

DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
OFFICE OF CONSERVATION AND COASTAL LANDS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**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

**Testimony of**  
**SUZANNE D. CASE**  
**Chairperson**

**Before the Senate Committee on**  
**WATER AND LAND**

**Friday, March 18, 2022**  
**1:00 p.m.**  
**State Capitol, Conference Room 229 & Videoconference**

**In consideration of**  
**HOUSE BILL 1669, HOUSE DRAFT 1**  
**RELATING TO SEA LEVEL RISE ADAPTION**

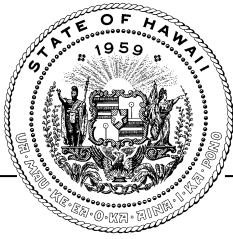
House Bill 1669, House Draft 1 proposes to require the Office of Planning and Sustainable Development to establish a pilot program to develop a Waikiki adaptation and resilience plan to address climate change and sea level impacts in the Waikiki special district. **The Department of Land and Natural Resources (Department) supports the bill.**

The proposed project would build off the Hawaii Climate Change Mitigation and Adaptation Commission's 2017 report, *Hawaii Sea Level Rise Vulnerability and Adaptation Report*. This report has been extremely valuable in the Department's mission to protect the State's natural and cultural resources and has guided many of our decisions over the past five years.

This bill will take the macro-level recommendations contained in the commission's report, along with other studies, to create a community-level adaptation and resilience plan for Waikiki under the leadership of the Office of Planning and Sustainable Development. The Department believes that a successful pilot project will provide a useful model for other coastal communities in the State that are facing serious threats from sea level rise.

In order to ensure the success of the project, the Department would request that the Committee consider including an implementation strategy as a component of the plan.

Thank you for the opportunity to comment on this measure.



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

**DAVID Y. IGE**  
GOVERNOR

**MARY ALICE EVANS**  
DIRECTOR

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

Telephone: (808) 587-2846  
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Statement of  
**MARY ALICE EVANS**  
Director, Office of Planning and Sustainable Development  
before the  
**SENATE COMMITTEE ON WATER AND LAND**  
Friday, March 18, 2022  
1:00 PM  
State Capitol, Conference Room 229

in consideration of  
**HB 1669 HD1**  
**RELATING TO SEA LEVEL RISE ADAPTATION.**

Chair Inouye, Vice Chair Keith-Agaran, and Members of the Senate Committee on Water and Land.

The Office of Planning and Sustainable Development (OPSD) commends the legislature for its continued recognition of sea level rise as part of the climate emergency. Waikiki is a significant asset to the State and has unique challenges and opportunities relating to coastal erosion and sea level rise. The OPSD supports the intent of **HB 1669 HD1** and provides the following comments:

For consistency with the amendments made by the House Committee on Water and Land, the OPSD offers the following proposed amendment in Section 1 of the proposed measure where deletions are bracketed and stricken:

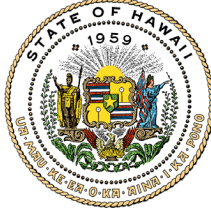
Page 3, Line 16 “pilot project where [~~a working group convened by~~] the office of”

The OPSD requests that this committee consider the requests documented in House Committee Report HSCR279-22 from the House Committees on Water and Land & Energy and Environmental Protection acknowledging that OPSD would require appropriate resources, to include a dedicated position (Exempt, 1.0 FTE, Salary ~\$81,744), to lead, manage, and procure consultant services to carry out the activities in this measure. To ensure activities identified within the Waikiki Adaptation and Resilience Plan are carried out accordingly, this position would provide sustained staff support to monitor and coordinate agencies towards plan implementation.

The OPSD recognizes that this scale of planning is typically county-led and therefore the OPSD would work closely on the City and County of Honolulu to ensure that the outcomes

funded by this proposed measure are complementary to and consistent with county planning efforts without being duplicative of any activities currently being undertaken at the county level.

