



UNIVERSITY OF HAWAII SYSTEM

‘ŌNAEHANA KULANUI O HAWAII

Legislative Testimony

Hō'ike Mana'o I Mua O Ka 'Aha'ōlelo

Testimony Presented Before the
House Committee on Higher Education
Wednesday, February 12, 2025 at 2:00 p.m.

By

Tao Yan, PhD

Director, Water Resources Research Center

And

Michael Bruno, Provost

University of Hawai'i at Mānoa

HB 736 HD1 – RELATING TO WASTEWATER SYSTEMS

Chair Garrett, Vice Chair Amato, and Members of the Committee:

The University of Hawai'i Water Resources Research Center (UH Mānoa WRRC) supports the intent of HB 736 HD1. This legislation proposes to establish a pilot program to evaluate and demonstrate new wastewater technologies and appropriate funding to address the critical issue of cesspool conversion in Hawai'i. The estimated total costs are \$745,325 for the three years.

The UH Mānoa WRRC is committed to implementing the pilot program should adequate funds be appropriated. UH Mānoa WRRC has extensive technical expertise in wastewater management, and has been instrumental in supporting the evaluation and demonstration of new wastewater technologies. Therefore, UH Mānoa WRRC is well-positioned to lead the technical aspects of this project, ensuring that the pilot program is executed with scientific rigor and practical effectiveness. We welcome the opportunity to take on this role and collaborate with relevant stakeholders to advance wastewater solutions in Hawai'i.

We strongly support the appropriation of funds for the UH Mānoa WRRC to establish and implement this pilot program, including necessary infrastructure, equipment, and administrative support, provided its adoption does not impact priorities as indicated in our Board of Regents Approved Budget.

Thank you for the opportunity to testify on this measure.

JOSH GREEN, M.D.
GOVERNOR
STATE OF HAWAII
*Ke Kia'āina o ka Moku'āina 'o
Hawai'i*

SYLVIA J. LUKE
LT. GOVERNOR
STATE OF HAWAII
*Ka Hope Kia'āina o ka Moku'āina
'o Hawai'i*



KALI WATSON
CHAIRPERSON, HHC
Ka Luna Ho'okele

KATIE L. LAMBERT
DEPUTY TO THE CHAIR
Ka Hope Luna Ho'okele

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
Ka 'Oihana 'Āina Ho'opulapula Hawai'i

P. O. BOX 1879
HONOLULU, HAWAII 96805

TESTIMONY OF KALI WATSON, CHAIR
HAWAIIAN HOMES COMMISSION
BEFORE THE HOUSE COMMITTEE ON HIGHER EDUCATION
HEARING ON FEBRUARY 12, 2025 AT 2:00PM IN CR 309

HB 736, HD 1, RELATING TO WASTEWATER SYSTEMS

February 11, 2025

Aloha Chair Garrett, Vice Chair Amato, and Members of the Committee:

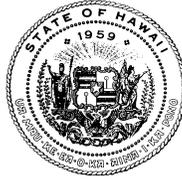
The Department of Hawaiian Home Lands (DHHL) **supports** this bill which 1) establishes and appropriates funds for a three-year new wastewater system and individual wastewater system technology testing pilot program within the University of Hawaii Water Resources Research Center and 2) requires interim and final reports to the Legislature.

Approximately 2,500 cesspools exist on Hawaiian Home Lands. Pursuant to Act 125 (SLH 2017), these cesspools are required to be converted to a septic system or aerobic treatment unit system or connected to a sewerage system before January 1, 2050.

DHHL supports the establishment of a three-year new wastewater system and individual wastewater system technology testing pilot program within the University of Hawaii Water Resources Research Center because it will provide the opportunity to test new wastewater technology systems and review and evaluate the affordability, feasibility, and efficiency of the treatment technologies for DHHL, current lessees residing on Hawaiian Home Lands, and potential beneficiaries to understand the challenges and financial costs of cesspool conversions and wastewater technologies.

DHHL understands that there is no simple, one method fits all ahupua'a (land division) solution toward addressing the cesspool conversion and wastewater needs of the State of Hawaii and we stand ready to work collaboratively on this issue.

