

Project Title:

Pōka'ī Bay Jetty Wall Improvement Project

Prepared By:

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Date:

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Introduction

This outreach was initiated by Kingdom Pathways to assess circulation patterns and community impacts of the Pōka'ī Bay Jetty Wall. The goal is to integrate modern data with 'ike kupuna (ancestral knowledge) to inform future design and management decisions that improves water quality, cultural access, and ecological balance.

HISTORY

Kingdom Pathways has worked collaboratively with the engineering and consultant team on the Pōka'ī Bay Jetty Wall Study to ensure community voices and traditional knowledge inform decision-making. Our partnership began through early outreach and coordination with DLNR DOBOR, and Wai'anae High School Marine Science Learning Center to study and integrate circulation data, cultural insight, and 'āina-based perspectives into the study design. Since then, Kingdom Pathways has hosted community meetings, facilitated conversation mapping, and helped bridge technical findings with local expertise. This ongoing collaboration represents a milestone in aligning engineering solutions with cultural and environmental priorities rooted in Wai'anae.

RESEARCH PURPOSE & OBJECTIVE

This research was developed to bridge scientific analysis and 'ike kupuna (ancestral knowledge) in evaluating circulation, water quality, and community use at Pōka'ī Bay. The purpose is to inform future decisions about the jetty wall's structure, design, and environmental impact through collaboration between agencies, engineers, and the Wai'anae community.

HOW WE WORK

'Āina-Based Approach

Technical Approach

Community Engagement

Kingdom Pathways grounds all research in the principle of ma ka hana ka 'ike through direct experience, we gain understanding.

The team conducted site visits, community talk-story sessions, and kilo (environmental observations) of currents, water clarity, and sediment patterns along the jetty wall and shoreline.

This method values 'ike kupuna as a valid and essential source of environmental knowledge.

Observations shared by kūpuna, fishermen, and long-time residents guided how data collection sites were chosen and how flow models were interpreted.

To align cultural insights with quantitative findings, technical data from the ocean circulation study by Ph.D Candidate Christina Comfort are being analyzed and will be overlaid with community-identified zones of concern.

Data sources include circulation and sediment modeling, water quality testing (Enterococcus, turbidity, salinity), coral surveys with Kuleana Coral and DLNR-DAR, and historic aerial imagery to assess long-term shoreline changes.

These datasets will be integrated into GIS overlays to identify opportunities to restore natural flow and guide future jetty wall modifications, including a review of engineering design options developed by HDR in coordination with DOBOR engineers.

Community participation was central to this participatory process. Kingdom Pathways hosted a public meeting and conversation mapping session at Mā'ili Community Learning Center on October 23, 2025, to gather community priorities and observations about Pōka'ī Bay.

Kupuna, surfers, divers, fishers, and local families representatives shared insights on historical currents, fishing areas, and jetty wall impacts. All registered participants, including those unable to attend, will receive the meeting summary and final report via email, and it will also be available on the Kingdom Pathways website for public access.

Collaborating Partners and Leads

Name	Title	Contact information
Bruce Swartz	District Manager, Division of Boating and Ocean Recreation	Department of Land & Natural Resources 4 Sand Island Access Road, Honolulu, HI 96819 Tel: (808) 587-1966
Mehgan Statts	Administrator, Division of Boating and Ocean Recreation	Department of Land & Natural Resources 4 Sand Island Access Road, Honolulu, HI 96819 Tel: (808) 587-1966
Brian Mahoney	Engineer III, DLNR Division of Boating and Ocean Recreation	Department of Land & Natural Resources 4 Sand Island Access Road, Honolulu, HI 96819 Tel: (808) 587-3256
Finn McCall	Engineer V, DLNR Division of Boating and Ocean Recreation	Department of Land & Natural Resources 4 Sand Island Access Road, Honolulu, HI 96819 Tel: (808) 587-3256
Kyle Ogata	Associate HDR	Hawaii's Construction Service Lead 1001 Bishop Street, Suite 400 Honolulu, HI 96813-3402
Christina Comfort	Oceanography Researcher	University of Hawai'i at Manoa Ph.D Candidate
Carmen Guzman-Simpliciano	Community & Cultural Liaison	Kingdom Pathways Co-Founder and Liaison Wai'anae HI, 96792
Kale Hoyle-Kamakahi	Presenter, Kingdom Pathways	Kingdom Pathways Interim Manager Wai'anae HI, 96792

Meeting Attendance Record

All registered participants, including those unable to attend, will receive the meeting summary and final research report via email. The report will also be available on our website to ensure equitable access to project information and opportunities for input.

