Project Updates to MACZAC

Focus Area 1: Coastal Hazards

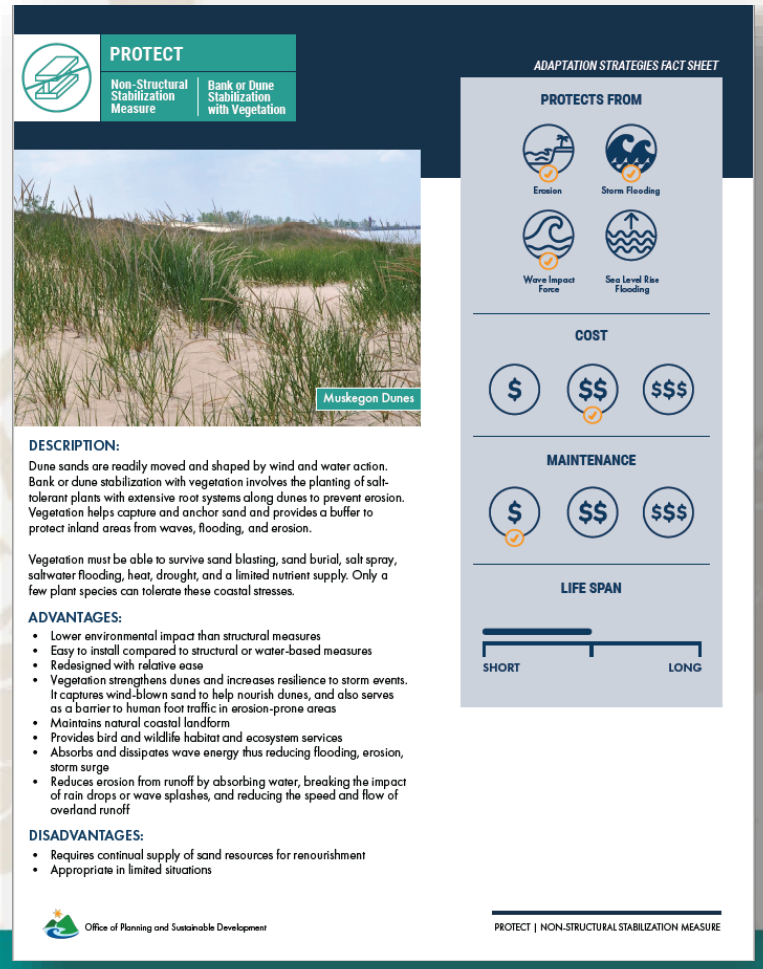
A Guide to Coastal Adaptation Strategies Suitable for Hawaii's Coastlines

Status: Completed; StoryMap & Info Cards launched soon

Objective: Present the complex issue of coastal adaptation in an easily accessible for format that is digestible for all audiences. Help users understand the range of available options, the pros and cons of each, and the permitting process needed to implement them.

Deliverable: An informational resource that identifies over 40 adaptation strategies to protect from coastal hazards. Includes a central website, Adaptation Strategy Matrix, Info Cards, interactive map, links to agencies with relevant permits and approvals

Next Steps: Share the resource widely with agencies/organizations from various sectors



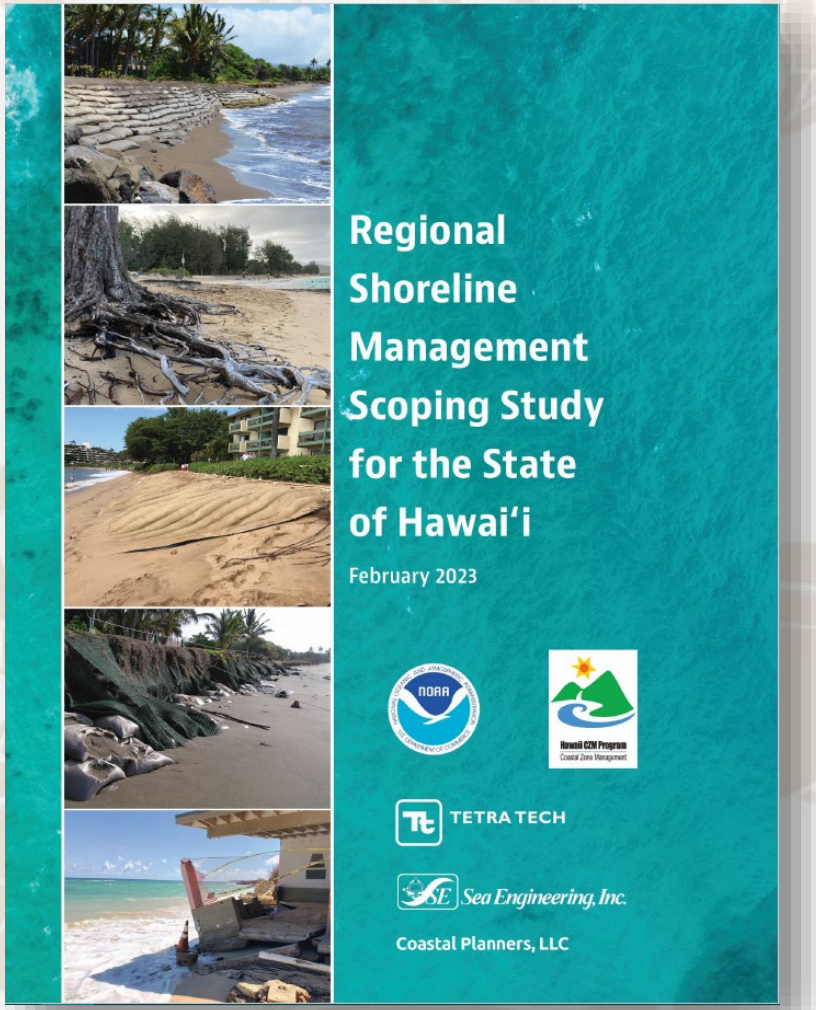
Regional Shoreline Management Scoping Study

