

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
KA 'OIHANA OLAKINO  
P. O. BOX 3378  
HONOLULU, HI 96801-3378  
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In reply, please refer to:  
File:

**Testimony COMMENTING on HB1691 HD1  
RELATING TO THE ENVIRONMENT**

SENATOR MIKE GABBARD, CHAIR  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

SENATOR JOY A. SAN BUENAVENTURA, CHAIR  
SENATE COMMITTEE ON HEALTH AND HUMAN SERVICES

Hearing Date: 3/13/2024

Room Number: 224

- 1 **Fiscal Implications:** None.
- 2 **Department Testimony:** The Department of Health (Department) acknowledges the intent of
- 3 this measure and offers comments. The Department concurs that decreasing or eliminating
- 4 pollutants and protecting nearshore waters and the coral reef systems are very important.
- 5 However, clarifications are required to provide the basis for the 200-foot setback from the
- 6 shoreline, provide the basis for the 1,500-foot above sea level and below zone, identify who will
- 7 determine whether the substrate is less than 5,000 years old, and identify who will determine
- 8 whether the soil has low nutrient holding capacity, low shrink and swell characteristics, and very
- 9 fast water permeability based on the Hawai'i Soil Atlas. Without the basis for the above
- 10 mentioned criteria, the Department will have difficulty justifying this requirement. Enforcing the
- 11 200-foot setback and 1,500-foot above sea level and below zone will require a licensed
- 12 surveyor, which will increase cost of design and installation of an individual wastewater system
- 13 (IWS). The Department, specifically the Wastewater Branch, does not have staff positions that
- 14 are qualified to determine whether the substrate is less than 5,000 years old and determine
- 15 whether the soil has low nutrient holding capacity, low shrink and swell characteristics, and very
- 16 fast water permeability based on the Hawai'i Soil Atlas. What will be required of properties and
- 17 property owners who have existing IWS that do not meet and/or cannot meet the above
- 18 mentioned requirements? These concerns and question need to be clarified and addressed before
- 19 this measure can be effectively implemented.

1 **Offered Amendments:** None.

2 Thank you for the opportunity to testify.

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

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



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

P.O. BOX 621  
HONOLULU, HAWAII 96809

Testimony of  
DAWN N. S. CHANG  
Chairperson

Before the Senate Committees on  
AGRICULTURE AND ENVIRONMENT  
and  
HEALTH AND HUMAN SERVICES

Wednesday, March 13, 2024  
1:02 PM

State Capitol, Conference Room 224 & Videoconference

In consideration of  
HOUSE BILL 1691, HOUSE DRAFT 1  
RELATING TO THE ENVIRONMENT

House Bill 1691, House Draft 1 proposes to require newly installed or modified individual wastewater systems that are near the shoreline, or likely to pollute groundwater, to include denitrification capacity. **The Department of Land and Natural Resources (Department) supports this bill.**

Clean nearshore waters are vital to both public health and the health of nearshore reefs and associated fisheries. Wastewater systems have the potential to pollute groundwater and nearshore waters by introducing elevated levels of contaminants such as nitrogen, phosphorus, and pathogens. A 2023 Hawai'i-based study<sup>1</sup> found that septic and cesspool pollution is a major driver of coral reef decline along the West Hawai'i coastline. When excess nutrients, such as nitrogen, from these wastewater systems enter nearshore waters, they stimulate the growth of algae, which can smother coral. Requiring denitrification capacity in wastewater systems that are near the shoreline or likely to pollute groundwater will reduce the amount of contaminants entering Hawai'i's nearshore waters and support more resilient coral reef ecosystems.

Mahalo for the opportunity to provide testimony in support of this measure.

<sup>1</sup> Gove, J.M., Williams, G.J., Lecky, J. *et al.* Coral reefs benefit from reduced land-sea impacts under ocean warming. *Nature* **621**, 536–542 (2023). <https://doi.org/10.1038/s41586-023-06394-w>

DAWN N. S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT  
RYAN K.P. KANAKA'OLE  
FIRST DEPUTY  
DEAN D. UYENO  
ACTING 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



# 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 Agriculture and Environment  
Senate Committee on Health and Human Services  
Wednesday, March 13, 2024 at 1:02 p.m.

