



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Testimony Presented Before the  
House Committee on Energy and Environmental Protection and  
House Committee on Health  
Tuesday, February 11, 2020 at 8:30 a.m.

By  
Darren T. Lerner, Director  
Hawai'i Sea Grant  
and  
Michael Bruno  
Provost  
University of Hawai'i at Mānoa

### HB 1858 – RELATING TO CESSPOOLS

Chairs Lowen and Mizuno, Vice Chairs Wildberger and Kobayashi, and members of the committees:

The University of Hawai'i Sea Grant College Program strongly supports this bill provided that its passage does not replace or adversely impact priorities as indicated in our Board of Regents approved Supplemental Budget.

Previous research and a review of other state efforts to convert cesspools and outdated onsite wastewater treatment systems (OWTS) by the Environmental Protection Agency highlight that education and outreach, supported by a neutral, non-regulatory entity is a major component of successful programs for conversion of OWTS. Members of the Cesspool Conversion Working Group (CCWG) established by the State of Hawai'i and led by the State of Hawai'i Department of Health (DOH) have recognized that robust public education and outreach efforts in the form of a systematic, statewide outreach engagement will be needed if the State of Hawai'i is to achieve its goal of converting an estimated 88,000 cesspools by 2050.

For more than 50 years, Hawai'i Sea Grant has demonstrated expertise working in communities across Hawai'i to provide unbiased science-based information to stakeholders and as such is well suited to perform the necessary needs assessment and to execute a statewide outreach program in cooperation and consultation with the DOH.

In discussion with staff from DOH, they also support this measure. They stated that they do not have the resources or staff to conduct such a program.

Thank you for the opportunity to testify on this measure.



# **UNIVERSITY OF HAWAII SYSTEM**

## **Legislative Testimony**

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Testimony Presented Before the  
House Committee on Energy and Environmental Protection and  
House Committee on Health  
Tuesday, February 11, 2020 at 8:30 a.m..

By  
Thomas Giambelluca, Director  
Water Resources Research Center  
and  
Michael Bruno  
Vice Chancellor for Research  
University of Hawai'i at Mānoa

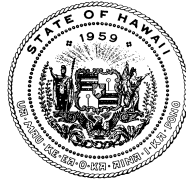
### **HB 1858 – RELATING TO CESSPOOLS**

Chairs Lowen and Mizuno, Vice Chairs Wildberger and Kobayashi, and members of the committees:

The University of Hawai'i Water Resources Research Center (WRRC) strongly supports this measure, provided that its passage does not replace or adversely impact priorities as indicated in our Board of Regents approved Supplemental Budget.

Upgrading the state's estimated 88,000 cesspools will require researching and developing onsite wastewater technologies tailored to Hawai'i's unique geology and hydrology. In general, onsite wastewater systems often have large upfront costs. System costs in Hawai'i vary widely based on the type of treatment and our geographic isolation. WRRC believes that identifying a suite of cost effective solutions will be paramount to assisting the state achieving its goal of converting all cesspools by 2050. WRRC's staff has expertise in several interdisciplinary fields including engineering, hydrology, economics, and geology and is committed to protecting and preserving the state's drinking water and groundwater resources.

Thank you for the opportunity to testify on this measure.



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

**Testimony in SUPPORT of HB1858  
RELATING TO CESSPOOLS**

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

REPRESENTATIVE JOHN M. MIZUNO, CHAIR  
HOUSE COMMITTEE ON HEALTH

Hearing Date: 2/11/2020

Room Number: CR 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 supports this measure. Act 132, Session Laws of  
5 Hawaii (SLH) 2018 established a Cesspool Conversion Working Group (CCWG) that is  
6 administered by the Department, to develop a long-range, comprehensive plan for cesspool  
7 conversion statewide of all cesspools by 2050. Outreach and education is an important part of  
8 implementation of the plan. The Department supports the outreach program that is being  
9 proposed by the University of Hawaii Sea Grant College Program. The measure also includes  
10 the University of Hawaii Water Resources Research Center to conduct research on wastewater  
11 system technologies to determine the most cost-effective way to upgrade cesspools in the State  
12 and reduce the impact of cesspools on drinking water and groundwater resources. The  
13 Department supports this research because the results could potentially save cesspool owners  
14 thousands of dollars when converting or upgrading their cesspools.