Attendee's

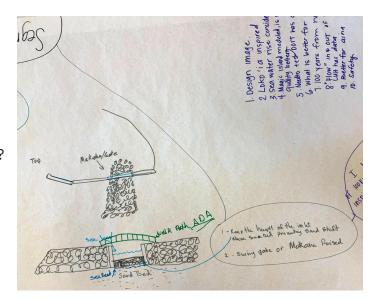
/ ttellace 5	
Kelani Uti (KP's Zoom Coordinator)	Joseph Simpliciano
Georgiana Navarro	Brian Mahoney
Justin Goo	Don Kaulia
Finn McCall	Tara Moriasato
Christina Comfort	Arleen Velasco
Kyle Ogata	Mathew Kauwe
Roger Medeiros	Duane DeSoto
Cynthia Recentes	Jody Pihana-Opunui
Kalei Hoyle-Kamakahi	Carmen Guzman-Simpliciano
Bruce Swartz	Georgiana Navarro
William Aila	Rebecca Canadilasa
Roland Matusda	Tara Moriasato
Registered Non-Attendee's	
Lena Suzuki	Daniel Anthony
Patrice Tanna	Terra Faraon
Philamer Felicitas	Loaa Pine
Jodie Tonita	Priscilla Leal
Mauna Burgess	Shirline Ho
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CONVERSATION MAPPING

Conversation Mapping is a hands-on, visual tool used to gather community input quickly and inclusively. As part of the outreach effort, Kingdom Pathways facilitated a conversation mapping activity to gather community mana'o on Pōka'ī Bay. Participants respond to a central "trigger" word then write and draw their observations and priorities, allowing every voice kupuna, fishers, surfers, and families to be represented. The maps were photographed and transcribed to identify recurring themes that will guide ongoing collaboration with HDR, and DLNR-DOBOR engineers.

Pōka'i Bay Repair: Segmented Jetty Wall (Cemented Cap-ADA)

- Keep the height of the inlet above sea bed preventing sand shift
 - 1.1. Swing gate or Makaha raised
 - 1.2. I like the idea of looking to Loko I'a for inspiration versus western solutions. What else can we look at?

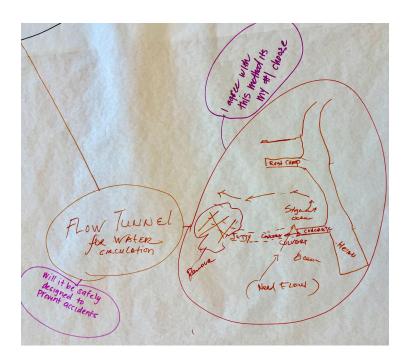


- 2. Could create rip currents.
 - 2.1. Need to educate children on how to get out.
- 3. Sea water rise needs to be considered for all designs.
 - 3.1. Agree, 100% SLR will be included
 - 3.2. Yes, please add this to area of concern
- 4. If Magic Island is the model, is the water quality much better there?
 - 4.1. Would need to test fecal bacteria, nutrients and flow on Magic Island to compare.
 - 4.2. DOH has some water quality data on the Magic island lagoon.
- 5. "Flow" In and out of Poka'ī Bay

- 5.1. UH has some flow data showing water movement in and out of the bay, not yet published-NEW
 - 5.1.1. This is good information for the community
 - 5.1.2. It might need quality control or a repeat sampling for confidence in the data-Christina Comfort.
- 6. What is better for the 'aina?
 - 6.1. 100 years from now!
 - 6.2. Better for the 'aina is better for all people in future generations.
 - 6.3. Restoring the original/normal shoreline is better for erosion control, flow, and resilience to climate change.
- 7. I think there would need to be gaps relatively close to shore to avoid stagnation.

Pōka'i Bay Repair: Jetty Wall Culverts (Cemented Cap-ADA)

- 1. Will there be new rip current?
- 2. Flow tunnel for water circulation
 - 2.1. Will it be safely designed to prevent accidents.

