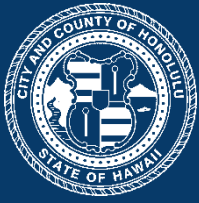


Institute of Transportation Engineers (ITE)

October 27, 2021

City and County of Honolulu
Office of Climate Change,
Sustainability and Resiliency





Mandate 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.



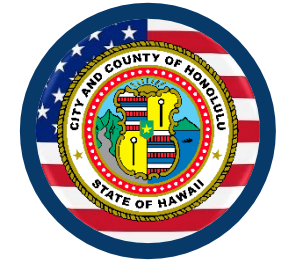
**Green
City Operations**



**Reduce Climate
Emissions & Impact**



**Promote Resilient
Communities**



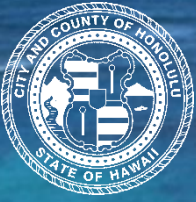
**Coordinate with
Federal & State Agencies**



**Ensure Sustainable
City Plans & Policies**

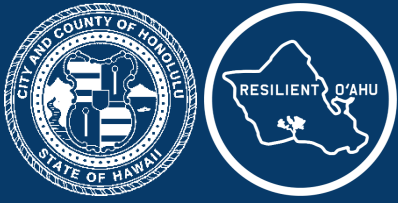


**Facilitate Climate
Change Commission**

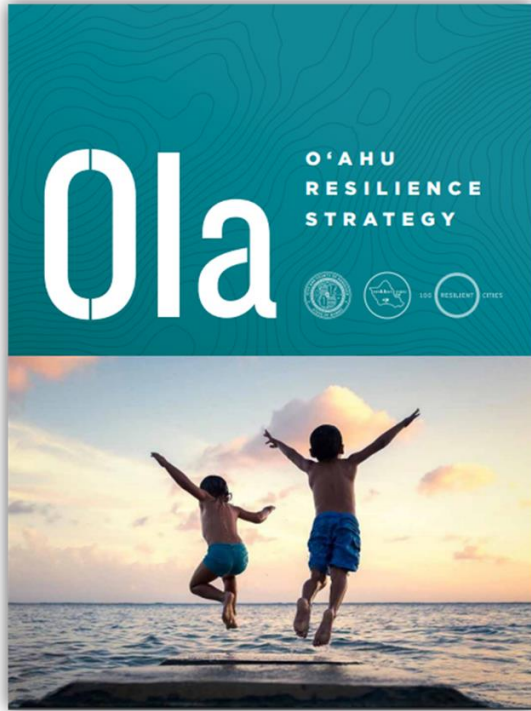


Resilience

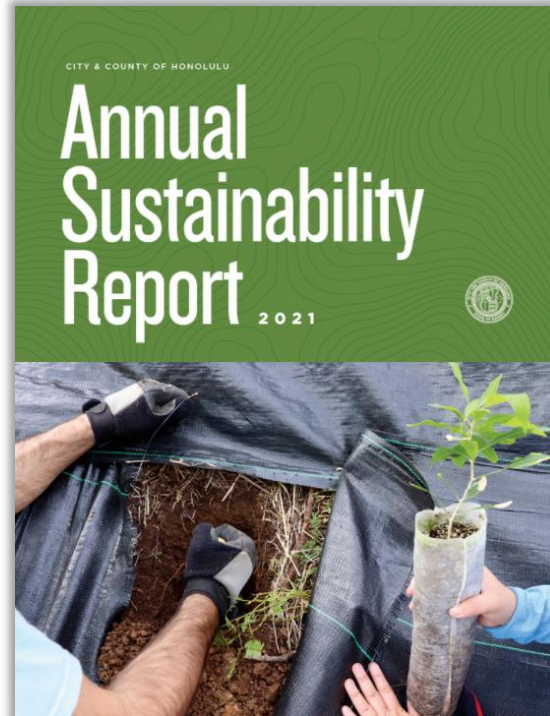
The capacity of individuals, communities, institutions, businesses, and systems to **survive, adapt, and thrive** no matter what kinds of chronic **stresses** and acute **shocks** they experience.



