



A Climate Ready O'ahu

*The City's Approach to Climate
Adaptation and Hazard Mitigation*

HWWA Annual Conference
October 15, 2025

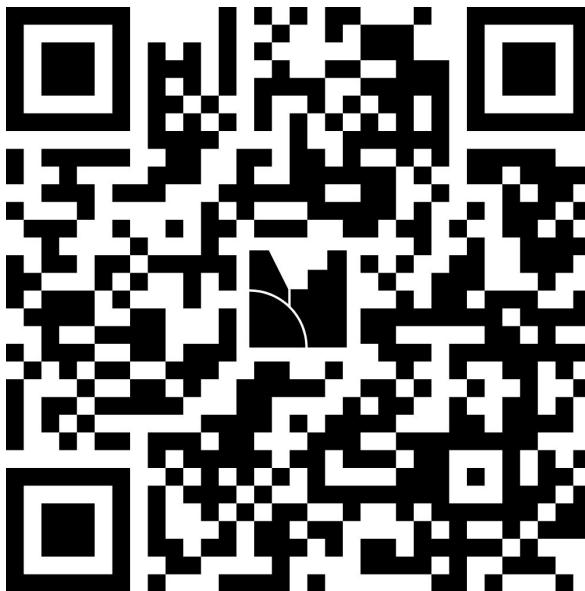
Presented by
Alexander Yee, AICP
Coastal and Water Program Manager

Sarah Harris
Hazard Mitigation and Long-Term Disaster Recovery Program
Manager



Icebreaker Questions

Open menti.com and enter code 8204 0295 to join!

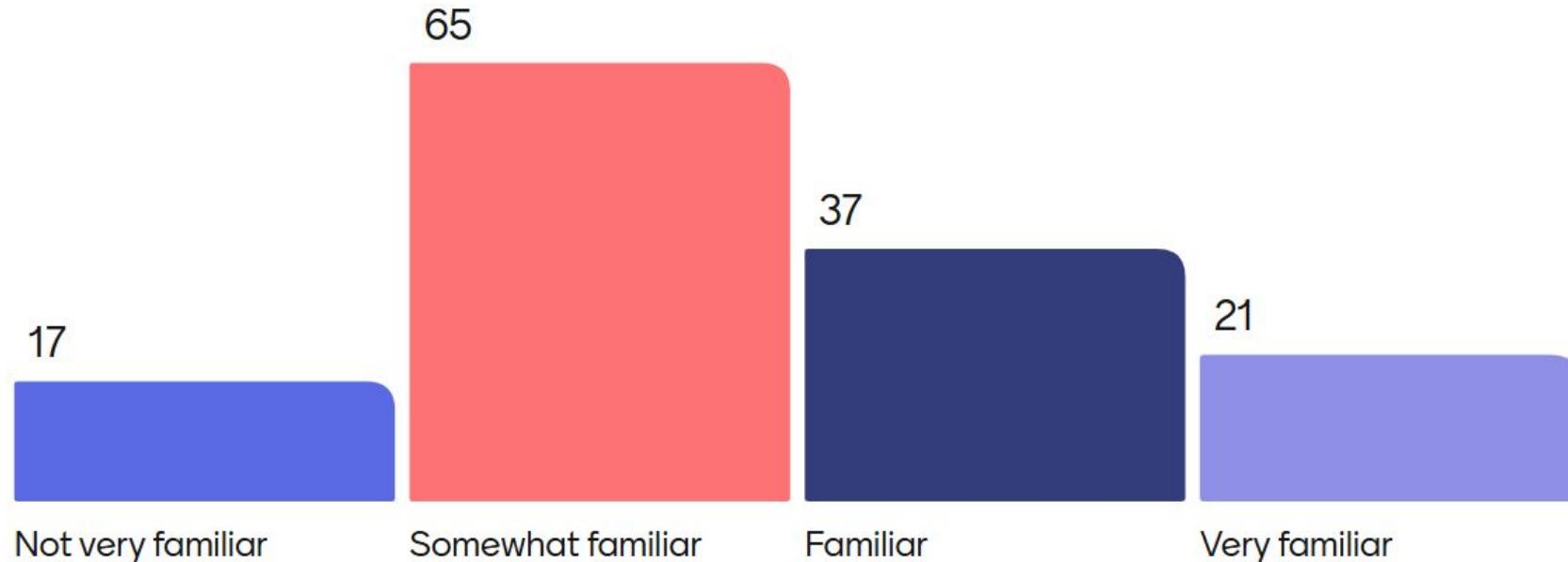


<https://www.menti.com/al9bd3rtng6u>



What is your job title?

How familiar are you with climate change impacts on O'ahu?



In your view, what are the biggest challenges to advancing adaptation efforts?