By

Darren T. Lerner, PhD

Director, University of Hawai'i (UH) Sea Grant College Program  
School of Ocean and Earth Science and Technology

And

Thomas Giambelluca, PhD

Director, UH Water Resources Research Center

And

Michael Bruno, PhD

Provost

University of Hawai'i at Mānoa

#### HB 1691 HD1 – RELATING TO THE ENVIRONMENT

Chairs Gabbard and San Buenaventura, Vice Chairs Richards and Aquino, and Members of the Committees:

The University of Hawai'i Sea Grant College Program and UH Water Resources Research Center appreciate the positive intent behind HB 1691 HD1 while also identifying areas where **improvements can be made through suggested considerations or amendments.**

The impact of nutrient discharge from wastewater systems on coral reefs can be significant and long-lasting. Thus, implementing measures to mitigate excess nitrogen through denitrification is crucial for enhancing reef resilience, especially considering the ongoing impacts of climate change on coastal ecosystems. HB 1691 proposes requiring individual wastewater systems identified as high risk to nearshore waters to incorporate denitrification capacity.

**However, we urge careful consideration regarding specific requirements outlined in the bill. The stipulation regarding elevation thresholds, particularly the 1500 ft elevation delineation, seems arbitrary and could inadvertently encompass a disproportionately large fraction of Onsite Sewage Disposal Systems (OSDS) in the state.** Given that a significant portion of Hawai'i's population resides below this elevation, we recommend a more nuanced approach based on a scientifically sound methodology. Additionally, the current soil characteristic requirements lack clarity, potentially leading to inconsistent interpretation and implementation of the law.

**Moreover, it's important to note that the majority of the State's shorelines are experiencing erosion, which may impact the viability of new, stationary, and costly systems within decades.** While it's essential to mitigate harmful nutrients reaching shorelines from inadequate sewage treatment, implementing measures in this manner could add undesired complexity to sea-level rise-related management options, such as managed relocation.

**To address these concerns, we propose striking the criteria outlined in subsections 1) and 2), pertaining to shoreline location, elevation, substrate age, and soil characteristics. Instead, we recommend utilizing the "Priority 1 cesspools" identification from the University of Hawai'i's most recent cesspool hazard assessment and prioritization tool.**

While this tool was not specifically designed to identify areas that would benefit from additional denitrification capacity, it does consider fifteen site-specific risk factors that control the movement of pollution, reduce capacity, or otherwise affect the overall level of impact onsite sewage disposal has on the land and also the water quality nearby. These include proximity to drinking water sources, distance to streams and wetlands, and sea-level rise zones, among others. This adjustment maintains the bill's intent while addressing practical considerations.

**However, we acknowledge that this tool only tangentially identifies areas that would benefit from additional denitrification. Therefore, we suggest recommending and potentially allocating funding to conduct a more focused analysis to develop evidence-based thresholds that strike a reasonable balance between cost and benefit.** Such an analysis could involve compiling and consolidating percolation tests, estimating groundwater travel time, and other relevant factors.

Thank you for considering our input on this matter. We appreciate the opportunity to contribute to the legislative process.



**Testimony of the  
Hawai'i State Association of Counties**

H.B. No. 1691 H.D.1

**Relating to the Environment.**  
Committee on Agriculture and Environment  
Committee on Health and Human Services

Wednesday, March 13, 2024, 1:02 p.m.

The Hawai'i State Association of Counties supports H.B. No. 1691, H.D.1, which requires denitrification capacity to be included in a newly installed or modified individual wastewater system located within two hundred feet of the shoreline, or located below one thousand five hundred feet above sea level, with:

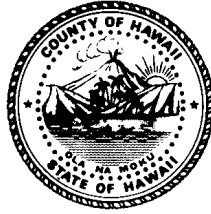
- Substrate less than 5,000 years old;
- Soil with low nutrient holding capacity and fast water permeability; and
- Which are likely to pollute groundwater.

The discharge of nutrients from wastewater systems can significantly affect our coral reefs. We acknowledge the concern raised by the UH Sea Grant College Program that specific elevation and soil characteristics requirement may be “arbitrary and could ...encompass a disproportionately large fraction of Onsite Sewage Disposal Systems...”, and acknowledge that the University of Hawai'i Priority 1 cesspools assessment and prioritization tool may be the more appropriate criteria to be used.

Hawai'i's groundwater is an invaluable resource which requires protection and needs more than arbitrary standards to evaluate the resource.

For these reasons the Hawai'i State Association of Counties supports H.B. 1691, H.D.1, and requests your favorable consideration of this measure.

**HEATHER L. KIMBALL**  
**COUNCIL CHAIR**  
Council District 1 (North Hilo,  
Hāmākua, and portion of Waimea)



Phone: (808) 961-8828  
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## **HAWAI‘I COUNTY COUNCIL**

25 Aupuni Street, Ste. 1402.  
Hilo, Hawai‘i 96720

March 12, 2024

Senate Committee on Agriculture and Environment  
Honorable Senator Mike Gabbard, Chair  
Honorable Senator Herbert M. “Tim” Richards, III, Vice Chair

Senate Committee on Health and Human Services  
Honorable Senator Joy A. San Buenaventura, Chair  
Honorable Senator Henry J.C. Aquino, Vice Chair

**RE: Support for HB 1691, HD1**

Dear Chair Gabbard, Vice Chair Richards, Chair San Buenaventura, and Vice Chair Aquino and Members of the Committees on Agriculture and Environment, and Health and Human Services:

As the Chair of the Hawai‘i County Council, I thank you for the opportunity to submit testimony in **SUPPORT of HB 1691, HD1**, along with proposed amendments, relating to the environment.

The study published in Nature in 2023 “Coral reefs benefit from reduced land–sea impacts under ocean warming”, clearly indicated that pollution from cesspools present a major threat to the wellbeing of our nearshore waters. Furthermore, it indicates that certain substrates septic leech fields are no better than cesspools as far as releasing contaminants into the environment. HB 1691 would require denitrification capacity for septic systems in these substrates, which would help reduce the nutrient released into nearshore waters.

In Miloli‘i on Hawai‘i Island, home of the last Hawaiian fishing village and adjacent to the community-based subsistence fishing area, the substrate is a porous, young lava flow. Just above this area is a 900-lot subdivision with approximately 200 lots developed. This is an example of an area where HB 1691 would apply. This bill gives us a chance to get ahead of the issue while this critical reef area is still in good condition.

In previous hearings there have been questions raised about how the age of the substrate could be determined and which agency would provide enforcement on this consideration. We propose that HB1691 be amended to utilize a hydraulic conductivity rate of 3000 ft or greater per day<sup>1</sup>.

Chair Gabbard  
Vice Chair Richards  
Chair San Buenaventura  
Vice Chair Aquino  
March 12, 2024  
Page 2

I urge that this committee to continue to improve and move HB 1691 through the legislative process. I am certain we can come to a final bill that will be amenable to all involved. Thank you for the opportunity to submit this testimony. If you would like to discuss my knowledge of this matter further, please do not hesitate to contact me directly.

Sincerely,



HEATHER L. KIMBALL

1. Whittier, R. B., & El-Kadi, A. I. (September 2014). Human health and environmental risk ranking of on-site sewage disposal systems for the Hawaiian Islands of Kauai, Molokai, Maui, and Hawaii. Final report. Prepared for State of Hawai'i Department of Health, Safe Drinking Water Branch. Principal Investigator: Aly I. El-Kadi. School of Ocean and Earth Science and Technology, Department of Geology and Geophysics, University of Hawai'i at Mānoa, Honolulu, Hawai'i 96822.





To: The Honorable Senators Mike Gabbard and Joy San Buenaventura, Chairs, the Honorable Senators Tim Richards, III, and Henry Aquino, Vice Chairs, and Members of the Committees on Agriculture and Environment and Health and Human Services.

From: Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

**Re: Hearing HB1691 HD1 RELATING TO THE ENVIRONMENT**

Hearing: Wednesday March 13, 2024 1:02 p.m.

Aloha Chairs Gabbard and San Buenaventura, Vice Chairs Richards and Aquino, and Members of the Committees on Agriculture and Environment and Health and Human Services:

The Hawai'i Reef and Ocean Coalition (HIROC) is a group of scientists, educators, filmmakers and environmental advocates who have been working since 2017 to protect Hawaii's coral reefs and ocean. HIROC is deeply concerned about nitrogen pollution from individual wastewater systems in certain areas that fertilize algae and smother and kill coral reefs.

