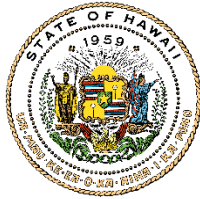


JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
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 House Committees on
ENERGY & ENVIRONMENTAL PROTECTION
and
WATER & LAND

Thursday, March 14, 2024
8:30 AM

State Capitol, VIA VIDEOCONFERENCE, Conference Room 325

In consideration of
SENATE BILL 2513, SENATE DRAFT 2
RELATING TO WASTEWATER SYSTEMS

Senate Bill 2513, Senate Draft 2 proposes to 1) establish a 3-year new waste management solution and cesspool system demonstration pilot program within the University of Hawai'i Sea Grant College Program to examine and demonstrate new wastewater and cesspool technology systems; 2) implement those technologies in demonstration projects in areas across the State that are identified as priority level 1 in the 2021 Hawai'i Cesspool Hazard Assessment and Prioritization Tool Report; 3) establish a similar ranking system for prioritization levels for the islands of Moloka'i, Lāna'i, and Ni'ihau; 4) require the University of Hawai'i Sea Grant College Program to submit annual reports to the Legislature; 5) establish positions; and 6) make appropriations. **The Department of Land and Natural Resources (Department) supports this bill provided that it does not replace or adversely impact priorities indicated in the Executive FY 2025 Supplemental Budget Request.**

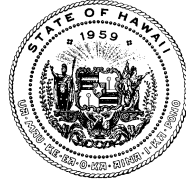
Clean nearshore waters are vital to both public health and the health of nearshore reefs and associated fisheries. Wastewater systems have the potential to pollute groundwater and nearshore waters by introducing elevated levels of contaminants such as nitrogen, phosphorus, and pathogens. A 2023 Hawai'i-based study¹ 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

¹ 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

algae, which can smother coral. Establishing a wastewater demonstration and implementation pilot program within the University of Hawai'i Sea Grant College Program will hopefully lead to new insights and methods for more efficient disposal of contaminating pollutants that damage Hawai'i's valuable reef ecosystems. By encouraging this project, the Department hopes that the University of Hawai'i's Sea Grant College Program will discover innovative methods to 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.



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

In reply, please refer to:
File:

**Testimony COMMENTING on SB2513 SD2
RELATING TO WASTEWATER SYSTEMS**

REPRESENTATIVE NICOLE E. LOWEN, CHAIR
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

REPRESENTATIVE LINDA ICHIYAMA, CHAIR
HOUSE COMMITTEE ON WATER & LAND

Hearing Date: 3/14/2024

Room Number: 325

1 **Fiscal Implications:** This measure may impact the priorities identified in the Governor's
2 Executive Budget Request for the Department of Health's (Department) appropriations and
3 personnel priorities.

4 **Department Testimony:** The Department acknowledges the intent of this measure and provides
5 comments to establish and appropriate funds to implement a three-year new wastewater system
6 demonstration pilot program within the university of Hawaii Sea Grant program and appropriate
7 moneys for two full-time equivalent (2.0 FTE) positions within the Department's Wastewater
8 Branch. The Department is concerned about the fiscal implications generated by this proposal as
9 it may adversely impact priorities indicated in the Governor's Executive Budget. However,
10 without the necessary full-time equivalent positions, the Department will be unable to process
11 the impending increase of up to 5,000 individual wastewater system applications.

12 **Offered Amendments:** The Department respectfully suggests the following revisions to the
13 proposed HRS amendments. Additions appear as underlined and deletions appear as strikeouts.

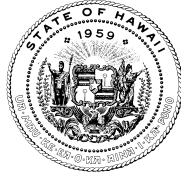
14 SECTION 5, Page 10, lines 8-21 and Page 11, lines 1-3: "There is appropriated out of the
15 general revenues of the State of Hawaii the sum of:

16 (1) \$89,500 or so much thereof as may be necessary for fiscal year 2023-2024 and the
17 same sum or so much thereof as may be necessary for fiscal year 2024-2025 to fund

1 one full-time equivalent (1.0 FTE) engineer V (SR-26) position within the
2 department of health's wastewater branch; and
3 (2) \$82,700 or so much thereof as may be necessary for fiscal year 2023-2024 and the
4 same sum or so much thereof as may be necessary for fiscal year 2024-2025 to
5 establish one full-time equivalent (1.0 FTE) engineer IV (SR-24) position within
6 the department of health's wastewater branch,
7 to support the approval of individual wastewater systems applications and the new wastewater
8 system demonstration pilot program established pursuant to this Act.”
9 Thank you for the opportunity to testify.

