

COUNCIL OF THE COUNTY OF MAUI
PLANNING COMMITTEE

September 21, 2018

Committee
Report No. 18-152

Honorable Chair and Members
of the County Council
County of Maui
Wailuku, Maui, Hawaii

Chair and Members:

Your Planning Committee, having met on August 30, 2018, makes reference to County Communication 18-273, from Councilmember Kelly T. King, transmitting a proposed resolution entitled "SUPPORTING THE RECOMMENDATIONS IN THE HAWAII SEA LEVEL RISE VULNERABILITY AND ADAPTATION REPORT".

The purpose of the proposed resolution is to support the implementation of the recommendations in the Hawai'i Sea Level Rise Vulnerability and Adaptation Report, Hawai'i Climate Change Mitigation and Adaptation Commission (2017) ("Report").

Sea level is rising at increasing rates due to global warming and melting of glaciers and ice sheets. Hawai'i has approximately 750 miles of coastline and is especially vulnerable to sea level rise threatening natural environments and developments in low-lying coastal areas.

The Report, mandated by State law, provides the first statewide assessment of Hawai'i's vulnerability to sea level rise and makes nine recommendations to reduce Hawai'i's exposure and sensitivity to sea level rise and increase the State's ability to adapt.

- 1) Support sustainable and resilient land use and community development;
- 2) Prioritize smart urban redevelopment outside the SLR-XA and limit exposure within the SLR-XA;
- 3) Incentivize improved flood risk management;
- 4) Enable legacy beaches to persist with sea level rise;
- 5) Preserve Native Hawaiian culture and communities with sea level rise;
- 6) Protect nearshore water quality from sea level rise impacts;

COUNCIL OF THE COUNTY OF MAUI
PLANNING COMMITTEE

Page 2

Committee
Report No. 18-152

- 7) Develop innovative and sustainable financing and incentives to support adaptation to sea level rise;
- 8) Support research, assessment, and monitoring to support adaptation to sea level rise; and
- 9) Promote collaboration and accountability for adapting to sea level rise.

Three chronic flooding hazards (passive flooding due to ground water level rise, annual high wave flooding, and coastal erosion) were combined to define the projected extent of chronic flooding due to sea level rise, called the sea level rise exposure area ("SLR-XA"). The SLR-XA with 3.2 feet of sea level rise was chosen in the Report to depict hazards that may occur in the mid to latter half of this century. For Lana`i and Moloka`i, only passive flooding was included in the methodology and more work is needed to consider the effects of high wave flooding and coastal erosion for those islands.

Chronic flooding in the SLR-XA with 3.2 feet of sea level rise would render over 25,800 acres of land in the State unusable. Across the State, over 6,500 structures located near shorelines would be compromised or lost in the SLR-XA with 3.2 feet of sea level rise. The projected economic loss amounts to over \$19 billion statewide, excluding costs related to infrastructure and utilities damage. With 3.2 feet of sea level rise, the potential economic loss is estimated at \$3.2 billion on Maui, \$285 million on Moloka`i, and \$10 million on Lana`i.

The public can access the Hawai`i Sea Level Rise Viewer on this website: www.pacioos.hawaii.edu/shoreline/slr-hawaii. The website supports the Report by providing an online atlas depicting projections for future hazard exposure and assessing economic and other vulnerabilities due to rising sea levels.

Your Committee discussed the possible effects of sea level rise on ocean fish hatcheries ("muliwai"). Muliwai, pools near mouths of streams, are the water transition zones between mauka and makai that are essential nursery habitats for fish. Your Committee expressed concern the

COUNCIL OF THE COUNTY OF MAUI
PLANNING COMMITTEE

Page 3

Committee
Report No. 18-152

Report does not specifically identify potential effects of sea level rise on these important ecosystems.

Your Committee referenced Waikiki as a historical example of fish population decline due to ecosystem damage. Your Committee also recognized the negative impact on the muliwai of one island, such as Lana'i, could have a corresponding negative impact on the fish population near other islands, such as Maui.

Your Committee noted the recommendations in the Report will improve the County's capacity to adapt to sea level rise by providing guidance on plans, programs, and capital improvement decisions. The recommendations in the Report are designed to support a multi-sectoral and holistic response to adaptation, build on existing efforts, and consider challenges and new opportunities.

Your Committee voted 5-0 to recommend adoption of the proposed resolution and filing of the communication. Committee Chair King, Vice-Chair Sugimura, and members Cochran, Crivello, and Hokama voted "aye." Committee members Guzman and White were excused.

Your Planning Committee RECOMMENDS the following:

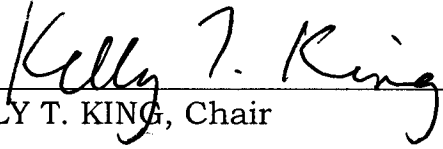
1. That Resolution 18-160, attached hereto, entitled "SUPPORTING THE RECOMMENDATIONS IN THE HAWAII SEA LEVEL RISE VULNERABILITY AND ADAPTATION REPORT," be ADOPTED; and
2. That County Communication 18-273 be FILED.