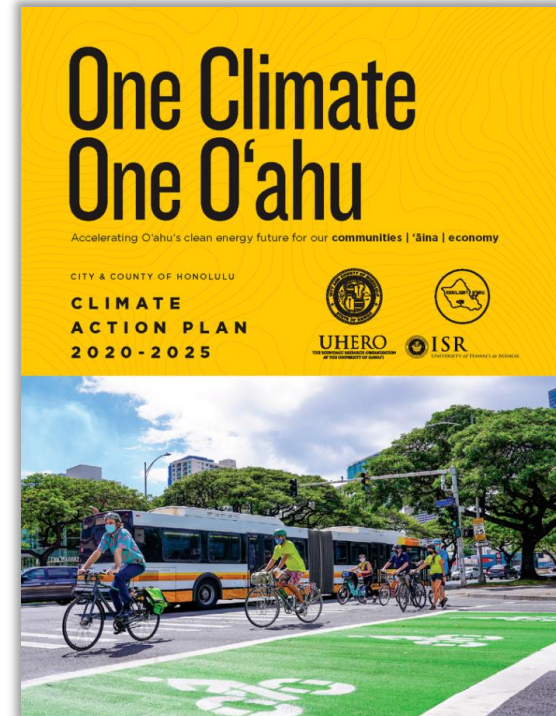
Community Resilience Pillars



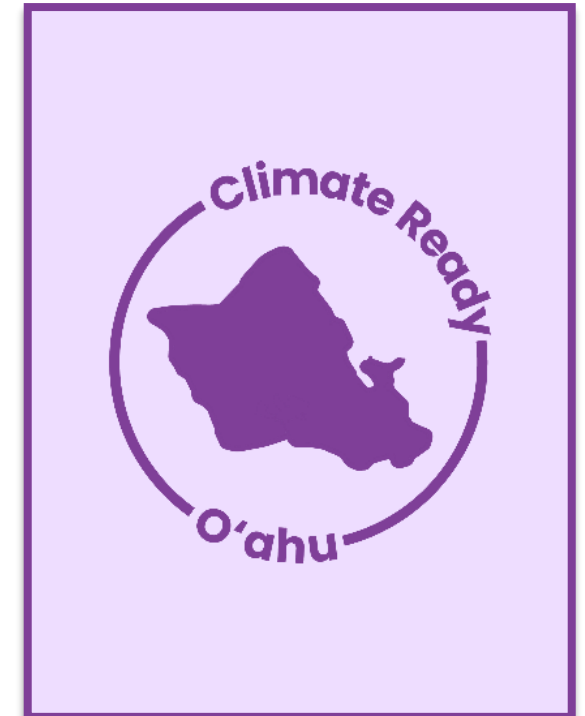
Adopted Oct 9, 2019



Released Apr 22, 2021



Adopted Jun 3, 2021



Expected Early 2022

One Climate One O'ahu

Accelerating O'ahu's clean energy future for our communities | 'āina | economy

CITY & COUNTY OF HONOLULU

**CLIMATE
ACTION PLAN
2020 - 2025**



UHERO
THE ECONOMIC RESEARCH ORGANIZATION
AT THE UNIVERSITY OF HAWAII

ISR
UNIVERSITY OF HAWAII AT MANOA



Action Highlights

2.1 & 2.3. Implement high priority projects of the O'ahu Bike Plan and O'ahu Pedestrian Plan

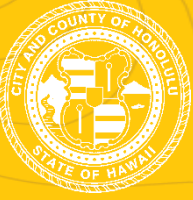
2.4. Plant trees as part of roadway rehabilitation projects to provide shade for pedestrian, bicycle and transit trips

2.7. Identify candidate projects and develop dedicated bus lanes along high-occupancy transit corridors.

3.4. Maximize efficiency of City-owned public parking in destinations with alternative options; implement dynamic rates

4.1. Develop and adopt an electric bus purchasing policy for the City's bus fleet to reach 100% renewable-powered city fleet goal by 2035.

