

DAVID Y. IGE
GOVERNOR OF
HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
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

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

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

**Testimony of
SUZANNE D. CASE
Chairperson**

**Before the Senate Committee on
WAYS AND MEANS**

**Thursday, February 20, 2020
10:35 AM
State Capitol, Conference Room 211**

**In consideration of
SENATE BILL 3099, SENATE DRAFT 1
RELATING TO CLIMATE CHANGE**

Senate Bill 3099, Senate Draft 1 proposes to implement the recommendations of the 2017 Hawai'i Sea Level Rise Vulnerability and Adaptation Report issued by the Hawai'i Climate Change Mitigation and Adaptation Commission. **The Department of Land and Natural Resources ("Department") acknowledges the importance of this measure and offers the following comments.**

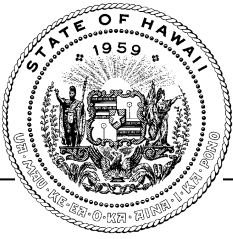
Impacts to the Department:

PART VIII of this measure (SECTIONS 18-23 on pages 39-57) relates to implementation by the Board of Land and Natural Resources and would impact, directly, programs within our Historic Preservation Division; Office of Conservation and Coastal Lands (SECTIONS 20, 22, and 23); Land Division (SECTIONS 20-23); Division of Forestry and Wildlife (Sections 21-23); and the Divisions of Aquatic Resources and Engineering (SECTIONS 22-23). If the Department is to carry out substantially more functions as outlined in this measure, substantial new funding will be required.

Acquisition of Resource Value Lands: The Department respectfully requests that this Committee delete SECTION 21 of the bill.

Chapter 173A, Hawaii Revised Statutes (HRS), governing the Legacy Land Conservation Program, already authorizes protection of coastal areas, beaches, and ocean access. Lands that "buffer" beaches and coastal frequently include built residential or commercial lands, not "legacy" natural, cultural, and scenic areas intended for protection under Chapter 173A, HRS.

Thank you for the opportunity to comment on this measure and for your support of the Department's mission to protect and perpetuate the State's beach systems in the face of climate change.



**OFFICE OF PLANNING
STATE OF HAWAII**

LATE

DAVID Y. IGE
GOVERNOR

MARY ALICE EVANS
DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

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Statement of
MARY ALICE EVANS
Director, Office of Planning
before the
SENATE COMMITTEE ON WAYS AND MEANS
Thursday, February 20, 2020
10:35 AM
State Capitol, Conference Room 211

in consideration of
SB 3099 SD1
RELATING TO CLIMATE CHANGE.

Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Senate Committee on Ways and Means.

The Office of Planning (OP) supports SB3099 SD1, with comments, which implements the recommendations of the Hawaii Sea Level Rise Vulnerability and Adaptation Report. OP offers comments on the sections of the bill that pertain specifically to the Office of Planning which start on page 16 through line 17, page 23.

The Office of Planning **thanks** the SMC for amending Section 10, which amends Chapter 225M, page 17, lines 14 – 17, to request the counties to identify underutilized land in the Urban District that is suitable for future development outside of sea level rise exposure areas.

The Office of Planning notes that that task on page 19, lines 15 -21 and page 20, lines 1 through 10, quantifying potential losses for identified urban areas and conducting a cost benefit analysis of mitigating the impacts of sea level rise versus taking no action, requires skills and staffing that are beyond OP's current capacity.

The Office of Planning further notes that the task on page 20, lines 20, 21, and page 21, lines 1 -14, creating a Willing Seller Program, is also beyond OP's skills and capacity.

Section 11, page 21 – 23, directing OP to develop a financing strategy to address any costs anticipated due to sea level rise will require additional resources.

Thank you for the opportunity to testify on this measure.

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com



LATE

February 20, 2020

KIRK CALDWELL, MAYOR

BRYAN P. ANDAYA, Chair
KAPUA SPROAT, Vice Chair
KAY C. MATSUI
RAY C. SOON
MAX J. SWORD

ROSS S. SASAMURA, Ex-Officio
JADE T. BUTAY, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

The Honorable Donovan M. Dela Cruz, Chair
The Honorable Gilbert S. C. Keith-Agaran, Vice Chair
and Members
Committee on Ways and Means
Hawaii State Capitol, Room 211
Honolulu, Hawaii 96813

Dear Chair Dela Cruz, Vice Chair Keith-Agaran and Members:

Subject: Senate Bill No. 3099, Senate Draft 1: Relating to Climate Change

The Honolulu Board of Water Supply (BWS) supports the intent of Senate Bill (SB) 3099, Senate Draft (SD) 1. This bill requires the applicable state and county agencies to implement recommendations of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report (Report). The BWS appreciates the State Legislature's leadership in climate change and sea level rise mitigation and adaptation. BWS is actively working with the City's Office of Climate Change, Sustainability and Resiliency (OCCSR) and the Honolulu Climate Change Commission on the implementation of various components of the Report.

