

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**Testimony of  
WILLIAM J. AILA, JR.  
Chairperson**

**Before the House Committee on  
FINANCE**

**Thursday February 20, 2014  
1:30 PM  
State Capitol, Conference Room 308**

**In consideration of  
HOUSE BILL 1714, HOUSE DRAFT 1  
RELATING TO CLIMATE CHANGE**

House Bill 1714, House Draft 1 proposes to establish a Sea Level Rise Vulnerability and Adaptation Committee in the Department of Land and Natural Resources (Department), in partnership with the Office of Planning. **The Department strongly supports this measure.**

Act 286, Session Laws of Hawaii 2012, established climate change adaptation priority guidelines. The Governor's plan, A New Day in Hawaii also recognizes the importance of planning for adapting to climate change and sea level rise (SLR). The 2013 Ocean Resources Management Plan (ORMP) also identifies climate change and SLR as major priority areas. The Department feels that these efforts have established a strong foundation and impetus for developing an over-arching climate change adaptation plan, but we also feel that it is not too soon to begin focusing our limited resources on actionable projects for adaptation to climate-related hazards within appropriate authorities and in areas that are most relevant and potentially devastating for Hawaii, such as SLR.

Hawaii sea level has risen 6 inches over the past century. According to the Intergovernmental Panel on Climate Change, Assessment Report 5, at the current rate of greenhouse gas production, global mean sea level is likely to rise a mean of 1 foot by mid-century and over 2 feet by the end of the century. The National Science Foundation, the United States Army Corps of Engineers, and the National Oceanic and Atmospheric Administration (NOAA) predict the possibility of even higher levels by the end of the century.

The impacts of accelerated SLR include an increase in an already dominant trend of coastal erosion, increased severity and frequency of flooding events by heavy rains and large waves, and increased vulnerability to tsunami and hurricane damage. The potential consequences of SLR

**WILLIAM J. AILA, JR.**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
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**ESTHER KIAAINA**  
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**WILLIAM M. TAM**  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

for Hawaii are severe compared to many other coastal states, as the majority of our population base and public infrastructure exist on low-lying coastal plains which are highly susceptible to coastal hazards. The State should put particular effort in SLR adaption, as there is consensus within the scientific community that rates of SLR will continue to accelerate in the coming decades.

Scientific research is beginning to improve our understanding and ability to predict risks and vulnerabilities associated with SLR. Historical shoreline change maps have been completed identifying beaches suffering the greatest historical erosion and also most prone to future erosion. Detailed maps of SLR flood zones have already been completed for Hawaii by University of Hawaii (UH) researchers and NOAA. The Department is currently working with UH to develop maps of predicted coastal erosion hazard areas incorporating a range of SLR scenarios to aid in identifying natural resources, coastal lands, property and infrastructure that are vulnerable to coastal erosion and flooding over the next century. However, state and county agencies still lack the localized planning tools they need to make regulatory decisions related to SLR.

Thank you for the opportunity to comment on this measure.



# OFFICE OF PLANNING STATE OF HAWAII

NEIL ABERCROMBIE  
GOVERNOR

JESSE K. SOUKI  
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Statement of  
**JESSE K. SOUKI**  
Director, Office of Planning  
before the  
**HOUSE COMMITTEE ON FINANCE**

Thursday, February 20, 2014  
1:30 PM  
State Capitol, Conference Room 308

in consideration of  
**HB 1714 HD1**  
**RELATING TO CLIMATE CHANGE.**

Chair Luke, Vice Chairs Nishimoto and Johanson, and Members of the House Committee on Finance.

The Office of Planning supports the intent of HB 1714, HD1; however, **we prefer joint majority caucus bill SB 2344, SD1**, so long as its passage does not replace or adversely impact priorities indicated in the Executive Budget.

We support SB 2344, SD1, because it includes recommended amendments developed in consultation with the Department of Land and Natural Resources, the Governor's Sustainability Coordinator, and key legislators. Among other things, SD1 focuses investment of public monies on one of Hawaii's most pressing climate related issues, sea-level rise. It also wisely invests public monies on existing climate change adaptation policies and authorities. Specifically, SD1 invests in implementation of the Hawaii State Plan component related to climate adaptation, which this legislature passed in 2012 as Act 286 (codified as HRS § 226-109).

Thank you for the opportunity to provide testimony on this measure.



**STATE OF HAWAII**  
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**COMMITTEE ON FINANCE**

**HB1714, HD1, RELATING TO CLIMATE CHANGE**

**Testimony of Herman Tuiolosega  
Office of Environmental Quality Control**

**February 20, 2014  
1:30 P.M.**

1 **Office's Position:** The office of environmental quality control (OEQC) supports HB1714,  
2 HD1, relating to climate change.

