

FY17 RSM IPR

Honolulu District, Kikiaola Harbor and Haleiwa Harbor RSM, Tom Smith

KIKIAOLA HARBOR BLUF: Optimize future SAND BYPASS events and eliminate upland discharge into harbor. Reduce channel shoaling rate.

HALEIWA HARBOR BLUF: Become RSM “SHOVEL READY” before the next maintenance dredging event. Reduce channel shoaling rate.

KIKIAOLA HARBOR Challenges/Objectives

- Challenge: Sediment accumulates in harbor entrance channel and basin
- Objective: Reduce maintenance dredging requirements by bypassing sand around harbor
- Challenge: Drainage ditch empties into harbor, mixing fines with beach quality sand
- Objective: Identify owner and work toward eliminating discharge into harbor

Approach

- Shoreline change analysis using Digital Globe imagery & Digital Shoreline Analysis System (DSAS)
- Collaborate with non-federal sponsor
- Leverage FY10 RSM Plan findings

HALEIWA HARBOR Challenges/Objectives

- Challenge: Permitting required to place sand on a beach can take one to two years
- Objective: Beneficially reuse dredged material

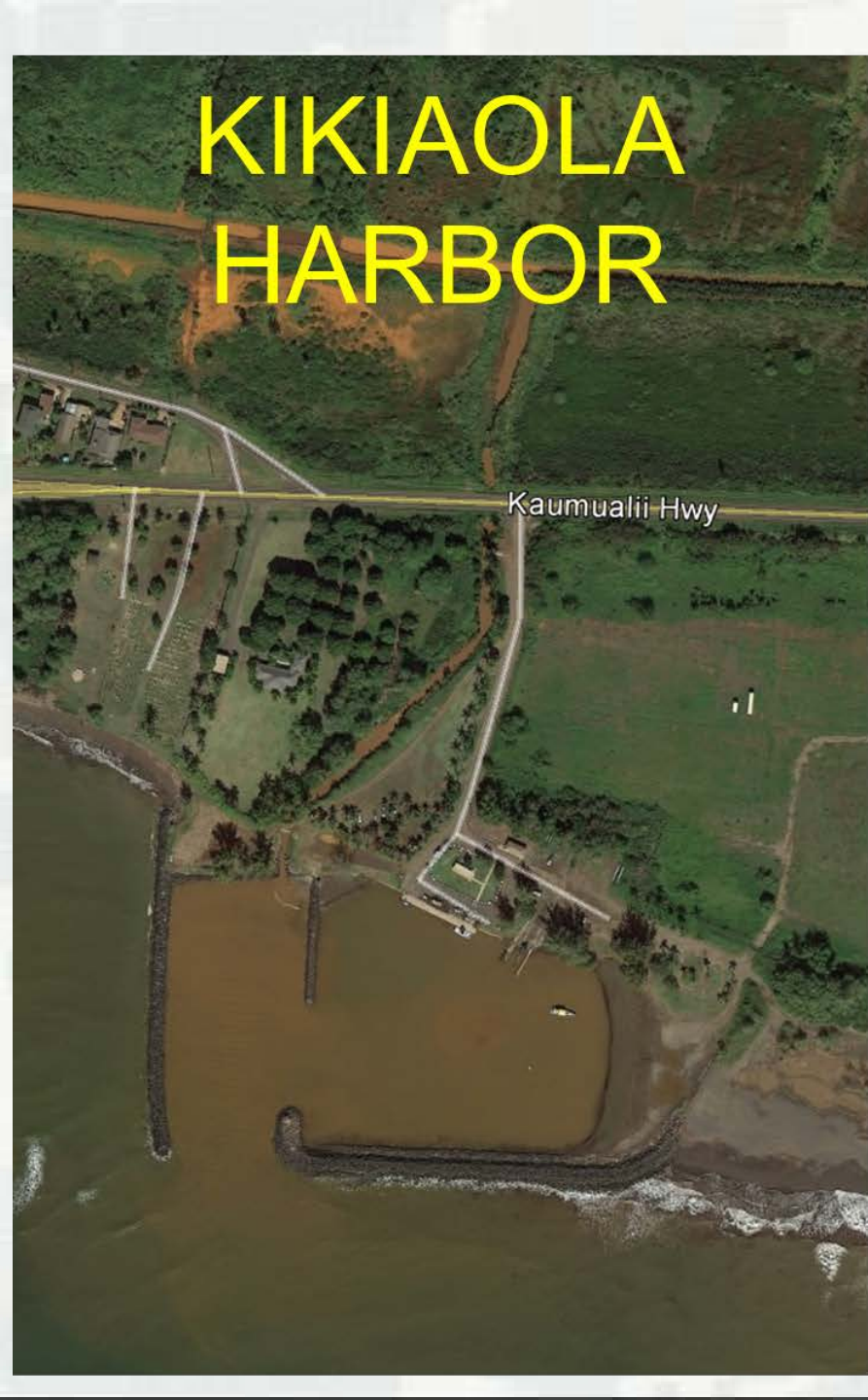
Approach

- Identify shoaling sources and BU placement areas
- Identify Environmental requirements
- Leverage FY13 RSM Plan findings