Thank you for your consideration of our testimony.



STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P. O. Box 3378
Honolulu, HI 96801-3378
doh.testimony@doh.hawaii.gov

**Testimony in SUPPORT of HB0736 HD1
RELATING TO WASTEWATER SYSTEMS.**

REPRESENTATIVE ANDREW TAKUYA GARRETT, CHAIR
HOUSE COMMITTEE ON HIGHER EDUCATION

February 12, 2025; 2:00 pm; Room Number: 309

1 **Fiscal Implications:** The Department of Health (“Department”) requests that this measure be
2 considered as a vehicle to provide this needed funding so long as it does not supplant the
3 priorities and requests outlined in the Governors executive budget request.

4 **Department Position:** The Department supports this measure.

5 **Department Testimony:** The Environmental Management Division Wastewater Branch
6 (EMD-WWB) provides the following testimony on behalf of the Department.

7 The Department supports this measure “to facilitate the certification of new wastewater
8 technologies in Hawaii that could reduce the costs of cesspool conversions by establishing and
9 appropriating funds for a new wastewater system technology testing pilot program within the
10 university of Hawaii water resources research center.”

11 **Offered Amendments:** None

12 Thank you for the opportunity to testify on this measure.

Josh Green
GOVERNOR OF HAWAII



Co-Chairs:
Chair, DLNR
Director, OPSPD

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

LATE

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

Testimony of
LEAH LARAMEE
Climate Change Coordinator on behalf of
Climate Change Mitigation and Adaptation Commission Co-Chair Mary Alice Evans and
Co-Chair Dawn N.S. Chang

Before the House Committee on
HIGHER EDUCATION

Wednesday, February 12, 2025
2:00 PM

State Capitol, Conference Room 309 & Videoconference

In consideration of
HOUSE BILL 736 HOUSE DRAFT 1
RELATING TO WASTEWATER SYSTEMS

House Bill 736 House Draft 1 establishes and appropriates funds for a three-year new wastewater system and individual wastewater system technology testing pilot program within the University of Hawaii Water Resources Research Center and requires interim and final reports to the Legislature. **The Hawai'i Climate Change Mitigation and Adaptation Commission (Commission) supports this bill provided that its passage does not replace or adversely impact priorities indicated in the Executive Budget request.**

The Hawai'i Climate Change Mitigation and Adaptation Commission consists of a multijurisdictional effort between 20 different departments, committees, and counties. Removal of cesspools for all properties within the Sea Level Rise Exposure Area (SLR-XA), is imperative to the health of nearshore waters and for members of the public accessing coastal resources. Removal may not be achievable by 2050 as directed by state law without viable alternatives for replacement. The Commission's 2022 update to the *Sea Level Rise Vulnerability and Adaptation Report* Recommended Action 6.1.1 states that the state should sponsor research and development efforts to expand affordable and actionable conversion options for shoreline property owners and options should account for SLR-XA projections of coastal erosion and associated land loss, and potential failure of sewage treatment systems due to sea level rise groundwater inundation. Cesspools in the coastal zone will be an increasing source of nonpoint source pollution as groundwater rises and coastal erosion accelerates. The *Sea Level Rise Vulnerability and Adaptation Report* Recommended Action 6.4 urges the state to expand policy directives beyond the existing income tax credits and requirement for removal by 2050. Specifically, policy must

address existing cesspools in the coastal zone in relation to enforcement of existing laws and regulations and removal of unpermitted shoreline hardening.

Connection to sewer lines is not always feasible and septic tanks while preferred to cesspools are not a perfect alternative. New innovative wastewater treatment systems designed for Hawai'i's unique landscape that are cost effective and protect our waters are needed. This bill will provide funding to ground truth this technology.

Mahalo for the opportunity to testify in support of this measure.



To: The Honorable Chair Andrew Takuya Garrett, the Honorable Vice Chair Terez Amato, and Members of the Committee on Higher Education.