3 **Fiscal Implications:** None

4 **Purpose and Justification:** This measure creates an interagency climate council to address the  
5 effects of climate change through 2050 to protect the State's economy. The adverse impacts of  
6 sea level rise and climate changes are manifested by the extreme weather patterns seen every  
7 year across the U.S. and the Pacific Islands Region: extreme adverse cold weather patterns on the  
8 Mainland; the high casualty and devastation of Typhoon Haiyan in the Philippines last year; and  
9 extreme beach erosion at Rocky Point on the North Shore last month. These examples highlight  
10 the gravity of the problem and the importance of addressing climate change impacts.

11 Therefore, OEQC supports this measure urges your committee to pass HB1714, HD1.

12 Thank you.

Written Testimony Presented Before the  
House Committee on Finance  
Thursday, February 20, 2014; 11:00 am  
by  
J. Kenneth Grace

HB 1714 HD1 RELATING TO CLIMATE CHANGE

Chair Luke, Vice Chairs Nishimoto and Johanson, and members of the House Committee on Finance, thank you for this opportunity to express my support for HB 1714 HD1, having to do with preparation of the State of Hawaii for climate change, and mitigation of its impacts.

My name is J. Kenneth Grace, and I am the Interim Associate Dean and Associate Director for Research in the College of Tropical Agriculture and Human Resources (CTAHR), University of Hawaii at Manoa. I am providing personal testimony today on HB 1714 HD1.

In its current form, HB1714 HD1 now largely focuses on sea level rise vulnerability, which is certainly a serious concern for Hawaii and other island states. It is also appropriate for this new office to have a concrete initial focus such as this in order to facilitate the development of internal processes.

However, I would like to respectfully remind the members that climate change is projected to have many other significant impacts on island states, in addition to shoreline erosion and dangers posed by sea level rise to human habitations and shoreline resources.

Hawai'i has already experienced six years of drought, which has had a serious negative impact on the livestock sector of our diversified agricultural economy. These drought conditions are projected to increase in frequency and duration. Average temperatures are also projected to increase, which will also impact all aspects of our agricultural economy and our ability to become self-sufficient in food production. An additional impact of sea level rise will be increasing salinity in near-shore agricultural systems such as lo'i. Finally, the impact of drought and increasing temperatures on watersheds and forestry activities are other consequences of climate change that demand preparation.

In sum, I would encourage this new office to broaden its activities in the near future to address the additional deleterious impacts of climate change for Hawaii. The newly designated USDA Climate Hubs, in which CTAHR is partnering with the USDA Forest Service and the USDA Agricultural Research Service may be of assistance to state agencies in planning to mitigate effects on agriculture and terrestrial resources.

Thank you again for the opportunity to provide this testimony in support of HB 1714 HD1.



# Chamber of Commerce HAWAII

*The Voice of Business*

**Testimony to the House Committee on Finance  
Thursday, February 20, 2014 at 1:30 P.M.  
Conference Room 308, State Capitol**

**RE: HOUSE BILL 1714, HD1 RELATING TO CLIMATE CHANGE**

Chair Luke, Vice Chairs Nishimoto and Johanson, and Members of the Committee:

The Chamber **supports** the intent of H.B. 1714, HD1 which is intended to address climate change adaptation by creating a new government entity, the interagency climate council, and tasking the head of this new entity, the sustainability coordinator, with creating initial reports identifying expected climate impacts. The bill also tasks the Office of Planning with establishing and implementing strategic climate adaptation plans and policy recommendations based on reports from sustainability coordinator. The bill establishes a goal of having the interagency climate council of implementing a general state policy to address climate change through 2050.

The Chamber is the largest business organization in Hawaii, representing more than 1,000 businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the “Voice of Business” in Hawaii, the organization works on behalf of its members, which employ more than 200,000 individuals, to improve the state’s economic climate and to foster positive action on issues of common concern.

While we understand the need to address concerns regarding climate change, we believe that the approach should be structured around two narrow goals.

The first would be to establish the facts of what impacts climate change may have on our state. There would be a need to differentiate between normal coastal erosion and sea level rise caused by climate change. Once the “science” is understood, the next question would be to project the rate or rates at which both processes are expected to occur over time. This approach and methodology should provide a range of different outcomes depending on certain established scientific variables.

The second goal would be to take the “science” and develop public policies based on mitigating impacts identified from the science. These policies should establish certain milestones which would trigger policy implementation.

The sheer scope and magnitude of this effort should involve more than government officials as there are significant sections of Hawaii’s coastline that are privately owned. Furthermore, much of the State’s valuable visitor industry infrastructure and amenities are located along a narrow band along the State’s coastline.



Rather than create another layer of government, it may be prudent to engage in a discussion on the “Science” with educators and researchers from the University of Hawaii and other institutions that may have research conducted or in process on the science of climate change. The policy discussions should occur after the science has been obtained.