Thank you for the opportunity to testify on this matter.



STATE OF HAWAII  
DEPARTMENT OF DEFENSE  
HAWAII EMERGENCY MANAGEMENT AGENCY

TESTIMONY ON HOUSE BILL 1669, HD 1,  
RELATING TO SPECIAL IMPROVEMENT DISTRICTS

BEFORE THE SENATE COMMITTEE ON  
**WATER AND LAND**

BY

Luke P. Meyers  
Administrator, Hawaii'i Emergency Management Agency (HI-EMA)

MARCH 18, 2022

Aloha Chair Inouye, Vice-Chair Keith-Agaran, and Members of the  
Committee:

Thank you for the opportunity to submit testimony providing **COMMENTS** on  
House Bill 1669, HD 1.

House Bill 1669, HD 1 requires the office of planning and sustainable  
development to establish a pilot program to develop a Waikiki adaptation and  
resilience plan to address climate change and sea level impacts in the Waikiki  
special district. Requires reports to the legislature. Makes an appropriation.

The Hawaii'i Emergency Management Agency (HI-EMA) sees substantial  
value in creating additional tools such as this pilot project which communities  
may use to enhance hazard mitigation strategies to prepare and pay for the  
impacts of sea level rise, groundwater inundation, and coastal erosion relating  
to climate change.

As the bill progresses, the HI-EMA would recommend that the bill incorporate  
language to align the local hazard mitigation planning with statewide hazard  
mitigation efforts, allowing HI-EMA to better support the district in maximizing  
the impact of mitigation projects and in maximizing federal funding. This would  
also be consistent with the hazard mitigation plans that are adopted by each  
county and the state and are approved by the Federal Emergency  
Management Agency. These hazard reduction documents identify activities  
that reduce the loss of life, property, and the environment from hazards  
impacting our coastal communities.

The HI-EMA takes no stance on the reporting requirements, deferring that to the Office of Planning and Sustainable Development, but the HI-EMA otherwise supports this bill provided that the appropriation does not conflict with the Governor's budget priorities.

Thank you for the opportunity to provide testimony offering comments on House Bill 1669, HD 1.

Luke P. Meyers: [Luke.P.Meyers@hawaii.gov](mailto:Luke.P.Meyers@hawaii.gov); 808-733-4300



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Testimony Presented to the  
Senate Committee on Water and Land  
Friday, March 18, 2022 at 1:00 p.m.

by

Vassilis L. Syrmos, Vice President for Research and Innovation  
University of Hawai'i System

HB 1669 HD1 – RELATING TO SEA LEVEL RISE ADAPTATION.

Chair Inouye, Vice Chair Keith-Agaran, and Members of the Committee:

The University of Hawai'i (UH) supports HB 1669 HD1 which requires the State Office of Planning and Sustainable Development to establish a pilot program that will develop a Waikīkī adaptation and resilience plan to address the projected impacts of climate change and sea level rise in the Waikīkī special district.

Hawai'i Sea Grant and the Climate Resiliency Initiative (formerly the Coastal Geology Group), both based in UH Mānoa's heralded School of Ocean and Earth Sciences, provide excellent research, education and policy efforts in this domain. Combined with working, technical solutions from the UH Mānoa College of Engineering's Coastal Erosion Shoreline Team in geotechnics, transportation, infrastructure and shoreline hardening, UH is well-suited to be a contributing member of this important pilot program.

Thank you for the opportunity to testify on this measure.