Status: Completed; Final Report & StoryMap coming soon

Objective: First step in a larger initiative to open up opportunities for more coordinated, large-scale and proactive interventions based on how environmental conditions interact with the natural environment and development, rather than property lines.

Deliverable: Proposed methodology for defining shoreline regions that incorporates range of factors; Identified challenges and opportunities with implementing a regional shoreline management strategy

Next Steps: Outreach to agencies with land use/resource management responsibilities; apply proposed methodology to test sites around the State.



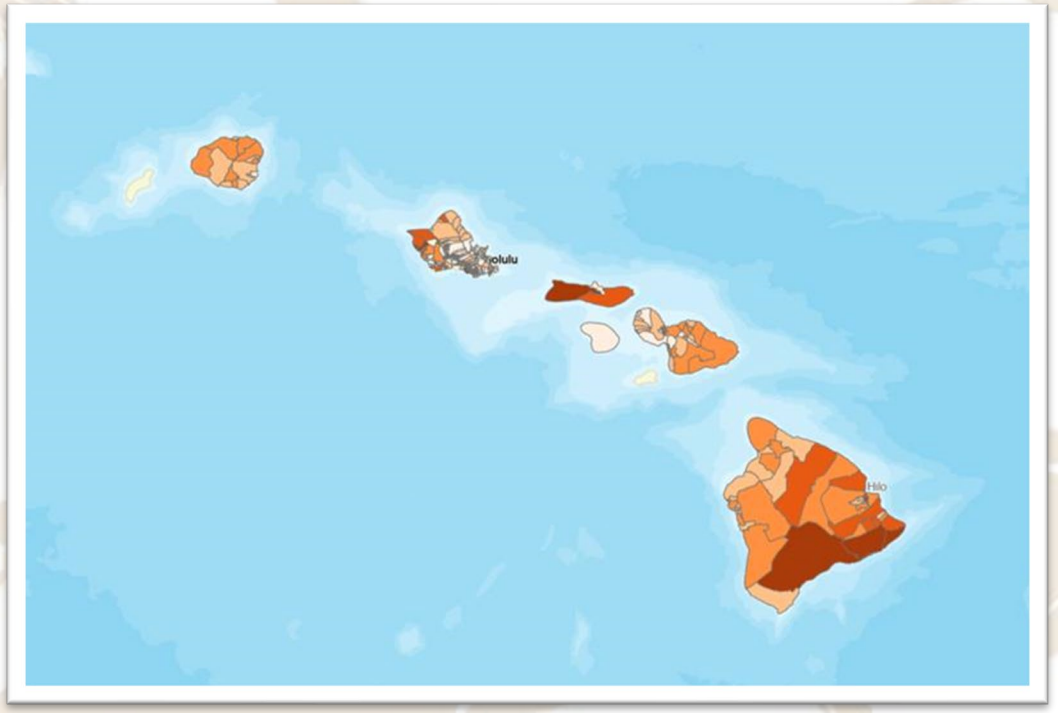
Social Vulnerability and Coastal Hazards

Status: In progress, Social Vulnerability indicators have been identified and an initial spatial analysis has been conducted

Objective: To use the concept of Social Vulnerability to identify communities with a disproportionate risk to sea level rise and coastal erosion hazards. This will help inform future work of the CZM program to apply for funding opportunities and to inform equitable policies for coastal communities in Hawai‘i.