Based on the recommendations of OCCSR and the Honolulu Climate Change Commission, the Mayor of the City and County of Honolulu executed the Honolulu Climate Change and Sea Level Rise Directive 18-02 on July 16, 2018, which directs all City agencies to incorporate the findings of the Report into their long-range plans and Capital Improvement Programs (CIP).

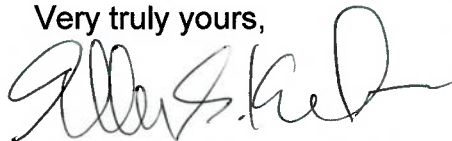
The BWS recognizes that climate change and sea level rise will impact the sustainability of Oahu's water resources and coastal water infrastructure. As such, vulnerability assessments and adaptation measures needed to be prioritized and implemented. BWS recently completed its vulnerability assessment entitled Impacts of Climate Change on Honolulu Water Supplies & Planning Strategies for Mitigation (2019) and have incorporated the findings into our long-range CIP. The expansion of the Honouliuli Water Recycling Facility (completed in December 2019) and the proposed Kalaeloa Seawater Desalination Project are among other BWS infrastructure resilience projects. Climate change and sea level rise adaptation is currently being incorporated in our regional watershed management plans for South Oahu (Ewa, Central Oahu, Primary Urban Center and East Honolulu).

The Honorable Donovan M. Dela Cruz, Chair
The Honorable Gilbert S. C. Keith-Agaran, Vice Chair
and Members
February 20, 2020
Page 2

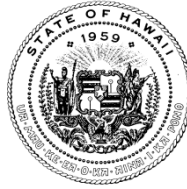
<https://www.boardofwatersupply.com/bws/media/files/water-research-foundation-4637-climate-change-impacts-on-honolulu-water-supplies-2019.pdf>

Thank you for your consideration of our testimony in support of SB 3099, SD 1.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Ernest Y. W. Lau', written in a cursive style.

Ernest Y. W. Lau
ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer



TESTIMONY BY:

JADE T. BUTAY
DIRECTOR

Deputy Directors
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

February 20, 2020
10:35 a.m.
State Capitol, Room 211

S.B. 3099, S.D. 1
RELATING TO CLIMATE CHANGE

Senate Committee on Ways and Means

The Department of Transportation (DOT) **supports the intent** of S.B 3099, S.D. 1, which directs State departments and agencies and Counties to implement the recommendations of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report issued by the Hawai'i Climate Change Mitigation and Adaptation Commission.

The DOT recognizes the importance of supporting resiliency efforts to address sea level rise and other extreme weather events and is undertaking efforts to evaluate the vulnerabilities of our transportation system to sea level rise, coastal erosion, and other impacts of climate change and extreme weather. These efforts will guide our investments as we work to address existing issues and increase the resiliency of our transportation system. Our efforts include resource agencies, government stakeholders, infrastructure owners, environmental groups, and state and county land use leaders for input and direction.

However, the DOT also recognizes that, to be effective, the development of a long-term strategic plan to address existing issues and increase the resiliency of our transportation system cannot be an HDOT-centric plan, but will require collaboration with all stakeholders and resource agencies statewide to evaluate priorities on a statewide basis.

Offered Amendments:

Page 6, From Line 4

(11) Conduct an in-depth assessment of critical infrastructure that is at risk due to climate change and sea level rise, including critical infrastructure within sea level rise exposure areas. The assessment shall examine the vulnerability and evaluation of adaptation strategies for the infrastructure. The assessment shall consider the current condition of the infrastructure and the remaining years of useful life. The State shall use the assessment to prioritize investment to protect, retrofit, or relocate the infrastructure.

The first assessment shall be completed no later than [~~July 1, 2019~~] December 31, 2023, and subsequent assessments shall be conducted at least once every five years.

Thank you for the opportunity to provide testimony.