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**The Hawai'i Reef and Ocean Coalition STRONGLY SUPPORTS HB1691 HD1 and proposes an amendment!**

Nutrient pollution from individual wastewater systems is harming our precious coral reefs and public health! Nutrients, particularly nitrogen, generally are not removed sufficiently by conventional septic systems. The release of **nutrients** from individual wastewater systems through groundwater and streams into the ocean causes algae growth, which can **smother the coral reefs that are essential to protecting our shorelines, nurturing our fisheries, preserving water quality, and enabling our lucrative recreational economy. Hawaii's coral reefs will die in warmer, more acidic, and rising oceans if we don't reduce nutrient pollution!**

This bill recognizes that individual wastewater systems are especially harmful in certain locations, such as near to the shoreline or areas where they are likely to pollute groundwater. The bill would **require denitrification capacity for newly installed or modified individual wastewater systems located 200 feet or less from the shoreline** or at or below 1,500 altitude with poor soils, where the substrate is less than 5,000 years old, and the soils have low nutrient holding capacity, low shrink and swell characteristics, and very fast permeability **based on the Hawaii Soil Atlas**. In those areas, individual wastewater systems should have denitrifying capacity. The bill defines "denitrifying capacity" based on the National Sanitation Foundation and the American National Standards Institute nationally used "NSF/ANSI 245" standard for on-site residential wastewater treatment. **This standard requires 50% reduction for total nitrogen. It is widely used to meet the growing demand for nutrient reduction in coastal areas and sensitive environments.** Areas with fractured rock, such as in parts of Hawai'i Island, contribute excessively to nutrient runoff. Septic systems in such areas, coastal areas, and sensitive environments should have denitrifying capacity to help save our reefs.

This bill could be enforced by DOH, which reviews new and modified septic system applications as part of the county building permit approval.

**The bill should be amended to add a definition of "shoreline." Please add after the word "shoreline" in Section 2(a)(1):**

**". Shoreline" means the upper reaches of the wash of the waves, other than storm and seismic waves, at high tide during the season of the year in which the highest wash of the waves occurs, usually evidenced by the**

**edge of vegetation growth, or the upper limit of debris left by the wash of the waves.”**

**Please pass this bill with this clarifying amendment to protect our coral reefs from nutrient pollution by requiring denitrifying capacity for newly installed or modified individual wastewater systems near the shore or in areas where they are likely to pollute groundwater!**

Mahalo!

Hawai'i Reef and Ocean Coalition (by Ted Bohlen)



March 12, 2024

In Support of **HB1691 HD1** Relating to the Environment  
Sen. Committees on Agriculture & the Environment (AEN) and Health & Human Serv. (HHS)  
Hearing on March 13, 1:00pm, Rm. 224

Aloha, Chairs Gabbard & San Buenaventura, Vice-Chairs Richards & Aquino and Committee Members:

On behalf of the non-profit WAI: Wastewater Alternatives & Innovations and the Cesspool Legislative Task Force, I am writing in **strong support of HB1691 HD1**. This bill would require individual wastewater systems (IWS) to do denitrification and reduce nutrient pollution in nearshore areas with pool soil health in order to protect declining coral reefs.

Hawaii has more than 83,000 cesspools across the state, discharging 52 million gallons of raw sewage each day into Hawaii's waters. That's similar to a massive sewage spill every day! Along with threats to public health and drinking water resources, new research shows that this polluted wastewater poses significant harm to coral reefs and the near-shore environment. The people of Hawaii need this law to protect coral reefs and make sure their wastewater systems aren't polluting the groundwater or nearby surface waters. This pollution threatens our environment, public health and our economy, damaging Hawaii's reputation as a world class destination with pristine waters.

As an amendment, we recommend that the denitrification follow the guidelines set by NSF 245, which requires that IWS do a minimum of 50% nitrogen reduction. This will be crucial in areas that are near the coast and where there is only porous volcanic rock and very little healthy soils. New research published last August in Nature shows that the wastewater nutrients from cesspools and septic systems near the coast are killing coral reefs. As I wrote in my article in [Hawaii Business Magazine](#), the decline of our coral reefs poses serious threats to Hawaii's near-shore ecosystem, the visitor industry, our economy and our natural protection against major storms and flooding events.