Deliverable: A final document summarizing the findings of the analysis and outreach of the project. Community profiles will be included in the document to highlight community needs for adaptation to sea level rise.

Next Steps: Continue spatial analysis; Anticipated project completion July 31, 2024



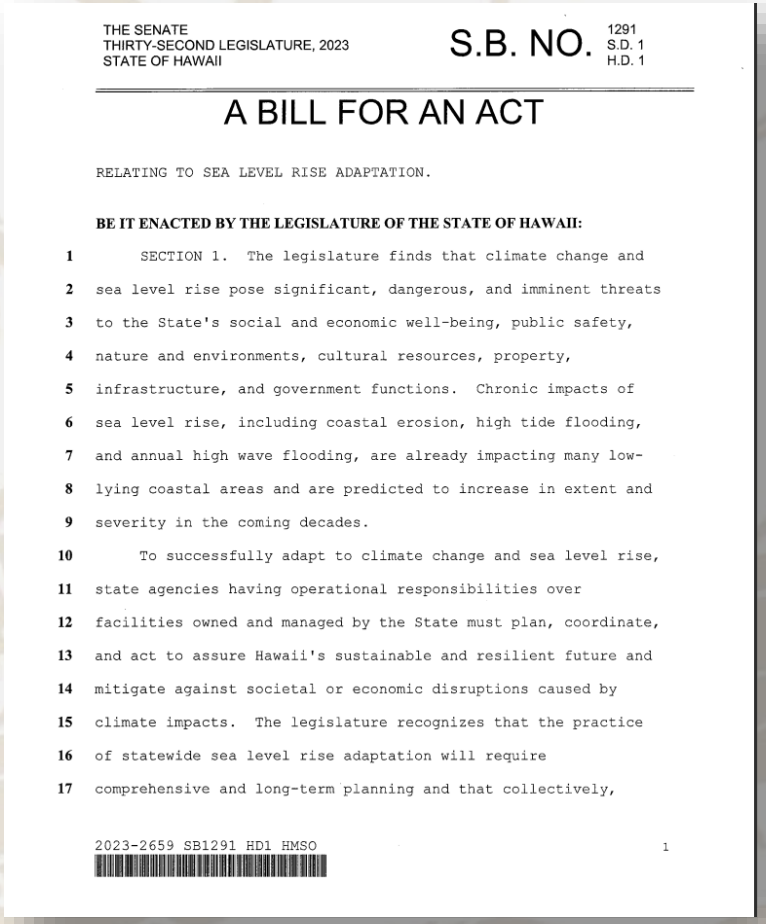
State Facilities & SLR (Act 178, SLH 2021)

Status: Pending appropriations request to legislature.

Objective: To increase agency capacity, facilitate agencies' actions to integrate adaptation into their planning and decision making, and ensure a statewide alignment of SLR adaptation efforts.

Deliverable: Develop a standardized procedure and template for assessing and reporting state facility vulnerability to SLR; and guidance for agenices on how to conduct vulnerability assessments.

Next Steps: Reconvene Action Team, Procure consultant services (pending funding)



THE SENATE
THIRTY-SECOND LEGISLATURE, 2023
STATE OF HAWAII

S.B. NO. 1291 S.D. 1 H.D. 1

A BILL FOR AN ACT

RELATING TO SEA LEVEL RISE ADAPTATION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The legislature finds that climate change and sea level rise pose significant, dangerous, and imminent threats to the State's social and economic well-being, public safety, nature and environments, cultural resources, property, infrastructure, and government functions. Chronic impacts of sea level rise, including coastal erosion, high tide flooding, and annual high wave flooding, are already impacting many low-lying coastal areas and are predicted to increase in extent and severity in the coming decades.

To successfully adapt to climate change and sea level rise, state agencies having operational responsibilities over facilities owned and managed by the State must plan, coordinate, and act to assure Hawaii's sustainable and resilient future and mitigate against societal or economic disruptions caused by climate impacts. The legislature recognizes that the practice of statewide sea level rise adaptation will require comprehensive and long-term planning and that collectively,

2023-2659 SB1291 HD1 HMSO 1

Managed Retreat Analysis

Status: Procurement stage; Anticipated Contract Start May 22, 2023

Objective: Build off the findings of the 2019 Managed Retreat Feasibility Report to further understand the implications of implementing managed retreat as a strategy for coastal hazard adaptation.

Deliverable: A legal framework for implementing MR, including potential amendments; an analysis of financing and funding strategies; conceptual application of legal framework, and funding mechanism to two case study sites.

