Climate Ready O‘ahu
Climate Adaptation Strategy
City and County of Honolulu
Office of Climate Change, Sustainability and Resiliency
City Climate Change Commission
August 20, 2020
Project Introduction & Asks

• Scope and process

• Support to ensure most current climate change information
• Other guidance, critique, and support to practice and execute on climate equity and resilience
• Future formal project touch points with Climate Change Commission
• Request up to two commissioners to participate as members of still to be-developed advisory/stakeholder group(s)

• Request for all commissioners to participate in any and all other engagement/participation platforms
• Professional/personal assistance in getting the word out
Action 28:
Chart a Climate Resilient Future by Creating and Implementing a Climate Adaptation Strategy

(1) Vulnerability assessment for City infrastructure
(2) ID climate-driven risks to critical infrastructure, assets, and populations
(3) Evaluation/ranking of risks to ID near-term threats
(4) Mitigation plans to protect core infrastructure and assets
(5) Coordination of adaptation options across multiple departments and shared infrastructure needs
(6) Recommendation for Capital Improvement Projects and funding vehicles to address shared solutions
(7) Key recommendations for land use and policy changes to reduce risk exposure to climate change impacts

+Hawai‘i Fresh Water Initiative and One Water for Climate Resiliency

Graphic Credit: Board of Water Supply
Goals, Objectives, Tasks
• Equity in process, proposals, and then implementation (as informed by outreach and guided by decision-making support materials)
• (1) Risks Assessments and (2) Adaptation Strategies
• Support the 8 Community Plans with materials to advance that planning process
• Support department Functional Plans
• Support budget development and decision making

Tasks
• Climate Risk Assessment
  • Identify risks and understand exposure
  • Analyze and evaluate risks
  • Economic analysis
• Develop case studies for Adaptation Action Areas (~5)
  • Sector-specific adaptation strategies
  • Cross-cutting adaptation strategies
• Develop Decision-Making Support Materials

Towards a Climate Resilience and Hazard Mitigation Plan
Office of Climate Change, Sustainability and Resiliency

Climate Adaptation Strategy

Team

Resilience Office
Matthew Gonser
Maddy Baroli
Sophie Lee
Ujay Siddharth

ICF International
Susan Asam (O‘ahu)
Cassandra Bhat (Miami)
Brenda Dix (NYC)
Claire Phillips (DC)
Amanda Vargo (DC)

Outreach & Inreach

Resilience Office – external engagement leads
• Project website, Virtual Meetings/Open Houses, Interactive Map, Visioning
• Advisory Hui(s), Focus groups
• Climate Change Commission
• Review Drafts
• City Council Committee(s)
• Etc.

ICF International – internal engagement leads
• 1:1/Dept. Interviews/work sessions
• City Resilience Team/Directors reviews
• Interdepartmental work sessions

Timeline
July 2020-September 2021
## Office of Climate Change, Sustainability and Resiliency

### Working Schedule

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<th>Task</th>
<th>2020</th>
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<td>J A S O N D</td>
<td>J F M A M J J A</td>
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<td><strong>T1: Project Management</strong></td>
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<td><strong>T2: Stakeholder/Working Group Engagement</strong></td>
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<td><strong>T3: Risk Assessment Adaptation Plan Scoping and Outline</strong></td>
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<td><strong>T4: Conduct Climate Risk Assessment</strong></td>
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<td><strong>T4a: Identify Climate Risk Events and Understand Exposure</strong></td>
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<td><strong>T4b: Analyze and Evaluate Risks</strong></td>
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<td><strong>T4c: Economic Analysis</strong></td>
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<td><strong>T4d: Draft and Final Climate Risk Assessment Results</strong></td>
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<td><strong>T5: Develop Case Studies for Adaptation Action Areas</strong></td>
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<td><strong>T5a: Sector-specific Adaptation Strategies</strong></td>
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<td><strong>T6: Develop Draft and Final Climate Adaptation Strategy</strong></td>
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<td><strong>T7: Develop Decision-Making Support Materials</strong></td>
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**Public participation**

