plants)
- Shipping industries including tug and tow companies
- Bar pilots
- Citizens/coastal landowners
- Tribes
- Surfers
- Recreational boaters and beach go-ers
- Environmental NGOs
- Other federal or state agencies (e.g. NOAA USGS, USFWS, state land agencies, fish and wildlife agencies, coastal programs)
- Coastal businesses, especially those reliant on ports, such as agriculture

Appendix

National Oceanic Atmospheric: NOAA
http://www.noaa.gov/

U.S. Army Corps of Engineers: ACOE
http://www.wes.army.mil/rsm/

U.S. Environmental Protection Agency: USEPA
http://www.epa.gov/beaches/
http://www.epa.gov/OWOW/oceans/ndt/

California Natural Resources Agency
http://www.resources.ca.gov/

California Coastal Commission: CCC
http://www.cold.ca.gov/

California Department of Boating and Waterways: DBW
http://www.dbw.ca.gov/

Association of Monterey Bay Area Governments (AMBAG):
http://www.ambag.org/

Beach Erosion Authority for Clean Oceans and Nourishment (BEACON),
http://www.beacon.ca.gov

California Sediment Management Workgroup
http://dbw.ca.gov/csmw/default.aspx

Lower Columbia Solutions Group
http://www.lowercolumbiasolutions.org/index.php?option=com_content&task=category&sectionid=5&id=27&Itemid=39

Northern Gulf of Mexico RSM:
http://rsm.sam.usace.army.mil/

San Diego Association of Governments (SANDAG),
http://www.sandag.cog.ca.us/index.asp?projectid=330&fuseaction=projects.detail

Snake River, (Oregon and Washington):
http://www.nww.usace.army.mil/psmp/

Southwest Washington Coastal Erosion Study:
http://www.ecy.wa.gov/programs/sea/swces/index.htm