



STATE OF HAWAII
DEPARTMENT OF EDUCATION
KA 'OIHANA HO'ONA'AUAO
P.O. BOX 2360
HONOLULU, HAWAII 96804

Date: 02/02/2023
Time: 03:15 PM
Location: CR 225 & Videoconference
Committee: Senate Government
Operations

Department: Education

Person Testifying: Keith T. Hayashi, Superintendent of Education

Title of Bill: SB 0509 RELATING TO SEA LEVEL RISE ADAPTATION.

Purpose of Bill: Requires each executive branch department to: identify existing and planned facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards; assess options for mitigation impacts of sea level rise to existing and planned facilities; establish staff level points of contact to improve interagency coordination for sea level rise adaptation, flooding, and resilience; and submit annual reports to the Governor, Legislature, and Hawaii Climate Change Mitigation and Adaptation Commission.

Department's Position:

The Hawaii State Department of Education (Department) is pleased to provide testimony in support of SB 509.

Pursuant to Act 178, Session Laws of Hawaii (SLH) 2021, Relating to Sea Level Rise Adaptation, and under the guidance of for the Office of Planning and Sustainable Development, the Department has been an active participant in the coordination with partner agencies on assessment of its facilities and development of strategies to mitigate risk to its capital improvements.

The Department is currently engaged in discussions with stakeholders to:

- Identify existing school facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards; and
- Explore and coordinate options and resources with partner agencies to mitigate the

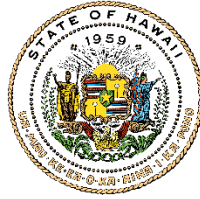
impacts of sea level rise and climate change.

The Department looks forward to working with and coordinating its sea level rise and climate change mitigation efforts with its state, county and federal partners and explore potential resources that might support a unified effort to implement practical and sustainable solutions .

Thank you for this opportunity to provide testimony in support of SB 509.

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

P.O. BOX 621
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Testimony of
DAWN N.S. CHANG
Chairperson

Before the Senate Committee on
GOVERNMENT OPERATIONS

Thursday, February 2, 2023
3:15 p.m.
State Capitol, Conference Room 225 & Videoconference

In consideration of
SENATE BILL 509
RELATING TO SEA LEVEL RISE ADAPTATION

Senate Bill 509 proposes to amend Chapter 27, Hawai'i Revised Statutes (HRS), to require the executive departments to identify and plan for mitigation efforts for existing and planned facilities that are vulnerable to sea level rise, flooding impacts and natural hazards. **The Department of Land and Natural Resources (Department) offers the following comments:**

The Department is supportive of all efforts to identify vulnerable infrastructure and plan for sea level rise mitigations. As such, the Department currently cooperates with the Office of Planning and Sustainable Development (OPSD) to meet the mandate set by Session Laws of Hawaii 2021 Act 178, which amended HRS 225-M to add a new section regarding the coordination of sea level rise adaptation activities.

The purpose of Act 178 was to identify existing and planned facilities vulnerable to sea level rise, to assess the range of options to mitigate the impacts of sea level rise to those facilities, and to submit annual reports to the Governor, Legislature, and Climate Change Mitigation and Adaptation Commission regarding progress made towards meeting the purpose of the act. Previous years reports can be found at the State of Hawai'i Climate Portal at climate.hawaii.gov.

The Department finds that the goals of Senate Bill 509 are covered under the existing statute.

Mahalo for the opportunity to comment on this measure.

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA



KENNETH S. HARA
MAJOR GENERAL
ADJUTANT GENERAL
DIRECTOR OF EMERGENCY
MANAGEMENT

JAMES DS. BARROS
ADMINISTRATOR
HAWAII EMERGENCY MANAGEMENT
AGENCY

STATE OF HAWAII
KA MOKU'ĀINA O HAWAII
DEPARTMENT OF DEFENSE
KA 'OIHANA PILI KAUA
HAWAII EMERGENCY MANAGEMENT AGENCY
4204 DIAMOND HEAD ROAD
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STATE OF HAWAII
DEPARTMENT OF DEFENSE
HAWAII EMERGENCY MANAGEMENT AGENCY

TESTIMONY ON SENATE BILL 509
RELATING TO SEA LEVEL RISE ADAPTATION

BEFORE THE SENATE COMMITTEE ON **GOVERNMENT OPERATIONS**

BY

JAMES DS. BARROS
ADMINISTRATOR
HAWAII EMERGENCY MANAGEMENT AGENCY

FEBRUARY 1, 2023

Aloha Chair McKelvey Vice-Chair Gabbard, and members of the committee:

I am James Barros, Administrator of the Hawaii Emergency Management Agency (HI-EMA).

HI-EMA provides written testimony to **OFFER COMMENT** on SB509.

This measure requires executive branch departments to take steps to identify existing and planned facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards; assess options to mitigate impacts of sea level rise to these facilities; establish staff level points of contact; submit annual reports; and other actions.

HI-EMA sees substantial value in the actions laid out in the bill to provide a coordinated framework for future action. However, the agency notes that many of the steps identified in the bill address hazard mitigation.