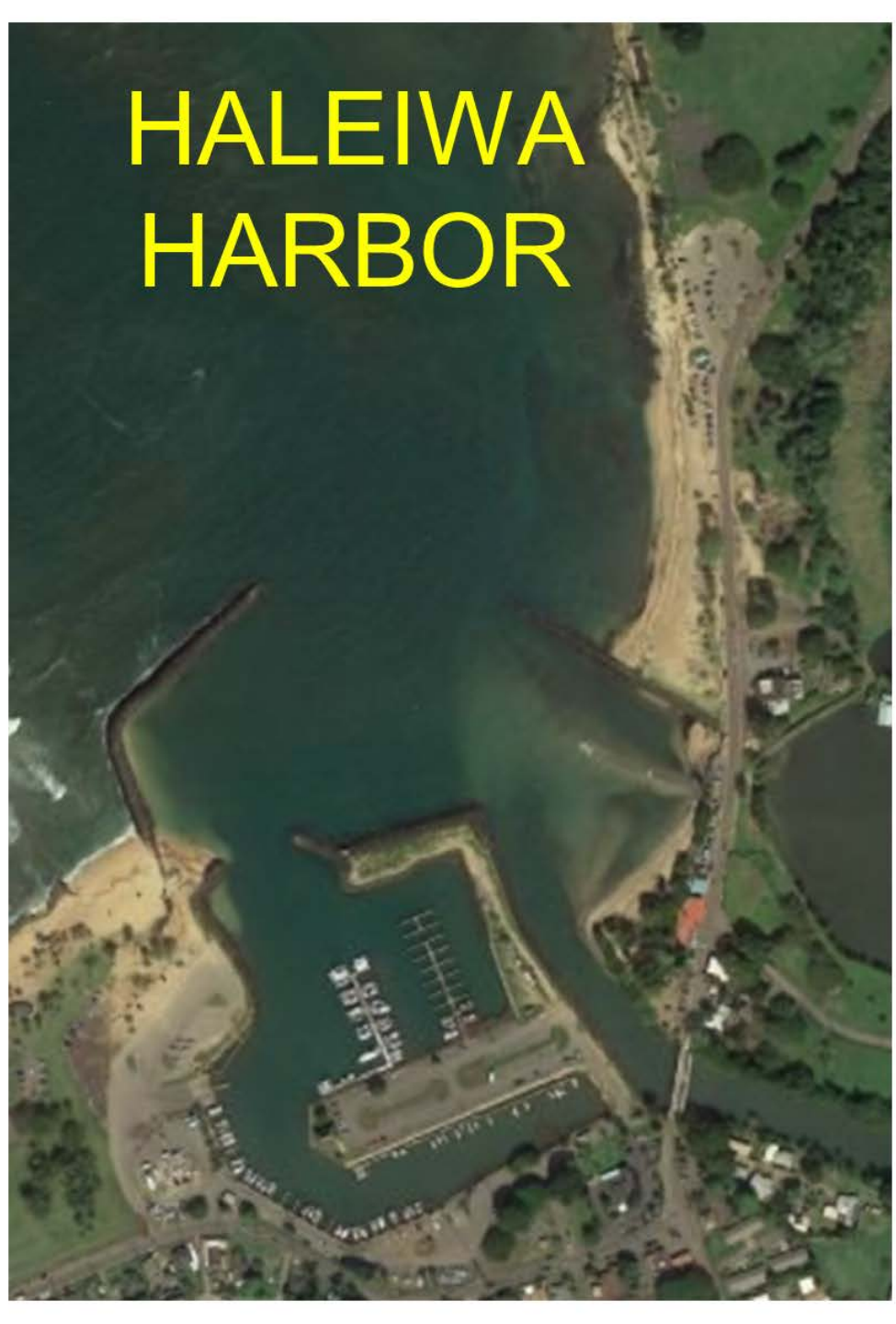


KIKIAOLA HARBOR

Kaumualii Hwy

An aerial photograph of Kikiaola Harbor. The harbor is a large, irregularly shaped body of water with a dark, silty appearance. It is bordered by a low stone wall on the left and right sides. The surrounding land is green and hilly, with a road labeled 'Kaumualii Hwy' running horizontally across the middle. There are some buildings and a parking lot visible near the road.

