



**TESTIMONY OF  
THE DEPARTMENT OF THE ATTORNEY GENERAL  
THIRTIETH LEGISLATURE, 2020**

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**ON THE FOLLOWING MEASURE:**

H.B. NO. 1859, H.D. 1, RELATING TO ENVIRONMENTAL PROTECTION.

**BEFORE THE:**

SENATE COMMITTEES ON AGRICULTURE AND ENVIRONMENT AND ON  
HIGHER EDUCATION

**DATE:** Monday, March 16, 2020

**TIME:** 2:45 p.m.

**LOCATION:** State Capitol, Room 224

**TESTIFIER(S):** Clare E. Connors, Attorney General, or  
Lori N. Tanigawa, Deputy Attorney General

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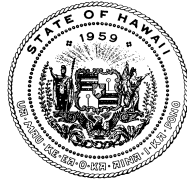
Chairs Gabbard and Kim and Members of the Committees:

The Department of the Attorney General provides the following comments.

The purpose of this bill is to establish a 3-year pilot project by the University of Hawai'i Water Resources Research Center to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects.

Article X, section 6, of the Hawai'i Constitution, gives the University of Hawai'i Board of Regents "exclusive jurisdiction over the internal structure, management, and operation of the university." Section 6 further provides: "This section shall not limit the power of the legislature to enact laws of statewide concern. The legislature shall have the exclusive jurisdiction to identify laws of statewide concern." We therefore suggest that the Legislature consider amending this bill to add a statement identifying this bill as a law of statewide concern.

Thank you for the opportunity to provide these comments.



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

**Testimony in SUPPORT of HB1859 HD1  
RELATING TO ENVIRONMENTAL PROTECTION**

SENATOR MIKE GABBARD, CHAIR  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

SENATOR DONNA MERCADO KIM, CHAIR  
SENATE COMMITTEE ON HIGHER EDUCATION

Hearing Date: 3/16/2020

Room Number: 224

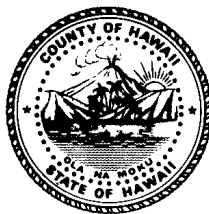
1 **Fiscal Implications:** This measure may impact the priorities identified in the Governor's  
2 Executive Budget Request for the Department of Health's (Department) appropriations and  
3 personnel priorities.

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 by the  
12 University of Hawaii Water Resources Research Center which involves evaluating various  
13 available wastewater treatment alternative technologies will assist the CCWG with meeting the  
14 objectives of Act 132 SLH 2018.

15 **Offered Amendments:** None.

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

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*

March 10, 2020

TESTIMONY OF REBECCA VILLEGAS  
COUNCIL MEMBER, HAWAI'I COUNTY COUNCIL  
ON HB 1859 HD 1, RELATING TO ENVIRONMENTAL PROTECTION  
Committee on Agriculture and Environment  
Committee on Higher Education  
Monday, March 16, 2020  
2:45 p.m.  
Conference Room 224

Aloha Chair Gabbard, Chair Kim, and Members of the Committees:

I thank you for the opportunity to testify in support of HB 1859 HD 1, 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 Agriculture and Environment, the Committee on Higher Education 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

## BOARD OF WATER SUPPLY

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




March 16, 2020

KIRK CALDWELL, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
KAY C. MATSUI  
RAY C. SOON  
MAX J. SWORD

ROSS S. SASAMURA, Ex-Officio  
JADE T. BUTAY, Ex-Officio

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

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

The Honorable Mike Gabbard, Chair  
and Members  
Committee on Agriculture and Environment  
State Senate  
State Capitol, Room 224  
Honolulu, Hawaii 96813

The Honorable Donna Mercado Kim, Chair  
and Members  
Committee on Higher Education  
State Senate  
Hawaii State Capitol, Room 224  
Honolulu, Hawaii 96813

Dear Chair Gabbard, Chair Kim and Members:

Subject: House Bill 1859, House Draft 1: Relating to Environmental Protection

The Honolulu Board of Water Supply (BWS) supports House Bill (HB) 1859, House Draft (HD) 1. This purpose of this bill is to establish and appropriate funds for a New Waste Management Solution Pilot Project to be conducted by the University of Hawaii Water Resources Research Center (WRRC) to conduct the 3-year pilot project that tests new toilet and sewage technologies and to expedite demonstration projects.