DAVID Y. IGE  
GOVERNOR



CRAIG K. HIRAI  
DIRECTOR

GLORIA CHANG  
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM  
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND  
OFFICE OF THE PUBLIC DEFENDER

**STATE OF HAWAII**  
**DEPARTMENT OF BUDGET AND FINANCE**  
P.O. BOX 150  
HONOLULU, HAWAII 96810-0150

ADMINISTRATIVE AND RESEARCH OFFICE  
BUDGET, PROGRAM PLANNING AND  
MANAGEMENT DIVISION  
FINANCIAL ADMINISTRATION DIVISION  
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

**WRITTEN ONLY**  
TESTIMONY BY CRAIG K. HIRAI  
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE  
TO THE SENATE COMMITTEE ON WATER AND LAND  
ON  
HOUSE BILL NO. 1669, H.D. 1

**March 18, 2022**  
**1:00 p.m.**  
**Room 229 and Videoconference**

RELATING TO SEA LEVEL RISE ADAPTATION

The Department of Budget and Finance (B&F) offers comments on this bill.

House Bill No. 1669, H.D. 1, requires the Office of Planning and Sustainable Development to establish a pilot program to develop a Waikiki adaptation and resilience plan (WARP) to address climate change and sea level impacts in the Waikiki special district and appropriates an unspecified amount of general funds for FY 23 for the development of the WARP.

B&F notes that, with respect to the general fund appropriation in this bill, the federal Coronavirus Response and Relief Supplemental Appropriations Act requires that states receiving Elementary and Secondary School Emergency Relief (ESSER) II funds and Governor's Emergency Education Relief II funds must maintain state support for:

- Elementary and secondary education in FY 22 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and

- Higher education in FY 22 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

Further, the federal American Rescue Plan (ARP) Act requires that states receiving ARP ESSER funds must maintain state support for:

- Elementary and secondary education in FY 22 and FY 23 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 and FY 23 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

The U.S. Department of Education has issued rules governing how these maintenance of effort (MOE) requirements are to be administered. B&F will be working with the money committees of the Legislature to ensure that the State of Hawai'i complies with these ESSER MOE requirements.

Thank you for your consideration of our comments.



## BOARD OF WATER SUPPLY

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



March 18, 2022

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
RAY C. SOON  
MAX J. SWORD  
NA'ALEHU ANTHONY

JADE T. BUTAY, Ex-Officio  
DAWN B. SZEWCZYK, P.E., Ex-Officio

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

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

The Honorable Lorraine R. Inouye, Chair  
and Members  
Committee on Water and Land  
The Senate  
Hawaii State Capitol, Room 229  
Honolulu, Hawaii 96813

Dear Chair Inouye and Members:

**SUBJECT: House Bill 1669, HD1: Relating to Sea Level Rise Adaptation**

The Honolulu Board of Water Supply (BWS) supports House Bill (HB) 1669, House Draft (HD) 1 relating to sea level rise adaptation, which requires the Office of Planning and Sustainable Development to establish a pilot project to develop a Waikiki adaptation and resilience plan to address climate change and sea level impacts in the Waikiki special district.

The BWS is actively working with the City's Climate Change, Sustainability and Resiliency Office and the City's One Water Panel to address sea level rise adaptation from climate change. The BWS recognizes that sea level rise and coastal erosion will impact the water distribution system in low lying and coastal areas and adaptation measures need to be prioritized and implemented. BWS has already experienced difficulty in repairing main breaks along Ala Wai Boulevard, Ala Moana Boulevard and Nimitz Highway having to wait for low tide to complete pipe repairs. We anticipate sea level rise exacerbating water system maintenance and repair in the decades to come.

Thank you for the opportunity to testify in support of HB 1669, HD1.

Very truly yours,

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



# SIERRA CLUB OF HAWAI'I

## SENATE COMMITTEE ON WATER AND LAND

March 18, 2022      1:00 PM      Conference Room 229

**In SUPPORT of HB1669 HD1: Relating to Sea Level Rise Adaptation**

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Aloha Chair Inouye, Vice Chair Keith-Agaran, and Members of the Water and Land Committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **strongly supports HB1669 HD1** Relating to Sea Level Rise Adaptation.