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

Re: Hearing **SB736 HD1 RELATING TO WASTEWATER SYSTEMS**

Hearing: Wednesday February 12, 2025, 2:00 p.m. Rm. 309

Aloha Chair Garrett, Vice Chair Amato, and Members of the Committee on Higher Education:

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.

The Hawai'i Reef and Ocean Coalition STRONGLY SUPPORTS SB736 HD1!

There are about 83,000 cesspools in Hawaii that are dumping about 50 million gallons **every day** into Hawaii's groundwater, drinking water, streams, and ocean and harming our coral reefs. By law (the mandate of section 342D-72, Hawaii Revised Statutes), all 83,000 cesspools must be upgraded to a system approved by the Department by 2050.

Cesspool upgrades are expensive. The cost depends on site-specific conditions, but the cost to convert a cesspool to a septic system or an aerobic treatment unit system is often over \$30,000. We need to try to find ways to **make upgrades more affordable** to homeowners and governments.

At a time when many residents of Hawaii are struggling to make ends meet, our State has an excellent opportunity to **save cesspool owners and governments money by introducing new wastewater technologies**. There are new wastewater technologies in cluster sewers, in individual wastewater systems, and in other wastewater systems that **can potentially reduce the costs of cesspool upgrades substantially without harming water quality and protect coral reefs by reducing nutrients**.

The Department of Health must certify the new technology systems. The Department does not have sufficient resources and expertise to perform those certifications promptly and effectively, however.

The University of Hawaii's Water Resources Research Center (WRRC) has previously had a testing program for wastewater systems. **Guidance and studies by a revived UH WRRC testing program for new technologies can facilitate and accelerate DOH's certification of new technologies. The cost of the testing program is modest (estimated at \$745,000 million over three years) and the benefits in reducing costs will be many times larger.**

The bill funds a three-year pilot program to test wastewater systems and individual wastewater systems technology at UH WRRC. UH WRRC, in coordination with other departments at UH, DOH, county agencies and others will review, document, and evaluate the affordability, feasibility, and efficiency of treatment technologies, perform tests and studies and submit results to the Department.

This bill will enable Hawaii to achieve its goal of upgrading cesspools MORE AFFORDABLY without compromising water quality.

Please pass this bill!

Mahalo!

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

HB-736-HD-1

Submitted on: 2/10/2025 12:30:35 PM

Testimony for HED on 2/12/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
robin knox	Water Quality Consulting, Inc.	Support	Written Testimony Only

Comments:

It is essential to the protection of public health and water quality that we eliminate cesspools. there is a shortage of alternate technologies that the DOH feels are acceptable. Septic tanks are considered the default solution, however they are expensive, take a lot of space, disturb iwi kupuna, and do very little to improve water quality. There are better innovative alternatives that currently exist and the potential for more to be developed. This research by University of Hawaii will help DOH find technologies that are well suited and approveable.

Robin S. Knox, QEP, President

Water Quality Consulting, Inc.



Environmental Caucus of The Democratic Party of Hawai'i

February 10, 2025

Testimony in Support of HB736 HD1: Relating to Wastewater Systems

To: Chair Andrew Takuya Garrett, Vice Chair Terez Amato, and Members of the Committee on Higher Education

From: The Environmental Caucus of the Democratic Party of Hawai'i

Date: Wednesday, February 12, 2025, 2:00 p.m.

Place: Conference Room 309 & Videoconference

Subject: Support for HB736 HD1 - Relating to Wastewater Systems

Aloha Chair Garrett, Vice Chair Amato, and Members of the Committee on Higher Education,

The Environmental Caucus of the Democratic Party of Hawai'i strongly supports HB736 HD1, which establishes and appropriates funds for a three-year new wastewater system and individual wastewater system technology testing pilot program within the University of Hawai'i Water Resources Research Center. This bill also requires interim and final reports to the Legislature.

Key Points:

1. Establishment of Pilot Program:

- a. HB736 HD1 establishes a three-year pilot program within the University of Hawai'i Water Resources Research Center.
- b. The program focuses on testing new wastewater system and individual wastewater system technologies.

2. Appropriation of Funds:

- a. The bill appropriates funds necessary for the planning, design, and implementation of the pilot program.
- b. Financial support is crucial to the success of this initiative.

3. Interim and Final Reports:

- a. HB736 HD1 requires interim and final reports to the Legislature, ensuring transparency and accountability.
- b. These reports will provide valuable insights and data on the effectiveness of the new technologies being tested.

Arguments in Support:

1. Innovation in Wastewater Management:

- a. The pilot program aims to identify and test innovative wastewater system technologies that can improve efficiency and effectiveness.
- b. By exploring new solutions, Hawaii can stay at the forefront of wastewater management practices.

2. Environmental Preservation:

- a. Implementing advanced wastewater technologies can help reduce environmental impacts and promote sustainability.
- b. Proper wastewater management is essential for protecting Hawaii's natural resources and ecosystems.

3. Public Health and Safety:

- a. Ensuring the effectiveness of wastewater systems is crucial for public health and safety.
- b. The pilot program will help identify technologies that can provide reliable and safe wastewater treatment solutions.

4. Economic Benefits:

- a. Investing in innovative wastewater technologies can lead to long-term cost savings by improving system efficiency and reducing maintenance needs.
- b. The pilot program can also create opportunities for research and development, supporting local industries and job creation.

5. Educational and Research Opportunities:

- a. The University of Hawai'i Water Resources Research Center will serve as a hub for research and innovation in wastewater management.
- b. The pilot program will provide valuable learning opportunities for students and researchers, fostering a culture of innovation and scientific inquiry.

In conclusion, we urge the Committee to favorably consider HB736 HD1 and support its passage. This bill represents a significant investment in the future of Hawaii's wastewater management and environmental sustainability.

Thank you for the opportunity to testify.

Sincerely,

Melodie Aduja and Alan Burdick

Co-chairs Environmental Caucus of the Democratic Party of Hawai'i



Feb. 11, 2025

In Support of **HB736 Relating to Wastewater Systems**
House Committee on Higher Education (HED)
Hearing on Wed., Feb. 12, 2025, 2:00pm, CR309

Aloha, Chair Garrett, Vice-Chair Amato and Committee Members:

On behalf of the non-profit WAI: Wastewater Alternatives & Innovations, I am writing in **strong support of HB736**. This bill funds a three-year pilot program to test wastewater technology at the University of Hawaii Water Resources Research Center (WRRC). The goal is to introduce more efficient and affordable sanitation technologies to the state. WRRC will work in coordination with other departments at UH and the Dept. of Health to evaluate the efficiency of treatment technologies, perform tests and submit results to the Department.

The Department of Health must certify the new technology systems, but the Department doesn't have sufficient resources and expertise to perform those certifications promptly and effectively. Research and studies by the WRRC testing program can facilitate and accelerate DOH's certification of new technologies. The costs are modest, and the benefits in reducing costs will be many times larger. Based on a previous program run by Dr. Roger Babcock and WRRC, the pilot program will build on existing resources and staff at WRRC and UH. Once the program is up and running again, it will generate revenues from companies that pay testing fees to get their treatment systems approved in Hawai'i. This will bring revenues to the state, be self-sustaining and help solve our cesspool crisis.

Hawaii has more than 83,000 cesspools across the state, discharging 52 million gallons of raw sewage each day into Hawaii's waters. Along with threats to public health and drinking water resources, new research shows that polluted wastewater poses significant harm to coral reefs and the near-shore environment. The people of Hawaii need this law to make sure their wastewater systems aren't polluting the groundwater or nearby surface waters.

WAI is an environmental non-profit dedicated to protecting our water resources by reducing sewage pollution from cesspools. We support more innovative, affordable, and eco-friendly solutions to wastewater management. Better sanitation systems protect public health and valuable natural resources like groundwater, streams, coral reefs and coastal areas.

Hawaii is struggling with serious sewage pollution, and the state has a mandate to make sure all cesspools are converted in the next two decades. This bill will provide the necessary testing of new treatment technologies that are needed to convert cesspools across the state more efficiently and affordably. Mahalo for your leadership on this issue and support of this bill.