WAI is an environmental non-profit dedicated to protecting our drinking water, groundwater and near-shore ecosystems by reducing sewage pollution from cesspools and failing septic systems. Our goal is to help find more innovative, affordable, and eco-friendly solutions to wastewater management and help homeowners with the conversion process. Better sanitation systems reduce sewage and nutrient pollution and make properties more valuable, while also protecting public health and valuable natural resources like groundwater, streams, coral reefs and coastal areas.

Hawaii is struggling with serious sewage pollution problems, and the state has a mandate to make sure all cesspools are converted in the next three decades. This bill will provide widely available technical solutions that will protect our coral reefs, our groundwater and our nearshore ecosystems. As an amendment, we recommend clearer guidelines for where to do denitrification, starting with Priority 1 Areas established by DOH. Mahalo for your leadership and support of this bill.

Aloha,  
*Stuart Coleman*  
Stuart H. Coleman, Executive Director

March 13, 2024

**The Honorable Mike Gabbard, Chair**

Senate Committee on Agriculture and Environment

**The Honorable Joy A. San Buenaventura, Chair**

Senate Committee on Health and Human Services  
State Capitol, Conference Room 224 & Videoconference

**RE: House Bill 1691, HD1, Relating to the Environment**

**HEARING: Wednesday, March 13, 2024, at 1:02 p.m.**

Aloha Chair Gabbard, Chair San Buenaventura, and Members of the Joint Committees:

My name is Lyndsey Garcia, Director of Advocacy, testifying on behalf of the Hawai'i Association of REALTORS® ("HAR"), the voice of real estate in Hawaii and its over 11,000 members. HAR provides **comments** on House Bill 1691, HD1, which requires newly installed or modified individual wastewater systems that are near the shoreline, or likely to pollute groundwater, to include denitrification capacity. Effective 7/1/3000.

HAR supports the goal of protecting our drinking water, streams, ground water, and ocean resources. However, for the average homeowner, determining whether they would need denitrification capacity when installing an individual wastewater system would be very challenging under this measure. A homeowner would need to determine if their property is situated within 200 feet of a shoreline. Or, determine if their property is at or below 1,500 feet above sea level; with substrate less than 5,000 years old; and soil exhibiting low nutrient retention, minimal shrinkage and swelling, and rapid water permeability, as indicated by the Hawaii Soil Atlas.

Moreover, the cost to install denitrification capacity can be thousands of dollars which may be cost-prohibitive for homeowners. We have an existing mandate to convert 83,000 cesspools in the state to a DOH approved wastewater system by 2050 which is challenging for homeowners to meet due to high costs as well as other factors. The Cesspool Conversion Working Group conducted an affordability analysis<sup>1</sup> for homeowners. Based on the analysis, 97% of homeowners would be financially burdened by cesspool conversion costs. Equally concerning, even with a \$10,000 rebate 82% of homeowners would still be financially burdened. Costs will vary greatly depending on resources, labor, permitting delays, property terrain, and other variables. This measure will add further costs for homeowners who may need to convert to a DOH approved wastewater system that requires denitrification capacity.

Mahalo for the opportunity to testify on this measure.

<sup>1</sup> Cesspool Conversion Working Group. (2022). *Final Report to the 2023 Regular Session Legislature*. State of Hawai'i Department of Health. <https://health.hawaii.gov/opppd/files/2022/12/Act-170-SLH-2019-Nov-2022.pdf>



3/12/2024

AEN/HHS Committees  
Hawai'i State Capitol  
Honolulu, Hawai'i 96813

Dear Chair Gabbard, Chair San Buenaventura, and Members of the Senate Committees on Agriculture and Environment and Health and Human Services

**Position: Support 1691 - Denitrification Near Shore and Poor Soils**

The Surfrider Foundation, Hawai'i region, is testifying in **strong support of HB1691** that would require individual wastewater systems (IWS) to do denitrification and reduce nutrient pollution in nearshore areas with pool soil health in order to protect declining coral reefs.

*As an amendment*, we recommend that the denitrification follow the guidelines set by NSF 245, which requires that IWS do a minimum of 50% nitrogen reduction. This will be crucial in areas that are near the coast and where there is only porous volcanic rock and very little healthy soils. New research published last August in Nature shows that the wastewater nutrients from cesspools and septic systems near the coast are killing coral reefs. The decline of our coral reefs poses serious threats to Hawaii's near-shore ecosystem, our economy and our natural protection against major storms and flooding events.