High efficiency toilets of 1.28 gallons per flush should be included in the evaluation as a potable water conservation measure and will reduce wastewater flows into cesspools. According to a 2017 Department of Health (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.

The Honorable Mike Gabbard, Chair  
and Members  
The Honorable Donna Mercado Kim, Chair  
and Members  
March 16, 2020  
Page 2

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

Thank you for your consideration of our testimony in support of HB 1859, HD 1.

Very truly yours,



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

**HB-1859-HD-1**

Submitted on: 3/9/2020 3:52:00 PM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Wendy Arbeit	Individual	Support	No

Comments:

What a good idea. This is actually a good use of our taxes. Please support it.



**Written Statement of Elemental Excelerator  
before the Senate Committees on Agriculture and the Environment and Higher Education  
March 16, 2020**

**In consideration of [HB 1859 HD 1](#)  
RELATING TO THE ENVIRONMENT**

**Aloha Chairs Gabbard and Kim, Vice-Chairs Ruderman and Kidani, and Members of the  
Senate Committees on Agriculture and the Environment and Higher Education:**

Elemental Excelerator respectfully submits **support** for HB 1859 HD 1:

1. Establishes a 3-year pilot project by the University of Hawaii Water Resources Research Center to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects.
2. Appropriates funds.

Elemental Excelerator is a Honolulu-based non-profit organization that supports climate positive startup companies that are helping solve Hawai'i's most urgent environmental problems. Each year, we select 15-20 companies annually that best fit our mission and fund each company up to \$1 million. To date, we have awarded \$36 million to 99 companies resulting in over fifty demonstration projects in Hawai'i & the Asia Pacific. Seven percent of our portfolio companies are focused on water solutions related to decentralized treatment, system optimization, and conservation and reuse. Last year, we saw an increasing number of water company applicants focused on decentralized waste and wastewater management, with interests in deploying and scaling projects in Hawai'i.

**We support HB 1859 HD 1** because we believe this bill will open opportunities for innovation by attracting technologies from all across the world to address our State's wastewater challenges, which in turn, will support our State's development of a clean, carbon-neutral economy. Each household, community center, or decentralized area has different environmental and economic factors. Therefore, we urge the committee to consider a community outreach plan for homeowners and communities to create buy-in for them to recognize the challenges and merits of an investment in a future system.

Mahalo for the opportunity to testify on this measure.

Sincerely,

*Tiffany Huynh*

Tiffany Huynh  
Director of External Affairs

**HB-1859-HD-1**

Submitted on: 3/15/2020 2:11:50 PM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
HIROC 2020	Testifying for Hawaii Reef and Ocean Coalition	Support	No

Comments:

HIROC strongly supports funding pilot for new toilet and sewage treatment technologies. Coral reefs and other marine life are being harmed and killed by wastewater from the land. Please pass this bill. Mahalo!





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

SENATE COMMITTEES ON AGRICULTURE & ENVIRONMENT AND HIGHER EDUCATION  
Monday, March 16, 2020 — 2:45 p.m. — Room 224

**Ulupono Initiative supports HB 1859 HD 1, Relating to Environmental Protection.**

Dear Chair Gabbard, Chair Kim, 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 HD 1**, which establishes a 3-year University of Hawai'i pilot project to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects.

Hawai'i has over 88,000 cesspools statewide that discharge more than 53 million gallons of untreated sewage into the State's waters each day. This poses major health and environmental risks 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 Hawai'i 2018, a cesspool conversion working group was formed 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 cesspools 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*



**WAI** WASTEWATER  
ALTERNATIVES AND  
INNOVATIONS

Mar. 15, 2020

In Support of **HB1859 HD1** Relating to Environmental Protection  
Senate Committees on AEN / HRE  
Mar. 16, 2:40pm, Rm. 224

Aloha, Chairs Gabbard & Kim, Vice Chairs Ruderman & Kidani and Members of the Committees:

On behalf of the non-profit WAI: Wastewater Alternatives & Innovations, I am writing in **strong support of HB1859 HD1**, which would establish a pilot program review and test new toilet and sewage treatment technologies in different locations across the state with UH's Water Resources Research Center and UH Sea Grant College. Due to concerns about the costs of the coronavirus to the state, I would suggest passing the bill but delaying implementation of the grant program till 2021.

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 across the state. 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.