HB1669 HD1 recognizes the need for community-specific and community-driven adaptation plans to deal with sea level rise and other climate threats. It calls for, and would fund, a pilot project to develop a Waikīkī adaptation and resilience plan that would not only protect an economic engine of Hawai'i, but also serve as a model for development of adaptation plans elsewhere throughout the islands.

While Waikīkī is a very important area, generating much economic activity, Climate Equity principles require development of similar adaptation and resilience plans for frontline communities including Native Hawaiian and other Pacific Island communities. HB1672 HD1, scheduled for a hearing on March 22, may help to address this need by authorizing counties to create special improvement districts for purposes including climate-change related natural hazard mitigation.

Thank you very much for this opportunity to provide testimony on **HB1669 HD1**.



WAIKIKI NEIGHBORHOOD BOARD NO. 9

PO NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BLVD. SUITE 160 • HONOLULU, HAWAII, 96817  
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: <http://www.honolulu.gov>

March 17, 2022

Senate Committee on Water and Land

House Bill 1669

Aloha Chair Inouye and Committee,

Mahalo for the opportunity to testify in Favor of the Concept of House Bill 1669.

The Residents of Waikiki are highly concerned about the future of sea rise and climate change.

We support the efforts of the Waikiki Beach Special Improvement Association and the Waikiki Improvement Association to take early steps to address sea rise and climate change as a partner in Waikiki.

This legislation will help our community prepare for the future and may help prevent damage to our community.

We support the concept of this bill and related SB2724.

Mahalo again,

Robert Finley  
Chair

**LATE**

**HB-1669-HD-1**

Submitted on: 3/16/2022 9:43:27 AM

Testimony for WTL on 3/18/2022 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Andrea Quinn	Individual	Support	Written Testimony Only

Comments:

Dear Honorable Committee Members:

Please support HB1669.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei, Maui

**HB-1669-HD-1**

Submitted on: 3/16/2022 6:46:31 PM

Testimony for WTL on 3/18/2022 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Denise Boisvert	Individual	Support	Written Testimony Only

Comments:

Aloha,

As a long-term resident of Waikiki, I FULLY SUPPORT the passage of HB1669.

It is never too early to address climate change; there is a lot that needs to be done about it now.

Thank you for your kind consideration of this bill.

**HB-1669-HD-1**

Submitted on: 3/16/2022 6:49:49 PM

Testimony for WTL on 3/18/2022 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Kim Jorgensen	Individual	Support	Written Testimony Only

Comments:

I SUPPORT HB1669 HD1.

There is no time like the present to do something about climate change.

We don't want future generations to wonder why we didn't when we should have.

**HB-1669-HD-1**

Submitted on: 3/16/2022 8:06:07 PM

Testimony for WTL on 3/18/2022 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Gerard Silva	Individual	Comments	Written Testimony Only

Comments:

There is not Clime Change it is just a fact that the Sand goes out and if it does not come back in there is Erosion bin going on for Centuries its about Time you Donkeys Look this up and Stop spreiding lies!



Testimony Presented Before the  
**Senate Committee on Water and Land**  
**March 18, 2022 at 1:00pm**  
Senate Capitol (Via Video conference)

**Waikiki Beach Special Improvement District Association**

By

Rick Egged, President

HB1669 HD1– RELATING TO SEA-LEVEL RISE ADAPTATION

Chairs Inouye, Vice Chair Keith-Agaran and members of the committees:

The Waikiki Beach Special Improvement District Association (WBSIDA) **strongly supports House Bill (HB1669 HD1)**. This bill requires the State Office of Planning and Sustainable Development (OPSD) to convene a working group to develop a Waikiki resilience plan to address climate change and sea level impacts in the Waikiki special district. This effort is an important step towards the development of an adaptation and resilience strategy for Waikiki and will serve as framework and demonstration for other communities in Hawai'i.