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

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



KALI WATSON
CHAIRMAN, HHC
Ka Luna Ho'okele

KATIE L. DUCATT
DEPUTY TO THE CHAIRMAN
Ka Hope Luna Ho'okele

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

P. O. BOX 1879
HONOLULU, HAWAII 96805

TESTIMONY OF KALI WATSON, CHAIRMAN
HAWAIIAN HOMES COMMISSION
THE HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION AND
THE HOUSE COMMITTEE ON WATER AND LAND
HEARING ON MARCH 14, 2024 AT 8:30AM IN CR 325

SB 2513, SD2, RELATING TO WASTEWATER SYSTEMS

March 14, 2024

Aloha Chairs Lowen and Ichiyama, Vice Chairs Cochran and Poepoe, and Members of the Committees:

The Department of Hawaiian Home Lands (DHHL) supports this bill which 1) establishes a 3-year new wastewater system demonstration pilot program within the University of Hawaii Sea Grant College Program to examine and demonstrate new wastewater and cesspool technology systems; 2) implement those technologies in demonstration projects in areas across the State that are identified as priority level 1 in the 2021 Hawaii Cesspool Hazard Assessment and Prioritization Tool Report; 3) establish similar prioritization categories for the islands of Molokai, Lanai, and Niihau; 4) requires the University of Hawaii Sea Grant College Program to submit annual interim reports and a final report to the Legislature; 5) establishes positions; 6) declares that the appropriations exceed the state general fund expenditure ceiling for 2024-2025; and 7) makes appropriations, effective 7/1/2050.

Approximately 2,500 cesspools exist on Hawaiian Home Lands (HHL). 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 Demonstration Pilot Program because it will provide the opportunity for alternative, financially feasible, and effective wastewater technologies to be evaluated and published in reports for DHHL, current lessees residing on HHL, and potential beneficiaries to understand the challenges and financial costs of cesspool conversions and wastewater technologies.

The pilot program will also require that these technologies be implemented in areas across the State that are identified as Priority Level 1 in the 2021 Hawaii

Cesspool Hazard Assessment and Prioritization Tool Report, many of which are located on HHL. The DHHL supports fully comprehensive data and new technology demonstrations that will include the islands of Moloka'i, Lana'i, and Ni'i'hau.

DHHL understands that there are approximately 82,000 cesspools statewide that will require cesspool conversion approvals. DHHL supports the appropriation of funds for FTE positions within the Department of Health's Wastewater Branch to support the approval of individual wastewater systems applications, due to the administrative demand that this legislative requirement places on DOH for the 82,000 cesspools statewide. DHHL is also aware that the State currently has a shortage of licensed engineers to execute the design plans and final construction inspections required by Act 125 (SLH 2017).

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 support this measure that will initiate the implementation of the diverse and feasible ways in which the requirements outlined in Act 125 (SLH 2017) can be completed.

Thank you for your consideration of our testimony.



Mar. 12, 2024

In Strong Support of **SB2513 SD2** Relating to Wastewater Systems
House Committees on Energy & Environment (EEP) and Water & Land (WAL)
Hearing on March 14, 8:30am, Rm. 235

Aloha, Chairs Lowen & Ichiyama, Vice-Chairs Cochran & Poepoe, 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 SB2513 SD2**. This bill would establish and fund a three-year waste management solution and cesspool system demonstration pilot in the University of Hawai'i Water Resources Research Center. The pilot will demonstrate new wastewater technology systems, implement those technologies in demonstration projects in Priority 1 Areas and establish similar rankings for Mokokai, Lanai, and Niihau. The bill also **appropriates moneys for two full-time equivalent (2.0 FTE) positions at the Department of Health's Wastewater Branch**. These positions are critical to the department's ability to handle the additional work that will come with the thousands of cesspool conversions that will be necessary to comply with the law.

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 in *Nature* shows that this polluted wastewater poses significant harm to coral reefs and the near-shore environment (see also [my article in Hawaii Business Magazine](#)). The people of Hawaii need this law to make sure their wastewater systems aren't polluting the groundwater or nearby surface waters.

Under Act 125 (2017), all cesspools are mandated to be converted by 2050. To do this logistically, the state will need to explore more decentralized "package treatment" systems that can convert hundreds of cesspools, instead of trying to convert each of the 83,000 across the state. As an amendment, I would suggest that the pilot project be shared between UH Sea Grant and the Water Resources Research Center (WRRC) for research and implementation. WAI will work with both groups to come up with efficient and affordable solutions to our wastewater management issues.