4.2. Develop a plan and implement City passenger vehicle fleet transition to achieve 100% clean fleet goal by 2035.



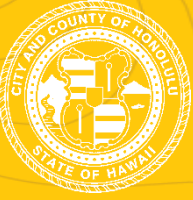
Transportation is a Key to Climate Goals

- 1 Encourage density and mixed land use in strategic areas
- 2 Enable and provide multiple modes of green transportation
- 3 Encourage mode shift through parking efficiency
- 4 Electrify the City Fleet and support high efficiency vehicles
- 5 Reduce energy demand by increasing energy efficiency
- 6 Maximize energy efficiency and renewable energy throughout City operations and assets
- 7 Expand renewable energy planning and expedite permitting
- 8 Promote waste prevention
- 9 Maximize waste resource efficiency

TRANSPORTATION

ELECTRICITY

WASTE



Transportation on the Rise



We cannot meet our climate goals without changes in ground transportation

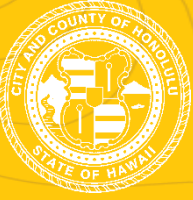
=

Improving Multimodal Options & Reducing VMT
Reducing miles driven through multimodal solutions and prioritizing design around people

+

Clean Fuels

Electrification of transportation and greater use of biofuels, etc.



Rolling out the red carpet for bus riders

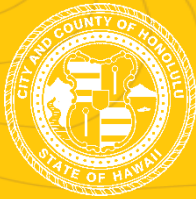


King St. Bus Lane Pilot Lays Foundation for Transit-Priority

- First transit-priority lane since the 1980s
- At peak hour, almost half travelers on bus
- Improved safety and reduced kupuna injuries
- Faster, more reliable service on King & Hotel St
- Reduced operation time and cost
- Positive feedback from drivers and riders