15 **Offered Amendments:** None.

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

DEPARTMENT OF ENVIRONMENTAL SERVICES  
**CITY AND COUNTY OF HONOLULU**

1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707  
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: <http://envhonolulu.org>

KIRK CALDWELL  
MAYOR



LORI M.K. KAHIKINA, P.E.  
DIRECTOR

TIMOTHY A. HOUGHTON  
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.  
DEPUTY DIRECTOR

IN REPLY REFER TO:  
WAS 20-56

February 7, 2020

The Honorable Nicole E. Lowen, Chair  
The Honorable Tina Wildberger, Vice-Chair  
and Members of the Committee on Energy & Environmental Protection  
The Honorable John M. Mizuno, Chair  
The Honorable Bertrand Kobayashi, Vice-Chair  
and Members of the Committee on Health  
House of Representatives  
State Capitol, Room 325  
415 South Beretania Street  
Honolulu, Hawaii 96813

Dear Chair Lowen, Chair Mizuno, Vice-Chair Wildberger, Vice Chair Kobayashi,  
and Members of the Committees on Energy & Environmental Protection, and Health:

SUBJECT: HB 1858  
Relating to Cesspools

The Department of Environmental Services (ENV) of the City and County of Honolulu supports HB 1858.

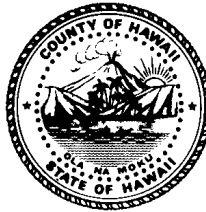
In consideration of Act 125 requiring the replacement of all cesspools in Hawaii by 2050, ENV recognizes the need for comprehensive solutions for achieving that goal. HB 1858 appears to be a step in the right direction by proposing a statewide outreach program to provide information on the environmental and marine impacts of cesspools, conduct stakeholder engagement to identify physical, practical and financial issues related to converting cesspools, and recommending viable solutions.

Thank you for your consideration.

Sincerely,

  
Lori M.K. Kahikina, P.E.  
Director

REBECCA VILLEGAS  
Council Member  
District 7, Central Kona



PHONE: (808) 323-4267  
FAX: (808) 323-4786  
EMAIL: [Rebecca.villegas@hawaiicounty.gov](mailto:Rebecca.villegas@hawaiicounty.gov)

## HAWAI'I COUNTY COUNCIL

*West Hawai'i Civic Center, Bldg. A  
74-5044 Ane Keohokalole Hwy.  
Kailua-Kona, Hawai'i 96740*

February 6, 2020

TESTIMONY OF REBECCA VILLEGAS  
COUNCIL MEMBER, HAWAI'I COUNTY COUNCIL  
ON HB 1858, RELATING TO CESSPOOLS  
Committee on Energy & Environmental Protection  
Committee on Health  
Tuesday, February 11, 2020  
8:30 a.m.  
Conference Room 325

Aloha Chair Lowen, Chair Mizuno, and Members of the Committees:

I thank you for the opportunity to testify in support of HB 1858, relating to cesspools. My testimony is submitted in my individual capacity as a member of the Hawai'i County Council and Chair of the Hawai'i County Council Public Safety Committee.

The purpose of this measure is to commission a comprehensive statewide outreach program by the UH Sea Grant College program that will provide science based information of sewage contamination sources in nearshore marine areas, understanding sewage capacity needs, and will inform stakeholders including the Department of Health of appropriate solutions that support converting all cesspools in the State by 2050. Public health and the quality of Hawai'i's drinking water, streams, ground waters, nearshore marine areas, and the ocean are being harmed by water pollution from cesspools. Drinking water and the State's coral reefs, which we depend on, are being harmed by such pollution. Authorizing a comprehensive outreach program will allow us to receive information that we could potentially utilize to tackle our cesspools converting issues.

