#### **CAR.Committee**

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Sent:	Tuesday, October 20, 2020 9:13 AM
То:	CAR.Committee
Subject:	CAR-23 presentation
Attachments:	2020 10 19 SLR in CP briefing to Maui Council.pdf

Please see attached presentation for CAR-23 tomorrow (Wednesday). Mahalo, Brad Romine

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# Guidance for Addressing Sea Level Rise in Community Planning

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Funding from: NOAA FY16 Regional Coastal Resilience Grants Program





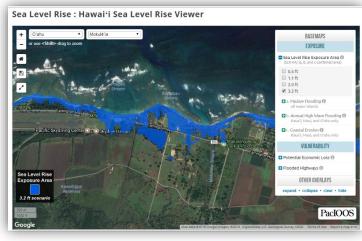


State of Hawaii, Office of Planning



## BUILDING RESILIENCE TO COASTAL HAZARDS AND CLIMATE CHANGE IN HAWAI'I

Three complementary projects building on the *Hawai'i Sea Level Rise Vulnerability and Adaptation Report* and other recent projects and initiatives:



Hawaii Sea Level Rise Viewer hawaiisealevelriseviewer.org



#### seagrant.soest.hawaii.edu



Funding from: NOAA FY16 Regional Coastal Resilience Grants Program







## Overview

- Purpose: Assist county planners to build upon and improve ongoing efforts to address sea level rise
- Focus: county general and community plans as a critical entry point, guidance may also be applied in other planning efforts
- Guidance under four key topics:
  - A. Vulnerability assessment
  - B. Land use and development alternatives
  - C. Plan and policy alignment
  - **D.** Adaptive management
- With **Recommended Practices** under each Guidance
- **Examples and Resources** for each of the Recommended Practices are provided in Appendix 1
- Summary of recommended practices with relevance to State Priority Guidelines is provided in Appendix 2



#### GUIDANCE

A. Assess vulnerability to sea level rise and identify potential adaptation strategies to support planning and policy development

B. Create sea level riseinformed land use and development alternatives identifying benefits and drawbacks

C. Align plans, policies, and actions to reduce vulnerability to coastal hazards and support sea level rise adaptation

D. Approach planning and implementation as cycle with monitoring and evaluation to support adaptive management

# **Outreach and County Input**



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- This Guidance document was developed through extensive input and technical review from planners in each of the counties
- Recommended practices and examples were developed through research, consultations, and ongoing work on community plan updates
- 15 outreach events with over 100 county staff and other stakeholders
- Workshops, webinars, and smaller in-person meetings
- Written comments on drafts were essential to refining the guidance

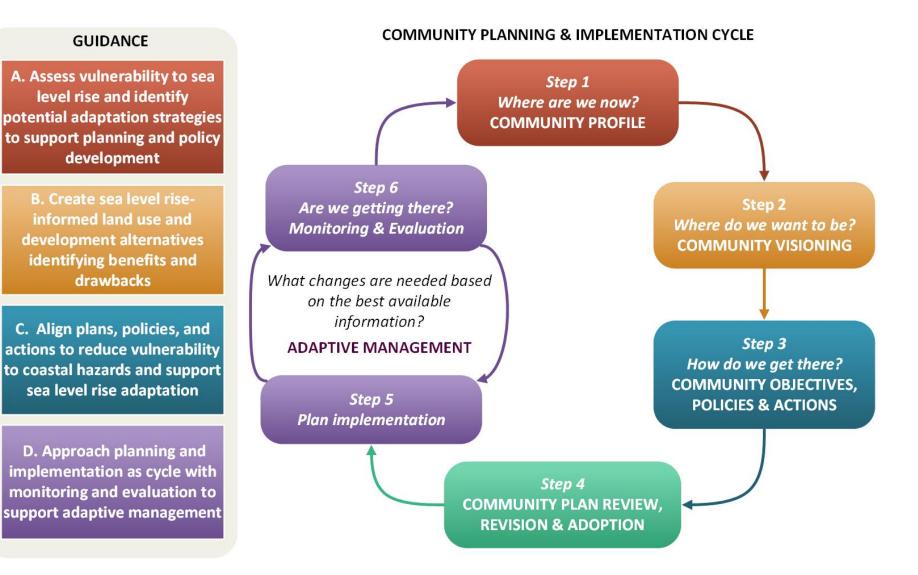
"It will be critically important for localities to institutionalize flexible decision-making frameworks that extend long into the future, possibly for 50 or more years."<sup>1</sup>

- Adapting to sea level rise requires communities to make difficult decisions, weighing priorities and consequences
- Community planning provides a critical entry point and existing framework for locally-appropriate combination of:
  - Decision analysis
  - Land use planning
  - Public participation

1.Quay, R. (2010). Anticipatory Governance. *Journal of the American Planning Association,* 76(4), 496-511.



# Guidance for addressing sea level rise as part of the community planning and implementation cycle



## **GUIDANCE AND RECOMMENDED PRACTICES**

A. Assess vulnerability to sea level rise and identify potential adaptation strategies to inform plan and policy development

Recommended Practices	Application
A1. Establish an interdepartmental climate adaptation working group to support coordination on vulnerability assessments and throughout the planning and implementation cycle	
A2. Conduct county-wide and community-scaled sea level rise vulnerability assessments using best-available data and identify potential adaptation strategies	
A3. Conduct sector-specific vulnerability assessments and identify potential adaptation strategies	
A4. Use the results of sea level rise vulnerability assessments to support community outreach activities, to inform all plan elements, and to create or revise policies and rules	



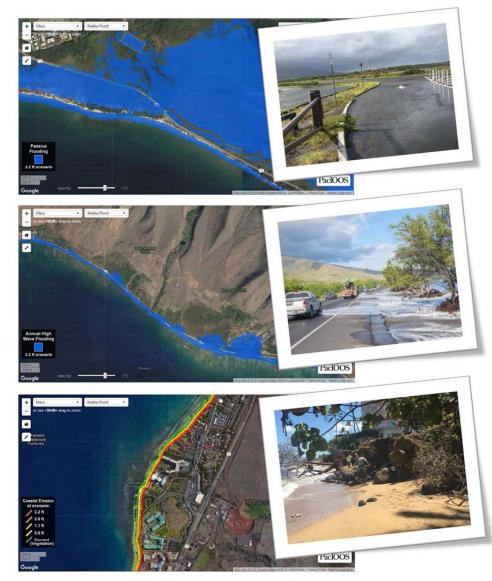


Guidance A. Assess vulnerability to sea level rise and identify potential adaptation strategies to inform plan and policy development

Selected Examples and Resources:

- Interdepartmental Coordination (A1): Honolulu City Resilience Team
- County and Community Vulnerability Assessments (A2): West Maui Community Plan

   Climate Change and Sea Level Rise
   Technical Resource Paper
- Sector-specific Vulnerability Assessments (A3): HI-DOT coastal roads vulnerability assessment
- Uses of the Results of Vulnerability Assessments (A4): Policies and adaptation actions in recent community plans



West Maui Community Plan – Climate Change and Sea Level Rise Technical Resource Paper (Hawaii Sea Grant, 2018)

## **GUIDANCE AND RECOMMENDED PRACTICES**

B. Create sea level rise-informed land use and development alternatives and analyze tradeoffs	
Recommended Practices	Application
B1. Use community visioning to develop sea level rise adaptation strategies	
B2. Create land use and development alternatives based on different sea level rise adaptation strategies and analyze tradeoffs	
B3. Identify and retain disaster redevelopment alternatives that support adaptation to sea level rise in the event of a catastrophic coastal event	





Applied or conducted for a specific community planning area

Guidance B. Create sea level rise-informed land use and development alternatives and analyze tradeoffs

Selected Examples and Resources:

- Community Visioning (B1): Honolulu PUC Development Plan sea level rise vulnerability mapping and community engagement
- Sea Level Rise Informed Land Use and Development Alternatives (B2): West Maui Community Plan development alternatives
- Disaster Redevelopment Alternatives (B3): Hilo post-tsunami redevelopment



C. Align plans, policies, and actions to reduce vulnerability and adapt to sea level rise

Recommended Practices	Application
C1. Facilitate consistency and alignment of new policies and actions by coordinating across departments	
C2. Prepare draft ordinances and rules to submit concurrently with the plan to align plans and implementing rules	



Applied or conducted county-wide



Applied or conducted for a specific community planning area

Guidance C. Align plans, policies, and actions to reduce vulnerability and adapt to sea level rise

Selected Examples and Resources:

- Plan and Policy Integration (C1): Hawaii County General Plan, lava recovery plan, and Multihazard Mitigation Plan alignment
- Ordinances and Rules to Support Community Plan Implementation (C2): Ordinances submitted and adopted concurrently with the 2020 West Kauai Community Plan update



Network of County of Hawai'i plans being aligned to build community resilience to sea level rise, volcanic, and other natural hazards

#### **GUIDANCE AND RECOMMENDED PRACTICES**

D. Approach planning and implementation as a cycle with monitoring and evaluation to support adaptive management

Recommended Practices	Application
D1. Place greater emphasis on plan implementation, monitoring, and evaluation to track performance and make course corrections	
D2. Conduct pilot projects to demonstrate the viability of adaptation strategies and develop collaborative pathways for planning, funding, and implementation	



Applied or conducted county-wide

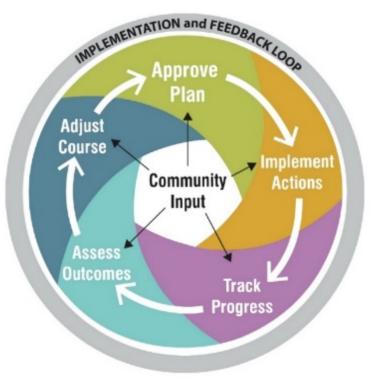


Applied or conducted for a specific community planning area

Guidance D. Approach planning and implementation as a cycle with monitoring and evaluation to support adaptive management

#### Selected Examples and Resources:

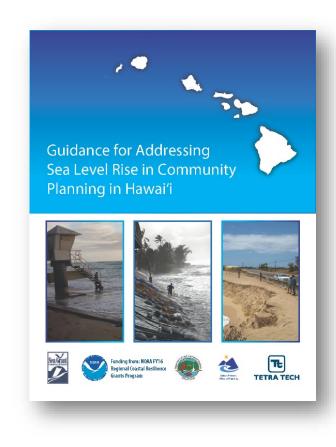
- Implementation, Monitoring, and Evaluation (D1):
  - Maui County Plan Implementation Division
  - Kauai General Plan adaptive management as a cycle to address uncertainty with climate change impacts
- Pilot Projects (D2): Maui dune restoration projects (nature-based adaptation)



Adaptive management cycle adopted in the County of Kaua'i General Plan (County of Kaua'i, 2018)

## **Concluding Thoughts**

- Adapting to sea level rise will be challenging and disruptive. However, disruption brings opportunity for innovation and creativity to re-envision our communities as more equitable, sustainable, and resilient.
- Inaction will be the costliest and most complicated path in the long-run.
- Developing this Guidance has emphasized the importance of continuing to share evolving knowledge and practices



## Mahalo!

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Front Street, Lahaina, Maui (photo: Don McLeish) Guidance for Addressing Sea Level Rise in Community Planning in Hawai'i



