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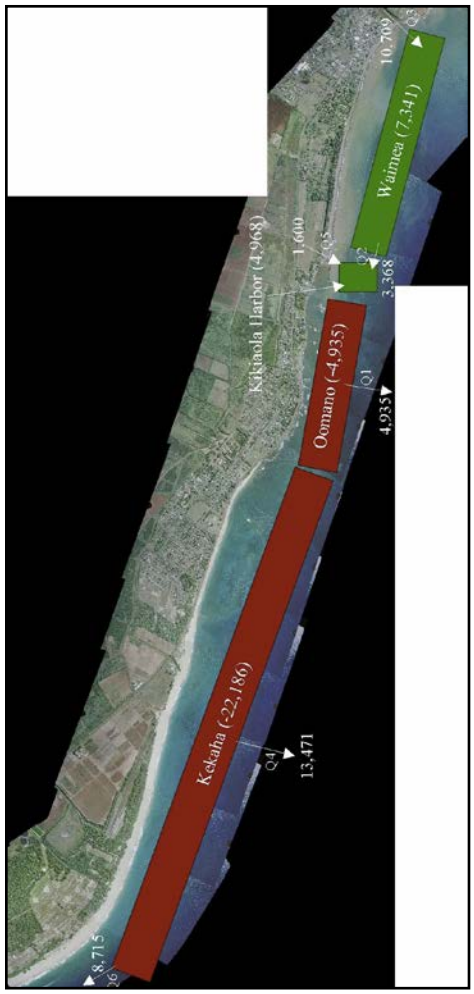
Regional Sediment Management Program Honolulu District (POH):

Kikiaola Light Draft Harbor RSM

Description

In 2014, the State of Hawaii Department of Boating and Outdoor Recreation (DOBOR) bypassed approximately 60,000 cy of sediment around Kikiaola Light Draft Harbor (KLDH) in compliance with the non-federal items of cooperation for the project. DOBOR has secured the services of TEOK Consultants to conduct post-bypassing monitoring. This RSM study will review the results of the initial bypassing effort and provide recommendations on future work.



Kekaha Regional Sediment Budget developed in the 2012 RSM study.

Issues/Challenges To Address

As previous studies found, sediment that is brought to the coast by the Waimea River is transported alongshore to the Waimea, `Õ`ōmanō, and Kekaha Beaches. However, Kikiaola Harbor impedes the majority of that transport. Sediment accumulates on Waimea Beach on the updrift side of the harbor, while the downdrift beaches have been eroding. In addition, the harbor captures sediment within the entrance channel and basin, which results in operation and maintenance dredging requirements. The harbor's non-federal sponsor (DOBOR) implemented a bypassing project to help address these issues. This study will evaluate the results of the bypassing. In addition, a drainage ditch currently empties into

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KLDH. During large rain events, the ditch transports fine upland sediment and debris into the harbor, contaminating sediments within the harbor that could potentially be beneficially reused. Attempts will be made to identify the owner of the ditch and investigations on how to eliminate its undesirable discharges into the harbor will be conducted.

Successes Lessons Learned

Lessons learned will be taken from previous studies conducted in project area, including the 2010 Kauai RSM Plan and the Kekaha Region Technical Note (CHETN-XIV-32). These will be integrated into this study, which will also evaluate lessons learned from the first bypassing project to provide recommendations for future bypassing.

Expected Products

- Update of the Kekaha regional sediment budget
- Evaluation of initial sand bypass effectiveness
- Recommendations for future sand bypassing
- Evaluation of ways to reduce upland sediment input
- Preparation of a technical note documenting study findings
- Web site update on findings and lessons learned

Stakeholders/Users

Stakeholders and users include the USACE Honolulu District, State of Hawaii Office of Conservation and Coastal Lands, State of Hawaii Department of Land and Natural Resources Division of Boating and Ocean Recreation, State of Hawaii Department of Transportation Highways Division (non-federal sponsor of the Kekaha Beach Shore Protection Project), and the County of Kauai Department of Public Works (non-federal sponsor of the Waimea River Flood Control Project)

Projected Benefits Value Added

Successful bypassing of sediment from Waimea Beach, around KLDH will address the accretion/erosion issues on the beaches and reduce dredging needs in the harbor. Remediation of upland sediment and contaminant input will enable potential beneficial use of material dredged from KLDH.

Leveraging Opportunities

This RSM study will leverage the information obtained during previous RSM efforts and documented in the Kauai RSM Plan and Kekaha Region Technical Note (CHETN-XIV-32). Additionally, the data from TEOK Consultants' post-bypassing monitoring will be used.

Points of Contact

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Participating Partners

Participating partners include the State of Hawaii Department of Land and Natural Resources' Division of Boating and Ocean Recreation (DOBOR) and Office of Conservation and Coastal Lands (OCCL).