For the reasons stated above I urge the Committee on Energy & Environmental Protection, and the Committee on Health to support this measure as well. Should you have any questions, please feel free to contact me at (808) 323-4267.

Mahalo for your consideration

A handwritten signature in black ink, appearing to read "Rebecca Villegas".

Rebecca Villegas  
Council Member, Hawai'i County Council



February 9, 2020

To: The Honorable Nicole E. Lowen, Chair,  
The Honorable Tina Wildberger, Vice Chair, and Members of the HOUSE  
COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION  
And  
The Honorable John M. Mizuno, Chair,  
The Honorable Bertrand Kobayashi, Vice Chair, and Members of the  
HOUSE COMMITTEE ON HEALTH

Re: **HB 1859– relating to new toilet technologies**  
Hearing: Thursday, February 11, 2020, 8:30 a.m. Room 325  
Position: **Strong Support**

Aloha, Chairs Lowen and Mizuno, Vice Chairs Wildberger and Kobayashi, and Members of the Committees,

The HAWAI'I REEF AND OCEAN COALITION – HIROC – was formed in 2017 by coral reef scientists, educators, local Hawaii environmental organizations, elected officials, and others to address a crisis facing Hawaii's coral reefs and ocean – namely, the pollution of our near-shore environment by sunscreens that are literally killing our marine life. We are currently asking the Legislature to pass a handful of very important bills to save our coral reefs – they are bills relating to sunscreens, plus bills on cesspools, plastic marine debris, the climate crisis and sea level rise.

HIROC strongly supports this bill, which would establish a 3-year Department of Health pilot project to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects. Hawaii needs to consider new solutions to its old wastewater and sewage problems. Toilets and sewage treatment have not advanced much, but there is a great potential for technological advances that would save water, energy and money.

This bill will provide needed funding to investigate and demonstrate new solutions.  
Please pass this bill. Mahalo!

Alan B. Burdick, for HIROC  
[Burdick808@gmail.com](mailto:Burdick808@gmail.com) 486-1018

**HB-1858**

Submitted on: 2/9/2020 2:15:20 PM

Testimony for EEP on 2/11/2020 8:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Lisa Bishop	Friends of Hanauma Bay	Support	No

Comments:



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

HOUSE COMMITTEES ON ENERGY AND ENVIRONMENTAL PROTECTION AND HEALTH  
Tuesday, February 11, 2020 — 8:30 a.m. — Room 325

**UluPono Initiative supports HB 1858, Relating to Cesspools.**

Dear Chair Lowen, Chair Mizuno, and Members of the Committees:

My name is Amy Hennessey, and I am the Senior Vice President of Communications & External Affairs at UluPono Initiative. We are a Hawai'i-based impact investment firm that strives to improve our community's quality of life by creating more locally produced food; increasing affordable clean renewable energy and transportation options; and better managing waste and fresh water resources.

**UluPono supports HB 1858**, which requires the Sea Grant College Program, with the Department of Health, to develop and conduct a 2-year comprehensive statewide outreach program that provides science-based information and understanding of sewage contamination sources in nearshore marine areas; increases understanding of sewage capacity needs; and informs all stakeholders of appropriate solutions for cesspool conversion. This bill also requires the Water Resources Research Center to research wastewater system technologies to determine the most cost-effective way to upgrade cesspools in Hawai'i and reduce their impact on drinking water and groundwater.

Hawai'i has over 88,000 cesspools island wide that discharge more than 53 million gallons of untreated sewage into the State's waters each day. This poses a major health and environmental risk to our drinking water, groundwater, streams, and shore waters. UluPono supports local community engagement statewide for sustainable waste management practices. Increasing awareness for cesspool conversions is important in moving the State toward environmentally-friendly solutions on waste management.

Thank you for this opportunity to testify.