There is an existing process which requires the Counties and the State to regularly update hazard mitigation plans; these plans are important when the State seeks funding from the Federal Emergency Management Agency for hazard mitigation. HI-EMA recommends that any initiative to coordinate the State efforts to mitigate the effects of sea level rise on State facilities should be aligned with the existing hazard mitigation planning process.

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA



STATE OF HAWAII
KA MOKU'ĀINA O HAWAI'I
DEPARTMENT OF DEFENSE
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In addition, HI-EMA notes that the bill does not appropriate funds to achieve the additional actions which it requires, such as producing annual reports. Individual departments may have difficulties achieving the desired results without additional resources.

Thank you for the opportunity to provide testimony.

James Barros: james.barros@hawaii.gov; 808-733-4300



UNIVERSITY OF HAWAII SYSTEM

‘ŌNAEHANA KULANUI O HAWAII

Legislative Testimony

Hō'ike Mana'o I Mua O Ka 'Aha'ōlelo

Testimony Presented Before the
Senate Committee on Government Operations
Thursday, February 2, 2023 at 3:15 p.m.

By

Darren T. Lerner, PhD
Director, Sea Grant College Program,
School of Ocean and Earth Science and Technology

And

Charles "Chip" Fletcher, PhD
Dean, School of Ocean and Earth Science and Technology

And

Michael Bruno, Provost
University of Hawai'i at Mānoa

SB 509 – RELATING TO SEA LEVEL RISE ADAPTATION

Chair McKelvey, Vice Chair Gabbard, and Members of the Committee:

The University of Hawai'i Sea Grant College Program (Hawai'i Sea Grant) and the Climate Resilience Collaborative (CRC) support the intent of SB 509.

This measure requires each executive branch department to: identify existing and planned facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards; assess options for mitigation impacts of sea level rise to existing and planned facilities; establish staff level points of contact to improve interagency coordination for sea level rise adaptation, flooding, and resilience; and submit annual reports to the Governor, Legislature, and Hawai'i Climate Change Mitigation and Adaptation Commission.

In the preamble of Senate Bill 509, there is a discussion of sea level rise based on 2017 projections. Hawai'i Sea Grant and CRC would like to begin by providing updated information about sea level rise science and projections. Research and modeling by a federal task force (Sweet et al., 2022) indicate the following:

1. Hawai'i will experience sea level rise that is 15% to 30% higher than the global average.
2. Sea level around Hawai'i is projected to rise about 1 foot by 2050 and about 4 feet by 2100.

In the Hawai'i State Climate Change Mitigation and Adaptation's 2022 update to the Hawai'i Sea Level Rise Vulnerability and Adaptation Report to the Legislature as required by Act 32 (2017), the Commission recommended that:

"...the state should set a revised planning and policy benchmark of 4 ft as the minimum scenario for all planning and design based on the report's Intermediate (mid-range) scenario for Hawai'i of 3.9 feet of sea level rise by 2100, and apply a 6 ft benchmark for planning and design of public infrastructure projects and other projects with low tolerance for risk based on the report's Intermediate High scenario for Hawai'i of 5.9 feet of sea level rise by 2100. The latest science suggests that the SLR-XA for 3.2ft of sea level remains valid as a planning overlay for the mid century at this time."

We also draw your attention to the 6th Assessment Report of the Intergovernmental Panel on Climate Change which states with high confidence that:

"Sea level is committed to rise for centuries to millennia due to continuing deep-ocean warming and ice-sheet melt and will remain elevated for thousands of years."

Each year, Hawai'i's coastal communities grow increasingly vulnerable to the dangers of wave impacts, coastal erosion, high tide flooding, and storm surge, all of which are exacerbated by sea level rise. We emphasize - There is nothing we can do to stop sea level rise. We must develop exit strategies for our coastal communities. Sea level rise is an unstoppable reality and without major adjustments to coastal laws and policies, flooding, erosion, and storm dangers will increase - slowly at first, as at present, but by the 2030's sea level rise impacts related to extreme tidal flooding will increase exponentially.

The complex nature of managed retreat requires evolution beyond the narrow binary options of armor or retreat and instead require evaluation of broader adaptation options in the context of hazard risk and vulnerability, socio-economic factors and place-based and community driven considerations for a variety of phased adaptation options that include managed retreat. Managed retreat has significant advantages over shorter-term mitigation responses, especially over longer time frames. While there may be significant opposition to this approach, especially in regard to the use of public funds to acquire coastal lands, the strategy may be best suited when protection of the natural beach resources are the highest priority and are economically justified for public investment into acquisition.

In Section 2 of this measure, the measure directs State departments to "Assess a range of options for mitigation impacts of sea level rise to existing and planned facilities, including flood-proofing in-place and relocation of facilities, especially in locations where conservation of beaches and coastal environments is desired." Hawai'i Sea Grant and CRC suggest to add clarity to this directive by defining "locations where conservation of beaches and coastal environments is desired." In addition, we believe it necessary to also add language ensuring the agency's commitment to protecting public trust public

beaches while distinguishing that in some cases other public interests for health, safety, and welfare of residents could prevail.