The Hawaii State Legislature has correctly recognized that Hawai'i is experiencing the impacts of climate change and coastal hazards including the effects of sea level rise and coastal erosion. These threats include; coastal hazards and climate change impacts including the effects of increased frequency and severity of storms and drought, sea level rise, groundwater inundation and coastal erosion. Sea-level rise induced ground water inundation is of particular concern to low elevation regions like Waikiki given the contribution to our economy, dense urban development and substantial coastal exposure to hazards. The intent of this bill is to develop a proactive resilience plan to prioritize actions that protect, preserve, and where desirable, create, restore or improve the quality of the environment and the associated community benefits.

As described by the City and State Climate Change Commission, it is increasingly likely that we will experience 3 feet or more of sea level rise by the middle to end of this century, depending on the greenhouse gas emission scenario. Six feet or more of sea level rise by 2100 is plausible under some scenarios. High tide flooding will affect low-lying coastal areas like Waikiki decades before global mean sea level reaches these benchmarks. The Honolulu Climate Commission recommends using the 3.2 ft Sea Level Rise Exposure Area as a hazard overlay to prepare for and adapt to sea level rise impacts. This is the type of actionable information that can be used by such a task force to anticipate and plan for predicted impacts to Waikiki.



Waikīkī is a globally recognized icon of Hawai'i and is the state's largest tourist destination. Waikīkī generates approximately 42% of the state's visitor industry revenue and is responsible for 8% (\$5 billion) of the Gross State Product<sup>1</sup>. Beaches are a primary attraction for visitors to Waikīkī and perhaps the first line of defense against sea-level rise. It has been estimated that Waikīkī Beach accounts for over \$2 billion in annual income for the local economy<sup>2</sup>. The beaches and myriad of world-renown surf breaks and reef ecosystem located offshore are valuable natural resources that support the environment, culture and lifestyle of Hawai'i, and the idyllic image of Waikīkī. It is critically important to facilitate the ability to maintain these important natural resources along with maintaining the associated resilient development for the inherent economic, social, cultural and environmental value they provide to residents and visitors alike.

Policies related to coastal resilience in Hawai'i have centered on the possible impact of sea-level rise on the active beach system and the built environment. As part of the development of new resilience policies, it is important to recognize and evaluate possible adaptation strategies with a strong understanding of the challenges, limitations and opportunities associated with some adaptive planning and design approaches for Waikīkī. The role and influence of the impacts of groundwater inundation is one example of the type of predicted impact that significantly affects land use and urban design. Similarly, due to the unique history and economy of Waikīkī there may be solutions and design approaches that are particularly well-suited for a high-density urban environment like Waikīkī that should be assessed and evaluated by the task force.

The effort to develop a resilience plan and specific resilient design guidelines for Waikīkī is consistent and supportive of the City and County of Honolulu's (CCH) O'ahu Resilience Strategy. The O'ahu Resilience Strategy (ORS) is part of the CCH's effort to develop strategies for resilience as part of the international 100 Resilient Cities network organized and hosted by the Rockefeller Foundation. One of the 44 Resilience Actions identified in the ORS is Action 14: *Establish Future Conditions Climate Resilience Design Guidelines*. This action is among many in the ORS that a task force can and should evaluate and serve as a proactive advisory guideline for climate resilience. The purpose of the Action 14 guideline is to provide step-by-step instructions on how to incorporate climate and hazard considerations into the design of City and private facilities and infrastructure but can also serve a pilot for adaptation for private development.

Waikiki Special District Guidelines (WSD)<sup>3</sup>.

Waikīkī is subject to a Special District that controls certain land uses and zoning restrictions. The purpose of a special district is to provide a means by which certain areas in the community in need of restoration, preservation, redevelopment or rejuvenation may

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<sup>1</sup> <http://www.waikikibid.org/>

<sup>2</sup> Waikīkī Improvement Association (2018) *Economic Impact Analysis of the Potential Erosion of Waikīkī Beach, Final Report*.