Bus Fleet Electrification

Payment Innovations and Holo Card Launch



Biking, walking, rolling, strolling



o'ahu **bike plan**

2019 Update



December 2019



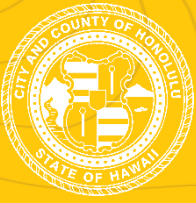
O A H U PEDESTRIAN P L A N



Department of Transportation Services
City and County of Honolulu

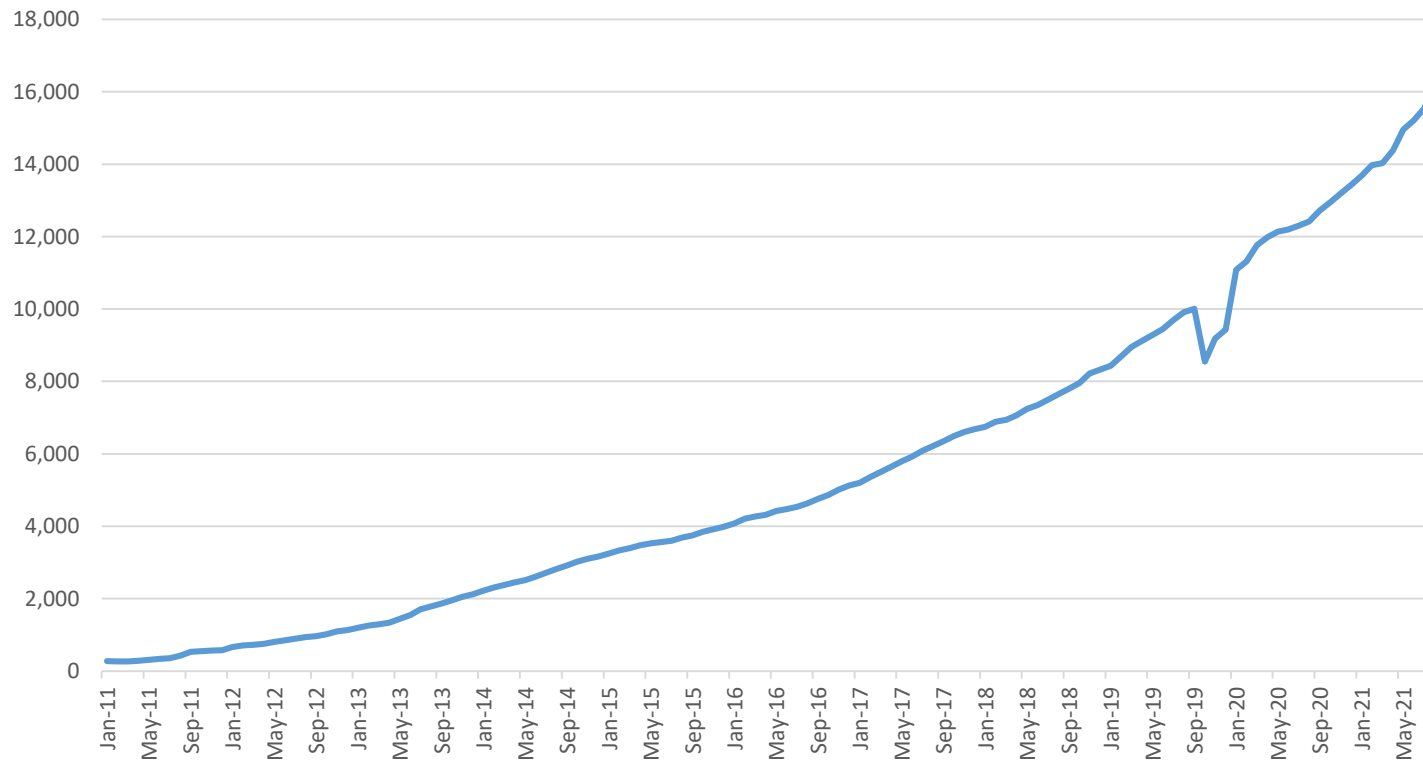
Honolulu
COMPLETESTREETS

DRAFT
June 2021



Driving electrification

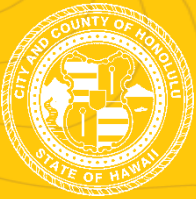
Registered EVs in Hawai'i



What is Ordinance 20-10 (formerly Bill 25)?



Signed into law in June 2020, Ordinance 20-10 mandates all new developments install EV-ready parking spaces to expand EV access and support the transition to EVs.



Even Parking is On the Move

Ord. 20-41

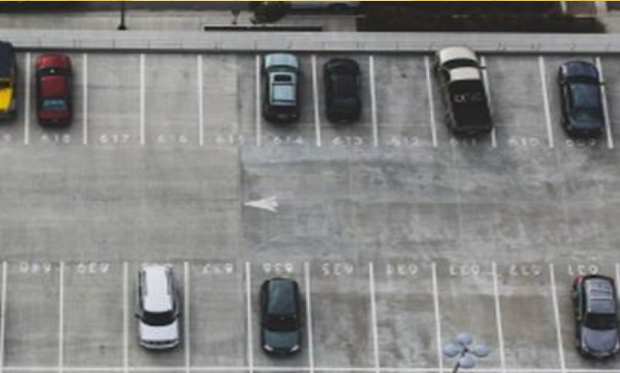
Off-Street Parking & Loading

Key Provisions

 No minimum parking requirement (Requirement in the Primary Urban Center, Kapolei, and Ewa)




January 2020
Map is subject to change.



Unbundle
50%
or more
parking spaces


→

EXEMPTION from
minimum parking
requirement




1 shared car space

=




3 vehicle spaces




4 extra short/long term
bicycle spaces

=




1 vehicle space

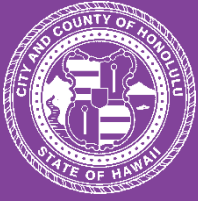


1 motorcycle/
moped space

=



1 vehicle space

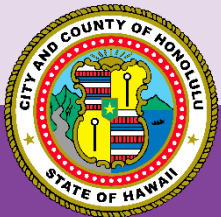


Climate Adaptation Strategy

Climate Ready O'ahu:

- Hurricanes
- Sea Level Rise
- Decreasing Precipitation
- Rain "Bombs"
- Extreme Heat