A Call to Action from O‘ahu Voters

The Office of Climate Change, Sustainability and Resiliency is a **Charter-mandated City office** created to respond to climate change, resilience, and other sustainability challenges.



Green
City Operations



Reduce Climate
Emissions & Impact



Coordinate with
Federal & State Agencies



Promote Resilient
Communities



Ensure Sustainable
City Plans & Policies



Climate Change
Commission



Our Programs



Adaptation

Addressing and preparing for climate change impacts where we live, work, and play.

Energy

Taking action to reduce greenhouse gas emissions in our energy, transportation and waste sectors.

Food

Working to ensure equitable and affordable food access and food systems.

Hazards

Reducing our risk to climate hazards and preparing for long-term recovery so no one is left behind.

Office Wide Programs

(work with all programmatic teams)

Equity

Climate change highlights existing inequities, and ensures we consider these issues in our planning and actions so benefits reach all people.

Policy

Develops, tracks, and advocates for relevant policies; and identifies grant opportunities.

Communications

Amplifies the City's and community-based partners climate work to the public via media channels and outreach events.

Climate Resiliency: A *Both-And* Approach

CLIMATE ACTION

Taking action to ***reduce and eliminate emissions*** of heat-trapping gasses in our atmosphere that have caused / are causing climate change.



Examples of mitigation:

- Zero emission transportation
- Clean & renewable energy
- Zero waste / circular economy

CLIMATE ADAPTATION

Taking action to ***prepare for and adjust*** to both the experienced and projected impacts of climate change shocks and stresses.

Examples of adaptation:

- Flood resilience
- Heat preparedness
- Biodiversity conservation



O‘ahu’s Top Climate Hazards & Impacts



→ STRESSES

SHOCKS



Sea Level Rise and Coastal Erosion



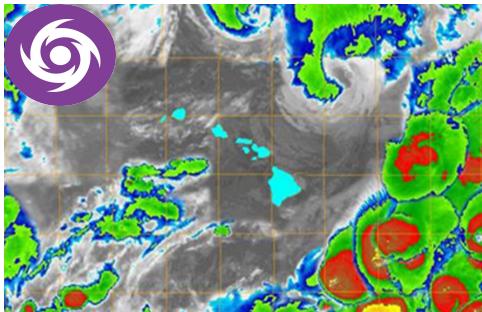
Increasing Temperatures and Extreme Heat