Co-Chairs:
Chair, DLNR
Director, Office of Planning

Commissioners:
Chair, Senate AEN
Chair, Senate WTL
Chair, House EEP
Chair, House WTH
Chairperson, HTA
Chairperson, DOA
CEO, OHA
Chairperson, DHHH
Director, DBEDT
Director, DOT
Director, DOH
Chairperson, DOE
Director, C+C DPP
Director, Maui DP
Director, Hawai'i DP
Director, Kaua'i DP
The Adjutant General
Manager, CZM

**STATE OF HAWAII
HAWAII CLIMATE CHANGE MITIGATION & ADAPTATION
COMMISSION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809**

**Testimony of
Anukriti Hittle
Coordinator, Hawaii Climate Change Mitigation and Adaptation Commission**

**Before the Senate Committee on
WAYS AND MEANS**

**Thursday, February 20, 2020
10:35 AM
State Capitol, Conference Room 211**

**In support of
SENATE BILL 3099, SENATE DRAFT 1
RELATING TO CLIMATE CHANGE**

Senate Bill 3099, Senate Draft 1 proposes to implement the recommendations of the Hawaii Sea Level Rise Vulnerability and Adaptation Report issued by the Hawaii Climate Change Mitigation and Adaptation Commission. **On behalf of the Hawaii Climate Change Mitigation and Adaptation Commission (Commission) I support this measure.**

The Hawaii Climate Change Mitigation and Adaptation Commission “recognizes the urgency of climate threats and the need to act quickly. It promotes ambitious, climate-neutral, culturally responsible strategies for climate change adaptation and mitigation in a manner that is clean, equitable and resilient.” The Commission, established by Act 32 SLH 2017 to uphold the United States’ pledges under the Paris Agreement, is the coordinating body for policies on climate change mitigation and adaptation for the state. It is a high-level multi-jurisdictional body that guides the priorities of the state’s climate response. Co-chaired by DLNR and Office of Planning, it consists of 20 members—chairs of four legislative committees, and executive department heads at the county and state levels.

The Commission has established dealing with sea level rise and its impacts as one of its two focuses, and issued a statement on priority issues. This measure acts on the Commission’s priority recommendations, and is a crucial component of Hawaii’s adaptation to the impacts of sea level rise.

One of the main purposes of establishing the Commission was to help align legislative and executive actions to facilitate implementation of sea level rise adaptation strategies at the state and county levels. On behalf of the Commission, I greatly appreciate the Legislature’s eagerness to

implement the Sea Level Rise Report's recommendations through new legislation such as in Senate Bill 3099.

Thank you for the opportunity to testify on this measure.



LATE

**SB3099 SD1
RELATING TO CLIMATE CHANGE**

Ke Kōmike 'Aha Kenekoa o ke Ki'ina Hana a me nā Kumuwaiwai

Pepeluali 20, 2020

10:35 a.m.

Lumi 211

The Beneficiary Advocacy and Empowerment Committee of the Office of Hawaiian Affairs (OHA) will recommend that the Board of Trustees **SUPPORT WITH AMENDMENTS** SB3099 SD1, which will implement the recommendations of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report (Report) that was submitted by the Hawai'i Climate Change Mitigation and Adaptation Commission (Commission) in 2017. As a member of the Commission, OHA worked with other stakeholders and subject matter experts and we recognize that climate change poses a threat to the interests of our beneficiaries and the entire State of Hawai'i. **OHA accordingly applauds the introduction of this measure, and supports its intent to implement the recommendations of the Report and strengthen Hawai'i's ability to address the impacts of sea level rise and climate change.**

Should the Committee choose to move SB3099 SD1 forward, OHA does respectfully urge the Committee to amend this measure to (1) remove any amendments to Hawai'i Revised Statutes (HRS) Chapter 6E; and (2) broaden the scope and membership of the working group to be established by OHA.

OHA believes the proposed amendment to HRS Chapter 6E on page 40, lines 13-15 that directs the State Historic Preservation Division (SHPD) to include "...traditional and customary native Hawaiian cultural resources and practices impacted by sea level rise" in statewide survey and inventory development is not necessary at this time. "Traditional and customary native Hawaiian cultural resources and practices" is a broad term that may include not only archaeological, cultural, and burial sites, but also other resources and associated practices that are not within the jurisdiction of HRS Chapter 6E. OHA supports the intent of the proposed amendment and believes it will be achieved by broadening the scope and membership of the working group established by OHA.

