

An Analysis of Managed Retreat Strategies in Hawai'i: Policy and Funding Opportunities and Challenges

EXECUTIVE SUMMARY



The purpose of this project is to guide future state initiatives around managed retreat as an adaptive response to climate change induced coastal hazards including sea level rise (SLR), erosion, and flooding. This project identified specific legal, policy, and funding opportunities and challenges to implementing managed retreat as part of the State's overall climate adaptation framework, and included: **1) an analysis of relevant existing policies, laws, and regulations; 2) an analysis of potential strategies to implement and finance managed retreat; 3) identification of challenges to implementation including practical and legal issues; and 4) recommendations for potential solutions to address those challenges.**

PROPOSED PROGRAM

This report proposes a program focused on strategies for managed retreat where shorelines with eroding sandy beaches exist. In these areas, retreat is likely to be a key component of the adaptation strategy due to accelerating coastal erosion; the presence of high value ecological, cultural, and recreational public trust resources; and the consequences of not adapting proactively, including threats to public trust resources as well as public health and safety.

The recommendations center around the creation of a **Beach Resilience Program (BRP)** focused on regions with eroding sandy beaches that have been identified as priority areas for adaptation. Many of the recommendations in this report could also have broader applicability for climate adaptation in other contexts.

The BRP uses an Adaptation Pathways approach to facilitate place-based planning and adaptation within designated Beach Resilience Planning Areas (BRPAs).

Adaptation Pathways is an approach that can be used to prioritize strategies for adapting to climate change that are place-based, flexible, and responsive to changing conditions. Pathways provide a phased adaptation approach based on area-specific thresholds, triggers, and sequencing of adaptation strategies. Pathways are not prescriptive about which actions to take when. Instead, once the pathway is in place, conditions are monitored and when triggers are reached, the next adaptation strategy is initiated.

This approach acknowledges that adaptation must occur at a local level and be informed by scientific and technical study as well as community input and traditional ecological knowledge (TEK).

The program also proposes funding sources, voluntary relocation options, and a regulatory framework for facilitating adaptation in BRPAs.

CHALLENGES AND OPPORTUNITIES

There are many challenges to implementing managed retreat, particularly around community acceptance, political will, planning frameworks, agency capacity, and funding. Perhaps the greatest challenge limiting the ability to implement managed retreat lies in evolving the current approach to coastal planning and management in Hawai'i from an approach that is piecemeal, reactive, and enforcement driven to one that is proactive, holistic, transparent, equitable, and consistently implemented. This will require systemic change and sustained commitment at many levels.

Despite such challenges, opportunities also exist, afforded by the strength of Hawai'i's public trust doctrine, climate adaptation policy, Native Hawaiian TEK and community values. TEK can inform climate adaptation by centering the public trust and reframing sea level rise as an opportunity to reimagine and restore spaces for the community, rather than focusing on losses and damage to private property.

PROPOSED PROGRAM FRAMEWORK

The Beach Resilience Program would enable the designation of Beach Resilience Planning Areas (BRPAs) that would be subject to:

- ▲ Area-specific study and adaptation planning
- ▲ Community engagement and education
- ▲ Development and monitoring of adaptation pathways
- ▲ Strengthened regulations and enforcement
- ▲ Funding for beach management and adaptation
- ▲ Options and incentives for removal or relocation of development
- ▲ Beach management and restoration

The BRP aims to provide a transparent process for adapting development in coastal areas to the impending impacts from sea level rise, which include accelerated erosion, worsening storms, and decreased capacity to address coastal hazards. **A transparent process would help property owners, government, and the general public understand the future options for these areas and engage in planning and visioning for how to adapt their communities.**

BEACH RESILIENCE PROGRAM ELEMENTS

- ▲ Establishing Policy to Implement BRP
- ▲ Clarifying Jurisdiction
- ▲ Establishing a Planning Framework
- ▲ Strengthening Regulations
- ▲ Establishing Funding Sources and Incentive Programs
- ▲ Developing Land Management Options
- ▲ Community Engagement and Education
- ▲ Beach Management and Restoration

LEGAL BASIS FOR BEACH RESILIENCE PROGRAM

The legal basis for the BRP is supported by the public trust doctrine, HRS Chapter 205A, existing case law, and other foundational legal principles and powers of the state. Collectively these provide a strong basis for enabling proactive adaptation of coastal areas through planning, regulation, and enforcement that is expected to withstand legal challenges including takings claims.