With an estimated 83,000 cesspools, Hawai'i has one of the highest per capita number of cesspools in the nation. This bill will provide widely available technical solutions that will protect our coral reefs, our groundwater and our nearshore ecosystems. As an amendment, we recommend clearer guidelines for where to do denitrification, starting with Priority 1 Areas established by DOH.

Surfrider Foundation maintains a citizen-science water quality monitoring program called the Blue Water Task Force (BWTF) on Kaua'i, Maui, and O'ahu that tests for enterococcus, a fecal indicator bacteria. Since 2018, the O'ahu BWTF has been monitoring water quality in Kāne'ohe bay at Kahalu'u due to the high concentration of coastal cesspools in this area. Due to these cesspools, the water near and around Kahalu'u regularly exceeds state public health standards. Without solutions like those proposed in HB1691, we will continue to pollute our coastal and freshwaters, threatening both environmental and public health.

Thank you for your consideration of this testimony in support of HB1691, submitted on the behalf of the Surfrider Foundation's 3 Chapters in Hawai'i and all of our members who live in the state and visit to enjoy the many coastal recreational opportunities offered by all of the islands' coastlines.

Sincerely,

Lauren Blickley  
Hawai'i Regional Manager  
Surfrider Foundation

**HB-1691-HD-1**

Submitted on: 3/8/2024 5:53:24 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>            |
|---------------------|---------------------|---------------------------|---------------------------|
| Douglas Perrine     | Individual          | Support                   | Written Testimony<br>Only |

Comments:

Denitrification is essential for any wastewater system that releases effluent likely to enter nearshore ocean waters. Nitrogen is the primary pollutant that feeds the growth of invasive algae that smothers the live corals on our reefs, and in particular prevents corals from recovering from bleaching events that are becoming ever more common with global warming. Inducing residents to spend tens of thousands of dollars converting to septic systems without denitrification capacity is both a crime against the environment and a financial fraud against our citizens. Please pass HB1691.

**HB-1691-HD-1**

Submitted on: 3/9/2024 10:34:48 AM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>            |
|---------------------|---------------------|---------------------------|---------------------------|
| Hilary Smith        | Individual          | Support                   | Written Testimony<br>Only |

Comments:

I strongly support this bill! Hawaii is in big trouble if we let our coral reefs experience any more stress, damage, and pollution than they are already being subjected to. Instead, we need to reduce the stress on our reefs through a variety of measures, including protecting them from cesspool sewage. Thanks!



**HB-1691-HD-1**

Submitted on: 3/9/2024 1:00:17 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b>   | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>            |
|-----------------------|---------------------|---------------------------|---------------------------|
| Jacqueline S. Ambrose | Individual          | Support                   | Written Testimony<br>Only |

Comments:

Aloha,

Requires newly installed or modified individual wastewater systems that are near the shoreline, or likely to pollute groundwater, to include denitrification capacity

**HB-1691-HD-1**

Submitted on: 3/10/2024 5:26:28 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>            |
|---------------------|---------------------|---------------------------|---------------------------|
| Mark Hixon          | Individual          | Support                   | Written Testimony<br>Only |

Comments:

Aloha: As a professional marine biologist, I urge you to pass HB 1691 and all bills designed to avert our cesspool disaster. The scientific reality is clear: If Hawai'i is to have healthy coral reefs that protect our coasts from sea-level rise and erosion, feed us, and provide us income, recreation, tourism, and spiritual connection, then we must curtail the leaching of cesspool waters into our coastal ocean. There is no free lunch regarding this issue. If we don't invest in cleaning our coastal waters to save our reefs, our children and grandchildren will never forgive us. Mahalo--Mark Hixon (Honolulu)

**COUNTY COUNCIL**

Mel Rapozo, Chair  
KipuKai Kualii, Vice Chair  
Addison Bulosan  
Bernard P. Carvalho, Jr.  
Felicia Cowden  
Bill DeCosta  
Ross Kagawa



**OFFICE OF THE COUNTY CLERK**

Jade K. Fountain-Tanigawa, County Clerk  
Lyndon M. Yoshioka, Deputy County Clerk

