

FY16 RSM IPR

Honolulu District, Utulei Beach (American Samoa) RSM, Thomas D. Smith, P.E.

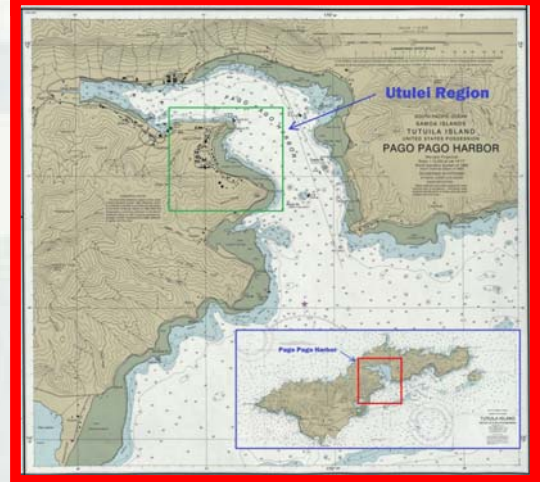
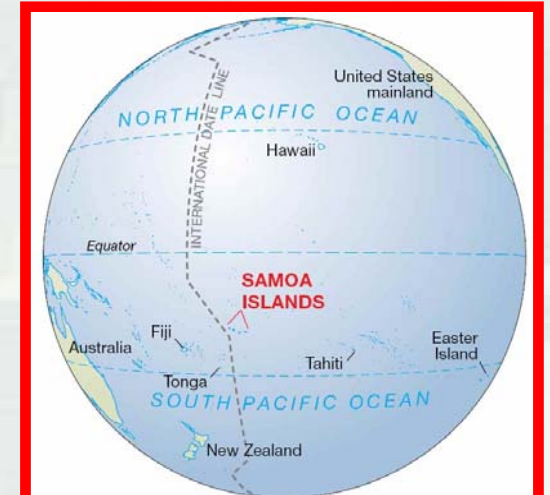
BLUF: Federally authorized shore protection projects in American Samoa all consist of “hard” structural features, such as rubblemound and tri-bar revetments. This trend will continue into the future in response to impacts from coastal storms and sea level rise unless “soft” solutions to the problem are identified and implemented.

Description/Challenges

- Investigate sediment related problems and opportunities in the Utulei Beach region on the island of Tutuila.
- The region extends from Tulutula Point to Utulei Beach Park (approximately 0.8 miles of shoreline).
- Utilizing dredged material from federally authorized small boat harbors that are not in the Utulei Beach region may be an issue.

Objectives

- Evaluate recent changes and existing condition of the shoreline
- Identify potential sediment sources
- Examine coastal processes
- Engage stakeholders
- Identify potential RSM projects in the region.



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Approach

- Water Levels:
 - ERDC/CHL TR-02-20
 - TR CHL-98-33
- Single Beam Bathymetry: 2002
- NOAA Multibeam Survey: 2001 to 2006
- Aerial Imagery: 2003 to 2015 (11 dates)
- Biological Assessment: October 2015
- Offshore Sand: USGS Report 86-112
- Wave Information Study: 32-year hindcast
- Numerical Models: CMS-Wave & CMS-Flow



Deliverables

ITEM

Utulei Beach RSM Workshop
Technical Note: Coastal Modeling
Technical Note: Potential RSM Projects
Update RSM Website