We would encourage the legislature to consider using existing resources supplemented with private consultants and/or research grants to address the first two phases discussed earlier as an alternative to immediately creating another government entity. Once the science and policies have been identified and developed, the legislature will be in a better position to identify the focus, staffing and funding levels for a new entity to implement or oversee the implementations of the policy recommendations, as necessary.

Thank you for the opportunity to express our views on this matter.



AMERICANS FOR DEMOCRATIC ACTION

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February 19, 2014

TO: Chair Sylvia Luke, Vice Chair Aaron Johanson, Vice Chair Scott Nishimoto  
Members of the House Committee on Finance

FROM: John Bickel, President  
Americans for Democratic Action/Hawai'i

RE: Support and Comments on HB 1714 HD1 Relating to Climate Change

Americans for Democratic Action/Hawaii supports HB 1714 as it is a good step toward dealing with impending and massive change. We should not pretend sea level rise is not going to happen. "If we do nothing and if we keep going the way we're going, the sea level will be something like two to three feet higher than it is today by the end of the century. If we make a concerted effort to cap our emissions and to actually reverse the trend, we could see something like a foot of rise by the end of the century," said Dr. Mark Merrifield, a contributing author for the Intergovernmental Panel on Climate Change, a scientific body endorsed by the United Nations to provide assessments about the risk of climate change, and its potential environmental and socio-economic consequences. We not only need reports from an Interagency Climate Adaptation Committee; we need to start acting on them. Please pass this bill before we end up like Kiribati having to negotiate for land to move residents displaced by rising sea level.



**LATE**

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to:  
File:

**HOUSE COMMITTEE ON FINANCE**

**H.B. 1714 H.D. 1, RELATING TO CLIMATE CHANGE**

**Testimony of Gary Gill  
Deputy Director, Environmental Health Administration**

**February 20, 2014  
1:30 p.m.**

- 1 **Department's Position:** The Department **STRONGLY SUPPORTS** this measure.
- 2 **Fiscal Implications:** The measure requests two \$58,874 appropriations out of the General Fund for  
3 fiscal year 2014-2015 to provide the Office of Planning and the Department of Land and Natural  
4 Resources with staff and resources to carry out the purposes of Act. It also requests \$400,000 in General  
5 Funds to enable the Department of Land and Natural Resources to research and develop a coordinated,  
6 multidisciplinary sea level rise vulnerability and adaptation report, and \$50,000 for the Office of  
7 Planning to carry out its duties under the Act.
- 8 **Purpose and Justification:** The Department strongly supports this measure, which sets forth a  
9 coordinated strategy to address the effects of climate change in Hawaii, including sea level rise, and  
10 recognizes the unprecedented challenges that climate change presents to the State's sustainability,  
11 security, and economy, and the need for planning to adapt to and address these challenges. There is a  
12 clear need for the climate adaptation plans and the well-defined path to address the effects of climate  
13 change laid out in this measure.

1           The Department of Health looks forward to participating on the Interagency Climate Adaptation  
2 Committee and in ongoing climate change adaptation efforts throughout the State, particularly in light of  
3 the Department’s responsibilities to ensure safe drinking water (rising sea levels can increase the salinity  
4 of Hawaii’s drinking water sources), the quality of nearshore waters, and to regulate greenhouse gases in  
5 the State. The Department also appreciates the importance of maintaining a comprehensive statewide  
6 planning and geographic information system that can be used to help guide decision-making.

7           Given the magnitude of the climate change issue, and its widespread effects on people and the  
8 environment in all areas of the State, this measure’s emphasis on coordination between county, state,  
9 and federal agencies, and the public is crucial to a successful climate change adaptation strategy. Its  
10 recognition of the importance of ongoing monitoring of social, economic, and physical conditions and  
11 trends, as well as determining the best way to allocate resources to meet identified needs, is an important  
12 step towards bolstering the State’s resilience and preparedness, as is its recognition of formulating  
13 mechanisms to simplify, streamline, and/or coordinate interagency development and regulatory  
14 processes.

15           Thank you for the opportunity to provide testimony on this important measure.

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII

Testimony of  
**JACQUELINE KOZAK THIEL**  
State Sustainability Coordinator

Before the House Committee on  
**FINANCE**

Thursday February 20, 2014  
1:30 pm  
State Capitol, Conference Room 308

In consideration of  
**HOUSE BILL 1714**  
**RELATING TO CLIMATE CHANGE**

House Bill 1714 proposes to address climate change impacts in Hawaii through an integrated approach to support research, long-range planning, and coordination. House Draft 1 proposes an initial focus on sea level rise to develop a framework for addressing other impacts for a statewide adaptation plan. **The State Sustainability Coordinator is in strong support of this measure.**

Thank you for the majority support of this measure and including the resources needed to work towards a more resilient Hawaii. Mahalo for the opportunity to provide testimony.