HALEIWA HARBOR



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Leveraging/Collaborative Opportunities

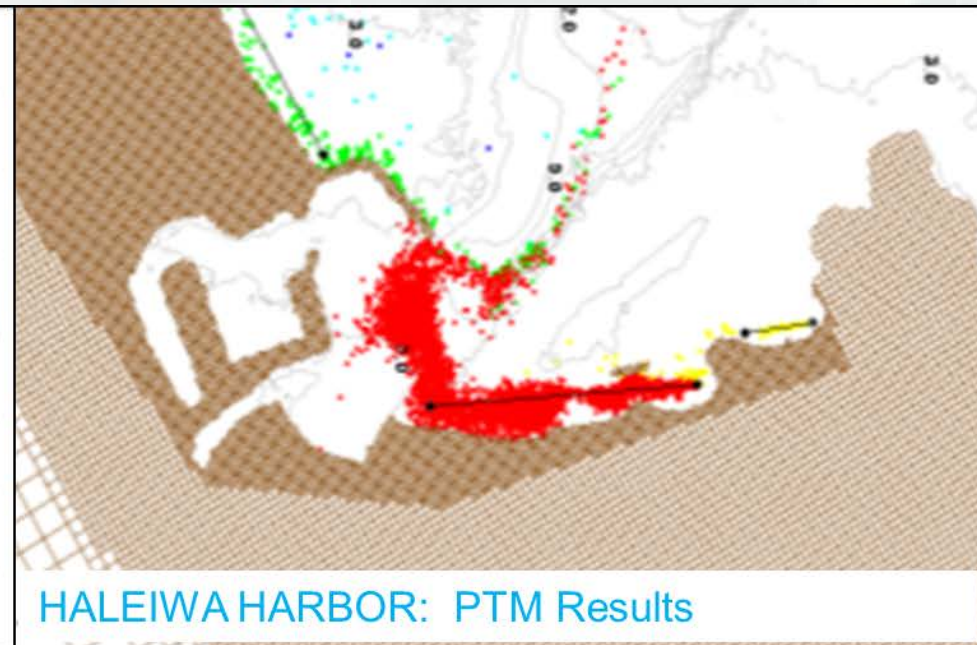
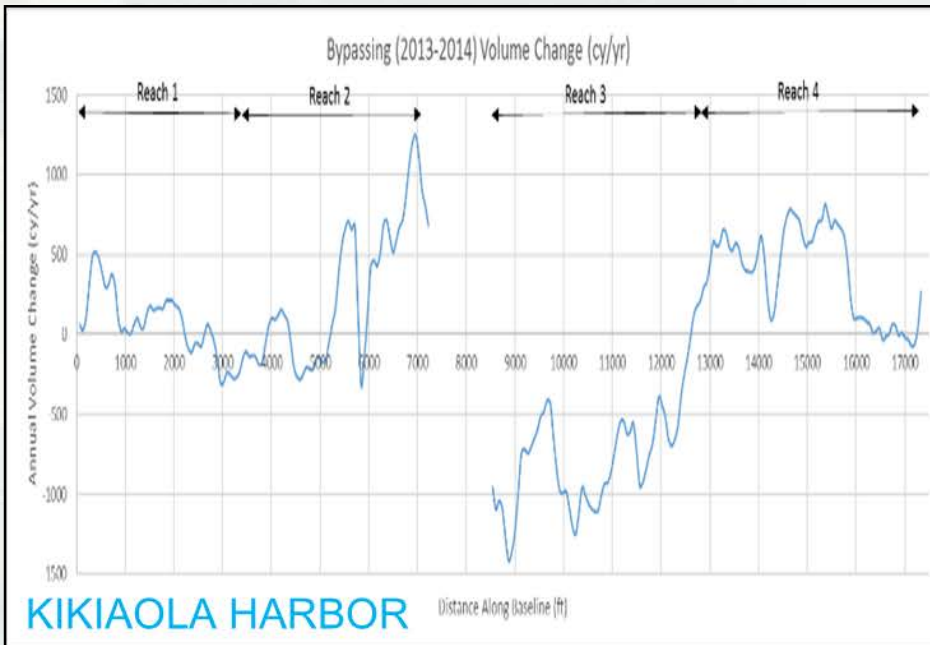
- Kikiaola Harbor Bypass Monitoring (TEOK, Blay)
- FY10 Kauai RSM Plan
- Kekaha Region Technical Note (CHETN-XIV-32)
- FY13 Haleiwa RSM Plan
- State Small Scale Beach Restoration Permit

