Hawaii Regional Sediment Management
West Maui Region Workshop
Breakout Session Notes

1. The West Maui Region was the focus of Hawaii Regional Sediment Management (RSM) investigations in fiscal year 2014 (FY14). The West Maui Region extends from Kaanapali through Honolua Bay. The conceptual sediment budget developed for the West Maui Region as part of the FY14 investigations indicates that the shoreline has been relatively stable over the past 17 years (1997 through 2014). Portions of sandy shoreline within the region, however, have been lost altogether. Critically eroding beaches in the West Maui Region have been identified by the County of Maui Planning Department and various other stakeholders. This technical note identifies potential RSM projects (PRPs) that could be implemented in the region. Since the U.S. Army Corps of Engineers' RSM program does not provide federal funds for project construction, the goal of this document is to identify conceptual alternatives that could be refined and implemented through acquisition of appropriate federal authorization by other agencies, partnerships, or the private sector.

2. The following is a summary of discussions of PRPs in the West Maui Region as documented at the RSM West Maui Region Workshop held 17 August 2014 in Kihei, Maui. Of the three breakout sessions conducted at the workshop, one consisted of identifying PRPs in the region. The other two breakout sessions were devoted to the identification of engineering and environmental considerations associated with implementation of PRPs in the region. The following are the highlights of the various workshop breakout sessions;

A. Potential RSM Projects (Moderators: Katherine Touzinsky and Linda Lillycrop)

1. Advocate for increased Federal enforcement of the Clean Water Act both anticipating and in the wake of new development

- RSM may be able to alleviate brown water issues from local building site runoff (a non-coastal issue that must be addressed through enforcement and permitting)

- Alternate solutions must be available when it becomes apparent that best management practices (BMPs) do not apply to a specific area

- RSM could help with site design and BMPs for these areas

- Examples: Honokahua Bay, Mahana Ridge (originally part of Kapaluamauka permits in 2007 that promised no negative downstream effects), Honolua Bay

2. Outreach and guide the Kaanapali Operators Association with RSM concepts, modeling, and research and development

- Aid in better understanding the sediment/reef relationship through RSM principles

- Work to identify knowledge gaps, current tools, and future needs to aid in planning

- Hold a workshop to provide RSM guidance to KOA

3. Begin in-depth offshore sand investigations for potential future sediment replenishment

- Find viable sand resources through reconnaissance sampling, geophysics, etc

- Once viable sand resources are identified, work with communities to discuss its use

- Candidate area: Napili Bay, Kahana Bay

4. Kahana Bay Regional Beach Nourishment Project

- Nourishment project could easily tie into a potential offshore sand investigation project, as described above

- Nourishment project would focus on structures and monitoring/R&D to serve as alternatives to shore hardening

B. Hawaiian RSM models must be unique from mainland RSM. Hawaii needs more specific data to allow for variations in beach and storm characteristics during modeling projects for RSM and sediment transport. Mainland RSM does not fulfill HI beach needs because they are unique.

C. Engineering Considerations (Moderator: Jessica Podoski)

1. Dredge material from USACE dredging

- No pump out capability

2. Small pockets of sand and deep water

3. Renourishment required?

- Sugar Cove, 60K/year, Fine sand, Terminal structures on open coast

4. Partnerships with hotels to defray costs

5. Combination of revetment and beach nourishment
6. Push sand to recreate the berm
7. Sand bags (temporary) during the winter season
8. Issues at end of cells (seasonality)
   - + long term erosion
9. BMPs for upland sedimentation
10. Natural or engineered beaches?
11. Napili Bay/Kapalua Beach nourishment plan (SEI?)

D. Environmental Considerations (Moderator: Tom Smith)

1. Consequences of introducing sediment
2. Lack of science
3. Sand (calcium carbonate) versus terrestrial sediment
4. Resuspension of fine material
5. Lack of water quality stations
   - Not the correct sensors either
6. No Environmental Labs on Maui
7. Marginal quality sand
8. “Tako” Puka infilling (reef-wide issue)
9. Offshore sand source
   - Sediment plume
   - Encounter clay layer
   - Pepta Threshold
   - Temporal Impacts
10. Potential Environmental Projects
11. Sediment retention basin

12. Redirect flow (stream)
13. Erosion control structures
14. Feral animal control
15. Re-vegetation
16. Post-fore restoration- response
17. Ecological assessment of beach fill

- Sustainable?
- Long-term impact?

18. Keep Sand within project area
19. Regional Beach project

- Pohilani cond. To poharu beach part (?) with control structures

20. Move roads inland (retreat!)
21. Restore streams
22. Native vegetation