OHA believes that the second proposed amendment to HRS Chapter 6E on page 42, lines 1-11 as it relates to "...burial sites, burial goods, human skeletal remains" is also unnecessary at this time. The existing language of HRS § 6E-43.5(f)(3) authorizes the island burial councils established by this section to "...make recommendations regarding appropriate management, treatment, and protection of native Hawaiian burial sites, and on any other matters relating to native Hawaiian burial sites." Thus, as it relates to the impacts of sea level rise and climate change on native Hawaiian burial sites, burial goods, and iwi kūpuna (human skeletal remains), island burial councils are certainly the appropriate entity to make recommendations and are already authorized to do so. OHA also supports the intent of this second proposed amendment and believes it can be fully achieved through the existing statutory authority of island burial councils and by broadening the scope and membership of the working group to be established by OHA.

Accordingly, OHA recommends removing any proposed amendments to HRS, Chapter 6E, and instead adopting the amended language proposed below.

As described above, OHA believes that broadening the scope and membership of the proposed “coastal lands and water adaptation working group” would better effectuate the intent of this measure as it relates to protecting historic and cultural resources and sites as well as associated cultural practices from sea level rise and the impacts of climate change. OHA also respectfully submits that the chief executive officer of OHA may ideal to select the Native Hawaiian organizational representatives on the working group, given OHA’s extensive work with Native Hawaiian organizations, the broader scope and needs of the working group per OHA’s recommendations, and OHA’s role in establishing and administering the working group. OHA therefore recommends amending the language beginning on page 57, line 13 through Page 59, line 8, to read as follows:

SECTION 25. (a) The Office of Hawaiian Affairs shall establish and administer a working group, which shall consist of agency representatives and individuals familiar with traditional and culturally appropriate perspectives and approaches to sea level rise and climate change and shall consult with the Native Hawaiian community, island burial councils established by section 6E-43.5, and other stakeholders to develop adaptation plans for the following as may be impacted by sea level rise and climate change:

- (1) Historic properties of traditional and cultural significance to Native Hawaiians and their associated practices;
 - (2) Burial sites, burial goods, and iwi kūpuna (ancestral remains);
 - (3) Access to coastal lands and associated traditional and customary practices; and
 - (4) Any other identified cultural resources and associated practices.
- (b) The working group shall include:
- (1) The chief executive officer of the office of Hawaiian affairs or the chief executive officer's designee;
 - (2) The chair of the department of Hawaiian home lands or the chair's designee;
 - (3) The chair of the department of land and natural resources or the chair’s designee;
 - (4) The director of the office of planning or the director’s designee;
 - (5) Three representatives of Native Hawaiian organizations actively working on and with demonstrated knowledge of the impacts of sea level rise and climate change; provided that the chief executive officer of the office of Hawaiian

affairs shall appoint the representatives pursuant to this paragraph; and

- (6) Three persons with a background in sea level rise and climate change science; provided that the speaker of the house of representatives, the president of the senate, and the governor shall each appoint one person pursuant to this paragraph.

- (c) In developing the adaptation plan and recommendations pursuant to paragraph (a) (2), the working group shall consult with island burial councils established by section 6E-43.5 and any other appropriate Native Hawaiian organizations.

- (d) The working group members shall select the working group chairperson from among its members.

- (e) The working group shall utilize data from the Hawai'i sea level rise vulnerability and adaptation report and any other appropriate documents, reports, and consultation to conduct its duties.

- (f) The members of the working group shall serve without compensation but shall be reimbursed for expenses, including travel expenses, necessary for the performance of their duties.

- (g) The working group shall submit a report of its findings and recommendations, including any proposed legislation, to the legislature no later than twenty days prior to the convening of the regular session of 2023.

Therefore, OHA urges the Committee to **PASS WITH AMENDMENTS** the bill as described. Mahalo nui loa for the opportunity to testify on this measure.

February 20, 2020

LATE

The Honorable Donovan M. Dela Cruz, Chair
Senate Committee on Ways and Means
State Capitol, Room 211
Honolulu, HI 96813

RE: S.B. 3099, SD1, Relating to Climate Change

HEARING: Thursday, February 20, 2020, at 10:35 a.m.

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran and Members of the Committee,

I am Ken Hiraki, Director of Government Affairs, testifying on behalf of the Hawai'i Association of REALTORS® ("HAR"), the voice of real estate in Hawai'i, and its over 10,000 members. HAR **provides comments on Part XI** of Senate Bill 3099, SD1, which implements the recommendations of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report issued by the Hawai'i Climate Change Mitigation and Adaptation Commission. This measure provides for disclosure for properties within a sea level rise exposure area as officially designated by the Hawaii Climate Change Mitigation and Adaptation Commission.

