Planning for Hawai‘i’s Climate Change Adaptation

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Hawai‘i Congress of Planning Officials (HCPO) 2020
Climate Change Adaptation Session Panel
October 20, 2020
Hawaii County
Adaptation and
Planning for Future
Impacts
Countywide Efforts

- Partnerships & Collaboration
- Shoreline and Riparian Setback Project
- General Plan Update
- Climate Action Planning
- Multi-Hazard Mitigation Plan Update
Leveraging partners

- Ocean Resources Management Plan
- State Hazard Mitigation Forum
- Hawai’i Climate Change Mitigation and Adaptation Commission
- Pacific Island Climate Adaptation Science Center
- UH Sea Grant
- UH Hilo SDAV Lab
Shoreline and Riparian Setback Project
Analysis to Establish Research-Based Shoreline and Riparian Setbacks

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.

Funding partners:
- CZM
- FEMA/HMGP
- PI-CASC
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.
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
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!

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