Telephone: (808) 241-4188  
Facsimile: (808) 241-6349  
Email: [cokcouncil@kauai.gov](mailto:cokcouncil@kauai.gov)

**Council Services Division**  
4396 Rice Street, Suite 209  
Lihu'e, Kaua'i, Hawai'i 96766

March 11, 2024

TESTIMONY OF ADDISON BULOSAN  
COUNCILMEMBER, KAUAI COUNTY COUNCIL  
ON  
HB 1691, HD 1, RELATING TO THE ENVIRONMENT  
AND  
HB 1759, HD1, RELATING TO CESSPOOLS  
AND  
HB 1892, HD2, RELATING TO CESSPOOLS  
Senate Committee on Agriculture and Environment  
Senate Committee on Health and Human Services  
Wednesday, March 13, 2024  
1:02 p.m.  
Conference Room 224  
Via Videoconference

Dear Chair Gabbard, Chair San Buenaventura, and Members of the Committees:

Thank you for this opportunity to provide testimony in SUPPORT of HB 1691, HD 1, Relating to the Environment; HB 1759, HD 1, Relating to Cesspools; and HB 1892, HD 2, Relating to Cesspools. My testimony is submitted in my individual capacity as a member of the Kaua'i County Council.

I wholeheartedly support the intent of HB 1691, HD 1; HB 1759, HD 1; and HB 1892, HD 2, which would greatly affect the Kaua'i community.

Thank you again for this opportunity to provide testimony in support of HB 1691, HD 1; HB 1759, HD 1; and HB 1892, HD 2. Should you have any questions, please feel free to contact me or Council Services Staff at (808) 241-4188 or via email to [cokcouncil@kauai.gov](mailto:cokcouncil@kauai.gov).

Sincerely,

ADDISON BULOSAN  
Councilmember, Kaua'i County Council

AAO:slr

**HB-1691-HD-1**

Submitted on: 3/11/2024 12:34:26 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>            |
|---------------------|---------------------|---------------------------|---------------------------|
| Betsy Scolnik       | Individual          | Support                   | Written Testimony<br>Only |

Comments:

SUPPORT!!

**HB-1691-HD-1**

Submitted on: 3/11/2024 3:53:07 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>            |
|---------------------|---------------------|---------------------------|---------------------------|
| Eva Majerova        | Individual          | Support                   | Written Testimony<br>Only |

Comments:

With all the wastewater regularly leaking into the ocean, it is important to maximize the protection of the coastal reef environment.

**HB-1691-HD-1**

Submitted on: 3/11/2024 6:05:21 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>            |
|---------------------|---------------------|---------------------------|---------------------------|
| Uilani Naipo        | Individual          | Support                   | Written Testimony<br>Only |

Comments:

I thank you for for the amendments made in HD1 and am in SUPPORT of this measure.

- U'ilani Naipo

**HB-1691-HD-1**

Submitted on: 3/12/2024 11:23:02 AM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>         |
|---------------------|---------------------|---------------------------|------------------------|
| Arianna Feinberg    | Individual          | Support                   | Written Testimony Only |

Comments:

Dear Senators,

I am writing in strong support of HB1691. Nitrogen pollution from cesspools and septic tanks are detrimental to the health of Hawaii's people and coral reefs. In areas near the ocean, we need to require denitrification of wastewater. We can mitigate the harm to coral reefs from climate change by ensuring that we are not adding too much nitrogen to the ocean from cesspools and septic tanks.

Thanks,

Arianna Feinberg

Makawao, Maui

**HB-1691-HD-1**

Submitted on: 3/12/2024 11:31:25 AM

Testimony for AEN on 3/13/2024 1:02:00 PM

| Submitted By  | Organization | Testifier Position | Testify                |
|---------------|--------------|--------------------|------------------------|
| Sophia Morgan | Individual   | Support            | Written Testimony Only |

Comments:

Aloha AEN Chair Gabbard and Vice Chair Richards and HHS Chair San Buenaventura and Vice Chair Aquino,

I write in **strong support of HB 1691 HD1**. This bill would require individual wastewater systems (IWS) to do denitrification and reduce nutrient pollution in nearshore areas with pool soil health in order to protect declining coral reefs.