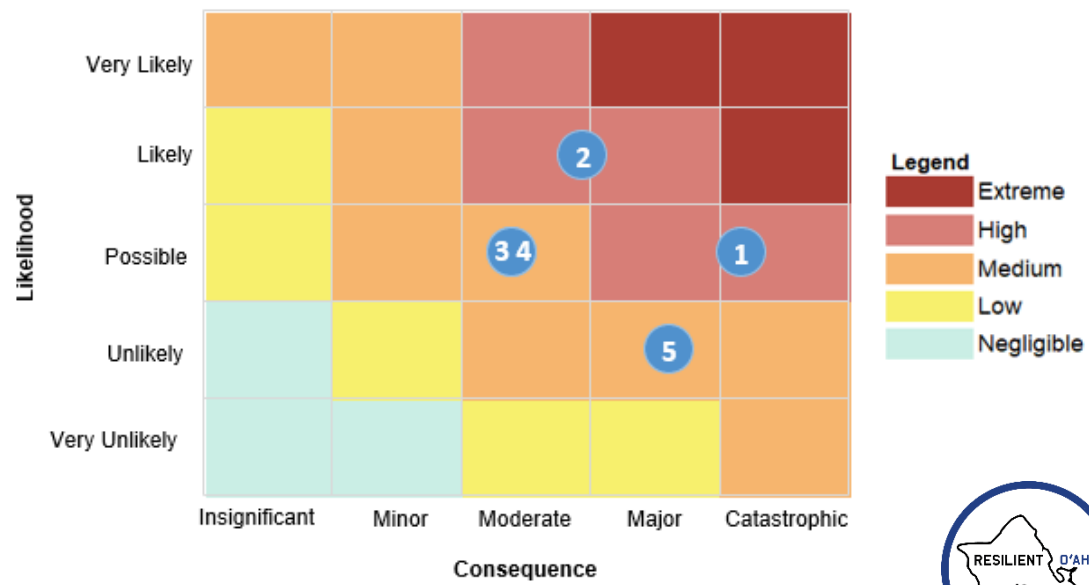
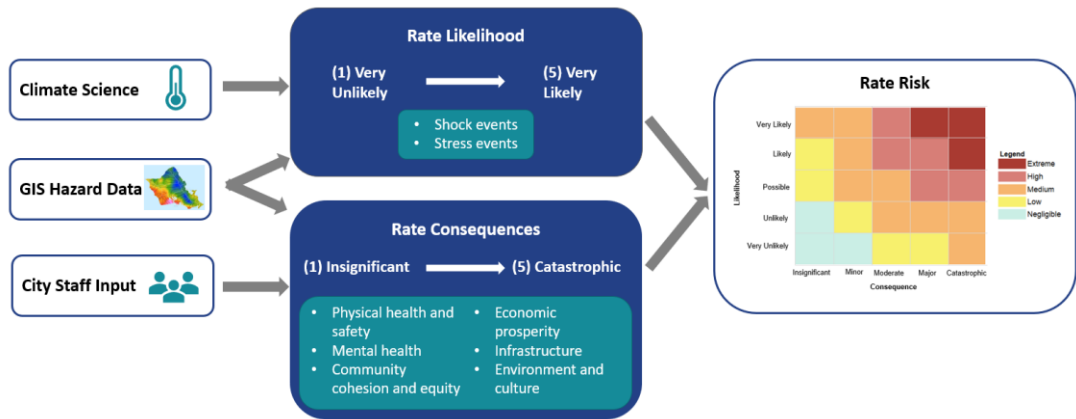