Drought



Flash Flooding



Hurricanes

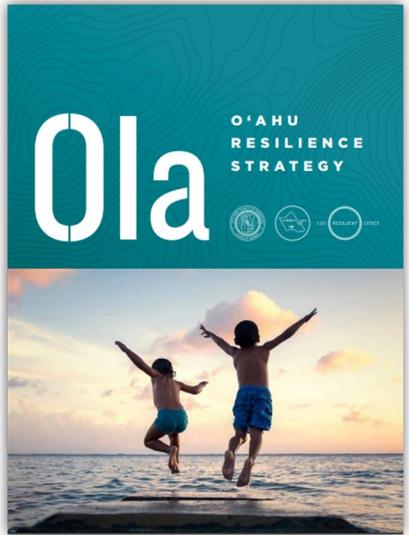


Wildfire

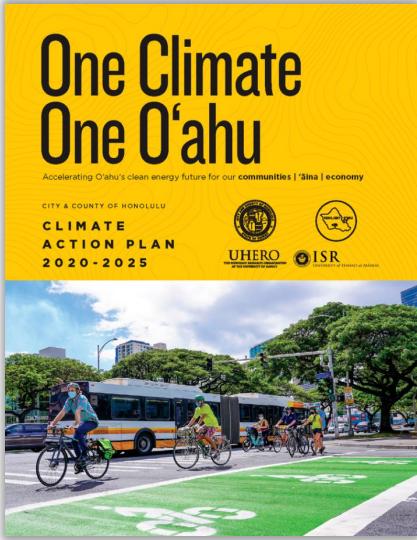
Climate Costs



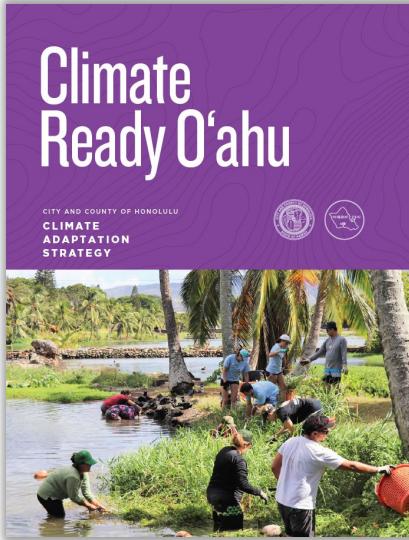
Acting on Resilience



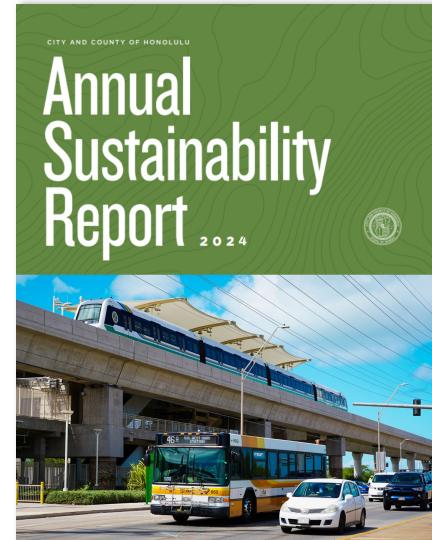
Adopted
Oct 9, 2019



Adopted
June 3, 2021
Being updated now



Adopted
Feb 29, 2024



Released Annually
April 22, 2025



Defining Resilience

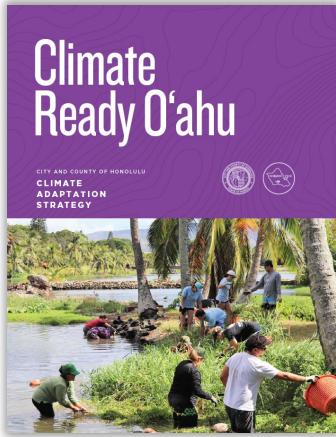


The capacity of individuals, communities, institutions, businesses, and systems to **survive, adapt, and thrive**, no matter what kinds of chronic stresses and acute shocks they experience.



Envisioning a Climate-Ready Future

A *Climate Ready O'ahu* is one where:



VISION



All people are empowered with the knowledge, tools, and resources to prepare for climate impacts;



Connections between people and native ecosystems are cultivated so the **'āina is safeguarded for generations** to come; and



Infrastructure works with natural systems to keep residents safe from climate hazards at home, at work, and everywhere in between.



Vision → Strategies → Actions

Three-part

Vision:

Strategy

Action

Empowered & Prepared

People

Strategy 2: Amplify and increase capacity for community-led climate adaptation.

Action 2.1: Create a climate champions program to encourage local climate leadership.

Safeguarded & Stewarded

‘Āina

Strategy 6: Improve watershed health to mitigate wildfire risk and manage flooding.

Action 6.1: Slow and hold runoff in parks, open spaces, and roads to improve water quality and reduce flooding.

Safe & Reliable

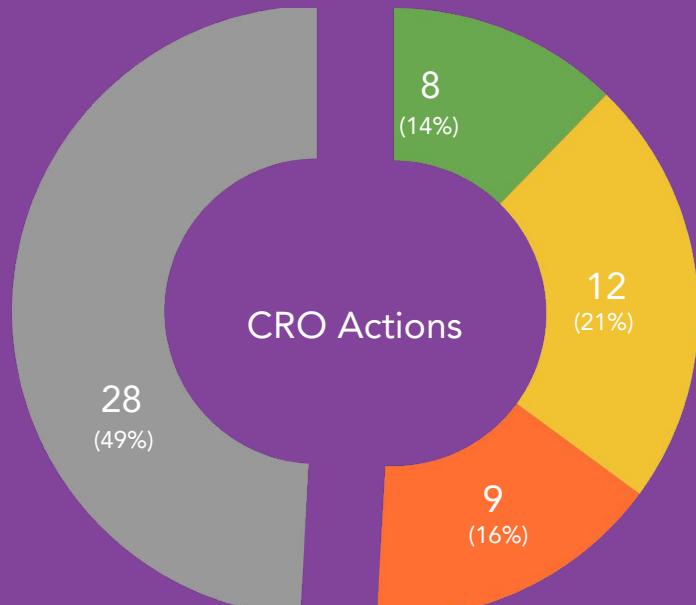
Infrastructure

Strategy 10: Safeguard buildings, homes, and infrastructure against climate hazards.

Action 10.3: Incentivize wind and flooding retrofits for homes and businesses, especially in areas with low shelter availability.