Under Hawai'i Revised Statutes §508-D, the law imposes a broad obligation upon sellers of residential property to disclose all material facts that are within the knowledge or control of the seller.

HAR would note that the county maps, including identifying the properties by tax map key, should be created first prior to changing the disclosure law. Without maps issued by a government entity, it would place an unreasonable burden upon sellers because the typical seller would not have the capacity or ability to know whether their property is within a "sea level rise exposure area."

Additionally, the Hawaii Climate Change Mitigation and Adaptation Commission is not a government entity. Once the maps are created, the disclosure should be to the maps as provided by said government entity and not to the Commission or its successors.

If the Committee is inclined to pass the measure, HAR respectfully requests an effective date of November 1st for Part XI. This will allow our Standard Forms Committee to make changes to the Seller's Real Property Disclosure Statement and educate our members on the changes.

Mahalo for the opportunity to testify.



1003 Bishop St. Suite 1975
Honolulu, Hawaii 96813
(808) 942-7474

To: Senator Donovan M. Dela Cruz, Chair; Senator Gilbert S.C. Keith-Agaran, Vice Chair
From: Lorraine Minatoishi Ph.D., AIA
Hearing: Senate Committee on Ways and Means 10:35am in Room 211.
Subject: **Support** SB3099, SD1, Relating to Climate Change

Dear Chair Dela Cruz,

I strongly **support** Bill SB3099, SD1.

I am an architect and a member on the AIA committee for Climate Change. This past year we have been in discussions on how best to work with the State and counties to regulate building with climate change. This is why I was so happy to read this Bill 3099.

As an architect who deals with climate change on a daily basis, I am very much aware of the need for regulations to encourage clients and developers to build for resiliency. In the case of developers who may not have a true incentive to build for longevity, requiring buildings to be built and planned in such a way that would require built-in resiliencies to counter-act climate change is critical. Further, homeowners and business owners who may be not aware of the impact on rise sea levels and greater flooding also would benefit from regulations that require them to protect their homes and businesses from future climate change impacts.

This bill allows architect and planners the government regulations we need to encourage clients to design with long-term climate issues in mind. Thank you so much for creating laws that address this much needed requirement!

Sincerely,

A handwritten signature in black ink, appearing to read 'Lorraine', written in a cursive style.

Lorraine Minatoishi, Ph.D., AIA

SB-3099-SD-1

Submitted on: 2/19/2020 10:28:02 AM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Henri Etta Schmitz	Individual	Support	No

Comments:

SB-3099-SD-1

Submitted on: 2/19/2020 9:39:36 AM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Chais Droge	Individual	Support	No

Comments:

WAM

Donovan M. Dela Cruz: Chair

Gilbert S.C. Keith-Agaran: Vice Chair

Wednesday, February 19th 2020

From: Chais Droge

Subject: Support for S.B. 3099

My name is Chais Droge and my take on this bill is that I support it. Climate change is a real problem that us as a society need to take seriously. "Sea level has risen along Hawaii's shores, increasing erosion and threatening coastal communities and infrastructure." As the earth gets warmer the oceans levels get higher. This in the future can be really bad if we don't do something now and take action. This bill helps start to take action. It helps limits urban growth and increase flood resiliency within sea level rise exposure areas. "Warming in the oceans around Hawaii has damaged coral reefs, and, in recent decades, increased ocean acidity has threatened reefs and other marine ecosystems." We are destroying our earth and we are the only ones the can stop it. we just need to take action. We can take action through this bill. It has preventions and other means to help us mend the earth. We need to take action and we can with this bill, this is why i think this bill should be passed.

SB-3099-SD-1

Submitted on: 2/18/2020 11:55:07 AM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Phaethon Keeney	Individual	Support	No

Comments:

SB-3099-SD-1

Submitted on: 2/18/2020 11:48:29 AM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
janice palma-glennie	Individual	Support	No

Comments:

aloha,

please support this bill to mplement the recommendations of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report issued by the Hawai'i Climate Change Mitigation and Adaptation Commission.

mahalo and sincerely,

janice palma-glennie

SB-3099-SD-1

Submitted on: 2/16/2020 12:43:38 PM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dylan P. Armstrong	Individual	Support	No

Comments:



SB 3099, SD1, RELATING TO CLIMATE CHANGE

FEBRUARY 20, 2020 · SENATE WAYS AND MEANS
COMMITTEE · CHAIR SEN. DONOVAN DELA CRUZ

POSITION: Support.