Respectfully,

Amy Hennessey, APR  
Senior Vice President, Communications & External Affairs

*Investing in a Sustainable Hawai'i*

999 Bishop Street, Suite 1202 | Honolulu, Hawai'i 96813 ☎ 808.544.8960 📠 808.432.9695 | [www.ulupono.com](http://www.ulupono.com)



# WAI

## WASTEWATER ALTERNATIVES AND INNOVATIONS

# LATE

Feb. 10, 2020

In Support of **HB1858** Relating to Cesspools  
House Committees on Energy & Environmental Protection (EEP) and Health (HLT)  
Feb. 11, 8:30am, Room 325

Aloha, Chairs Lowen & Mizuno, Vice Chairs Wildberger & Kobayashi and Members of the Committees:

On behalf of the non-profit WAI: Wastewater Alternatives & Innovations, I am writing in **strong support of HB1858**. This bill would establish a 2-year statewide program with the Dept. Of Health (DOH) and the UH Sea Grant Program to do education and outreach about sewage contamination and the need to protect our groundwater, surface waters and coastal environment. The program would also conduct a stakeholder assessment to identify impediments to converting from cesspools to more efficient sanitation systems and then inform the Cesspool Conversion Working Group.

I serve on the Cesspool Conversion Working Group, and this bill would help us find better and more affordable solutions to our serious wastewater management problem. Hawaii has more than 88,000 cesspools across the state, and these substandard systems discharge 53 million gallons of raw sewage each day into Hawaii's waters. That's like a massive sewage spill every day! Although most of us don't see the effects, this sewage pollution poses serious risks to water quality, human health and the resilience of our coral reefs.

WAI: Wastewater Alternatives & Innovations is dedicated to protecting our waters and near-shore ecosystems by reducing sewage pollution from cesspools and failing septic systems. Our goal is to help communities and homeowners find more innovative, affordable and eco-friendly solutions to wastewater management. Better sanitation systems reduce sewage pollution and makes properties more valuable, while also protecting our groundwater, streams and the health of our coral reefs and coastal areas.

This bill will help DOH to help fund an Outreach Program with UH Sea Grant to educate homeowners about the environmental and health threats posed by sewage pollution from cesspools, while also collecting information from these owners about their needs and offering them more innovative solutions. The mandate to convert all cesspools is 2050, but with 30-year mortgages, we need to start testing new solutions now, especially in high-priority areas like Kahalu'u and Upcountry Maui. This bill will make it easier to do that and provide critical information for the Cesspool Conversion Working Group to help us in educating the public and selecting the best new sanitation technologies for the state.

Mahalo for your leadership on this issue and consideration of this bill. Please let me know if you have any questions or concerns.

Aloha,  
**Stuart Coleman**  
Stuart H. Coleman



**HUMAN ENVIRONMENTAL IMPACTS COMMITTEE  
ENVIRONMENTAL CAUCUS**

Tuesday, February 11, 2020

**LATE**

**House Bill 1858  
Testifying in STRONG SUPPORT**

Aloha Chairs Lowen and Mizuno, Vice Chairs Wildberger and Kobayashi, and Members of the Committee on Energy & Environmental Protection and Members of the Committee on Health:

The Human Environmental Impacts Committee, Environmental Caucus of the Democratic Party of Hawai'i, stands in **STRONG SUPPORT** of HB1858. This measure requires the Sea Grant College Program, in conjunction with the Department of Health, to develop and conduct a two-year comprehensive statewide outreach program that provides science-based information and understanding of sewage contamination sources in nearshore marine areas; increases understanding of sewage capacity needs; and informs all stakeholders of appropriate solutions for cesspool conversion. It further requires the Water Resources Research Center to research wastewater system technologies to determine the most cost-effective way to upgrade cesspools in groundwater. It also appropriates funds.

This measure is reasonable and justifiable considering the 88,000 existing cesspools within the State of Hawai'i making Hawai'i the number one state in the nation with the greatest number of cesspools per capita than any other state in the Union. This measure is needed to assist in meeting the legally mandated cesspool conversion requirement by 2050.