Climate Ready O‘ahu Implementation

Oct 2025



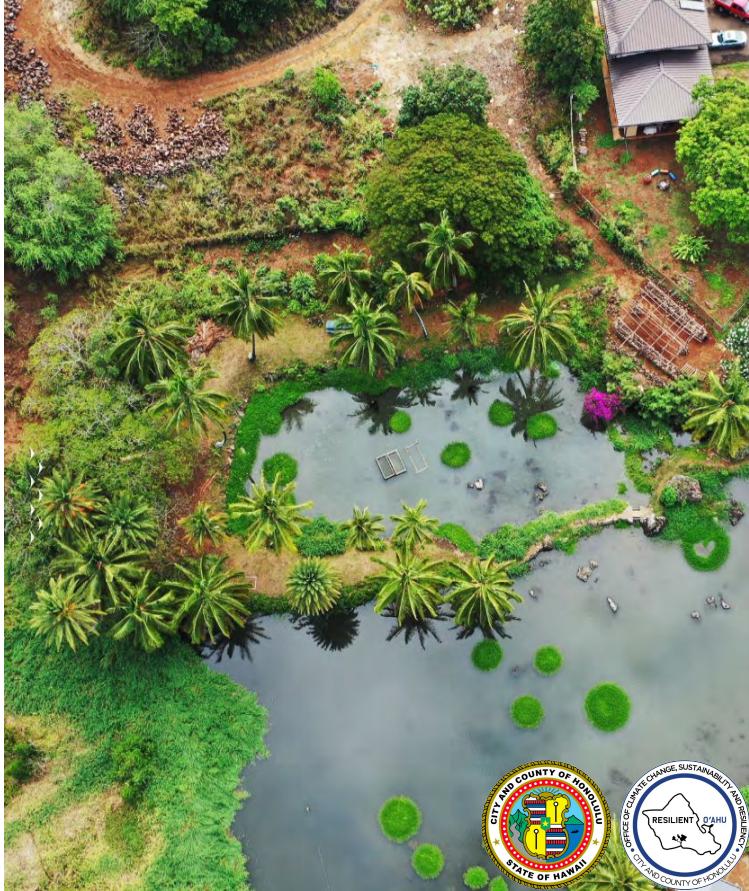
51%

of CRO actions initiated or in progress since adoption in February 2024

● Completed ● In Progress ● Initiated ● Not Initiated

Adaptation Guiding Principles

- ★ No adaptation without mitigation
- ★ Local impacts need local solutions
- ★ Mālama ‘Āina
- ★ Climate impacts are not evenly distributed or felt
- ★ Climate adaptation by any other name
- ★ Envisioning a climate ready future



Adaptation Guiding Principles

“Local impacts need local solutions”



VS.

