



Regional Sediment Management Program Honolulu District (POH): Utulei Beach RSM Tutuila, American Samoa



Description

This Regional Sediment Management (RSM) initiative will investigate sediment related challenges and opportunities in the Utulei Beach region on the island of Tutuila in the village of Pago Pago. The Utulei Beach region extends from Tulutula Point through Utulei Beach Park (Figure 1), approximately 0.8 miles of shoreline. The Utulei Beach RSM initiative will evaluate recent changes and existing condition of the shoreline (Figure 2), potential sediment sources, examine coastal processes, engage stakeholders, and identify potential RSM opportunities in the region.

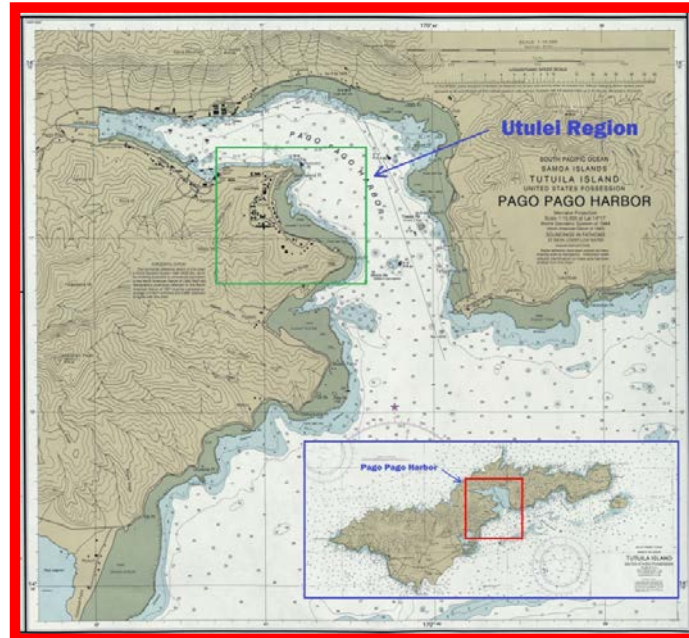


Figure 1: Location and site map for Utulei Beach RSM Region.



Figure 2: View of the Utulei Beach shoreline looking towards the south.



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Issue/Challenge To Address

Utulei Beach RSM investigations will constitute a first, in that it will bring the systems approach concept to civil works projects to the U.S. Territory of American Samoa (AS). The U.S. Army Corps of Engineers (USACE) has a rich history of providing civil work assistance to the territory for enhancements of navigation, shore protection, flood control, emergency management capabilities and life safety measures. The USACE has constructed and maintains small boat harbors on the territory's main islands (Tutuila, Aunuu, Tau, Ofu and Olosega). Shore protection projects have been constructed by the USACE along many miles of the shoreline within the territory to reduce the impacts of storms on critical infrastructure and upland development. Federal flood control measures have also been constructed to protect the populace and reduce damages to public and private property. Response to and recovery from natural disasters (e.g. tropical cyclones, earthquakes and tsunamis) have also been facilitated by the USACE in conjunction with Federal Emergency Management Agency authorities.

The existing federally authorized shore protection projects in AS all consist of "hard" structural features, such as rubblemound revetments. In addition, the American Samoa Government (ASG) has constructed similar projects that have reduced the amount of sandy shorelines in the territory. This trend will continue into the future in response to coastal storms and sea level rise impacts unless "soft" solutions to the problem are implemented. The ASG has expressed concerns for the loss of sandy shorelines as it impacts subsistence and quality of life for the people of American Samoa. ASG Department of Commerce (DOC) will be the non-federal sponsor of this and future ASRSM initiatives. The DOC enthusiastically accepts the non-federal requirements for implementing RSM measures to maximize beneficial use of sediment on a regional scale in the territory and in particular at Utulei Beach.

Successes/ Lessons Learned

No RSM initiatives have been undertaken in American Samoa to date. Successes accomplished and lessons learned associated with FY16 Utulei Beach RSM investigations will be documented following the completion of study tasks.

Expected Products

- Utulei Region RSM Workshop
- Technical Note: Coastal Modeling
- Technical Note: Potential RSM Projects
- Update RSM Website
- Newsletter Article

Stakeholders/Users

Stakeholders include the American Samoa Government, National Parks Service, Pacific Islands Ocean Observing System, Federal Emergency Management Agency, residents and tourists.

Projected Benefits

The potential value added by this RSM initiative will primarily be an increased understanding of a system with extremely limited sediment supply and high sensitivity to rising sea levels, with significant intrinsic economic, ecological, and cultural value. Lessons learned from this study will be passed on and used for management of other regions of AS in the future.

Leveraging Opportunities

Leveraging opportunities exist with several Government and non-Government agencies in American Samoa. The National Park Service (NPS) maintains a strong presence in AS due to the national parks that exist on several islands. The NPS has accumulated significant geological background information and has an interest in outreach concerning sediment supply and distribution in the islands. Pacific Islands Ocean Observing System (PacIOOS) has been collecting data (wave, water quality, etc.) in AS and has engaged several stakeholders in the region as PacIOOS partners. The National Oceanographic and Atmospheric Administration has



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collected offshore bathymetry for the region and also maintains a water level station that has documented long term sea-level changes for the area. The United States Geological Survey (USGS) has conducted numerous investigations on the terrestrial and offshore geology within the territory. USGS compiled sediment data will be utilized to narrow down the search for beach quality sediment available for the Utulei Beach Region.

Points of Contact

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Participating Partners

American Samoa Government, Department of Commerce