

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 House Committee on
WATER & LAND

Thursday, February 3, 2022
9:30 a.m.

State Capitol, Conference Room 430, Via Videoconference

In consideration of
HOUSE BILL 2229
RELATING TO COASTAL EROSION

House Bill 2229 proposes to appropriate funds to the University of Hawaii to study the impact of sandbag walls, or "sand burritos," on sand movement patterns and coastal erosion at Ehukai Beach Park. It also establishes a temporary moratorium on the use of sandbag walls or sand burritos unless authorized by an emergency permit from the Department of Land and Natural Resources (Department). **The Department appreciates that the House Committee on Water and Land is addressing coastal erosion, and offers the following comments.**

In the ahupuaa of Pupukea, which contains Ehukai Beach Park, and in the neighboring ahupuaa of Paumalu, there are residential structures that are currently in imminent danger of collapsing into the ocean due to coastal erosion. We have attached an exhibit containing drone footage from Paumalu taken on January 31, 2022, that shows debris from failed erosion control structures, a depleted beach, and homes that are at critical risk from coastal erosion.

Hawaii Administrative Rules Chapter 13-5 currently allow the Chairperson (Chair) of the Board of Land and Natural Resources to issue emergency permits when there is an imminent threat to public health or safety. This has been an important tool for the Department when addressing short-term emergencies such as floods, landslides, tsunami, and storms.

Temporary erosion control devices with sandbag walls and tarp systems can have similar effects as concrete and rock seawalls and other hardening structures. As such, emergency permits are designed to be temporary in nature, and to provide landowners time with the conditioned expectation that they work on short, mid, and long-range options.

The Department has authorized seven emergency permits for temporary erosion control structures in the ahupuaa of Pupukea since 2018, fronting approximately 18 properties. These permits expired in 2021. One structure appears to have been removed; the others remain, and the permit holders have requested that the temporary emergency erosion control structures remain for an additional three years citing continuing impacts from coastal hazards. The Department's Office of Conservation and Coastal Lands is currently investigating permit non-compliance with these remaining erosion control structures. We do not know the outcome of the investigation at this time and cannot guarantee that the sandbags will remain for the duration of the proposed study period.

The Department has authorized nine emergency permits in the ahupuaa of Paumalu, and there are additional erosion control structures that the Department alleges have been built without the necessary authorizations. Seven of the authorized structures are the subject of enforcement actions, while others are under investigation. The Department has served notices of violation for expired permits, failure to secure proper land dispositions for the use of State land, dilapidated structures, debris from failed structures on the beach, the use of unauthorized materials, and unauthorized expansion of approved structures.

We acknowledge that the issuance of emergency permits for shoreline structures is not an effective tool in responding to sea level rise and associated shoreline erosion, nor has it expedited the implementation of sustainable sea level rise adaptation that reduces the potential loss of life and property while protecting Hawaii's natural resources. We have provided the above information to provide context and urge that proposed appropriations be directed to developing more appropriate avenues of implementable and cross-jurisdictional near-term adaptive management and planning.

Thank you for the opportunity to comment on this measure.

Unmanned aircraft system [UAS] footage provided through a partnership between the Office of Conservation and Coastal Lands and University of Hawaii Sea Grant. Taken January 31, 2022

From 59-165 Ke Nui Road to 59-181 Ke Nui Road, Paumalu Ahupuaa, Waialua District, Oahu







DAVID Y. IGE
GOVERNOR



CRAIG K. HIRAI
DIRECTOR

GLORIA CHANG
DEPUTY DIRECTOR

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

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 HOUSE COMMITTEE ON WATER & LAND
ON
HOUSE BILL NO. 2229

February 3, 2022
9:30 a.m.
Room 430 and Videoconference

RELATING TO COASTAL EROSION

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

House Bill No. 2229: requires the University of Hawai'i (UH) to study the impact of sandbag walls on sand movement patterns and coastal erosion at Ehukai Beach Park; temporarily prohibits the installation or use of a sandbag wall unless authorized by an emergency permit from the Department of Land and Natural Resources; appropriates an unspecified amount of general funds for FY 23 to UH for the study, and extends the lapse date of the appropriation to June 30, 2024; and mandates a report to the Legislature.

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.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
House Committee on Water & Land
Thursday, February 3, 2022 at 9:30 a.m.

By

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

And

Michael Bruno, PhD
Provost
University of Hawai'i at Mānoa

HB 2229 – RELATING TO COASTAL EROSION

Chair Tarnas, Vice Chair Branco, and members of the committee:

The University of Hawai'i Sea Grant College Program (Hawai'i Sea Grant) supports the general intent of HB 2229 with recommendations for amendments below and provided that its passage does not replace the priorities as indicated in the University's Board of Regents approved budget.