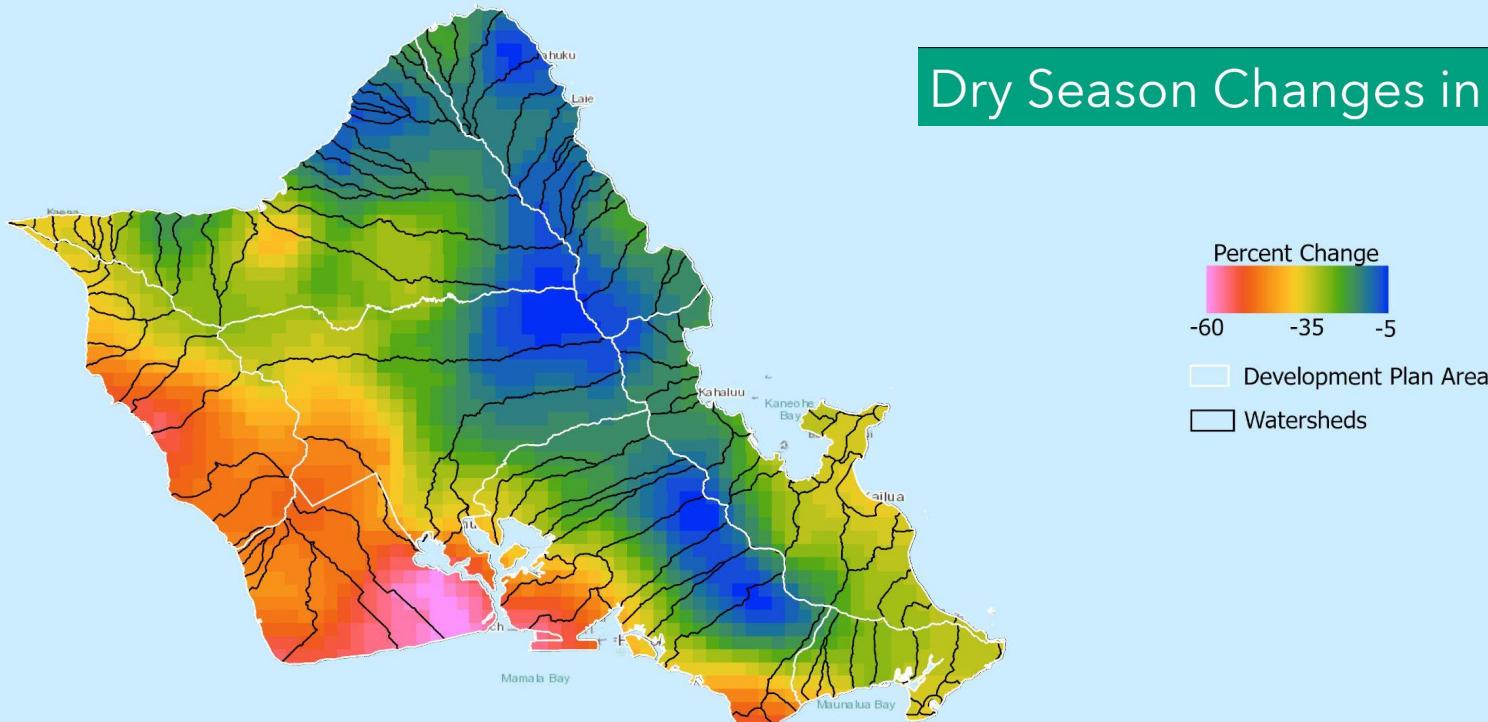


“Mālama ‘Āina”



Adaptation Guiding Principles

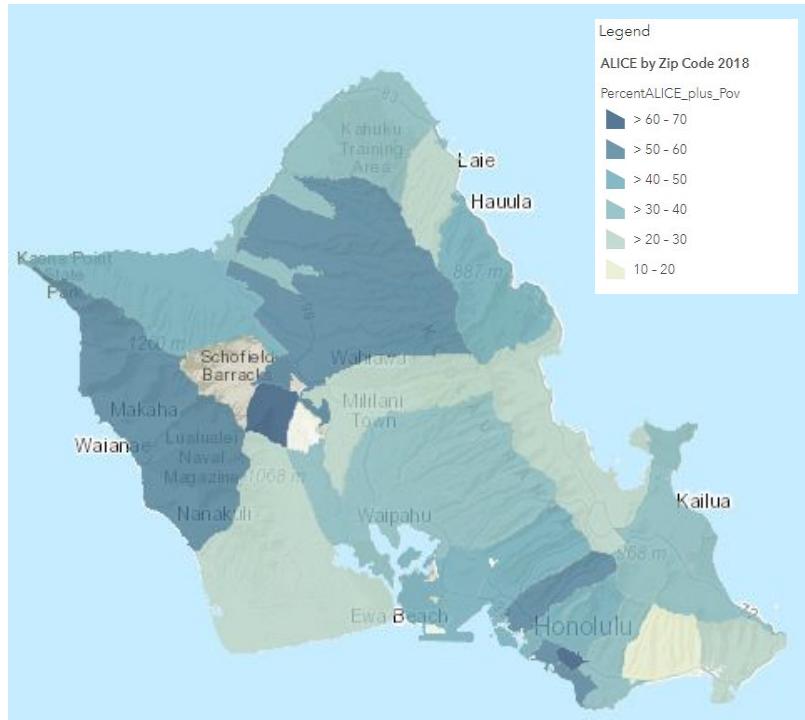
“Climate impacts are not evenly distributed...”



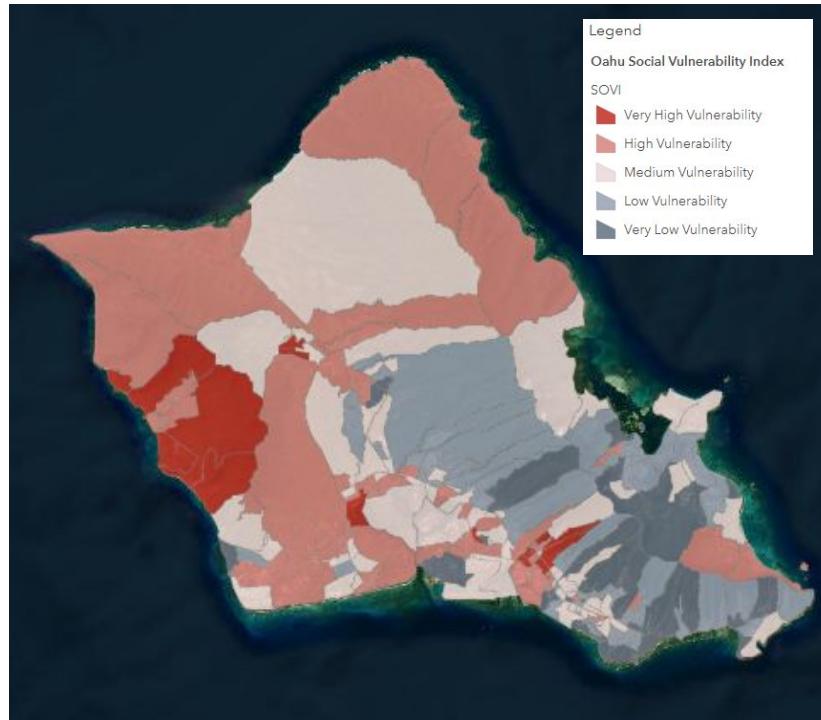
Adaptation Guiding Principles

“...or felt.”