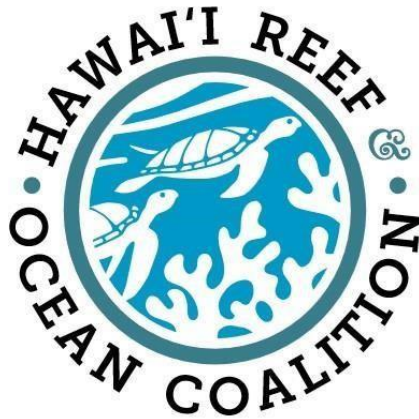
WAI is an environmental non-profit dedicated to protecting our drinking water, groundwater and near-shore ecosystems by reducing sewage pollution from cesspools and failing septic systems. Our goal is to help find more innovative, affordable, and eco-friendly solutions to wastewater management and help 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 to ensure all cesspools are converted in the next 26 years. This bill will provide the necessary pilot projects to convert cesspools across the state. Mahalo for your leadership on this issue and support of this bill.

Aloha,

Stuart Coleman

Stuart H. Coleman, Executive Director



To: The Honorable Chairs Nicole Lowen and Linda Ichiyama, the Honorable Vice Chairs Elle Cochran and Mahina Poepoe, and Members of the Committees on Energy and Environmental Protection and Water and Land.

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

Re: **Hearing SB2513 SD2 RELATING TO WASTEWATER SYSTEMS**

Hearing: Thursday March 14, 2024, 8:30 a.m., room 325

Aloha Chairs Lowen and Ichiyama , Vice Chairs Cochran and Poepoe, and Members of the Committees on Energy and Environmental Protection and Water and Land!

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 the harm that cesspool and other wastewater pollution inflicts on our precious coral reefs and public health!

Hawai'i Reef and Ocean Coalition **STRONGLY SUPPORTS SB2513** and **proposes a minor amendment!**

Hawaii has over 80,000 cesspools that put about 53 million gallons of raw sewage into our groundwater, streams and ocean every single day! This discharge **exposes people to sewage pathogens that can make them sick.** The release of **nutrients** from cesspools through groundwater and streams into the ocean fertilizes 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.** Sea level rise will further exacerbate the public health and environmental problems as it will cause more cesspools to overflow onto the surface.

Hawaii's reefs will die in warmer, more acidic, and rising oceans if we don't reduce cesspool pollution and other harmful factors now! Hawai'i needs to reduce cesspool pollution now in order to give coral reefs a chance to survive! A study reported in Nature Journal last August found that coral reefs benefit from reduced land-sea impacts under ocean warming. It stated: "Coral reef ecosystems are being fundamentally restructured by local human impacts and climate-driven marine heatwaves that trigger mass coral bleaching and mortality." Gove, J.M., Williams, G.J., Lecky, J. *et al.*

Nature 621, 536–542 (2023). <https://doi.org/10.1038/s41586-023-06394-w>.

This bill would establish and fund a three-year new wastewater system technology demonstration pilot in the University of Hawai'i sea grant college.

The pilot shall: examine and demonstrate new wastewater and individual toilet technology systems, ranging up to significantly larger multi-unit implement systems and options for community-scale solutions as appropriate, and review and evaluate the affordability, feasibility, and efficiency of the treatment technologies in demonstration projects that are identified as priority level 1 in the Hawaii Cesspool Hazard Assessment and Prioritization Tool and establish similar rankings for Mokokai, Lanai, and Niihau.

The bill also **appropriates moneys for two full-time equivalent (2.0 FTE) positions at the Department of Health's Wastewater Branch. These positions are critical to the department's ability to handle the additional work that will come with the thousands of cesspool conversions that will be necessary to comply with the law.**

This demonstration and implementation pilot is essential to determine the best and most affordable wastewater technologies to minimize the cost of cesspool upgrades while maximizing environmental protection. This pilot is essential for Hawaii, as the cost of upgrading all the cesspools is estimated to be well over \$2 billion (83,000 cesspools, with upgrade average costs of at least \$30,000)!

The pilot program's tasks will be broader than straight research. **HIROC suggests the following amendments to reflect this:**

On page 6, line 20, through Page 7, line 4 , it should read "There is established a three-year new wastewater system and individual wastewater system technology demonstration and implementation pilot program within the university of Hawai'i water resources research center in coordination with the university of Hawai'i sea grant college.

(b) The university of Hawai'i water resources research center in coordination with the university of Hawai'i sea grant college and in consultation with the department of health, ..."

On page 10, lines 6-7, it should read "The sum appropriated shall be expended by the university of Hawaii water resources research center in coordination with the university of Hawaii sea grant college program."

Please fund this research now to save cesspool owners who have to upgrade substantial money in the future and pass this bill with these minor amendments!

Mahalo!

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



CORAL REEF ALLIANCE

Mar 13, 2024

Dear,

Re: SB2513 SD2 RELATING TO WASTEWATER SYSTEMS.