This legislation appropriates money for a two-year program at the University of Hawai'i to study the impact of sandbag walls, or "sand burritos," on sand movement patterns and coastal erosion at 'Ehukai Beach Park. Hawai'i Sea Grant offers the following comments and suggestions to strengthen this Bill.

1. The bill identifies 'Ehukai Beach park as the proposed study area. In addition to this shoreline reach, an additional area of demonstrated need for such an assessment is at Rocky Point and "Kammies" near Sunset Beach on the North Shore of O'ahu, where recent beach erosion is currently immanently threatening dwellings as it has repeatedly in the last several years and has triggered emergency erosion control by private landowners.
2. While the intent to study the impacts of the sandbag structures is well-intentioned, the science is clear and well-established, shoreline protection structures can cause permanent damage to the adjacent beach under chronically and episodically eroding conditions. This is especially pronounced in the context of accelerated erosion due to sea-level rise.
3. In light of the recognized impacts of shoreline protection structures, it may be more effective and a better use of limited state funding to develop a solution-oriented coastal adaptation plan that includes a hazard risk and vulnerability assessment of the area, an evaluation of adaptation measures pathways and action triggers that includes strategic retreat of shoreline infrastructure.

4. A complimentary effort to develop a beach and dune management plan for these important stretches of beaches would also serve an important role in identifying potential sediment management techniques and coastal dune restoration and management strategies.
5. Any study of the impact of sandbag walls or other shoreline protection structures should also include a summary and assessment of potential policy and rule amendments and alternatives to emergency shoreline protection.
6. Data on historical and seasonal shoreline change exists for most of the state and is regularly updated by the University of Hawai'i researchers, this data compliments the intent to develop an assessment of an evaluation geotextile "burritos."
7. Long term beach conservation planning, maintenance and management should be part of larger comprehensive and cooperative planning efforts among a range of state and county agencies and communities. Coastal community adaptation measures including strategic or phased relocation of coastal development and infrastructure should be included in coastal management plans and will improve community resilience to coastal hazards and sea level rise while conserving and restoring beaches environments.

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.

Hawai'i Sea Grant supports the intent of HB 2229 and recommends consideration of the above mentioned amendments. Thank you for the opportunity to testify on this measure.

Written Statement of
MICHAEL FOLEY
Before the
HOUSE OF REPRESENTATIVES COMMITTEE ON WATER AND LAND

Thursday, February 3, 2022
9:30 a.m.

State Capitol, Conference Room 430 and Videoconference

To: Chair David A. Tarnas, Vice Chair Patrick Pihana Branco, and Members of the Committee
From: Michael Foley, Ph.D., P.E., Sr. Coastal Engineer
Re: Testimony in Support of HB 2229

Honorable Chair, Vice-Chair and Committee Members:

I am writing in SUPPORT of HB 2229, RELATING TO COASTAL EROSION. This bill suggests a program to study the impact of temporary protection on sand movement patterns and erosion at Ehukai Beach Park. I strongly support this measure in hopes that decisions on appropriate strategies to manage the critical erosion hazards at Ehukai may be based on data, science, and engineering knowledge.

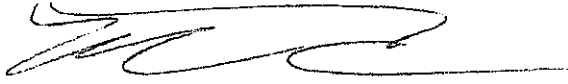
As a licensed professional engineer with 15 years of experience in the State of Hawaii, my team and I are often called upon to develop responses to coastal hazards. Beach and shoreline erosion are a persistent problem in our islands, and we often aim to develop wholistic nature-based approaches to mitigate threats to public safety while protecting the natural environment. Historically, much of the shoreline on parts of Oahu, Maui and Kauai has been armored in response to the erosion trend. Alternatives to shoreline hardening such as beach and reef ecosystem restoration, dune enhancement, erosion accommodation, and managed retreat may be feasible in some cases.

While alternatives to shoreline hardening may be available, the processes for managing coastal zone issues in Hawaii seems too inefficient to effectively respond to the climate crises, which is accelerating in pace and breadth across our islands. Perhaps in recognition of this issue, the State Office of Planning and Sustainable Development recently committed to develop a regional shoreline management strategy specific to Hawaii's unique context. In the meantime, our coastal communities are grappling with a wicked problem that cannot be solved by a single landowner or government agency. While state leaders work toward a new comprehensive shoreline management strategy and communities work through the layered regulatory process, temporary erosion control is an important tool to protect the public while also preventing damage to environmental resources in some cases.