Asset Limited, Income Constrained, Employed (ALICE)



Social Vulnerability Index (SOVI)



Adaptation Guiding Principles

“Climate adaptation by any other other name”

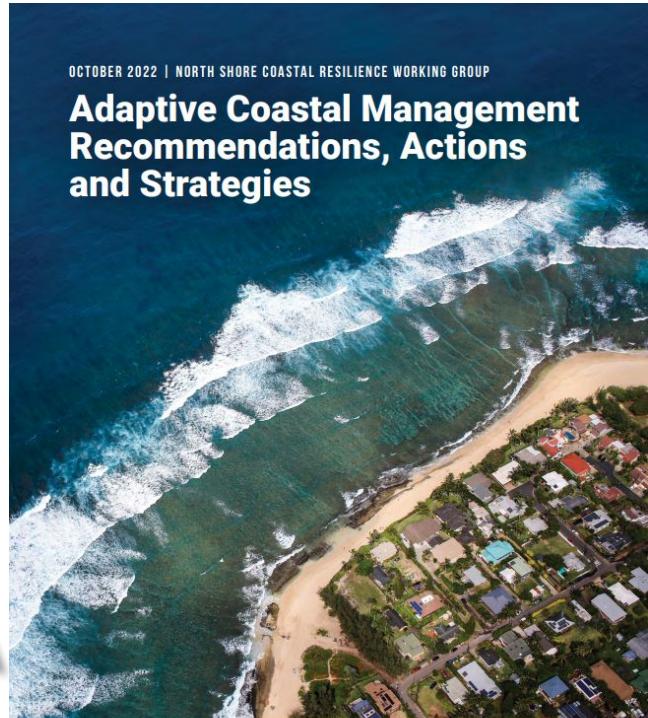


Adaptation Guiding Principles

“Envisioning a Climate Ready O‘ahu”

What were the ***critical concerns*** related to community vulnerability and coastal resource management?

“Absence of a comprehensive coastal erosion strategy and long-term vision for the North Shore... An understanding of the shared community vision for the North Shore is also necessary for guiding future planning efforts and management strategies.” -p.21



Vision → Strategies → Actions

Three-part

Vision:

Strategy

Action

Empowered & Prepared

People

Strategy 2: Amplify and increase capacity for community-led climate adaptation.

Action 2.1: Create a climate champions program to encourage local climate leadership.

Safeguarded & Stewarded

‘Āina

Strategy 6: Improve watershed health to mitigate wildfire risk and manage flooding.

Action 6.1: Slow and hold runoff in parks, open spaces, and roads to improve water quality and reduce flooding.

Safe & Reliable

Infrastructure

Strategy 10: Safeguard buildings, homes, and infrastructure against climate hazards.

Action 10.3: Incentivize wind and flooding retrofits for homes and businesses, especially in areas with low shelter availability.

Operationalizing the CRO Framework

Vision:

People + ‘Āina + Infrastructure

Strategy

Tools:

POLICY

- Strategic Frameworks
- Regulations
- Codes
- Budgeting

PLANNING

- Community Plans
- Area Adaptation Plans
- Agency Coordination
- Funding
- Data Sharing
- Tools

PROGRAMS

- Incentives
- Subsidies
- Partnerships

Action

Outputs:

- One Water Plan
- Climate Change Design Guidelines
- O‘ahu Climate Champions Program
- Climate Financial Risk Study
- CRS Class 8 Rating

- Adapt Waikīkī 2050
- Adaptation Pathways Pilot
- Keep Cool O‘ahu
- City Beach Dune Restoration Guide
- Adaptive Capacity Index

Ex. O‘ahu Climate Champions Program



Implementation Underway | People



2.1

Create a Climate Champions program to encourage local climate leadership.



Near

Implementing Project:

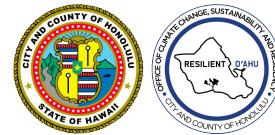
Got a grant from the EPA to launch Climate Champions Program with 6 CBOs



Mālama
Learning
Center



MĀLAMA
LOKO EA FISHPOND



Ex. City Beach Dune Restoration Guide



Implementation Underway | 'Āina



5.4 Collaborate with the community to restore beach and dune systems in City beach parks.



Implementing Project:

Creating a How-to Guide for Communities to Implement Dune Restoration Projects at City Beach Parks.