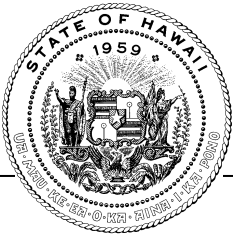
Hawai'i Sea Grant and CRC would also like to note that some directives of this measure would be duplicative of work that is already being conducted under Act 178 (2021). Under the framework of that law, the Office of Planning and Sustainable Development is working with other State agencies to conduct largely similar work related to sea level rise.

Hawai'i Sea Grant's mission is to provide integrated research, extension, and education activities that increase understanding and use of ocean and coastal resources of the Hawaiian and Pacific Islands and support the informed personal, policy, and management decisions that are integral to realizing this vision. Hawai'i Sea Grant is part of a national network of 34 university-based programs associated with the National Oceanic and Atmospheric Administration (NOAA) that promote better understanding, conservation, and use of coastal resources.

CRC is a multi-investigator research project at the University of Hawai'i at Mānoa focused on sea level rise adaptation and climate resilience. CRC is working to update coastal models with more recent projections of sea level rise and to take account of other variables that impact Hawai'i's shorelines.

Hawai'i Sea Grant and the Climate Resilience Collaborative support the intent of SB 509 and recommends consideration of the above mentioned amendments.

Thank you for the opportunity to testify on this measure.



**STATE OF HAWAII
OFFICE OF PLANNING
& SUSTAINABLE DEVELOPMENT**

JOSH GREEN, M.D.
GOVERNOR

SCOTT J. GLENN
DIRECTOR

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Statement of
SCOTT GLENN, Director

before the
SENATE COMMITTEE ON GOVERNMENT OPERATIONS

Thursday, February 2, 2023, 3:15 PM
State Capitol, Conference Room 225

in consideration of
SB 509

RELATING TO SEA LEVEL RISE ADAPTATION

LATE

Chair McKelvey, Vice Chair Gabbard, and Members of the Senate Committee on Government Operations:

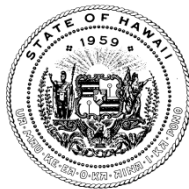
The Office of Planning and Sustainable Development (OPSD) **supports the intent and offers the following comments on SB 509** which amends HRS Chapter 27 and requires executive branch departments to identify existing and planned facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards; assess options for mitigation impacts of sea level rise to existing and planned facilities; establish staff level points of contact to improve interagency coordination for sea level rise adaptation, flooding, and resilience; and submit annual reports to the Governor, Legislature, and Hawaii Climate Change Mitigation and Adaptation Commission.

SB509 further emphasizes HRS § 225M-9 Coordination of sea level rise of sea level rise adaptation activities which requires OPSD, in coordination with state agencies with operational responsibilities over state facilities, to:

- Identify existing and planned facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards;
- Assess options to mitigate the impacts of sea level rise to those facilities; and
- Submit annual reports to the governor, legislature, and Hawaii climate change mitigation and adaptation commission regarding vulnerability and mitigation assessment for state facilities and progress in implementing sea level rise and disaster resiliency considerations.

The proposed amendments to codify these activities in HRS Chapter 27 and direct agencies to establish staff level contacts for these efforts reinforces the state's existing responsibilities and commitment to enhance its resilience by incorporating sea level rise into planning and adaptation implementation options for its plans, programs, and capital improvement decisions.

Thank you for the opportunity to testify on this measure.



TESTIMONY BY:

EDWIN H. SNIFFEN
DIRECTOR

Deputy Directors
DREANALEE K. KALILI
TAMMY L. LEE
ROBIN K. SHISHIDO
JAMES KUNANE TOKIOKA

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DEPARTMENT OF TRANSPORTATION
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February 2, 2023
3:15 PM
State Capitol, Room 225

LATE

**S.B. 509
RELATING TO SEA LEVEL RISE ADAPTATION.**

Senate Committee on Government Operations

The Department of Transportation (DOT) **supports the intent** of S.B. 509 which requires each executive branch department to identify facilities that are vulnerable to sea level rise impacts and assess options for mitigation of these impacts.

DOT considers this measure duplicative of Act 178, Session Laws of Hawaii, 2021. Further, this measure is also duplicative of Act 299, Session Laws of Hawaii, 2022, which requires DOT to plan for sea level rise based upon the latest science, estimates, and recommendations of the Hawaii Climate Change Mitigation and Adaptation Commission (Commission) in all future or amended transportation projects.

The additional provisions in S.B. 509 that are not included in the aforementioned laws require departments to establish staff points of contact to work with the Commission and to assess a range of mitigation options. DOT already aims to prioritize actions that build disaster resilience and climate adaptation, take actions to protect vulnerable populations, and prioritize nature-based adaptation and resilience solutions, but additional resources are required to effectively carry out the actions required in the bill. In 2021, Highways adopted its Climate Adaptation and Action Plan. To prepare a similar plan for Harbors and Airports building on the framework set by Highways, approximately \$1 million is required for each and we expect this process to take 18 months.

Thank you for the opportunity to provide testimony.