This bill is vital to help ensure the State of Hawai‘i achieves its mandate to convert all cesspools by 2050. Hawai‘i has more than 83,000 cesspools across the state, discharging 52 million gallons of raw sewage each day into Hawai‘i’s waters. That’s similar to a massive sewage spill every day. Around half of these cesspools pose a risk to water resources.

Cesspool discharge directly impacts human health by contaminating drinking water or waters used for swimming, exposing the citizens of Hawai‘i to sewage pathogens. Untreated wastewater from cesspools contains pathogens such as bacteria, protozoa and viruses that can cause gastroenteritis, Hepatitis A, conjunctivitis, leptospirosis, salmonellosis and cholera.

The threat of discharge also extends directly to the environment. A 2023 Hawai‘i-based study published by Nature found that septic and cesspool pollution is a major driver of coral reef decline. The release of nutrients from cesspools through groundwater and streams into the ocean causes algae growth, which can smother the coral reefs that are essential to protecting our shorelines, nurturing our fisheries, preserving water quality and enabling our lucrative recreational economy.

Cesspools are also a social justice issue here in Hawai‘i. The Association of Hawaiian Civic Clubs, a Native Hawaiian advocacy group and large organization, passed a resolution in 2023 recommending that the legislature fund a grant program to convert cesspools. The resolution notes that cesspools are prevalent in low-income, rural communities in which Native Hawaiians live. The large costs of cesspool conversion thus can exacerbate the issue of Native Hawaiians moving to the mainland because of economic constraints.

Mahalo nui loa for your time and consideration of my testimony!

Best regards, Sophia Morgan





**HB-1691-HD-1**

Submitted on: 3/12/2024 4:13:15 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| Submitted By  | Organization | Testifier Position | Testify                   |
|---------------|--------------|--------------------|---------------------------|
| Eileen Hilton | Individual   | Support            | Written Testimony<br>Only |

Comments:

The Windward Coalition supports **HB 1691** Implementing denitrification capacity in newly installed or modified individual wastewater systems near shorelines or prone to groundwater pollution. We believe that effective implementation will result in:

- **Ecosystem Protection:** It is crucial near shorelines where excess nitrogen can lead to harmful algal blooms, eutrophication, and damage to aquatic ecosystems including coral reefs.
- **Protection of Water Quality:** Denitrification can help maintain/improve the overall water quality of nearby surface waters and groundwater sources especially in areas where drinking water supplies or recreational activities depend on clean water.
- **Long-term Cost Savings:** Although initial installation/modification costs may be higher, significant long-term savings can be significant mitigating costs of cleanup and restoration efforts.
- **Public Health Benefits:** Improved water quality can have positive impacts on public health by reducing the risks of waterborne illnesses and contamination of food sources from polluted water bodies.

Mahalo,

Eileen Hilton, MD

President

Windward Coalition

**HB-1691-HD-1**

Submitted on: 3/12/2024 4:15:21 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>         |
|---------------------|---------------------|---------------------------|------------------------|
| Leonard Rossoff     | Individual          | Support                   | Written Testimony Only |

Comments:

I support HB 1691 implementing denitrification capacity in newly installed or modified individual wastewater systems near shorelines or prone to groundwater pollution is extremely important . It can provide for:

- Improved Public Health Benefits by reducing the risks of water contamination and waterborne illnesses.
- Ecosystem Protection by reducing damage to water ecosystems including our coral reefs.
- Protection of Water Quality especially in areas where drinking water and recreational activities depend on clean water.
- Long-term Cost Savings as an ounce of prevention can significantly reduce future cleanup and restoration efforts.

L.J. Rossoff, MD

Kaneohe

**HB-1691-HD-1**

Submitted on: 3/12/2024 4:27:22 PM

Testimony for AEN on 3/13/2024 1:02:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Testify</b>         |
|---------------------|---------------------|---------------------------|------------------------|
| GWEN YOUNG          | Individual          | Support                   | Written Testimony Only |

Comments:

Aloha all,

As a resident, waterwoman, environmental volunteer, and a water quality tester for Surfrider Foundation, I see the results of cesspools that release inappropriate affluent into our streams and water ways.

We critically need Cesspool Conversions that require denitrifying capacity for individual wastewater systems that are near waters or likely to pollute. Nitrogen released results in dead zones in waterways and can also lead to rapid algae bloom that creates a toxic environment for the species that reside there.

Thank you,

Gwen Young