City and County of Honolulu Beach Park Dune Restoration
A practical guide to working in City beach parks
Last updated October 6, 2022



Credit: DLNR OCC

This guide was written to accompany the [Hawai'i Dune Restoration Manual](#) by providing a clear, actionable sequence for initiating and managing a dune restoration project in a City and County of Honolulu (CCH) Beach Park. It includes permitting steps, community engagement strategies, and practical site management information specific to working in a City beach park.

Note: This document links to several external resources and is therefore better viewed online.



University of Hawai'i Sea Grant College Program
'i Dune Restoration Manual
2022



Ex. Adaptation Pathways Pilot

Vision:

People + ‘Āina + Infrastructure

Strategy

Tools:

POLICY

- Strategic Frameworks
- **Regulations**
- Codes
- Budgeting

PLANNING

- Community Plans
- Area Adaptation Plans
- **Agency Coordination**
- **Funding**
- **Data Sharing**
- **Tools**

PROGRAMS

- Incentives
- Subsidies
- Partnerships

Action

Outputs:

- One Water Plan
- Climate Change Design Guidelines
- O‘ahu Climate Champions Program
- Climate Financial Risk Study
- CRS Class 8 Rating

- Adapt Waikīkī 2050
- **Adaptation Pathways Pilot**
- Keep Cool O‘ahu
- City Beach Dune Restoration Guide
- Adaptive Capacity Index

Implementation Underway | Infrastructure



10.4

Develop sea level rise adaptation pathways for high priority infrastructure assets.



Medium

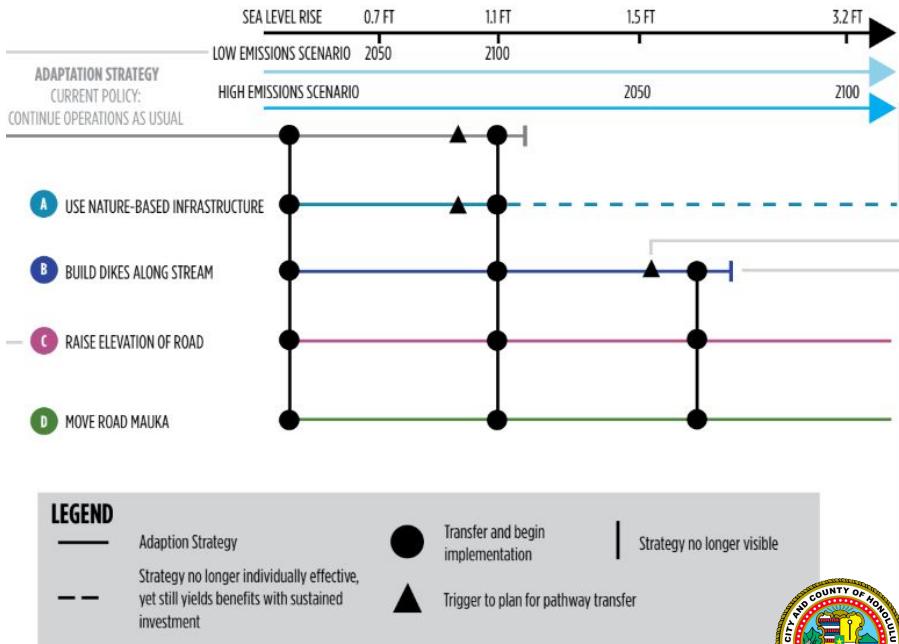
Implementing Project:

Develop pilot adaptation pathways for 3 Critical Infrastructure assets.

- The timing of impacts is uncertain but the sequence of impacts is predictable
- Plot out sequence of adaptation needs and pair with options
- Anticipate triggers for need and establish thresholds for planning
- Harmonize short and long term decision-making about capital assets
- Perform lifecycle BCA to compare pathways

How to read an Adaptation Pathway

Preserve functionality of Waipahu Depot Street under sea level rise through 2100



Staff should consider appropriate lead time needed for planning to implement a given action



One Water Approach



What is One Water?

» One Water is a **systems-thinking approach** to managing all water—whether it's rain, stormwater, drinking water, or wastewater—as a **single resource**. For Honolulu, this means **integrated planning**, **smarter infrastructure**, and **environmental stewardship**.



The One Water Honolulu Panel

One Water Honolulu is led by the **One Water Panel** – a collaborative effort, established through City Ordinance, among eight City and County of Honolulu departments to prepare water resources and infrastructure for climate change.