As a final amendment, I would suggest extending the \$10,000 tax credit for conversion of cesspools because most homeowners don't know about this incentive and can't afford to upgrade their systems without it. DOH suggested eliminating the requirements for it to be a certain body of water, and I agree this would help. 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

WAI: Wastewater Alternatives & Innovations \* 2927 Hibiscus Pl. \* Honolulu, HI 96815  
808-381-6220 \* [stuart@waicleanwater.org](mailto:stuart@waicleanwater.org) \* [www.WaiCleanWater.org](http://www.WaiCleanWater.org)



**WAI** WASTEWATER  
ALTERNATIVES AND  
INNOVATIONS

Stuart H. Coleman



# Environmental Caucus of The Democratic Party of Hawai'i

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Monday, March 16, 2020

House Bill 1859, HD 1  
Testifying in Strong Support

Aloha Chairs Gabbard and Kim; Vice Chairs Ruderman and Kidani; and Members of the Committee on Agriculture and Environment and Committee on Higher Education:

The Environmental Caucus of the Democratic Party of Hawaii stands in **STRONG SUPPORT** of HB 1859, HD 1. This measure establishes a 3-year pilot project by the University of Hawaii Water Status Resources Research Center to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects and 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 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, we urge you to vote favorably on this bill which establishes a 3-year pilot project by the University of Hawaii Water Status Resources Research Center to demonstrate new toilet and sewage treatment technologies and to expedite demonstration projects, and appropriates funds.

Mahalo for the opportunity to testify,

/s/ Melodie Aduja

Melodie Aduja  
Chair, Human Environmental Impacts Committee  
Environmental Caucus  
Democratic Party of Hawai`i  
Email: legislativepriorities@gmail.com

**HB-1859-HD-1**

Submitted on: 3/9/2020 6:27:09 PM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Benton Kealii Pang, Ph.D.	Individual	Support	No

Comments:

I am in support of HB1859 HD1. Hawai'i has over 88,000 cesspools statewide that discharge more than 53 million gallons of untreated sewage into the State's waters each day. This poses major health and environmental risks to our drinking water, groundwater, streams, and shore waters.

Mahalo for the opportunity to comment.

Benton Kealii Pang, Ph.D.

**HB-1859-HD-1**

Submitted on: 3/10/2020 9:16:18 AM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Amy Brinker	Individual	Support	No

Comments:



**HB-1859-HD-1**

Submitted on: 3/11/2020 5:27:11 PM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Emelia von Saltza	Individual	Support	No

Comments:

**HB-1859-HD-1**

Submitted on: 3/11/2020 7:02:21 PM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Sophia Daniel	Individual	Support	No

Comments:

I am Sophia Daniel, student at Kaiser High School and am testifying in support of HB1859. Sewage affects our waterways, ocean, food production system, and human health. Waste management solutions are needed to preserve the environment and quality of water. Our environment needs to be maintained and maintaining sewage systems properly allows our waterways, ocean, and human health to improve.

Sophia Daniel

(808) 492-0729

**HB-1859-HD-1**

Submitted on: 3/12/2020 9:16:23 PM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Naomi Melamed	Individual	Support	No

Comments:

**HB-1859-HD-1**

Submitted on: 3/16/2020 8:00:17 AM

Testimony for AEN on 3/16/2020 2:45:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Elizabeth Benyshek	Individual	Support	No

Comments:

I am in **strong support of HB1859 HD1**, which would bring new toilet and sewage treatment technologies to the state and would be reviewed by UH's Water Resources Research Center and UH Sea Grant College. This bill would help groups like the Cesspool Conversion Working Group find more affordable and efficient solutions to the state's 88,000 cesspools and wastewater management problem.

**HB-1859-HD-1**

Submitted on: 3/16/2020 8:58:41 AM

Testimony for AEN on 3/16/2020 2:45:00 PM

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

Comments:

Please support HB 1859. As a water quality expert in Hawaii, it is clear that we need to upgrade our onsite wastewater systems in order to protect the public and the nearshore ecosystems. We can most definitely solve this issue using recent technological innovations. HB 1859 is essential to this effort because it allows us to test the feasibility of new technology on site. In addition, this is a great chance to demonstrate how upgrading cesspools will actually impact our coastal water quality. This demonstration will be required if the public is ever to buy into cesspool upgrades mandated by ACT 125. Thank you for considering this bill. Mahalo - Daniel Amato, PhD