

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

**Testimony in SUPPORT of HB1859  
RELATING TO ENVIRONMENTAL PROTECTION**

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. The CCWG is also responsible for evaluating  
8 alternative wastewater equipment and technologies appropriate to the various areas where  
9 cesspools are located that may better protect the environment at lower or comparable cost and  
10 how the equipment or technologies can be incorporated as part of the long-term solution to  
11 wastewater treatment issues. The Department believes that funding a pilot project that  
12 evaluates various available wastewater treatment alternative technologies will assist the CCWG  
13 with meeting the objectives of Act 132 SLH 2018. However, the Department may not be the  
14 best agency to develop and manage the pilot project. The University of Hawaii's Water  
15 Resources Research Center (UH WRRC) may be the appropriate agency that has the expertise  
16 and experience to conduct the pilot project testing of new sewage technologies.

- 1 **Offered Amendments:** Amend bill by replacing the Department of Health with UH WRRC as
- 2 the agency that will establish and conduct the pilot testing of new toilet and sewage technologies.
- 3 Thank you for the opportunity to testify on this measure.

## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
www.boardofwatersupply.com




February 11, 2020

KIRK CALDWELL, MAYOR

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Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.  
Deputy Manager and Chief Engineer 

The Honorable Nicole E. Lowen, Chair  
and Members  
Committee on Energy and Environment Protection  
House of Representatives  
State Capitol, Room 325  
Honolulu, Hawaii 96813

The Honorable John M. Mizuno, Chair  
and Members  
Committee on Health  
House of Representatives  
State Capitol, Room 325  
Honolulu, Hawaii 96813

Dear Chair Lowen, Chair Mizuno and Members:

Subject: House Bill 1859: Relating to Climate Change Mitigation and Adaptation

The Honolulu Board of Water Supply (BWS) supports House Bill (HB) 1859. This bill establishes a 3-year Department of Health (DOH) pilot project to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects.

According to a 2017 DOH Report Relating to Cesspools and Prioritization For Replacement submitted to the Legislature (2018, Session Laws of Hawaii (SLH)), there are nearly 88,000 inventoried cesspools in the State. These cesspools discharge 53.0 million gallons of raw sewage into the groundwater and surface water every day. Oahu has 11,300 cesspools that discharge 7.5 million gallons per day of raw sewage into the groundwater and surrounding environment. Act 132, 2018 SLH, established a Cesspool Conversion Working Group within DOH to develop a comprehensive plan for conversion of all statewide cesspools by 2050. Accordingly, "replacement of each existing cesspool with an improved treatment method could cost \$20,000 or more per system, for a total cost around \$1.75 billion." DOH has partnered with several state and county agencies to resolving these issues, which are complex.

A 3-year pilot project and additional funding to research and find new toilet and sewage treatment technologies would allow the DOH to continue to find a new waste management solution that can preserve local water quality and protect our environment.

The Honorable Nicole E. Lowen, Chair  
and Members  
The Honorable John M. Mizuno, Chair  
and Members  
February 11, 2020  
Page 2

Thank you for your consideration of our testimony in support of HB 1859.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Ernest Y. W. Lau". The signature is fluid and cursive, with a large initial "E" and "L".

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer



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-1859**

Submitted on: 2/8/2020 12:49:02 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 HB1859. Underground storage tanks often end up polluting our water tables.

Thank you for the opportunity to present my testimony.

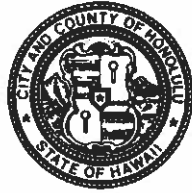
Andrea Quinn

Kihei

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 20-52

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 1859**  
Relating to Environmental Protection

The Department of Environmental Services (ENV) of the City and County of Honolulu supports HB 1859, which would establish a 3-year Department of Health pilot project to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects.

In consideration of Act 125 requiring the replacement of all cesspools in Hawaii by 2050, ENV recognizes the need for innovative solutions for achieving that goal. By establishing an expedited pilot project to identify, demonstrate and evaluate a wide range of cesspool conversion technologies, HB 1858 adopts a proactive approach to addressing this issue.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori M.K. Kahikina", is written over a white background.

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





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 1859, Relating to Environmental Protection.**

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 1859**, which establishes a 3-year Department of Health pilot project to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects.

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.

As an island state, Hawai'i is responsible for handling and diverting its waste streams. With the passage of Act 132, Session Laws of Hawaii 2018, a cesspool conversion working group was formatted and tasked to develop a comprehensive plan to address cesspool conversions in an environmentally-responsible manner. Allowing this solution-based approach will help to find new, innovative technologies in the State's push to transition cesspool statewide to eco-friendly alternatives.

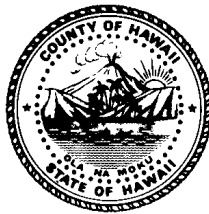
Thank you for this opportunity to testify.

Respectfully,

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

*Investing in a Sustainable Hawai'i*

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 1859, RELATING TO ENVIRONMENTAL PROTECTION  
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 1859, relating to environmental protection. 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 establish and fund a new waste management solution pilot project to demonstrate new toilet and sewage treatment technologies and to expedite the projects. Pollution from cesspools is harming public health. There are roughly 80,000 cesspools that are contaminating streams, oceans, ground water, drinking water, and marine areas around the State. Lack of adequate sewage capacity has led to massive sewage discharges into the ocean following heavy rains. New waste management solutions could greatly improve public health. There are many technologies that can address the issues related to commercial scale developments, individual homes, as well as multi-unit dwellings and entire communities. Considering methods which the Department of Health can ensure that cesspool converted into more environmentally responsible waste treatment systems will greatly benefit the State of Hawai‘i.

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

Rebecca Villegas  
Council Member, Hawai‘i County Council



**WAI** WASTEWATER  
ALTERNATIVES AND  
INNOVATIONS

**LATE**

Feb. 10, 2020

In Support of **HB1859** Relating to Environmental Protection  
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 HB1859**, which would establish a pilot program review and test new toilet and sewage treatment technologies in different locations across the state.

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 crucial bill will help DOH to help fund pilot projects that allow us to test new technology like the Gates Foundation's Reinvented Toilets. These and other innovative circular systems separate liquids and solids, burn the solids as fuel and then pasteurize the water, producing pathogen-free biochar and clean, recycled water. 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. This bill will make it easier to do that and provide critical information for the Cesspool Conversion Working Group to help us in 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 1859  
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 HB1859. This measure establishes a 3-year Department of Health pilot project to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects. It further appropriates funds and repeals on June 30, 2022.

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 also needed to assist in meeting the mandated cesspool conversion requirement by 2050.

In May 5, 2018, at the O`ahu County Democrats Convention, out of dire concern of 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 supports the passage of this measure to establish a 3-year Department of Health pilot project to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects.

Mahalo for the opportunity to testify,

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