Office of Climate Change, Sustainability and Resiliency

Kai Helena Iolani Aniau, Maiana Aniau a me ke Ola Loa



Planning & Permitting

Ka 'Ohana Mo'okuia e mele nā Pepee'a i ka 'Aina



CITY AND COUNTY OF
HONOLULU



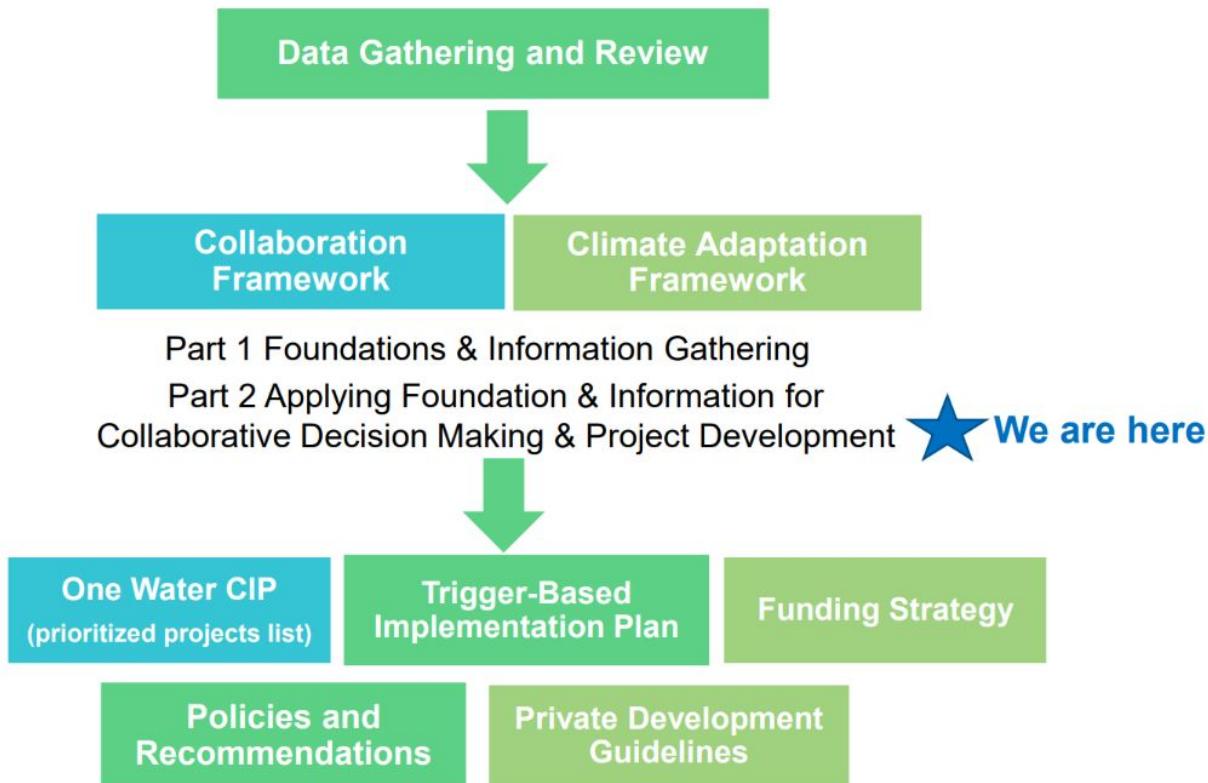
CITY AND COUNTY OF HONOLULU
DDC
DESIGN AND CONSTRUCTION



D
EPARTMENT of
T
RANSPORTATION
S
ERVICES



The One Water Plan



Ex. One Water Plan





1. What tools do I bring to the table?
2. How do I work with others who might have different tools?



Closeout Questions

Open menti.com and enter code 8204 0295 to join!



<https://www.menti.com/al9bd3rtng6u>



The code allows your audience to join the presentation and expires in 2 days.

What's one thing you learned from our presentation?

Collaboration

The wide range of what CRO covers!

Partnership

One water

The difficulty of implementation

Planning is key

Local problems, local solutions!

JESUS LOVES YOU

OneWaterHonolulu.org

Collaboration

Oahu has a plan!

take action now

Work together

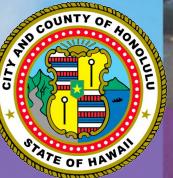
Collaborating is key

Education

The code allows your audience to join the presentation and expires in 2 days

What are you most excited about for the rest of the conference?

desalination discussion
water circular economy
talking to people
water slides pool time meeting 5 new people seeing industry friends
new friends learning about others connections new ideas connecting with people
learning more about oahu food learning hospitality room learning about one water
learning new things coffee networking fun mickey breaks
barry usagawa collaboration freebies mai tais pau hana
new connects happy hour desal ceus family reunion
meeting like minded people meeting people 71512634 mickey mouse
meeting new friends lazy river more presentations
seeing old friends seeing friends
networking and aligning indigenous knowledge making friends mickey and minnie
meeting other water people people resilience connection
talking story the lazy river



Mahalo!



resilientoahu.org



@ResilientOahu

