

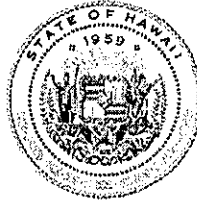
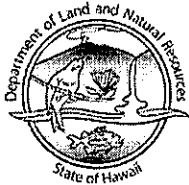
HB 1714, HD1

Measure Title: RELATING TO CLIMATE CHANGE.

Report Title: Majority Package; Climate Change Adaptation Planning; Interagency Climate Adaptation Committee; Appropriation (\$)

Description: Addresses climate change adaptation by tasking the Interagency Climate Adaptation Committee under the Department of Land and Natural Resources with creating sea level rise vulnerability and adaptation reports. Tasks the Office of Planning with establishing and implementing strategic climate adaptation plans and policy recommendations based on the report. Appropriates funds for staffing and resources. (HB1714 HD1)

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 Senate Committees on
ENERGY AND ENVIRONMENT
and
WATER AND LAND**

**Tuesday, March 18, 2014
2:45:00 PM
State Capitol, Conference Room 225**

**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 House Bill 1714, House Draft 1.

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

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

JESSE K. SOUKI
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

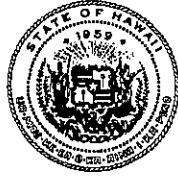
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

increased vulnerability to tsunami and hurricane damage. The potential consequences of SLR 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.

By initially focusing on SLR, we can effectively address the best understood and most urgent climate-related vulnerabilities in the state while building a solid institutional framework for research, planning and interagency coordination to address the other major areas of climate change affecting the State.

Thank you for the opportunity to comment on this measure.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



LINDA ROSEN, M.D., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
SENATE COMMITTEE ON WATER AND LAND
H.B. 1714 H.D. 1, RELATING TO CLIMATE CHANGE

Testimony of Linda Rosen, M.D., M.P.H.
Director of Health

March 18, 2014
2:45 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 Senate Committees on
ENERGY AND ENVIRONMENT
and
WATER AND LAND

Tuesday March 18, 2014
2:45 pm
State Capitol, Conference Room 225

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

House Bill 1714, House Draft 1 proposes to address climate change impacts in Hawaii through an integrated approach to support research, long-range planning, and coordination and 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.**

Climate change is one of the greatest challenges to the sustainability of our islands. Mahalo nui for the Legislature's support of this measure including the resources needed to work towards a more resilient Hawaii and for the opportunity to provide testimony.



**OFFICE OF PLANNING
STATE OF HAWAII**

NEIL ABERCROMBIE
GOVERNOR

JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
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Telephone: (808) 587-2846
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Statement of the
OFFICE OF PLANNING
before the
**SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
AND
SENATE COMMITTEE ON WATER AND LAND**
Tuesday, March 18, 2014
2:45 PM
State Capitol, Conference Room 225

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

Chairs Gabbard and Solomon, Vice Chairs Ruderman and Galuteria, and Members of the Senate Committees on Energy and Environment and Water and Land.

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, SB 2344, 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, SB 2344, 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.



**Testimony to the Senate Committee on Energy and Environment and
Committee on Water and Land
Tuesday, March 18, 2014 at 2:45 P.M.
Conference Room 225, State Capitol**

RE: HOUSE BILL 1714 HD1 RELATING TO CLIMATE CHANGE

Chairs Gabbard and Solomon, Vice Chairs Ruderman and Galuteria, and Members of the Committees:

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.



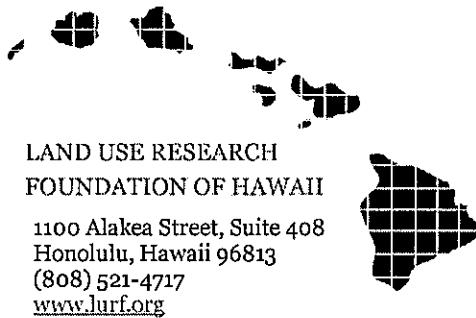
Chamber of Commerce HAWAII

The Voice of Business

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.