Project website, focus/advisory groups, social/mixed media…

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**VE = Virtual Engagement**
Climate Risk Assessment

1. Understand context: scope, values, and audience
2. Identify risks: risk scenarios and exposure variables
3. Analyze risks: assess likelihood and consequence
4. Evaluate risks: assign risk ratings and assess adaptive capacity

Outputs
- Exposure maps
- Climate risk assessment
- Economics assessment
- 8 Community Plan area “tear sheets” on climate risks
Implementing New Equity & Climate Practices

Opportunities and Obligations to...

Normalize
Organize
Operationalize

Equity in processes and practices
Implementing New Equity & Climate Practices

Office of Climate Change, Sustainability and Resiliency

Implementing Resilience for O‘ahu

Producing a strategy is not the end of thinking about resilience – it’s the beginning.

The Key Components for Action:

- Functional Plans
- Storm Water Fee
- Integrated Infrastructure Planning
- Infrastructure Resilience Design Review
- Longer-term Capital and Financial Plans
- Hazard Mitigation Plan and CIP Alignment

Normalize
Organize
Operationalize
Related Resilience Actions, i.e., Adaptation Strategies

**Climate Security**
- 29 – Coastal regulations
- 30 – Coastal partnerships
- 31 – Stormwater utility
- 32 – Sustainable roofs
- 33 – Community forestry
- 34 – Ala Wai Canal watershed

**Bouncing Forward**
- 11 – Codes, Codes, Codes
- 12 – Hurricane retrofits
- 13 – Community Rating System
- 14 – Future Condition Design Guidelines for public works

**Community Cohesion**
- 42 – Understanding of climate change island-wide

**Mayor Directives**
- 18-2 – Climate Change and Sea Level Rise
- 20-14 – Increasing Temperatures and Urban Tree Canopy

**Climate Change Commission Guidance**
- Climate Change Brief
- Sea Level Rise Guidance
- Shoreline Setback Guidance
- One Water for Climate Resiliency White Paper
- Climate Change and Financial Risk Guidance
- Social/Racial/Climate Equity
- Social Cost of Carbon Guidance
- Construction Guidance
Sea Level Wise

H₂Oh No!

Beat the Heat

Sea Level Rise and Coastal Hazards
Rainfall
Heat
Mayor’s Directive 18-2 | Climate Adaptation

Climate Ready O‘ahu Web Explorer

Current Layers
- SMA
- TMKs
- Community Plan Areas
- Historical and Future Shoreline Change Rates
- State 3.2’ SLR-XA, component hazards, and flooded highways
- O‘ahu DFIRM
- NOAA 6’ SLR
- Heat Index Afternoon
- Tree Canopy – Land Cover (2010)

Additional Potential Layers
- Beach/dune geology
- “Future V Zone”
- Tsunami Zones
- Tree Inventory/Citizen Forester Data

bit.ly/climatereadyoahumap
resilientoahu.org/s/MayorsDirective18-02.pdf
Community/Neighborhood Change Management

honoluludpp.org/Planning/DevelopmentSustainableCommunitiesPlans
Office of Climate Change, Sustainability and Resiliency

Hope, Visioning, Correction, Restoration

Stories/Messages for the Future
Positive proactive community visioning

Opportunities and Obligations to...

Normalize
Organize
Operationalize

Equity in processes and practices

www.hookuaaina.org
Coming to the Conversation

Dr. Noelani Puniwai

“The place has changed just as you’ve grown up… It gives you that positive aspect that we’re resilient people…Take a more proactive approach to being part of the environment. I think that’s a good message for climate change. I think as we get more connected to our environment and understand what’s going on we’ll be able to tackle it positively and not just always feel scared about climate change and just really feeling the negative effects that we think it’s going to bring.”
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**Recommendations; Questions?**