RATIONALE: IMUAlliance supports SB 3099, SD1, relating to climate change, which implements the recommendations of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report issued by the Hawai'i Climate Change Mitigation and Adaptation Commission.

According to a report produced by the Hawai'i Climate Change Mitigation and Adaptation Commission, global sea levels could rise more than three feet by 2100, with more recent projections showing this occurring as early as 2060. In turn, over the next 30 to 70 years, approximately 6,500 structures and 19,800 people statewide will be exposed to chronic flooding.

Additionally, an estimated \$19 billion in economic loss would result from chronic flooding of land and structures located in exposure areas. Finally, approximately 38 miles of coastal roads and 550 cultural sites would be chronically flooded, on top of the 13 miles of beaches that have already been lost on Kaua'i, O'ahu, and Maui to erosion fronting shoreline armoring, like seawalls.

Furthermore, according to research conducted by Michael B. Gerrard from Columbia Law School, modern-day slavery tends to increase after natural disasters or conflicts where large numbers of people are displaced from their homes. In the decades to come, says Gerrard, **climate change will very likely lead to a significant increase in the number of people who are displaced and, thus vulnerable, to human trafficking.** While the Paris Climate Agreement of 2015

established objectives to limit global temperature increases and several international agreements are aimed at combating modern-day slavery, it is highly uncertain whether they will be adequate to cope with the scale of the problem that is likely to occur as a result of climate change.

As we work to reduce carbon emissions and stave off the worst consequences of climate change, we must begin preparing for the adverse impact of sea level rise on our shores. We are now quantifying the speed at which we must act. We cannot continue to develop the 25,800-acre statewide sea level rise exposure area—one-third of which is designated for urban use—without risking massive structural damage and, potentially, great loss of life.

Therefore, our state should take steps to protect Hawai'i's coastal areas, including by identifying vulnerable public infrastructure and creating plans for mitigating and adapting to the imminent and existential threat of sea level rise. For the sake of our keiki, we cannot afford to wait to solidify strategies to preserve our island home for generations to come.

SB-3099-SD-1

Submitted on: 2/15/2020 7:12:52 AM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Noel Morin	Individual	Support	No

Comments:

I'm in strong support of SB3099 SD1.

We must take proactive measures to deal with the inevitable rise in sea levels. We already see the impact of this in coastal areas that are prone to sunny day flooding and erosion. Adaptation strategies will help us make the right decisions on coastal development and major infrastructure investments that could be put at risk by rising sea levels. These decisions will have important implications on life and health of our people, and state of our economy.

Please support SB3099 SD1.

Thank you,

Noel Morin

Hilo

SB-3099-SD-1

Submitted on: 2/18/2020 7:16:14 PM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

LATE

SB-3099-SD-1

Submitted on: 2/19/2020 10:35:35 AM

Testimony for WAM on 2/20/2020 10:35:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Rick Warshauer	Individual	Comments	No

Comments:

COMMITTEE ON WAYS AND MEANS, Senator Donovan M. Dela Cruz, Chair

HEARING Thurs., February 20, 2020 re. **SB3099 SD1** (relating to Climate Change)

Testimony of Rick Warshauer, Volcano

Chairman Dela Cruz and Committee Members,

I appreciate the intent of this bill to refine studies that identify the areas of impact from rising sea level, to further define the areas of inundation and to design the mitigating measures for planned retreat from impacted areas. These need to be initiated soon. The cost will be substantial.

I urge the committees to establish a new fund, or otherwise earmark monies that are raised for the purposes of this bill. I suggest an amendment that the state assess annual fees on structural developments (greater than a half million dollars in value) that are built on all coastal lands that are projected to be affected by rising sea levels and related storm impacts. By starting soon, such funds could quickly pay for expanded studies and projections, and begin to pay for mitigating measures.

I also recommend deletion of Section 21, as the proposed changes are redundant to the existing wording in H.R.S. Section 173A-5. The intent of proposed subsection (g)(10) “[Lands that buffer or otherwise may preserve adjacent beaches and other coastal areas.”] can be found in existing line (g)(2) [“Coastal areas, beaches, and ocean access;”] and other adjacent lines. Additionally, in subsection (h)(1), the addition of “including conservation easements” is redundant to existing references to conservation easements in the same sentence.

Mahalo for your consideration.