LAND USE RESEARCH
FOUNDATION OF HAWAII

1100 Alakea Street, Suite 408
Honolulu, Hawaii 96813
(808) 521-4717
www.lurf.org

March 11, 2014

Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair
Senate Committee on Energy and Environment

Senator Malama Solomon, Chair
Senator Brickwood Galuteria, Vice Chair
Senate Committee on Water and Land

Comments, Concerns and Support of Intent of HB 1714, HD1 Relating to Climate Change (Addresses climate change adaptation by tasking the Interagency Climate Adaptation Committee under the Department of Land and Natural Resources with creating sea level rise vulnerability and adaptation reports. Tasks the Office of Planning with establishing and implementing strategic climate adaptation plans and policy recommendations based on the report. Appropriates funds for staffing and resources).

Tuesday, March 18, 2014, at 2:45 p.m., in Conference Room 225

The Land Use Research Foundation of Hawaii (LURF) is a private, non-profit research and trade association whose members include major Hawaii landowners, developers and a utility company. LURF's mission is to advocate for reasonable, rational and equitable land use planning, legislation and regulations that encourage well-planned economic growth and development, while safeguarding Hawaii's significant natural and cultural resources, and public health and safety.

HB 1714, HD1. This measure proposes to address climate change adaptation by tasking the Interagency Climate Adaptation Committee (ICAC) under the Department of Land and Natural Resources (DLNR) with creating sea level rise vulnerability and adaptation reports; and tasks the Office of Planning with establishing and implementing strategic climate adaptation plans and policy recommendations based on the report. The measure also appropriates funds for staffing and resources.

LURF's Position. LURF commends the House Majority for including this measure in its package, and appreciates the opportunity to express its **comments, concerns and support of the intent of HB 1714, HD1.** This measure is well meaning and necessary; however, LURF's comments and concerns are summarized as follows:

- **The ICAC should include a broader diversity of major stakeholders.** The proposed composition of the ICAC includes at least twenty government officials, nineteen of which are either political appointees or elected politicians. This measure

should be revised to add key stakeholders who would provide for a broader diversity of policy and professional backgrounds, greater political independence, and the preservation of institutional knowledge.

- **Stakeholders who would be most affected by sea level rise and adaption should be designated as ICAC members.** This measure should be amended to mandate that the ICAC should include key stakeholders, including, but not limited to representatives from Hawaii's large shoreline land owners, agriculture, tourism and other major industries operating along the shorelines, the U.S. military, shoreline homeowner groups or the realtor organizations, representatives of organizations who do business, or enjoy recreational, conservation and environmental activities along the Hawaii's shorelines; and the construction industry (which will build any adaptive or mitigative structures).
- **The political appointees and elected politicians could result in a "temporary" ICAC, which could lack institutional knowledge in the future.** The terms of office of most of the nineteen appointed and elected officials is no longer than four years. The Important Agricultural Lands (IAL) laws, which were passed in 2005 and 2008, can illustrate this point. As of 2014, only two major legislative supporters of IAL are still in office and none of the key political appointee department heads remain. The institutional knowledge regarding the IAL lies only with the "major stakeholders" - the Hawaii Farm Bureau Federation, Land Use Research Foundation, Hawaii Agricultural Research Center, and a few Department of Agriculture employees.
- **The current ICAC composition may generate public perception issues.** The ICAC would be comprised of twenty members, and approximately nineteen are political appointees or elected politicians (additional members could include more county, state, or federal officials, who would probably subordinates to the political appointees on the ICAC). LURF has respect for and confidence in the proposed ICAC members, however, given the fact that nineteen of the twenty designated ICAC members are either political appointees or elected politicians, there could be public perception issues.
- **The Department of the Attorney General should be a member of, or advisor to the ICAC.** There will be a need for legal counsel, as some of the recommended adaption measures may affect private property rights or existing contractual agreements.
- **Experts hired should have the necessary qualifications, have actual expertise and experience in sea level rise vulnerability, adaption, planning, design and construction; and also be chosen by a request for proposal or an appropriate state procurement process.** LURF has been involved with similar legislative/government efforts, where the responsible State departments or offices have contracted with organizations or persons who did not have expertise or practical experience. The results were inefficient, ineffective, and unsatisfactory to the actual stakeholders who were directly affected by those government studies.

For the above reasons, LURF **supports the intent of HB 1714, HD1**, and respectfully urges your favorable consideration of the concerns expressed and the amendments suggested above.

Thank you for the opportunity to present testimony regarding this matter.



Testimony of Hawai'i Green Growth

**In Support of HB1719 HD1 – Hawai'i Climate Adaptation Initiative
Senate Committee on Energy and Environment**

18 March 2014, 2:45pm in Conference Room 225

Audrey Newman
Hawai'i Green Growth
P.O. Box 535 Ho'olehua, Hawai'i 96729

Hawai'i Green Growth is a voluntary partnership of more than 50 state, county, federal, business, and non-governmental leaders from energy, food production, natural resources, waste reduction, planning, green jobs, and other sectors who have come together to support a shared statewide commitment and tangible actions toward sustainability and a model green economy.

Hawai'i Green Growth (HGG) supports HB 1714 HD1, which will help plan for and address climate change impacts through 2050 by

- establishing an interagency climate adaptation committee within the Department of Land and Natural Resources and
- allocating funding and positions to the Office of Planning to coordinate and develop a statewide adaptation plan.

HGG members agreed on the top legislative actions for 2014 that will significantly advance sustainability in Hawai'i and already have widespread support across sectors. Support for climate change action through adding key staff to the Office of Planning and statewide adaptation planning are HGG top priorities.

As an island state, Hawai'i's economy, health, people, and way of life are especially vulnerable to the many impacts of climate change. This Act identifies sea level rise as the initial focus to begin planning for climate change adaptation. The Act also excellently describes the wide range of climate change threats facing Hawai'i, including decreased rainfall resulting in drought and fresh water loss, more frequent and severe storms, higher temperatures affecting watershed and agricultural health, and ocean acidification harming protective coral reefs. The committee's work on sea level rise will serve as a solid framework for addressing other climate change threats.

We recommend clarifying the bill to specifically charge the interagency climate adaptation committee and Office of Planning to 1) identify the critical climate change threats that require state or local planning and 2) recommend priorities, resources and a timeframe for more comprehensive climate change adaptation planning.

As a partnership representing Hawai'i's leaders in environment, food, energy and other sectors, HGG asks for your support of **HB 1714 HD1**, which is a critical step to a more resilient future for our islands and people.

Mahalo nui,

A handwritten signature in cursive script that reads "Audrey Newman". The signature is written in black ink and is positioned below the text "Mahalo nui,".

Audrey Newman

Senior Advisor, Hawai'i Green Growth (HGG)

Bringing leaders together to achieve sustainability in Hawai'i & be a model for a green economy.



Thursday, March 18, 2014

Relating To House Bill 1714 HD1
Testifying in Support

Aloha Chairs Gabbard and Solomon, Vice-Chairs Ruderman and Galuteria, and Members of the Senate Committees on Energy and the Environment and Water & Land.

The Democratic Party of Hawaii **supports HB1714 HD1, Relating to Climate Change**, which seeks to address climate change adaptation by tasking the sustainability coordinator to create initial reports identifying expected climate impacts; tasks the Office of Planning with establishing and implementing strategic climate adaptation plans and policy recommendations based on reports from sustainability coordinator; establishes an interagency climate council with the task of implementing a general state policy to address climate change; and Appropriates funds for staffing and resources.

The Democratic Party of Hawaii agrees that climate change is the paramount challenge of this century, posing both an urgent and long-term threat to the State's economy, security, and way of life. Beach erosion, drought, and rising temperatures are already having measurable impacts on our State and are promising only to worsen in coming years.

We applaud the Legislature's efforts to confront the threats that global climate change pose to our island State.

Mahalo for the opportunity to testify,
The Legislation Committee of the Democratic Party of Hawaii.

DEMOCRATIC PARTY OF HAWAII

404 Ward Ave., Suite 200 ☐ Honolulu, HI 96814 ☐ (808) 596-2980 ☐ www.hawaiidemocrats.org

Submitted by:
Shannon Wood, *President*
Windward Ahupua`a Alliance
P.O. Box 6366
Kane`ohe, HI 96744
Voicemail: 808/247-6366; Cellular: 808/224-4496
Website: <http://www.waa-hawaii.org>; E-mail: info@waa-hawaii.org

COMMITTEE ON ENERGY AND ENVIRONMENT

Senator Mike Gabbard, Chair
Senator Russell Ruderman, Vice Chair

COMMITTEE ON WATER AND LAND

Senator Malama Solomon, Chair
Senator Brickwood Galuteria, Vice Chair

2:45 pm
Tuesday, March 18, 2014
Conference Room 225

HB 1714 HD1 - RELATING TO CLIMATE CHANGE

I am Shannon Wood, the co-founder and president of the *Windward Ahupua`a Alliance*, a 501c3 Hawai`i non-profit corporation which was established in July, 2002, to create the Ko`olau Greenbelt & Heritage Trails System to restore, protect & provide public access to the *mauka* lands on the Windward side of O`ahu as well as to support locally-owned sustainable economic activities in the more developed areas. Its mandate, however, has greatly expanded over the past eleven-plus years well beyond these important regional issues.

Long before *WAA* was founded, I was studying how to mitigate the impacts of global warming & rising sea levels around the world .

I then began working on climate change/global warming public policy issues back in 1998. By 2006, I was actively involved in advocacy, legal, and scientific climate change issues not only here in Hawai`i but also nationally after becoming a member of Al Gore's **CLIMATE PROJECT** team.

In 2008, I started working with legislators to establish a **Climate Change Task Force** which included a significant number of non-governmental members with strong climate change professional/educational experience. In 2009, the bill was sent up to *Governor Lingle*, but she vetoed it. In a special session in July, 2009, the *Legislature* overrode her veto so it became **ACT 20 - 2009 Special Session**; however, she refused to release the funding so it died in **FY 2011**.

I tried to get similar legislation passed two years ago, but it was deferred because the *Legislature* had decided to take a different approach to addressing climate change issues.

In early 2011, I became actively involved with a group of NGOs based in Washington, D.C. and New York working on national & international climate change issues. Over time, I became part of the *Pacific Ocean* sub-group.

Here are my concerns with regards to this bill.:

There are too many members on the proposed *Interagency Climate Adaptation Committee* who do not have the necessary education/experience to address the impacts of climate change;

There are no scientists and policy advocates who are working on climate change issues required to be on the proposed *Interagency Climate Adaptation Committee*.

Therefore I urge this Committee to change the following section: (e) In addition to the members listed in subsection (d), the chairperson (may) SHALL designate and request members of the public; experts in the field; and county state or federal officials necessary for the formulation of the report.

The proposed legislation does state in Section (f): "In the formulation of the report, pursuant to subsection (b), the committee shall solicit public views and concerns." However, this is not enough.

In order to get the public involved in these issues, we all have to get the public directly involved through education and advocacy.

HB1714

Submitted on: 3/11/2014

Testimony for ENE/WTL on Mar 18, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Antonia Agbannawag	Individual	Support	No

HB1714

Submitted on: 3/11/2014

Testimony for ENE/WTL on Mar 18, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara Borgnino	Individual	Support	No

Comments: It is very important we prepare for the consequences of global warming. We are the least prepared coastal state.

Written Testimony Presented Before the
Senate Committee on Energy and Environment
and
Senate Committee on Water and Land
Thursday, March 13, 2014; 2:45 pm
by
J. Kenneth Grace

HB 1714 HD1 RELATING TO CLIMATE CHANGE

Chairs Gabbard and Solomon, Vice Chairs Ruderman and Galuteria, and members of the Senate Committee on Energy and Environment and Senate Committee on Water and Land, 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, sea level rise is a very appropriate initial focus, but 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, and commenting on, HB 1714 HD1.