District/Other USACE PDT Members

- Nani Shimabuku: RSM Project Manager
- Tom Smith: RSM & O&M Technical Lead
- Jessica Podoski: Coastal Engineer
- Lauren Molina: Coastal Engineer

Stakeholders and Partners

- DLNR, Office of Conservation of Coastal Lands
Sam Lemmo, Administrator
Brad Romine, Sea Grant Extension Agent
- DLNR, Department. of Boating and Ocean Recreation
Ed Underwood, Administrator\
Finn McCall, Engineering Branch
- City and County of Honolulu, Parks Department
- County of Kauai, Department of Public Works



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Accomplishments/Deliverables

Lessons Learned/Actions-construction

KIKIAOLA HARBOR

- Volume change rates calculated from pre/post bypass analysis
- Recovery slower than expected along updrift shoreline
- Downdrift shoreline relatively stable
- Prepare an ERDC/CHL Tech Note

Accomplishments/Deliverables

Lessons Learned/Actions-construction

HALEIWA HARBOR

- Identify requirements to authorize construction of a Settling Basin
- Consider raising the crest elevation of the non-federal breakwater
- Hydrocyclone Demonstration Project to separate fines/sand?
- Establish framework for future BU actions
- Prepare an ERDC/CHL Tech Note

	Volume Change Rate (cy/yr)			
	Pre Bypassing	Bypassing	Post Bypassing	Overall
	2011-2013	2013-2014	2014-2016	2011-2016
Reach 1 – Oomano Point	5,282	3,665	10,657	6,923
Reach 2 - Kikiaola Beach	2,586	15,485	4,861	6,386
Reach 3 – Waimea Beach	14,317	-49,171	-25,179	-14,987
Reach 4 – Waimea River	11,202	26,102	1,964	11,141



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What is working? Ups? Success?

- Non-federal sponsor's post-bypass monitoring at Kikiaola Harbor proving to be extremely useful
- Adaptive management will improve future bypass efficiencies
- Tools for evaluating coastal processes (CMS/PTM) have worked well in the Haleiwa Region
- Potential for use of Section 1122 "WIIN" Legislation at both harbors

What is not working? Downs? Issues?

- Haven't formally initiated RSM in Guam and CNMI (Saipan, Rota and Tinian islands)
- Geochemical Footprinting – not O&M or RSM?
- Disposal of Contaminated Sediment – who pays?



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**How is this project benefiting the USACE and Nation
(efficiency, monetary, technical, relationship building, outreach, etc)**

- Cost Savings: Reduce O&M costs at both harbors
- Value Added: Restore downdrift beaches and avoid litigation
- Leveraging Resources: Using findings of previous RSM work
- Improved Partnerships, Happy Stakeholders: Non-federal sponsors are encouraged by pre-planning efforts and potential Section 1122 actions
- Beneficial Use: Identification, coordination and permitting for beach placement of compatible O&M material being conducted