Next Steps: Assemble Action Team; Anticipated project completion March 31, 2024

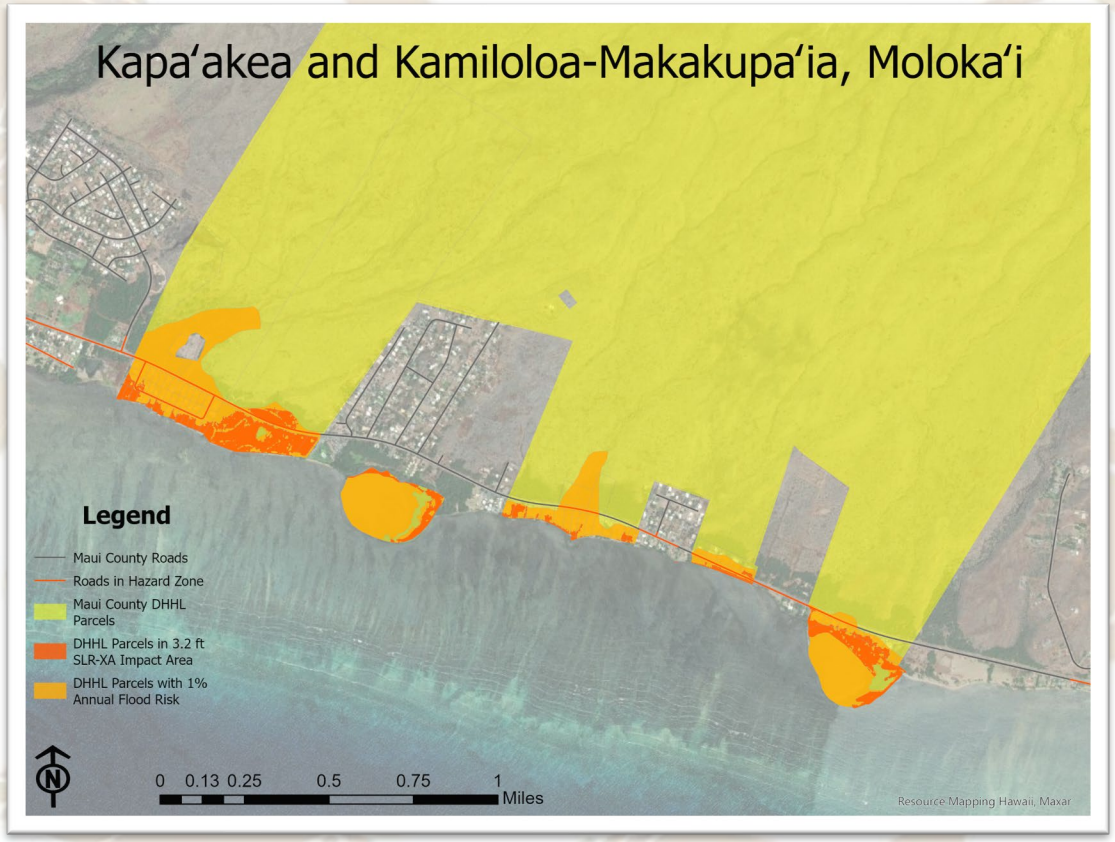
Integrating CZM into Hawaiian Home Lands

Status: Submitted to NOAA Project Special Merit FY23 Competition

Objective: Improve cross-agency coordination in coastal management by identifying current areas of inconsistent legal interpretations and challenges for DHHL beneficiaries when navigating county and State requirements for conducting activities in the shoreline area.

Deliverable: An analysis of potential strategies DHHL could implement to address challenges and create a consistent framework for managing shoreline activities.

Next Steps: Award announcements Summer 2023



Focus Area 2: Land-Based Pollution

Reimagined Low Impact Development (LID) A Users Guide

Status: Procurement stage with UH Sea Grant; Anticipated Contract Start in late May 2023.

Objective: Refresh, repurpose, and update the 2006 LID, A Users Guide so that it can be used an effective planning tool for stormwater runoff management/green infrastructure.

Deliverable: The updated LID Users Guide will reorganize the 2006 document, utilize better graphics, interactive maps, include outreach materials, and be available in a printed format, as well as a standalone electronic version.

Next Steps: Finalize contract with UH Sea Grant. Completion date December 2023.