HB1714

Submitted on: 3/12/2014

Testimony for ENE/WTL on Mar 18, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Bill Sager	Individual	Support	No

Comments: Act 286-12 "focuses on preparing for and adapting to the expected impacts of climate change. The purpose of this Act is to encourage collaboration and cooperation among county, state, and federal agencies, policy makers, businesses, and other community partners to plan for the impacts of climate change and avoid, minimize, or mitigate loss of life, land, and property of future generations." The Act amended the Hawaii State Planning Act (Hawai'i Revised Statutes Chapter 226) "Priority guidelines to prepare the State to address the impacts of climate change ... Invest in continued monitoring and research ... Consider native Hawaiian traditional knowledge and practices ... Encourage the preservation and restoration ... Explore adaptation strategies ... Promote sector resilience ... Foster cross-jurisdictional collaboration ... Encourage planning and management." HB1714 is a logical next step from talking and studying to implementation planning. HB1714 will mandate DLNR and OEP integrate scientifically based mitigation of the expected impacts of climate change into their planning process. Potential impacts include a 3 foot raise in ocean levels, prolonged draught punctuated by intense storms and destruction of our coral reefs due to ocean acidification and warming. We must begin planning now to minimize the impacts of climate change on our populations and on our infrastructure. If we don't start planning now, we will be saddling our great-grandchildren with the results of our failure.

Shanti Silver, Madison Imoto, Lei Saito, and Kalliyan Davis
Punahou School
1-808-944-3537

Each year, in Punahou school, students in the eighth grade are introduced to a project known as Challenge 20/20-Project Citizen. The purpose of this project is to inspire young minds to make a change in their community by choosing a problem that affects not only their own lives, but that will also affect the potential lives of all generations who will come after them. This year, our class has chosen global warming and climate change adaption. We would like to support House Bill 1714 as we believe, if enacted, this bill will have the potential to increase the likelihood of public safety in Hawaii from the catastrophic events of global warming.

One of the many effects that global warming will have on our lives, especially here in Hawaii, will be ocean acidification. Ocean acidification is the rise in the ocean's acidity level caused by the increase of CO₂ in the atmosphere. This will lead to the erosion of Hawaii's coral reefs and the extinction of many of Hawaii's marine life. Hawaii's largest industry right now is tourism, which will inevitably suffer due to this.

Another effect of global warming is the rapidly declining water supply. Groundwater is one of Hawaii's most crucial natural resources. It is used for not only drinking, but almost all domestic and industrial needs. According to the USGS, 99% of Hawaii's domestic water needs are taken from groundwater. With the sea level rising due to global warming, Hawaii's groundwater will be contaminated from the salinity of the sea water. The rapidly climbing climate along with the rate that the average family uses water (100-200 gallons per day) will lead to a shortage which will have significant ramifications. Therefore, creating a committee to curtail the effects of global warming and establish ways to adapt to future change is now crucial to Hawaii's survival.

Creating a committee for HB 1714 will not only help Hawaii, but it will ensure the future of Hawaii for many generations. Also, with Hawaii's lead, other states would be urged to create a committee themselves. Thank you for this opportunity to testify for this bill.

Legislature,

This is with regards to HB1714 and the issue of climate change. It is my hope that this legislature will act swiftly and diligently as the issue of climate change is one of the greatest threats to not only the State of Hawai'i, but also the world at large. If this state can enact a reasonable and cost effective plan to combat climate change we could be the catalyst for change across the country. Hawai'i is already revered for its environmental status as we have one of the best environmental programs in the country. It is our responsibility to pave the way for environmental responsibility.

In order to do this this legislature will have to take all issues into account that will affect our state. The main priority should be sea level rise because as a small island chain this will have the greatest impact. We have already seen this with the disappearance of Whale Skate Island. This will lead to wildlife habitats being lost and ecosystems being destroyed. Most of Hawai'i's beaches are generally protected from erosion because of the barriers presented by coral reefs. Warming of the seas will cause coral reefs to be subjected to adverse environmental conditions, which will harm their ecosystems, growth and sustainability. Without the protective quality of these coral reefs, which are the source of the island's white, sandy beaches, Hawai'i's coastline will very likely undergo erosion over time. When we lose our beaches it can be guaranteed that we will lose tourism income, which will create a giant burden on our state.

I hope you can take the time to create a realistic and sustainable plan to combat this issue. The time to act is now, and I know that Hawai'i can create a new path going forward.

Mahalo nui loa,

Conner Ogden

HB1714

Submitted on: 3/17/2014

Testimony for ENE/WTL on Mar 18, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Julia Parish	Individual	Support	No