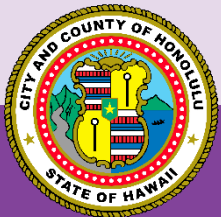
Climate Ready O‘ahu Risk Assessment

Final Climate Risk Assessment

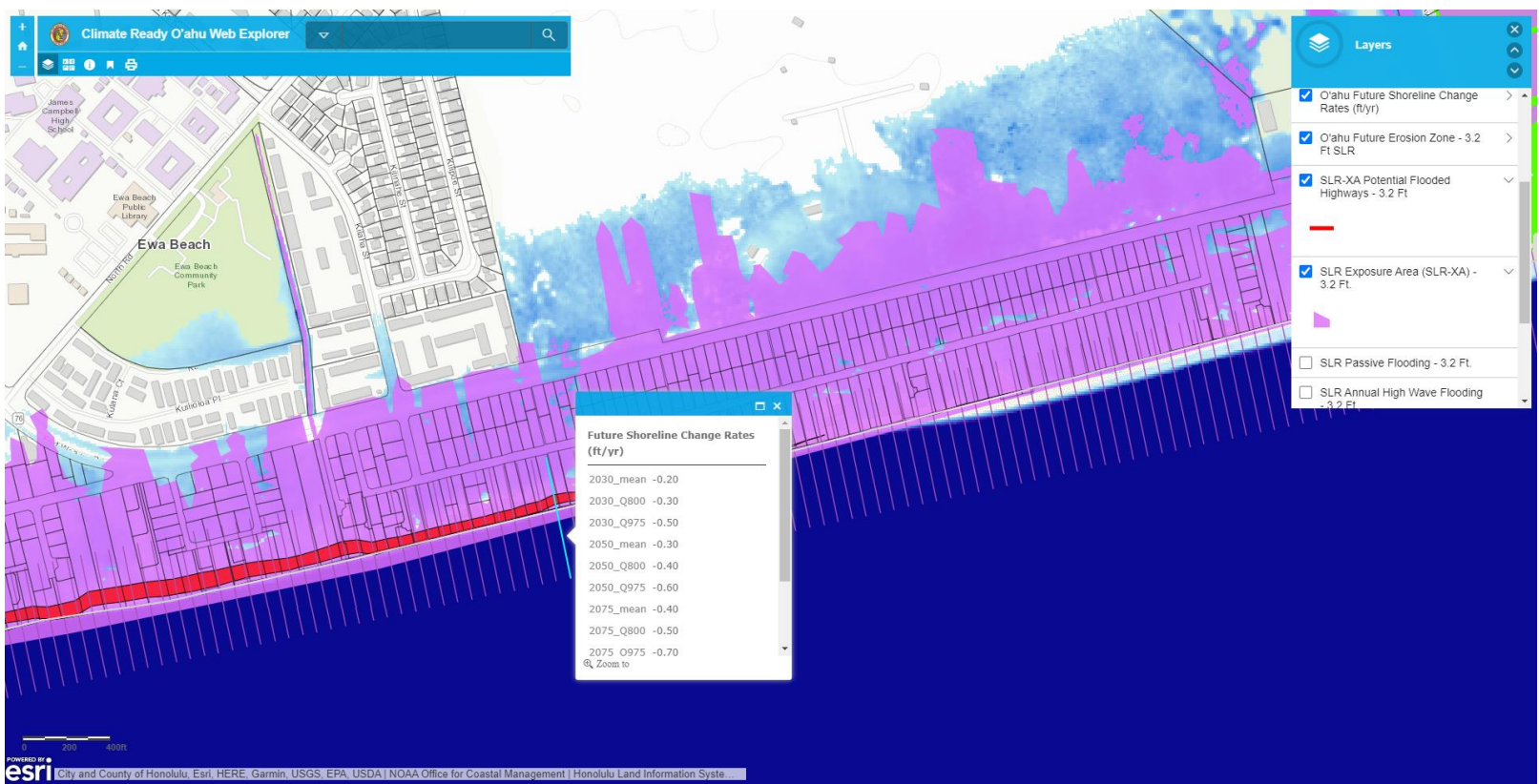
Now available at climateredyoahu.org

	Climate Hazard	Scenario	Current Rating (Score)	2050 Rating (Score)
1	Sea level rise and coastal erosion	Sea level rise and associated coastal erosion on a trajectory to 3.2 feet by 2100 with impacts due to high tides and/or coastal hazard events decades in advance	Medium (9.3)	High (14.0)
2	Increase in temperature	Increase in average annual temperature of 2.7°F to 4.5°F contributing to heat waves	Medium (6.9)	High (13.8)
3 (tie)	“Rain bomb”	Significant rain event with 4 inches of rain/hour	Medium (5.8)	Medium (8.7)
4 (tie)	Decrease in precipitation	Leeward side of island becomes up to 60% drier contributing to droughts	Medium (5.8)	Medium (8.7)
5	Hurricane	Landfall of a major hurricane with storm surge, rainfall, and high winds	Low (4.1)	Medium (8.2)





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)

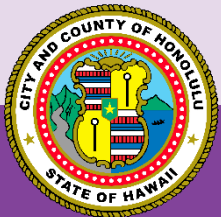
Additional Potential Layers

- Beach/dune geology
- "Future V Zone"
- Tsunami Zones
- Tree Inventory/Citizen Forester Data

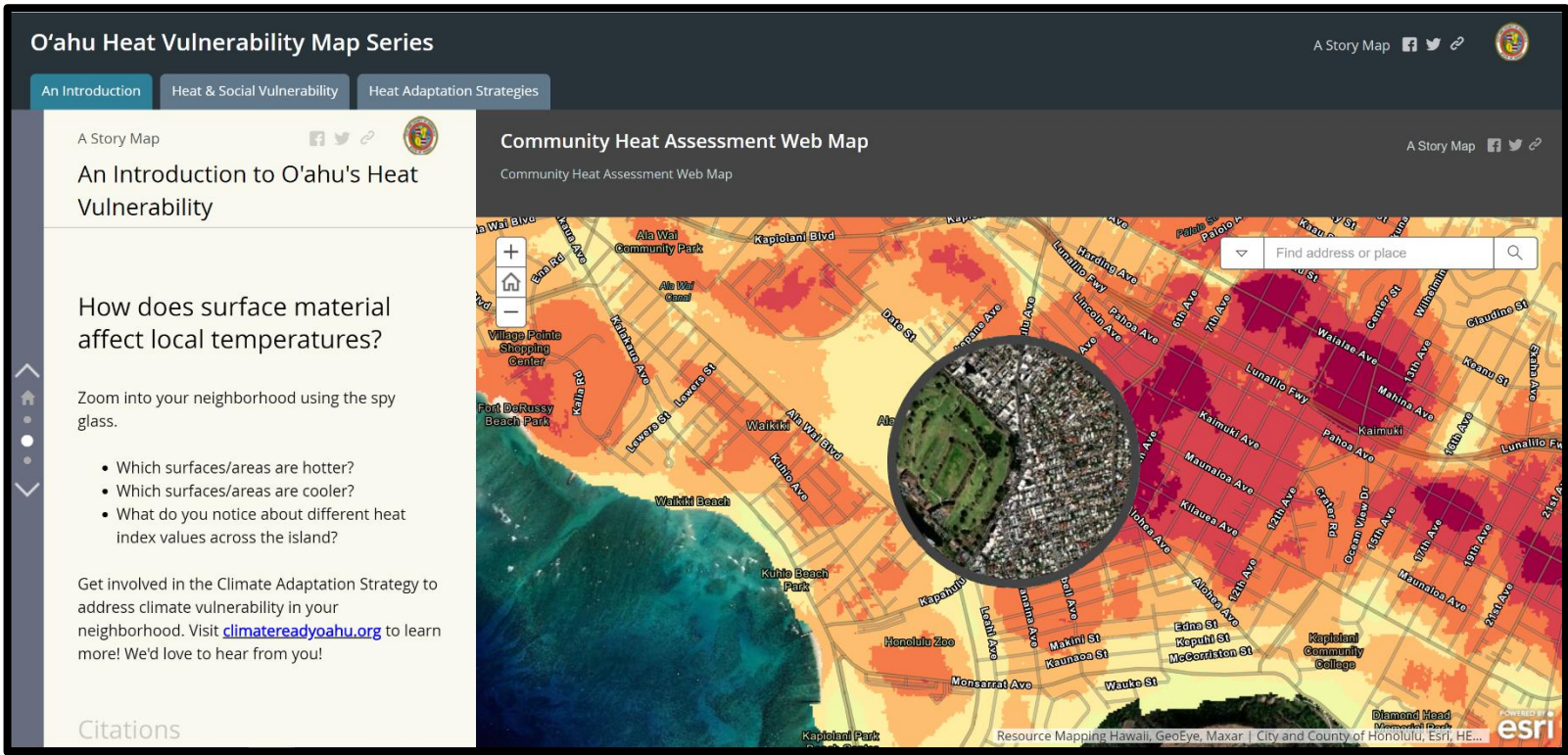
bit.ly/climatereadyoahumap

resilientoahu.org/s/MayorsDirective18-02.pdf





Vulnerability Assessment

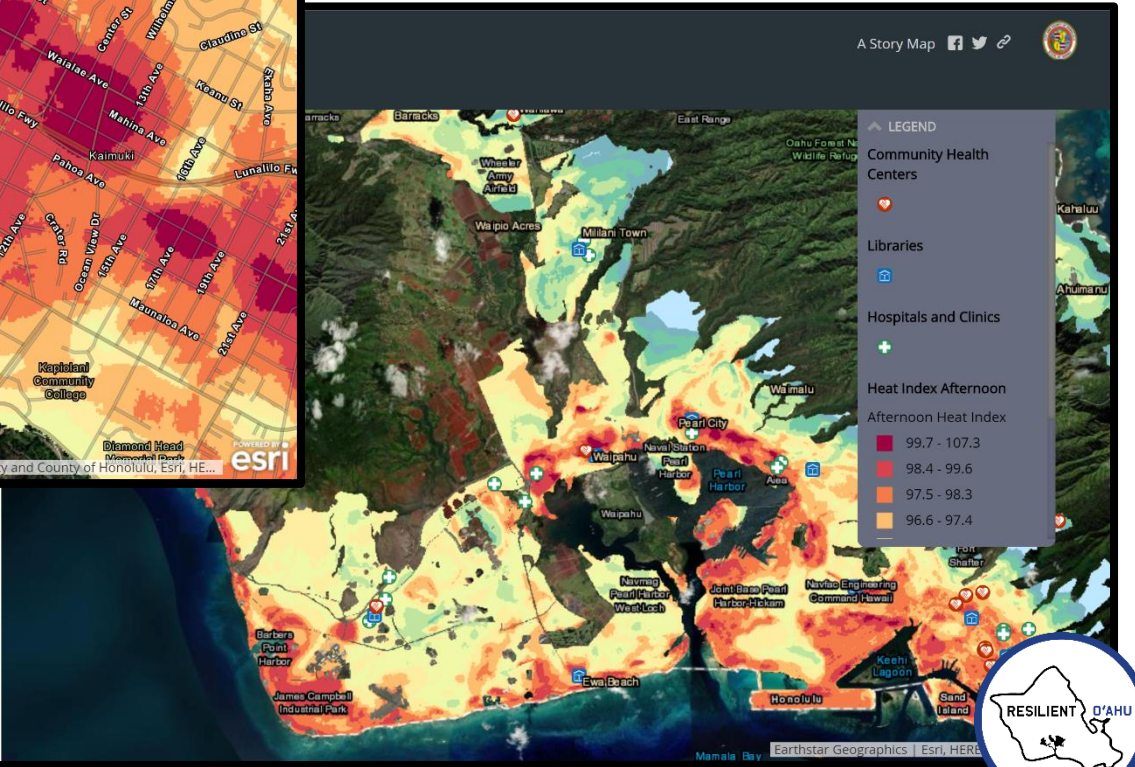


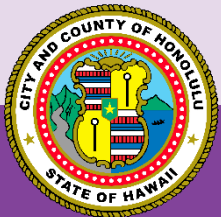
bit.ly/oahuheatvulnerability

best ways to stay safe is to know where your neighborhood resources are.

Use the map to locate [Hospitals](#) and [Community Health Centers](#) in case you have a health emergency from heat stress, heat stroke, or other heat-related illnesses. Call the City's [Emergency Medical Services](#) at 9-1-1 if you have an emergency.

Use the map to locate [Libraries](#) which often have facilities with air-conditioning to help keep you





One Water Panelists



**Office of Climate Change,
Sustainability, and Resiliency**



Honolulu Board of Water Supply



Department of Environmental Services



Department of Parks and Recreation



Department of Budget & Fiscal Services



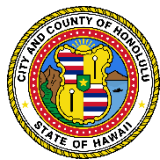
Department of Facilities Maintenance