Temporary erosion control may take many forms. "Sandbag walls" constructed of geotextile fabrics and beach sand are seen as a low-impact design when compared to the alternatives. Best practices in the design and construction of these structures can further limit the risk of negative impacts. Modern technology allows for detailed monitoring of the beach in response to shoreline hardening and beach changes may be evaluated and reported by experienced professionals. I strongly support this bill since the proposed study may gather important data and further the understanding of beach response to temporary shoreline hardening.

Thank you for the opportunity to provide testimony in SUPPORT of HB 2229.

Sincerely,



Michael Foley, Ph.D., P.E.
Sr. Coastal Engineer

February 2, 2022

Aloha Chair Tarnas, Vice Chair Branco, and Members of the Committee,

I write in **strong support** of HB2229 - RELATING TO COASTAL EROSION **and suggest two clarifying amendments.**

I greatly appreciate that my Representative Sean Quinlan introduced this bill as one of many steps to address a severe shoreline erosion problem on the North Shore of O‘ahu and to consider the statewide implications for public trust resources of these kinds of failing “bandaid” erosion control measures.

I have lived on the North Shore of O‘ahu since 1990, and for the first five years, I lived on Ke Iki Road, in the ‘Ehukai to Sunset area where the beaches have been heavily eroding for the past decade, threatening homes and impairing beach access, water quality, and recreation.

From living in the area, and walking, swimming, and snorkeling along these beach for years, I am familiar with the deteriorating shoreline conditions for these beachfront homes and the major shifts in sand movement from the seasonal swells, wind, and severe weather events. Climate change and sea level rise will only exacerbate all of the erosion trends we have witnessed in recent years.

I am also a member of the North Shore Coastal Resilience Working Group, an inter-agency, UH Sea Grant, NGO/community inclusive group started in 2021, which is studying this specific area and the issues discussed in the bill.

The UH study proposed by this bill is very important as one of many steps to address the severe erosion problem in this area and threats to public and private property.

This area has gone from one of the most spectacular scenic wide sand beaches in the State, with outstanding water quality, to a “**war zone**” of soft and hard erosion control measures, heavy equipment desperately sand pushing, “borrowing” sand (which belongs to the public trust) from stream mouths to protect private home frontage, the shocking blocking of public access points due to hazardous drop offs, sandbags, and obstruction, and debris from homeowners’ “temporary” erosion-control measures ending up in the nearshore waters.

The area is really a **disaster scene**. Here is a photo from this past weekend (January 30, 2022) of the erosion along the Ke Iki Road area near “Kammies” surf break. As you can see, the “burritos” can be ineffective, can block public access, and the collapsed deck of the house on the left indicates that either historic or new “band aid,” “sandbag,” or “burrito” measures will not protect these beachfront homes from the inevitable scouring that has now been set in motion by a domino effect of haphazard homeowner “remedies.” This is just one snapshot of the shoreline erosion tragedies that have beset this coastal area and caused substantial interference with public access and public trust resources.



This bill, if appropriately funded, will go a long way to assisting a number of ongoing efforts to come up with mitigation measures and solutions for this accelerated and tragic erosion problem.

May I suggest two clarifying amendments to assist the achieving the primary intent of the bill? First, the bill is too narrow in geographic and policy scope. It states “‘Ehukai Beach Park.” Not everyone is aware of the boundaries of ‘Ehukai Beach Park, which is a long shoreline park – and the boundaries are not transparently available to the public, even on the City web site. So this scope should be clarified for public understanding and to ensure the UH team appropriate scopes the study. In addition, the study needs clarify the type of impacts to study – that is, in my view, the impact on public trust resources, such as beach access, coastal water quality, and recreation. Please consider two clarifying amendments as follows:

Page 1, Lines 2-4 and Page 2, Lines 1-2: “to study the impact of sandbag walls, often referred to as “sand burritos,” on sand movement patterns and coastal erosion”

Amend (as underlined) to: “to study the impact of sandbag walls, often referred to as “sand burritos,” on sand movement patterns and coastal erosion, and on public trust resources, including beach access, coastal water quality, and recreation”

Page 1, Line 4 and Page 2, Line 2: “patterns and coastal erosion at Ehukai beach park.”

Amend (as underlined) to: “patterns and coastal erosion at Ehukai beach park, including from the shoreline area near Ke Iki Road to Sunset Beach.”

I appreciate your consideration and passage of this HB2229.

Mahalo,

Denise Antolini
Pūpūkea Resident