

CLIMATE CHANGE COMMISSION  
**CITY AND COUNTY OF HONOLULU**

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MAYOR

January 17, 2023

The Honorable Rick Blangiardi, Mayor  
530 South King Street, Room 300  
Honolulu, Hawaii 96813

AND

The Honorable Tommy Waters,  
Chair and Presiding Officer  
and Members  
Honolulu City Council  
530 South King Street, Room 202  
Honolulu, Hawaii 96813

Dear Mayor Blangiardi, Council Chair Waters, and Councilmembers:

SUBJECT: Updated Sea Level Rise Guidance

Pursuant to the Revised Charter of Honolulu (RCH) Section 6-107(h), the City and County of Honolulu (City) Climate Change Commission (Commission) is charged with gathering the latest science and information on climate change impacts on Hawai'i. The Commission provides advice and recommendations to the Mayor, City Council, and executive departments as they look to draft policy and engage in planning for future climate scenarios as well as reduce Honolulu's contribution to global greenhouse gas emissions.

According to Working Group I of the Sixth Assessment Report (AR6) from the Intergovernmental Panel on Climate Change (IPCC) it is unequivocal that human influence has warmed the atmosphere, ocean, and land. As a result, widespread and rapid changes in the atmosphere, ocean, cryosphere, and biosphere have occurred. The scale of recent changes across the climate system as a whole, and the present state of many aspects of the climate system, are unprecedented over many centuries to many thousands of years.

Human-induced climate change is already affecting many weather events and climate-heavy precipitation, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since the last IPCC report in 2013.

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Additionally, the science around sea level rise and the understanding of the risks and implications for the City has strengthened since the Commission's original Sea Level Rise Guidance was adopted on June 5, 2018. This updated document integrates new federal interagency sea level rise guidance and risk tolerance levels, considering case studies from other coastal U.S. cities.

Given that government actions and community planning work to mitigate risks and impacts, and that investments in public infrastructure projects are expensive and typically designed to last a long-time, the Commission identified key recommendations and best practices from other U.S. cities and states that are transferrable to Honolulu. These recommendations have been updated on the basis of new data supporting higher sea level rise scenarios; previous scenarios are anticipated to happen sooner than previously advised. As such, the Commission makes the following recommendations for the City (please see attachment for details).

Based on research, the Commission recommends the following:

1. The IPCC AR6 states that global mean sea level will continue to rise for thousands of years, even if future CO<sub>2</sub> emissions are reduced to net zero and global warming halted. On this basis, community design professionals, government agencies, and all coastal stakeholders should recognize that sea level rise is an inevitable, dangerous, and fundamental condition to be recognized in every element of coastal planning and management.
2. The City and County of Honolulu should set as a planning and policy benchmark the interagency Intermediate (1.16 m, 3.8 ft by 2100) sea level rise scenario, as modeled for the Honolulu Tide Station, as the minimum scenario for all planning and design, and that the City continue to utilize the 3.2 ft [state sea level rise exposure area (SLR-XA)] until updated SLR-XA map data is available.
3. The City and County of Honolulu should set as a planning and policy benchmark the interagency Intermediate High (1.78 m, 5.8 ft by 2100) sea level rise scenario for all planning and design of public infrastructure projects and other projects with low tolerance for risk, and that the City continue to utilize the 6 ft passive [sea level rise] flooding map layer from NOAA until updated map data is available.
4. With regard to Commission Guidance on revisions to [Revised Ordinances of Honolulu] Chapter 23 concerning shoreline setbacks (adopted December 23, 2019), new scientific findings underscore the threat that sea level rise presents to coastal properties and assets, and provide added urgency to implement the recommendations.

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5. In implementing Intermediate and Intermediate High sea level rise scenarios, all projects should apply design elevations to mean higher high water (MHHW) as a datum. Projects with low tolerance for flood risk should add additional design elevation to account for compound events (e.g., an additional 1 ft for extreme or “king” tides, 1 ft for runoff accumulation in light of drainage failure at high tides).

The Commission recognizes the significance of these recommendations in meeting the City’s and state’s coastal management and resilience objectives and offers the resources of the Commission in helping to communicate and implement these recommendations. If you have any questions, please contact us at [ccc@honolulu.gov](mailto:ccc@honolulu.gov).

Sincerely,



Rosanna 'Anolani Alegado, Ph.D.  
Chair



Victoria Keener, Ph.D.,  
Vice Chair

Attachment

Cc: All Executive Agencies  
Honolulu Authority for Rapid Transportation  
Honolulu Board of Water Supply