CONSIDERATIONS FOR PROGRAM SUCCESS



LEGAL CHALLENGES



FUNDING



POLITICAL WILL



INTEGRATION OF TEK



EQUITY



COMMUNITY ENGAGEMENT & VISIONING



MARKET FACTORS



COMPETING POLICY GOALS

IMPLEMENTING RECOMMENDATIONS

The report identifies **20 recommendations** for implementing the BRP, developed through research, stakeholder consultation, and analysis of legal, policy, and funding considerations. Recommendations are grouped into six topics:

POLICY

Strengthen the legal basis for the program and enable implementation

JURISDICTION

Assign authority and responsibility for the program

PLANNING

Guide area-specific adaptation planning in Beach Resilience Planning Areas and alignment with land use plans and designations

REGULATORY

Align regulations in eroding sandy beaches with public trust priorities and long-term adaptation needs

FUNDING

Establish dedicated, sustainable funding sources for adaptation of eroding sandy beaches and identify financial incentives for coastal property owners

LAND MANAGEMENT

Provide solutions for transfer of land in eroding sandy beach areas, relocation of displaced residents, and management and restoration of beaches

CASE STUDY APPLICATION

The report applies the BRP recommendations to two hypothetical case study areas: **1) Sunset Beach, North Shore O'ahu, and 2) Kahana Sunset Building F, West Maui**. The report compares outcomes under the current status quo vs. the recommended program.

Under the proposed BRP, both case study areas would have been part of designated BRPAs, long before reaching their current state, and the implications of this would have been communicated to owners in the area. Area specific Beach Resilience Plans would have identified site-specific adaptation pathways with associated adaptation actions and triggers, as well as potential



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near-term options for beach/sand management to mitigate erosion.

Front line property owners with damaged or threatened structures would already have been issued red tags (Notice to Vacate), indicating specific actions to take (removal, modification, or retreat) when a critical adaptation pathway trigger is reached, such as distance of a structure or cesspool from the erosion line. Enforcement for non-compliance would proceed according to the BRP regulatory program (fines, mandatory removal, etc.).