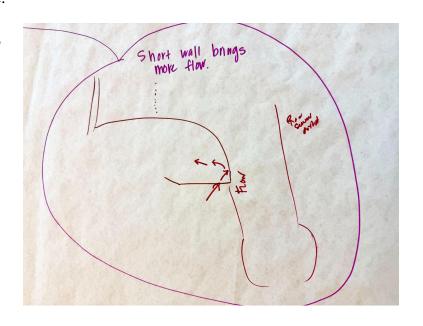


- 3. I agree with this method, it my #1 choice.
- 4. Culvert max circulation and still provide the ability to fish. Protect the health of community and marine life.
 - 4.1. Is there a way for fishing access to be available without shoreline hardening and inhibiting sand movement?

- 4.1.1. Would this be the concrete cap?
- 4.2. Culvert max circulation and still provide the ability to fish. Protect the health of community and marine life.
 - 4.2.1. The marine life that we eat.
 - 4.2.2. Need to restore stream flow and malama aina upstream as well.
 - 4.2.3. Agree, our data at UH shows lots of pollution entering the bay through stream.
- 5. Thumbs up! Safety
- 6. Culvert seems problematic, concrete degrades as well as any synthetic pipes. Sea level rise could also disrupt the culverts in the long term. Could also entrap sea life, such as turtles and monk seals.
 - 6.1. Are there guidelines and protocol to protect these things?
- 7. Do culverts allow sand movement?
 - 7.1. Has there been studies on this.

Pōka'i Bay Repair: Shortened Jetty Wall (Cemented Cap-ADA)

- 1. Would shoreline circulation be improved, where people swim or would shorter jetty still cause a stagnant area near shore?
 - 1.1. Circulation modeling will be performed.
 - 1.2. Please use Christina Comforts data to do an overlay.
- 2. A short wall brings more flow, see image.
- 3. What about the complete removal of the jetty wall? Can a coastal restoration engineer be used to envision a nature based solution that would address the water quality and the recreational use that could result in a restored bay.
 - 3.1. Funding constraints may not all complete removal, nature based solutions will be looked at.
- 4. Is sea water rise a big consideration in deciding on a solution?
 - Long term safety of walking on jetty could go down with higher sea level.



5. As a surfer, we lost a good wave, since the wall was built. Different impacts for different communities.

- 6. Kupuna/Handicap will be able to go fish and or observe marine life and ocean.
 - 6.1. Yes, if the cap is installed we should ask for it to be ADA compliant.
- 7. Like this, it will still provide ocean flow and protection.
- 8. Are there any live coral growing on the breakwall that would be displaced and could it be transplanted?
 - 8.1. A biological dive survey is being scheduled.
 - 8.2. Please contact carrisa@kuleancoral.org for their 3D mapping
- 9. Are there any concerns for potential sedimentation that could impact the reef? If so, what mitigation measures are being proposed?
 - 9.1. Sedimentation construction?
 - 9.1.1. Construction BMPs are required per the permit and contract. Includes turbidity curtains.
 - 9.2. Modeling will be performed to analyze sedimentation movement.

STUDY AND DESIGN

The ocean circulation study by University of Hawai'i Ph.D. candidate Christina Comfort provides key data on water flow and areas of stagnation in Pōka'ī Bay, helping to align engineering designs with community observations.

In collaboration with HDR Engineering and DLNR-DOBOR, three preliminary design concepts were shared with participants: Segmented Jetty Wall, Jetty Wall with Culverts, and a Shortened Wall to improve circulation while maintaining access and safety.

These options are being refined based on new data and feedback. Slides and study materials are available on the Kingdom Pathways website at www.kingdompathways.info.

CONCLUSION AND NEXT STEPS

This outreach affirmed that solutions for Pōka'i Bay Breakwater Repair must reflect both community knowledge and technical insight. Ideas shared through conversation mapping highlighted the need to restore natural circulation, improve water quality, and balance cultural understanding with engineering design.

Participants supported nature-based solutions that protect marine life, ensure safe access, and prepare for sea-level rise. These priorities will continue to guide collaboration between residents, kūpuna, and state partners. Kingdom Pathways remains committed to serving as a bridge between 'āina, community, and agency to support decisions grounded in kuleana and aloha 'āina.

Kingdom Pathways will host a follow-up meeting (date TBD) to review HDR's revised design options informed by community input and circulation data. This next session will ensure continued collaboration, transparency, and alignment with community priorities as the project moves forward.

Community members interested in receiving early notification of the next meeting date and location may contact Kalei Hoyle-Kamakahi at [Kalei@kphui.info] to be added to the pre-notification list.