Aloha,

Stuart Coleman

Stuart H. Coleman, Executive Director

HB-736-HD-1

Submitted on: 2/8/2025 7:52:02 AM

Testimony for HED on 2/12/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Hilary Smith	Individual	Support	Written Testimony Only

Comments:

I strongly support HB 736 because this pilot program would enable critical testing of innovative wastewater treatment technologies that could help protect our precious groundwater resources and near-shore marine ecosystems. The University of Hawaii Water Resources Research Center has the expertise and facilities necessary to evaluate both centralized and individual wastewater systems, ensuring that new technologies are properly vetted for Hawaii's unique geological and environmental conditions before widespread adoption. This investment in wastewater technology research will ultimately save taxpayers money by identifying the most effective and efficient solutions for Hawaii's wastewater management challenges, while helping to prevent costly environmental damage from outdated or failing systems.

HB-736-HD-1

Submitted on: 2/8/2025 9:36:15 AM

Testimony for HED on 2/12/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Support	Written Testimony Only

Comments:

I strongly support HB736. We need to move quickly to identify and approve wastewater treatment options that will protect the health of our citizens and the environment. Septic systems do not protect the health of our inshore waters and reefs, as they do not remove nutrients. They are also impractical and unaffordable for many residents. I have been ready to convert my cesspool to a reef-safe alternative for years, now, but the DOH has not approved any acceptable options. Please pass HB736!

HB-736-HD-1

Submitted on: 2/10/2025 10:14:46 AM

Testimony for HED on 2/12/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Nicolas Storie	Individual	Support	Written Testimony Only

Comments:

I support this bill.

HB-736-HD-1

Submitted on: 2/10/2025 2:32:35 PM

Testimony for HED on 2/12/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Christina Comfort	Individual	Support	Written Testimony Only

Comments:

Wastewater management upgrades are critical for Hawaii considering we have over 80,000 cesspools and degradation of coral reefs and coastal ecosystems that have been directly linked to wastewater pollution. Septic systems are outdated technology and despite providing primary wastewater treatment, they still release nitrogen pollution into the coastal ocean, which is one of the major pollutants that harms coral reefs. The proposed program at UH would help speed up the introduction of new, innovative technology to protect our nearshore oceans. As a coastal oceanographer and water quality specialist, I support this bill.

HB-736-HD-1

Submitted on: 2/10/2025 3:08:39 PM

Testimony for HED on 2/12/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Betsy Scolnik	Individual	Support	Written Testimony Only

Comments:

Wastewater management and cesspool conversions are critical.

HB-736-HD-1

Submitted on: 2/11/2025 10:52:59 AM

Testimony for HED on 2/12/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Karen Chang Barr	Individual	Support	Written Testimony Only

Comments:

Chair Rep Andrew Garrett

Vice Chair Rep Terez Amato

RE: HB379 HD1

I support HB736 HD1 to establish and appropriate funds for a three-year new wastewater system and individual wastewater system technology testing pilot program within the University of Hawai'i Water Resources Research Center.

I am gravely concerned with the effects of our failing cesspools and the impacts of seepage into our shorelines. As a former wastewater treatment utility employee supportin a board of directors and senior managers in Washington State, I have been acquainted with the compromise of aging cesspool systems on the water source in the community and the shorelines.

Our shoreline ecosystem is extremely important, especially our coral reef systems throughout the islands. The effects of pollution on these coral reefs is detrimental, as these living animals absorb everything. Furthermore, the nutrient pollution discharge can spawn algae blooms, causing suffocation and depletion of these coral reefs. I saw algae blooms proliferate in the Olympia, WA area and restrict and wildlife from thriving.

I realize that the cesspool upgrades can be cost-prohibitive to many homeowners, therefore, I support the testing and, hopefully, the approval of the new technologies to replace aging cesspools with high-tech, lower-cost systems for those homes that cannot get onto the City (or community) sewer system.

Please pass this bill, approve funding for the full-time coordinator, administrative efforts, and infrastructure and equipment costs for testing and analyses, so we can use the data to move forward with replacing these pollution-inducing systems and save our coral reefs!

Mahalo,

Karen (Chang) Barr