Department of Design and Construction

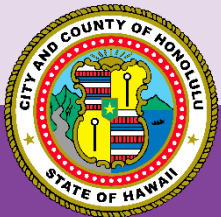


Department of Transportation Services



Department of Planning and Permitting





How can One Water help with planning?

Provide shared understanding of:

- Future impacts of SLR, climate change
- Adaptation options
- Planning and implementation approach
- Potential sources of funding

Assess multiple benefit solutions

- Stormwater capture, water quality improvements
- Expand urban tree canopy
- Mitigate urban heat island
- Complete Streets

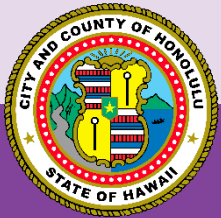
Identify opportunities for cost sharing

- Capital Improvement Planning
- Budgeting justification
- Opportunistic scheduling

Agencies share lessons learned

- Increase communication during planning, execution, monitoring
- De-silo co-benefits





One Water & Transportation

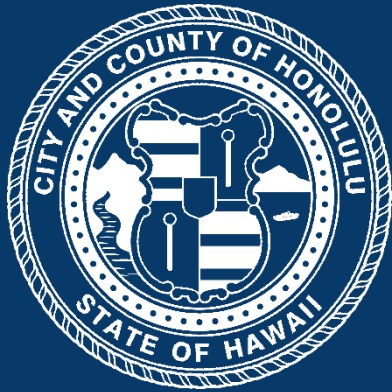


StormWaterUtilityOahu.org

Stormwater Utility

Mahalo!

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