From: Erica Perez- Sr. Program Manager

eperez@coral.org

Coral Reef Alliance (CORAL)

Subject: In Support of **SB2513 SD2** RELATING TO WASTEWATER SYSTEMS

I am testifying in Support of **SB2513 SD2** on behalf of the Coral Reef Alliance (or CORAL) and myself, a concerned Hawaii resident. I believe that this bill is a critical step towards addressing questions around cesspool conversion and identifying the best technology type to mitigate impacts of cesspools on Hawaii's coral reefs, waterways, and communities.

Individual wastewater systems play a critical role in moving us toward our 2050 goal of removing all cesspools across Hawaii. Including Molokai, Lanai, and Niihau will fill a data gap from the 2023 Cesspool Conversion Working Group's efforts. Providing science-based solutions under natural conditions for each island's unique geology, will aid homeowners in making the best decision for cesspool conversion.

I believe **SB2513 SD2** will inform the cesspool conversion process and help assure we capture the best return of investment for our reefs and communities. The conditions and urgency to address cesspool impacts and improve the quality of Hawaii's water and community resilience is priority. Thank you for supporting **SB2513 SD2**. Let us embrace this opportunity to safeguard our future, preserve our natural resources, and create a thriving, sustainable community for generations to come.

Coral Reef Alliance has been working to provide clean water for reefs for 30 years! The Coral Reef Alliance (CORAL) is on a mission to save the world's coral reefs. We use a science-based, holistic approach in supporting resilient coastal communities, reducing sources of water pollution, and promoting sustainable fisheries to ensure that coral reefs adapt in the face of global climate change. In Hawaii, CORAL works alongside local communities and partners to make lasting and effective conservation solutions to save precious coral reef ecosystems.



CORAL REEF ALLIANCE

Sincerely,

Erica Perez

Erica Perez, Sr. Program Manager (Hawai'i Island)

Coral Reef Alliance - coral.org

HC 1 Box 5519

Keaau, HI 96749

(808) 756 - 1786

eperez@coral.org

SB-2513-SD-2

Submitted on: 3/13/2024 1:03:51 PM

Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
SYBIL LOPEZ	SCHHA Molokai Mokupuni	Support	Remotely Via Zoom

Comments:

SCHHA Molokai Mokupuni strongly supports this bill. Mahalo for the opportunity to testify.

SB-2513-SD-2

Submitted on: 3/11/2024 6:09:00 PM

Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Uilani Naipo	Individual	Support	Written Testimony Only

Comments:

I **support** this measure.

- U'ilani Naipo

SB-2513-SD-2

Submitted on: 3/12/2024 11:56:07 AM

Testimony for EEP on 3/14/2024 8:30:00 AM

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

Comments:

Hawaii has rightly prioritized the urgent conversion of the large number of cesspools in our island state - a wastewater disposal system that has long been outlawed in every other state and most other nations. However we are hamstrung by the lack of adequate alternatives approved by the Dept. of Health, especially those that will accomplish removal of nitrogen compounds, which is all-important for properties in priority zone 1, in order to protect our coral reefs. This is something that currently available septic systems do not accomplish. Therefore I strongly support SB2513 to test and demonstrate which new technologies may work well in our island environment. There has got to be a better way, and we need to find it fast!

SB-2513-SD-2

Submitted on: 3/12/2024 6:45:14 PM

Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Lisa Bishop	Individual	Support	Written Testimony Only

Comments:

Mahalo for the opportunity to testify in strong support of this bill!

Lisa Bishop

Hawaii Resident, Homeowner, Taxpayer, and Voter

SB-2513-SD-2

Submitted on: 3/13/2024 1:46:53 AM

Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Barbara Shimei	Individual	Support	Written Testimony Only

Comments:

IN SUPPORT

SB-2513-SD-2

Submitted on: 3/13/2024 9:36:43 AM

Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kim Falinski	Individual	Support	Written Testimony Only

Comments:

Clean coastal waters are critical for our reef ecosystems health. Cesspools can cause harm to water quality within adjacent groundwater, anchialine, coral reef systems and fisheries by introducing elevated amounts of organic nitrogen and phosphorus, pathogens, and other contaminants. Contaminants emitted from cesspools can harm aquatic ecosystems by encouraging excess algal and bacterial growth, and can also pose a threat to human health.

It remains unclear as to which systems will operate best to remove our contaminants in our unique geologies, soils and socioeconomic conditions. Having a pilot program to test new technology in Hawai'i is an important step moving forward, and Seagrant is the right vehicle to get this done.

I strongly support efforts to upgrade our antiquated systems to newer wastewater technology, and prevent harmful runoff into our sensitive ocean systems.

SB-2513-SD-2

Submitted on: 3/13/2024 6:26:43 PM

Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Lois Crozer	Individual	Support	Written Testimony Only

Comments:

I'm so glad this technology is ready for demonstration. Let's see if it's viable. We need to PROTECT OUR REEFS!!