In May 5, 2018, at the O'ahu County Democrats Convention, out of dire concern for the continuous environmental damage and immediate future risk to the environment, to human life, and to wildlife and marine life, as already witnessed by the environmental demise of Kane'ohe Bay and illnesses and sores suffered by individuals who live, swim, play, fish, pick limu, and boat in Kane'ohe Bay through staphylococcus aureus and other bacterial skin infections, and MRSA, the Methicillin-resistant Staphylococcus aureus (resistant to many antibiotics), and in Upcountry Maui, where its drinking water aquifer is at risk of fecal coliform bacteria contamination from human sewage, the following OCC Resolution was adopted:

## **OC 2018-5. Urging Cesspool Abatement Measures**

Whereas, Thousands of cesspools throughout the islands are threatening drinking water supplies, coral reefs and the health of the people who swim, surf, and consume the marine life in popular places; and

Whereas, This is a serious public safety issue, environmental problem and economic danger that is exacerbated by the effects of climate change; and

Whereas, The impact to coral reefs affects the state's economy, shoreline protection, recreation and habitat for important marine life; and

Whereas, Coral reefs around the state, including Kahalu'u Lagoon and Diamond Head on O'ahu, are threatened as cesspools overload nearby waters with nutrients - nitrogen and phosphorous - that cause algae to smother new growth; and

Whereas, The State Department of Health estimates \$1.75 billion is needed to replace all 88,000 cesspools around Hawai'i, with upgrades required urgently for about half of them; and

Whereas, Approximately 53 million gallons of raw sewage are being discharged each day into cesspools which are basically holes in the ground for wastewater; and

Whereas, One of highest priority area is in upcountry Maui, where 7,400 cesspools have caused nitrate levels in well water to spike dangerously close to safe-drinking limits; and

Whereas, The other area of the highest priority is in Kahalu'u, on the east side of O'ahu, where there have been incidents of skin infections consistent with sewage-contaminated surface water; and

Whereas, The risk of disease is expected to increase as cesspools deteriorate and become more prone to flooding as sea level rises and storms intensify as a result of Climate Change; and

Whereas, Hawai'i depends on wells for more than 90 percent of its drinking water and the vast majority of homes are near the ocean subject to sea level and water table rise causing an increase in wastewater contamination on healthy sources; and

Whereas, Both cesspools and septic tank upgrades still allow for effluent to leach into the ground into groundwater and into the ocean; and

Whereas, Connecting to local wastewater systems is best; and

Whereas, All cesspools are banned by 2050; now, therefore, be it

*Resolved*, That the O'ahu County Democrats of the Democratic Party of Hawai'i urge the Hawai'i State Legislature, in collaboration with the County of Honolulu, to seek cesspools abatement

measures such as connecting to the local wastewater systems to totally eliminate the problem of leaching, coral damage, and wastewater contamination; and be it

*Ordered*, That copies of this resolution be transmitted to the members of the Hawai'i Congressional Delegation, the Governor of the State of Hawai'i, the Lt. Governor of the State of Hawai'i, Hawai'i Legislators who are members of the Democratic Party; the Mayor of the City and County of Honolulu; and Members of the City Council of the County of Honolulu, and the 2018 convention resolutions committee of the Democratic Party of Hawai'i.

For these reasons, the Human Environmental Impacts Committee of the Environmental Caucus supports the passage of this measure to require the Sea Grant College Program, in conjunction with the Department of Health, to develop and conduct a two-year comprehensive statewide outreach program that provides science-based information and understanding of sewage contamination sources in nearshore marine areas; increases understanding of sewage capacity needs; and informs all stakeholders of appropriate solutions for cesspool conversion; and to further require the Water Resources Research Center to research wastewater system technologies to determine the most cost-effective way to upgrade cesspools in groundwater.

Mahalo for the opportunity to testify,

/s/ Melodie Aduja  
Chair, Human Environmental Impacts Committee  
Environmental Caucus  
Democratic Party of Hawai'i

**HB-1858**

Submitted on: 2/8/2020 12:51:01 PM

Testimony for EEP on 2/11/2020 8:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support HB1858. Cesspools often end up polluting our water tables and are toxic to our coral reef.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei