

Planning for Hawai'i's Climate Change Adaptation

Bethany Morrison, Acting Long-Range Planning Program Manager

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Climate Change Adaptation Session Panel

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Hawaii County Adaptation and Planning for Future Impacts

Countywide Efforts

Partnerships &
Collaboration

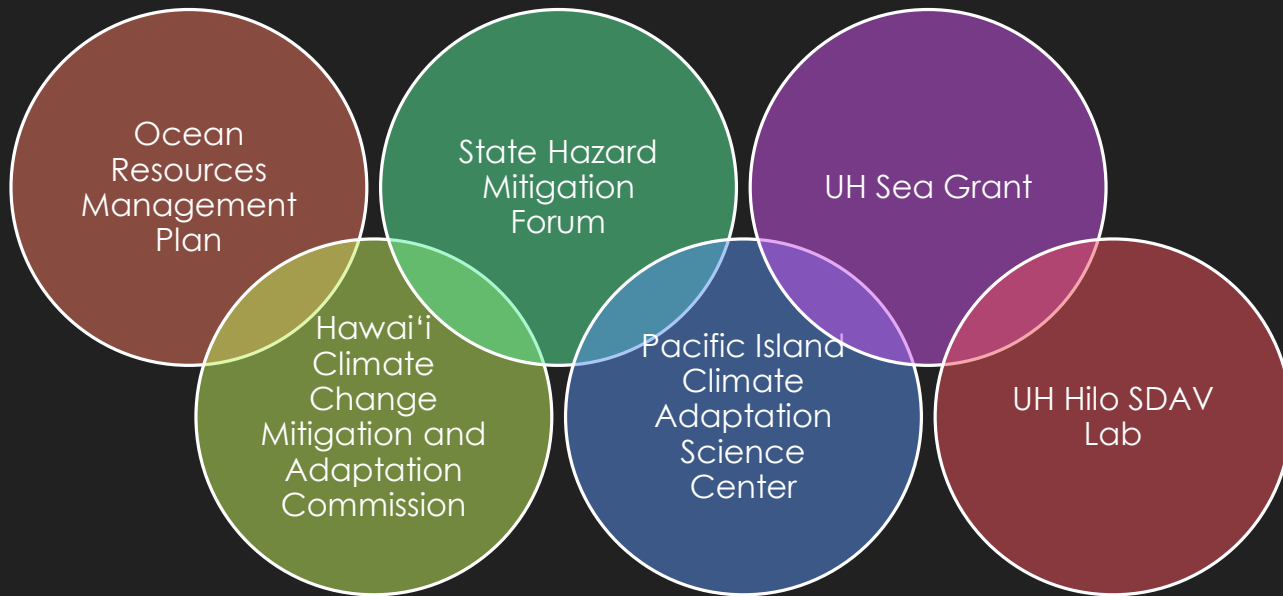
Shoreline and
Riparian
Setback Project

Climate Action
Planning

General Plan
Update

Multi-Hazard
Mitigation Plan
Update

Leveraging partners



Shoreline and Riparian Setback Project

Analysis to Establish Research-Based Shoreline and Riparian Setbacks

Funding partners:

- CZM
- FEMA/HMGP
- PI-CASC

1. Quantify historic shoreline change
2. Quantify riparian bluff retreat rates
3. Recommend mitigation strategies based on a gap analysis and research and analysis of the management tools to more effectively reduce risk to coastal hazards.
4. Provide the findings needed to adopt shoreline setbacks and riparian buffers through existing regulatory and nonregulatory tools in order to manage impacts and adapt to increased risk from more intense rainfall.

Climate Action Planning

Climate Action Plan 2020

Greenhouse Gas Mitigation and Reduction Implementing Actions

New Ordinances

Code Updates

Financing and Incentives

Education and Outreach

Changes to County Services

Community and Individual Action

- Vulnerability assessment
- Capability assessment
- Risk assessment based on various climate change scenarios
- Alternative scenarios comprised of different combinations of mitigation and resilience strategies
- Implementation plan, including financing strategies, and a monitoring and reporting framework.

Climate Change Adaptation Plan (2021)

General Plan Update

Draft Resilient Objectives



Increase food security



Reduce water use



Maximize waste reduction, resource reuse and recycling



Reduce vehicle miles travelled



Lead the State in renewable energy



Increase forest and woodland cover



Reduce clearing and grading of forested areas



Increase residential density within Urban areas



Reduce greenhouse gas emissions



Reduce vulnerability to SLR

Strategic Opportunities

Climate
Change

Integrated
Water
Resource
Management

Food Security

Place-Based
Economy

Healthy
Communities

Renewable
Energy

Equitable
Housing

Toolkit and New Scenario

Toolbox and Strategies for Multi-Hazard Mitigation Through Land
Use Reallocation Report and Low Tolerance for Risk Scenario

New Risk Analysis and Recommendations

- Companion effort with Recovery Plan
- Three Core Products
 - Toolkit and Strategies Report (Clarion, March-June 2020)
 - Low Tolerance for Risk Scenario (June 2020)
 - New Countywide scenario focused on reducing future hazard exposure and better connections to services.
 - Demonstrates implementation of Strategies from report
 - Multi-Hazard Risk Assessment for Future Scenarios (March-June 2020)
- Opportunity to incorporate additional tools and strategies in General Plan

Toolkit and Strategies Report

- Researched extensive list of possible tools
- Provided location specific strategy recommendations – Strategy Zones
 - Hazards Exposure
 - High Hazards = volcano lava hazard zones 1 and 2, historic lava flows (including 2018 event lava inundations)
 - Moderate Hazards = coastal hazards (tsunami, storm surge, coastal flooding and SLR)
 - Low/No Hazards = all other parcels (includes exposure classes to other hazards and no mapped exposures)
 - Service Condition
 - Underserved Subdivisions = previously defined non-conforming subdivisions plus a few added from criteria (low occupancy, small subdivided lots, private roads, well/septic/cess pools)
 - Other Areas = well-served areas (urban centers, villages, towns, subdivisions) and larger rural/agricultural parcels
- Strategies stacked for effectiveness

Strategy Zones

- Strategies impact vacant properties

- Greenfield

- Uninhabitable from recent hazard event

- Implemented as overlays

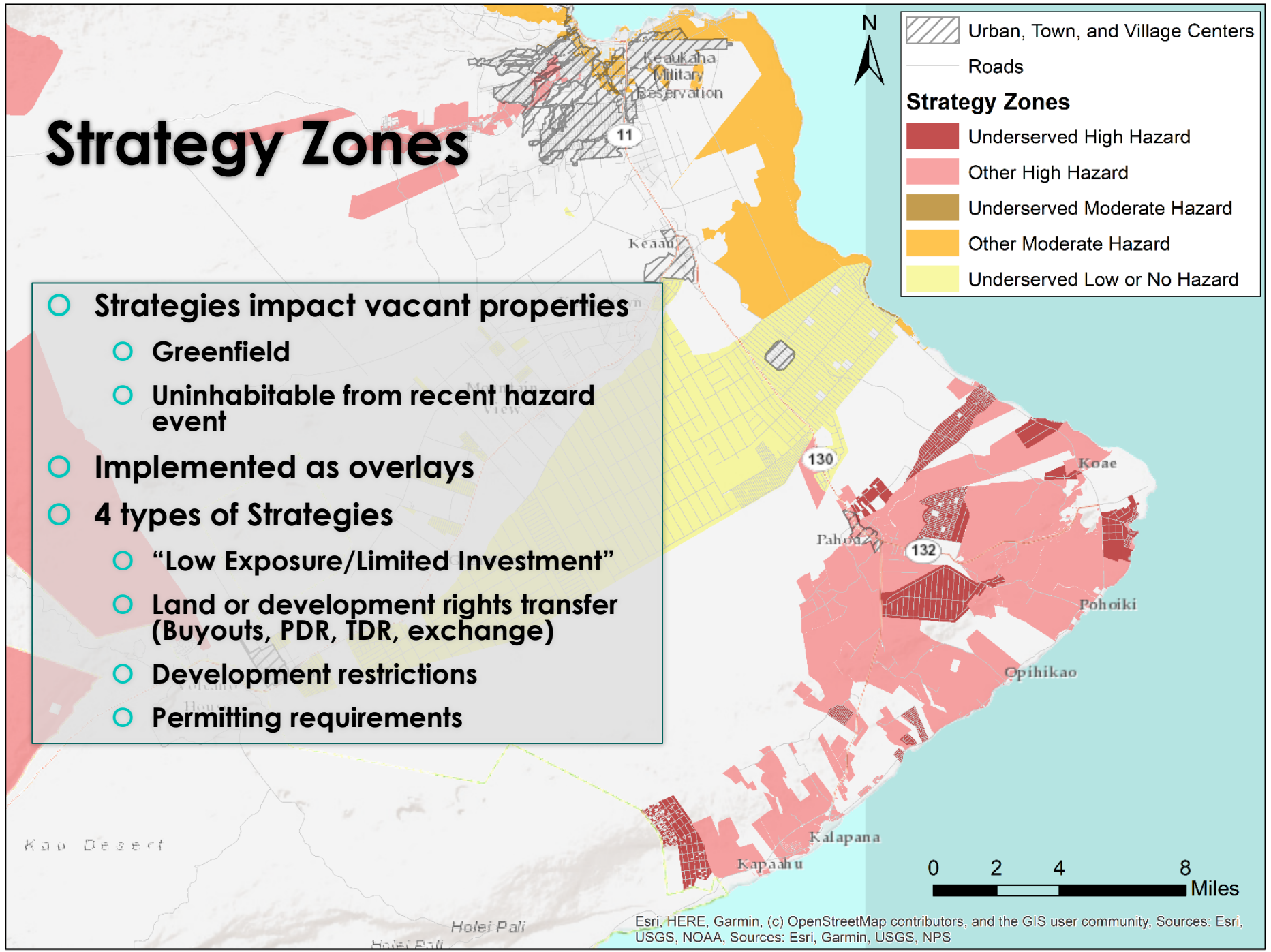
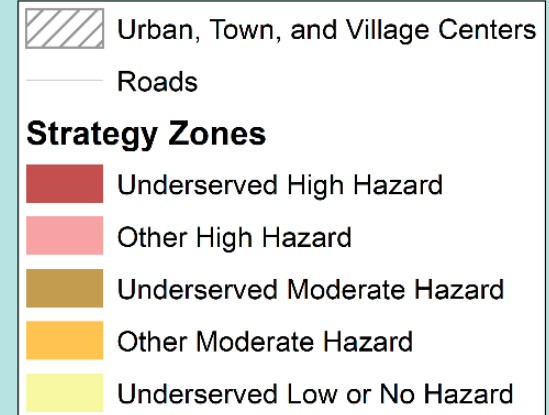
- 4 types of Strategies

- “Low Exposure/Limited Investment”

- Land or development rights transfer (Buyouts, PDR, TDR, exchange)

- Development restrictions

- Permitting requirements



Multi-Hazard Mitigation Plan Update

RECOMMENDED MITIGATION ACTIONS

Action HC23-Codes and Policies for Sea Level Rise

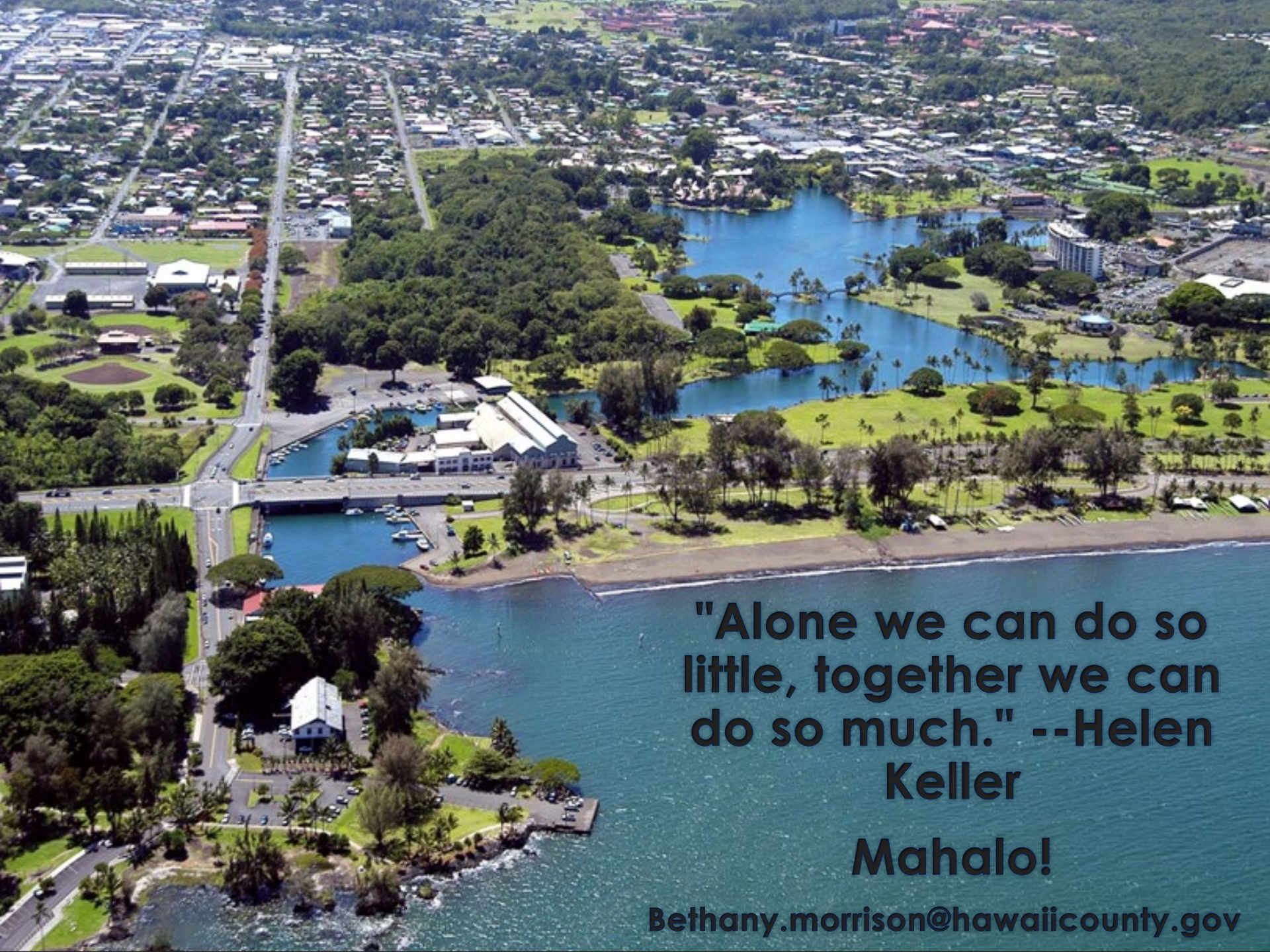
- Update county codes and policies to require that all coastal development consider and incorporate measures to address sea level rise

Action HC25-Shoreline setback for Coastal Erosion

- Update county shoreline setback policies to include coastal erosion in order to better regulate development in the high-risk areas

Action HC 26-Reduce development in high-risk hazard areas

- Update and overlay hazard zones and develop conditions for land use and design within high risk zones and within or adjacent to urban growth areas outside of high-risk areas



"Alone we can do so little, together we can do so much." --Helen Keller

Mahalo!

Bethany.morrison@hawaiicounty.gov