COUNCIL OF THE COUNTY OF MAUI
PLANNING COMMITTEE

Page 4

Committee
Report No. 18-152

This report is submitted in accordance with Rule 8 of the Rules of the Council.



KELLY T. KING, Chair

pc:cr:18020aa:tntf

Resolution

No. _____

SUPPORTING THE RECOMMENDATIONS IN THE HAWAII SEA LEVEL RISE VULNERABILITY AND ADAPTATION REPORT

WHEREAS, rapid warming of the atmosphere and oceans, caused by centuries of unabated greenhouse gas emissions, is causing increased rates of sea level rise, unprecedented in human history, that threaten natural environments, important cultural sites, and development on low-lying coasts; and

WHEREAS, the State of Hawai'i, the only state in the United States comprised entirely of islands, is especially vulnerable to impacts of sea level rise, with approximately 750 miles of coastline and extensive development in low-lying areas; and

WHEREAS, the Hawai'i Sea Level Rise Vulnerability and Adaptation Report ("Report"), attached hereto as Exhibit "1," was initially mandated by Act 83, Session Laws of Hawai'i 2014 (Hawai'i Climate Change Adaptation Initiative) and expanded by Act 32, Session Laws of Hawai'i 2017 (Hawai'i Climate Change Mitigation and Adaptation Initiative); and

WHEREAS, the Report, approved by the Hawai'i Climate Change Mitigation and Adaptation Commission in December 2017, provides the first statewide assessment of Hawai'i's vulnerability to sea level rise, including recommendations to reduce our exposure and sensitivity to sea level rise and increase our capacity to adapt; and

WHEREAS, the Report conducted modeling, using the best available scientific data and methods, to determine the potential future exposure of each island to passive flooding and, where data was available, annual high wave flooding and coastal erosion as a result of sea level rise; and

WHEREAS, the Report's Sea Level Rise Exposure Area is based on 3.2 feet of Sea Level Rise (3.2 SLR-XA) and depicts areas that are at risk of chronic flooding in the middle to latter half of this century; and

Resolution No. _____

WHEREAS, the Report recommends that community planning efforts consider the 3.2 SLR-XA now for planning processes and decisions; and

WHEREAS, with 3.2 feet of sea level rise on Maui, approximately 3,130 acres of land and nearly three hundred structures would be chronically flooded, and more than eleven miles of major coastal roads would become impassible, jeopardizing critical access to and from many communities; and

WHEREAS, with 3.2 feet of sea level rise on Molokai, approximately two thousand six hundred acres of land and over four hundred structures would be chronically flooded, and approximately two miles of coastal roads would become impassible, jeopardizing critical access to many communities; and

WHEREAS, with 3.2 feet of sea level rise on Lanai, approximately three hundred eighty acres of land and about one dozen structures would be chronically flooded; and

WHEREAS, the Report included the following nine recommendations, along with forty-nine actions, designed to provide guidance for State and County agencies, communities, and other stakeholders for improving our capacity to adapt to sea level rise and to support a multi-sectoral and holistic response to adaptation, building on existing efforts and considering challenges and new opportunities:

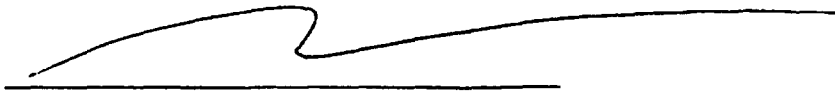
- 1) Support sustainable and resilient land use and community development;
- 2) Prioritize smart urban redevelopment outside the SLR-XA and limit exposure within the SLR-XA;
- 3) Incentivize improved flood risk management;
- 4) Enable legacy beaches to persist with sea level rise;
- 5) Preserve Native Hawaiian culture and communities with sea level rise;
- 6) Protect nearshore water quality from sea level rise impacts;
- 7) Develop innovative and sustainable financing and incentives to support adaptation to sea level rise;
- 8) Support research, assessment, and monitoring to support adaptation to sea level rise; and
- 9) Promote collaboration and accountability for adapting to sea level rise; now, therefore,

Resolution No. _____

BE IT RESOLVED by the Council of the County of Maui:

1. That the Council supports the nine recommendations in the Hawai'i Sea Level Rise Vulnerability and Adaptation Report; and
2. That the Council urges the Department of Planning to incorporate the Report's analysis, findings, and recommendations into the General Plan and Community Plans; and
3. That it urges all County departments and agencies to use the information and implement the recommendations in the Report and the 3.2 SLR-XA in their plans, programs, and capital improvement decisions, to mitigate impacts of sea level rise, particularly those related to infrastructure and critical facilities; and
4. That certified copies of this resolution be transmitted to the Mayor, Managing Director, Planning Director, University of Hawai'i Sea Grant College Program, and the Hawai'i Climate Change Mitigation and Adaptation Commission.

APPROVED AS TO FORM AND LEGALITY



**Deputy Corporation Counsel
County of Maui**

paf:tntf:18-042c