Focus Area 3: Marine Ecosystems

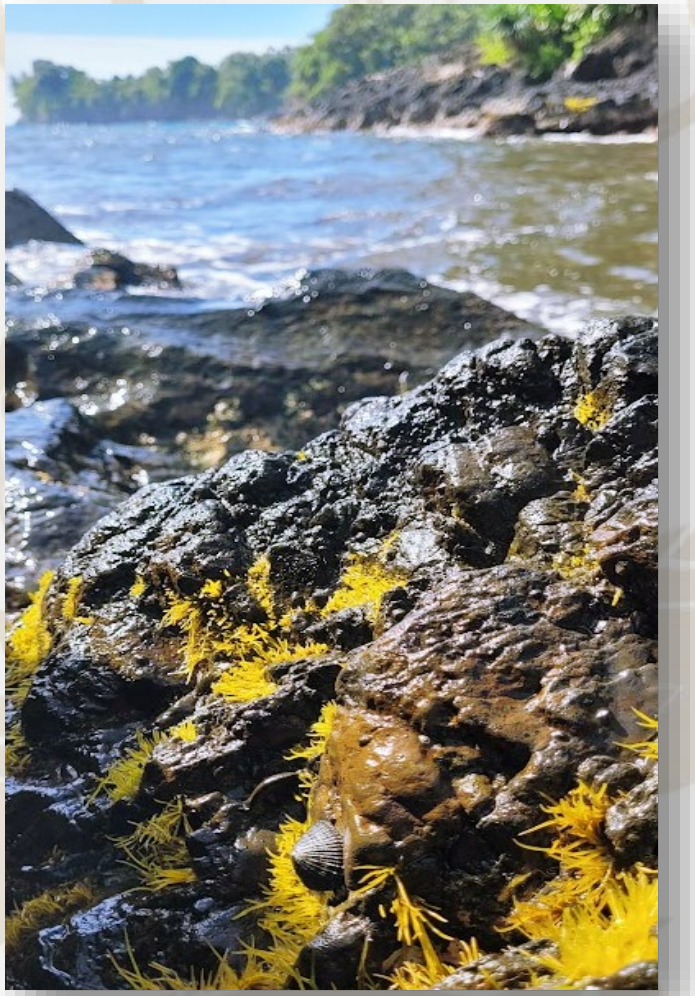
Kōkua Community-based Monitoring Project

Status: Ongoing. The framework is drafted and currently being circulated to partners for feedback. Training materials and monitoring protocols are in development.

Objective: To develop a framework for community-based monitoring of nearshore subsistence resources to fill gaps and support adaptive management.

Deliverable: A framework for community-based monitoring; co-developed protocols for ʻopihi and limu; training materials and monitoring kits to support communities; framework and monitoring protocols piloted in interested communities.

Next Steps: Complete circulating draft framework for feedback. Finalize sites and initiate pilots with interested communities. Revise framework based on lessons learned from implementation.



Tsunami Design Zone Maps

Status: In progress, modeling is complete, draft maps have been created.

Objective: To develop high-resolution probabilistic tsunami design zone maps for higher-risk coastal areas of the islands of Maui and Kaua‘i (maps for O‘ahu and parts of Maui were completed previously). Maps will result in recommended changes to county building codes and will inform engineers and experts on how best to design essential facilities, critical infrastructure, and taller buildings within the tsunami design zone to be able to withstand tsunami loads and impacts.

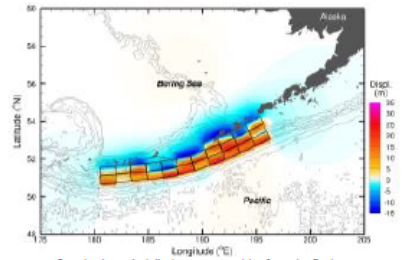
Deliverable: Updated tsunami design zone maps for Maui, Phase II, and Kaua‘i for inclusion in the Tsunami Geodatabase for the 2028 version of ASCE 7.

Next Steps: Convene final informational meeting for Maui, Phase II, and Kaua‘i; Finalize maps; Anticipated project completion September 30, 2023.

ASCE-compatible Aleutian source for the southwest shore of Maui (Makena-Kihei)

The final Aleutian-Trench source is a 35% increase from the preliminary source in order to comply with the ASCE 7-22 criteria

Source	M	Length (km)	Width (km)	Max slip (m)	Avg slip (m)	Mean Model/ASCE	Min Model/ASCE	Model
Preliminary	9.41	1,100	100-150	60.0	37.2	74.1% 77.9%	52.6% 46.4%	Non-Hydro Hydro
Final	9.49	1,100	100-150	81.0	50.2	101.5% 101.8%	82.7% 71.4%	Non-Hydro Hydro



Co-seismic vertical displacement resulting from the final source

Merging runup elevation points along south boundary of Makena-Kihei Model