DATE

7/20/16
9/30/16
9/30/16
9/30/16



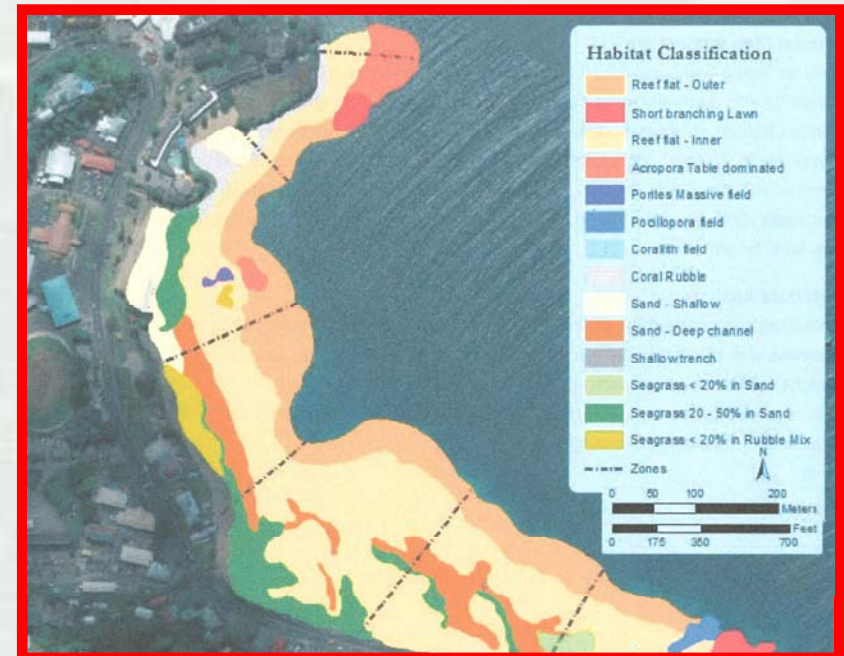
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Accomplishments/Benefits/Lessons Learned/Actions-construction

RSM GOALS WITHING UTULEI BEACH REGION:

- Increased understanding of a system with extremely limited sediment supply.
- Inventory upland and offshore sand sources.
- Collaborate with NOAA (PACIOOS), USGS, NPS and others.
- Conceptualize sediment pathways and potential erosional hotspots.
- Enhance beneficial use and identify sustainable shoreline protection alternatives.
- Influence and guide sediment management in other regions of AS.



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What is working?

- Existing data is sufficient to support technical investigations and numerical modeling.
- Two federally authorized harbors within 10 miles of the study region.
- Swimming channel previously dredged offshore of the region may serve as a deposition basin for cross shore sediment transport.
- Natural headland sediment control features on the northern limit of the region.
- Overwhelming support and appreciation of the American Samoa Government (ASG) for bringing Regional Sediment Management concepts to the territory.

What is not working?

- Benthic Habitat
 - Land Ownership
-
- Distance from Hawaii to American Samoa is 2,600 miles



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District/Other USACE PDT Members

- Honolulu District
 - Nani Shimabuku: RSM Program Manager
 - Tom Smith: RSM & O&M Technical Manager
 - Jessica Podoski: Coastal Engineer
 - Lauren Molina: Coastal Engineer
 - Linda Lillycrop: RSM Program Manager
- ERDC/CHL
 - Zeki Demirbilek
 - Lihwa Lin

Stakeholders and Partners

- American Samoa Department of Commerce
- Economic Development and Planning Office
 - Robert Tuala (robert.tuala@doc.as)
 - Nerelle Que (nerelle.que@doc.as)

Leveraging/Collaborative Opportunities

- Beach Recovery Foundation
- Department of the Interior
- Federal Highways Administration
- ASG: Department of Public Works



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Value to the Nation

- Cost Savings: **NA**
- Value Added: **NA**
- Leveraging Resources: **Beach Recovery Foundation may be able to fund construction of sand retention structures**
- \$/Habitat Credits: **NA**
- Environmental Benefits: **NA**
- Improved Partnerships, Happy Stakeholders: **New start for RSM in American Samoa. Working with stakeholders to investigate “soft” shore protection alternatives.**
- Permitting and compliance requirements improved (cost savings from reduction in requirements): **NA**
- Capacity of placement site saved and therefore \$ saved on coordination, surveys, modeling, etc to designate a new placement site not needed for x-years: **See last bullet**
- Cost savings from avoiding a lawsuit: **NA**
- Beneficial Use: **Identification, coordination and permitting for beach placement of compatible O&M material being investigated.**