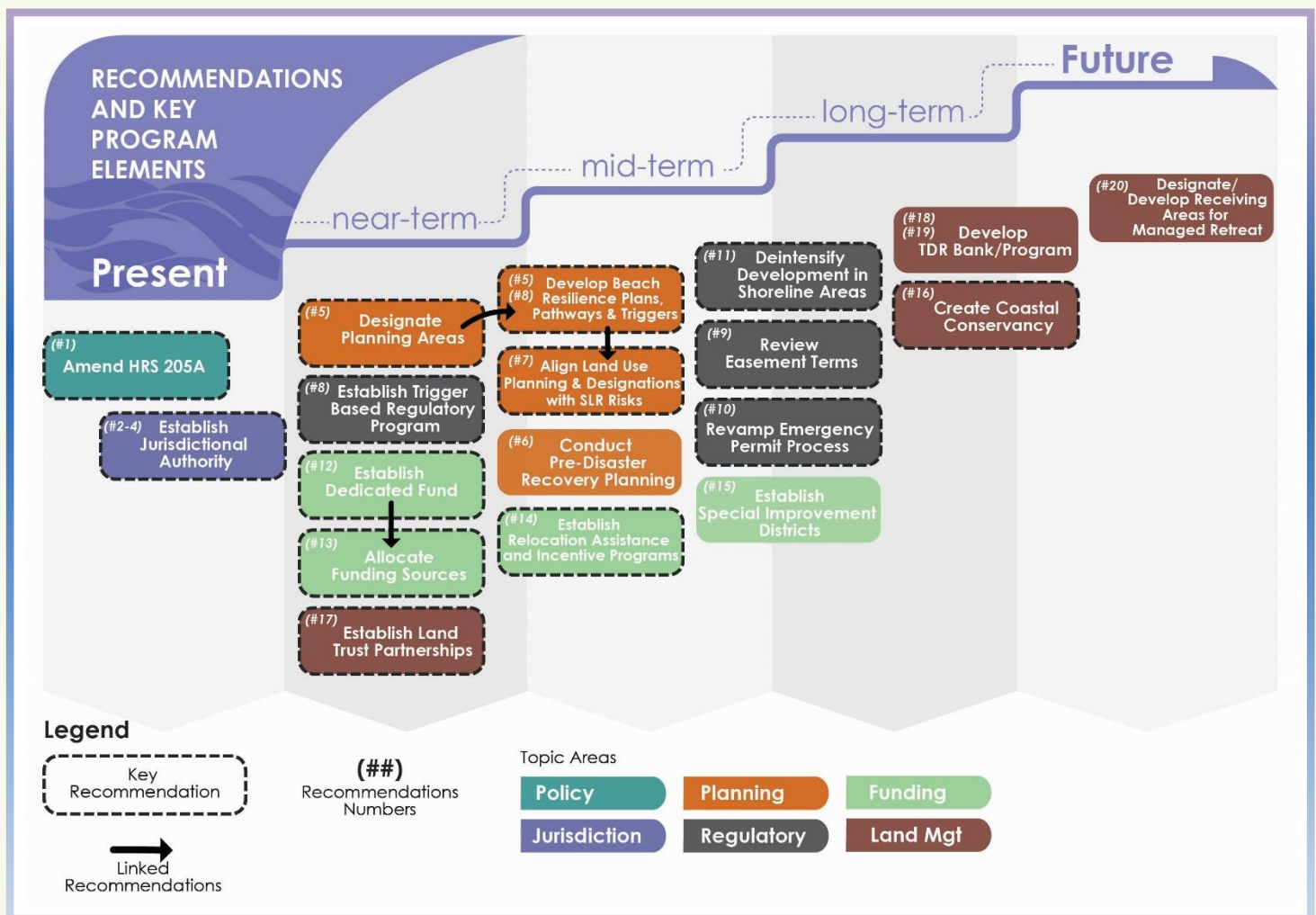


Owners behind the front line would be issued yellow or orange tags corresponding to their distance from the projected erosion line and other criteria established in

the Beach Resilience Plan. Depending on their eligibility, owners may have various options for relocation or transferring their properties, including buyout-leasebacks, tax incentives, sale or transfer of development rights, conservation easements, access to low interest mortgages elsewhere, and/or purchasing a lot in a designated receiving area.

Following removal of development, the areas would have been restored for public shoreline access as feasible.

The transparency of this program would provide options while setting clear expectations on what process owners must follow and the consequences for not doing so. Additionally, the regulatory basis of this framework in statute should head off most, if not all, contested cases and potential legal challenges.



	NO.	RECOMMENDATION	IMPLEMENTING ENTITIES
	#1	Amend HRS Chapter 205A to Strengthen Emphasis on Protection of the Public Trust	OPSD; DLNR OCCL; County Planning Departments
	#2	Improve Interagency Coordination	Hawai'i Climate Change Mitigation and Adaptation Commission; OPSD HICZMP; DLNR OCCL; County Planning Departments; USACE; NOAA; FEMA; USFWS; DOH; DOT; HIEMA; UH Sea Grant; County Parks Departments; DHHL; HTA
	#3	Establish DLNR as the Beach Resilience Authority Within Beach Resilience Planning Areas	DLNR; OPSD HICZMP; County Planning and Parks Departments; other State agencies (DOT, DOH, etc.); Federal agencies (NOAA, USACE, USFWS, etc.); Hawai'i Climate Change Mitigation and Adaptation Commission
	#4	Create New Integrated State Coastal Management Authority	OPSD; County Planning Departments; DLNR OCCL
	#5	Establish a Beach Resilience Planning Framework	OPSD, Hawai'i Climate Change Mitigation and Adaptation Commission; DLNR OCCL; DLNR; HTA; DOT; County Planning Departments; UH; scientific and technical experts
	#6	Conduct Pre-Disaster Recovery Planning	OPSD; County Planning Departments and Resiliency Offices; HIEMA; NDPTC; FEMA
	#7	Align State and County Land Use Planning with SLR Risks	County Planning Departments; OPSD; DLNR OCCL; LUC; BLNR; DLNR; DHHL; State Legislature; Planning Commissions; County Councils
	#8	Develop Trigger-Based Regulatory Program for BRPAs	Beach Resilience Authority as specified by program implementation (Recommendations #2-4); OPSD; DLNR OCCL; County Planning Departments
	#9	Review And Update Shoreline Easement Terms	DLNR Land Division; County Planning Departments
	#10	Revamp Emergency Shoreline Permits	DLNR OCCL; County Planning Departments; OPSD
	#11	Address Nonconforming Structures	OPSD; DLNR OCCL; County Planning Departments
	#12	Establish a Beach Resilience Fund	Legislature; OPSD; DLNR OCCL; County Planning Departments
	#13	Allocate Transient Accommodations Tax toward a Beach Resilience Fund	Legislature; OPSD; DLNR OCCL; HTA
	#14	Establish Voluntary Relocation Assistance and Incentive Programs	Coastal Conservancy (Recommendation #16); County Planning Departments; DLNR OCCL; BLNR; DLNR Land Division; County Councils; Land Trusts
	#15	Establish Special Improvement Districts for Coastal Adaptation	County Planning Departments; OPSD CZMP; County Councils; MACZAC; Residents
	#16	Establish a State Coastal Conservancy	DLNR OCCL, OPSD; Conservancy NGOs, Land Trusts
	#17	Partner with Existing Land Trusts	OPSD; DLNR; Land Trusts
	#18	Utilize Transfer of Development Rights (TDR)	County Planning Departments; OPSD; DLNR; Coastal Conservancy; HCDA
	#19	Create Development Rights Bank	Beach Resilience Authority as specified by program implementation (Recommendations #2-4) or Coastal Conservancy (Recommendation #16); County Planning Departments; OPSD; DLNR OCCL
	#20	Designate and Develop Receiving Areas for Managed Retreat	OPSD; HCDA; Legislature; LUC; DLNR; HHFDC; County Planning Departments; Planning Commissions; DLNR OCCL