<sup>3</sup> (Revised Ordinance of Honolulu Chapter 21 Section 9. Special District Regulations)

be designated as special districts to guide development to protect and/or enhance the physical and visual aspects of an area for the benefit of the community as a whole. The Waikīkī Special District Objectives contain a total of fourteen district objectives listed including promoting the Hawaiian sense of place, guiding development with optimum benefits to the community and retaining residential sector among the objectives. There is currently no specific mention of climate change, hazards, sustainability or resilience anywhere in the Waikīkī Special District Guidelines. With recent interest in revising and updating the WSD guidelines there is an opportunity for the Waikīkī Resilience Task Force to assist in the development of the revised guidelines utilizing new urban planning and architectural design concepts such as those presented here including the Waikīkī Design Flood Elevation guidelines as one example.

The University of Hawai'i, through a collaborative research project with the School of Architecture, SOEST and Sea Grant have initiated a study on long-term visioning and climate adaptation of the buildings and landscapes in Waikīkī through a series of architectural design charrettes. The research addresses the design problem of "in-place" adaptation of a coastal urban area to flooding as sea level rises in Waikīkī and is largely based on research of other U.S. municipalities efforts to adapt to sea-level rise. This research is an essential component to implementing these land use changes over time and the type of information the Resilience Task Force could evaluate.

Thank you for the opportunity to testify.

*The Waikiki Beach Special Improvement District Association (WBSIDA) is dedicated to enhancing the resilience of Waikīkī by ensuring the coordinated management and long-term sustainability of Waikiki Beach and nearshore waters.*

<https://www.wbsida.org/>

Senator Lorraine Inouye  
Chair of the Water and Land Committee  
State of Hawai'i 2022 Legislative

RE: Proposed Amending of HB 1669HD1

Plans and master plans are good when there is a lot of time. Over and over studies are made for the government's library. 100 years have gone by and the Ala Wai Canal walls have stayed as they were built, 20 feet of cut earth with a 5 feet loose rock wall on top that is grouted on the canal side. This allowed the Waikiki Resort District and the residential neighborhoods of Manoa, Palolo and Makiki Valleys to be built out. During this time, the canal created to protect Waikiki from the mountain river floods has lost its water capacity by an estimated 50% because of built up sludge and sewage from the many storms over the years.

Climate Change is now upon Hawaii and will bring extreme weather/flooding of Waikiki as the earth increases its temperature by 1.5 degrees between 2030 to 2050. Emergency action is needed for engineers to start on sheet pile walls for the canal to restore the water depth back to 25 feet. Getting to first base within the next 5 years, will allow the Army Corps and Other Solutions to utilize the canal.

Sincerely Yours,



Marshall Hung, retired affordable housing developer

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Art Ushijima, retired Pres/ CEO of The Queen's Health Systems

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Ken Hayashida, CEO of KAI Hawaii



Bill Wilson, former CEO of Hawaiian Dredging Construction Co.

**LATE**

Senator Donovan Dela Cruz  
Chair of the Ways and Means Committee  
State of Hawai'i 2022 Legislative

RE: Proposed Amending of HB 1669HD1

Plans and master plans are good when there is a lot of time. Over and over studies are made for the government's library. 100 years have gone by and the Ala Wai Canal walls have stayed as they were built, 20 feet of cut earth with a 5 feet loose rock wall on top that is grouted on the canal side. This allowed the Waikiki Resort District and the residential neighborhoods of Manoa, Palolo and Makiki Valleys to be built out. During this time, the canal created to protect Waikiki from the mountain river floods has lost its water capacity by an estimated 50% because of built up sludge and sewage from the many storms over the years.

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Sincerely Yours,



Marshall Hung, retired affordable housing developer

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Art Ushijima, retired Pres/ CEO of The Queen's Health Systems

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Ken Hayashida, CEO of KAI Hawaii



\_\_\_\_\_  
Bill Wilson, former CEO of Hawaiian Dredging Construction Co.