

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Testimony of
SUZANNE D. CASE
Chairperson

Before the House Committee on
FINANCE

March 1, 2016
3:00 PM
State Capitol, Conference Room 308

In consideration of
HOUSE BILL 2646, HOUSE DRAFT 1
RELATING TO ENVIRONMENTAL PROTECTION

House Bill 2646, House Draft 1 proposes to establish in State Department of Health a permanent fuel tank advisory committee to study issues related to leaks of underground fuel storage tanks at the Red Hill Bulk Fuel Storage Facility, Kuahua Peninsula, Pacific Missile Range Facility Barking Sands, Hickam Pol Annex, and Schofield Barracks Military Reservation. **The Department of Land and Natural Resources (Department) strongly supports this measure.**

Our underground aquifers are the major source of drinking water for the people of Hawaii. We have a public trust obligation to protect and preserve this valuable and irreplaceable resource. We must be proactive and protective to ensure the long-term sustainability of our precious water resources statewide.

With respect to the State's funding of two test wells around the U.S. Navy's Red Hill Bulk Fuel Storage Facility and the funding for an additional four wells from the United States Navy, the Department notes that a representative from the Department's Commission on Water Resource Management (Commission) sat on the Red Hill Task Force and recommended and supported the installation of additional monitor wells in areas around the facility. Further, the Commission itself has recently taken strong positions that more action needs to be done immediately. Although a relatively small step towards resolution of this serious concern, the siting and installation of two additional monitor wells is timely action in the right direction.

With respect to the advisory committee and its duties proposed in this measure, underground tanks are a major threat to the public trust water resources of the State. It is critical that all owners and operators of underground storage tanks regularly monitor for leaks using approved methods,

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
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

maintain adequate records, and meet corrosion protection, spill, and overfill requirements. These systems are prone to leak over time, as evidenced by the recent case regarding the Red Hill fuel storage tanks. However, the Department defers to the Department of Health regarding the appropriate means of funding, managing, and implementing the responsibilities of this advisory committee.

Lastly, it is unclear what is meant in SECTION 3 (b) that transfers functions and materials between the Red Hill Task Force, created and expanded pursuant to Senate Concurrent Resolution 73, House Draft 1, Regular Session of 2014 and Senate Concurrent Resolution 57, House Draft 1, Regular Session of 2015, respectively, and this measure's proposed advisory committee.



STATE OF HAWAII
DEPARTMENT OF HEALTH
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Honolulu, HI 96801-3378
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**Testimony in SUPPORT of HB 2646, HD1
RELATING TO ENVIRONMENTAL PROTECTION**

REPRESENTATIVE SYLVIA LUKE, CHAIR
HOUSE COMMITTEE ON FINANCE

Hearing Date: March 1, 2016 Room Number: 308
Time: 3:00pm

1 **Fiscal Implications:** Allocates reimbursement for necessary expenses.

2 **Department Testimony:** The Department supports the intent of HB 2646, HD1 and offers the
3 following comments:

4 1. It is unclear whether HB 2646, HD1 includes the study of all underground storage tanks.
5 It would appear that the intent is for the study of leaks of field-constructed tanks owned
6 and operated by the U. S. military.

7 2. The Department also recommends to include the director of health or the director's
8 designee on Line 7, page 3 of the bill.

9 If the intent is to study field-constructed tanks, we propose the following language:

10 "§342L- **Duties:** (a) The advisory committee shall study issues related to leaks of field-
11 constructed underground fuel storage tanks at the Red Hill Bulk Fuel Storage Facility, Kuahua
12 Peninsula, Pacific Missile Range Facility Barking Sands, and Hickam POL Annex. The advisory
13 committee shall consider:..."

14 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



March 1, 2016

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Manager and Chief Engineer

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

The Honorable Sylvia Luke, Chair
and Members
Committee on Finance
House of Representatives
Hawaii State Capitol, Room 308
415 South Beretania Street
Honolulu, Hawaii 96813

Dear Chair Luke and Members:

Subject: House Bill 2646, HD 1: Relating to Environmental Protection

We strongly support House Bill 2646, HD 1. This bill creates a permanent fuel tank advisory committee to study and oversee fuel tank leak issues.

The establishment of a permanent fuel tank advisory committee ensures the results of on-going and future studies and work to understand and mitigate the impact of fuel leaks, receive immediate and continuous discussion, analysis, follow up attention and action. It also provides a way for open discussion and availability of information, free from mechanisms designed to restrict disclosure. The public has a right to know about the quality of their environment and drinking water aquifers and are entitled to the responsibility and transparency vested in this advisory committee to protect them as declared in article XI, section 7 of the state constitution. This bill is in the best interest of public health protection and our most precious resource – the groundwater aquifer – and we respectfully request your passage of this measure.

Thank you for the opportunity to testify.

Very truly yours,

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

HOUSE COMMITTEE ON FINANCE

Sylvia Luke, Chair; Scott Y. Nishimoto, Vice Chair

Testimony on House Bill 2646 H.D. 1, Relating to Environmental Protection

**Hearing on date/time: Tuesday, March 1, 2016, 3:00pm,
Conference Room 308, State Capitol, 415 South Beretania Street**

Testimony by Navy Region Hawaii

Chair Luke, Vice-Chair Nishimoto, and Representatives,

The Navy appreciates the interest expressed by House Bill 2646 HD 1 in creating an advisory committee within the Department of Health, State of Hawaii, on fuel tanks and releases from fuel tanks. We would expect that entities in Hawaii beyond those engaged in national defense, such as entities engaged in transportation, utilities and the members of the industry that provides and moves fuel around the State, may also store fuel in tanks in Hawaii and may have experienced releases from their tanks or pipelines. This proposed committee, to be a fair advisor on the subject of releases of fuel into the environment, would merit far broader participation, if that is the intention of the proposed committee. To do otherwise would seem to specifically target those who store fuel while providing for the national defense.

However, if this proposed Committee is not intended to address the topic of release from fuel tanks and pipelines in general, but specifically intends to target former releases from the Navy's Red Hill Bulk Fuel Storage Facility, we would note that this Committee duplicates on-going efforts. The topics noted by the proposed legislation are already being addressed by the subject matter experts and regulatory agencies via the United States Environmental Protection Agency, Region IX and Department of Health, State of Hawaii's Order, Administrative Order on Consent, EPA DKT. No. RCRA 7003-R9-2015-01; DOH DKT NO. 15-UST-EA-01, dated September 28, 2015.

Your Department of Health's subject matter experts, as well as those from other branches of State government and the County's Board of Water Supply, are actively engaged in addressing these very topics under the Order. As stated in the Order, its "primary objectives . . . are to take steps to ensure that the groundwater resources in the vicinity of the Facility is protected and to ensure that the Facility is operated and maintained in an environmentally protective manner." Investigation and Remediation of Releases comprises its own section of the Order. Groundwater Protection and Evaluation forms another. The subject matter experts from the Regulatory Agencies, the United States Environmental Protection Agency, Region IX and the Department of Health, State of Hawaii, who would participate in this Committee, if focused primarily on Red Hill, are fully engaged in meeting the Order's requirement.

We respectfully offer the attached amendments to clarify that the proposed Committee or task force be focused not solely on past releases from the Navy's Red Hill Bulk Fuel Storage Facility, but on the issue of releases of petroleum into the environment in Hawaii in general.

Should you choose however to proceed with the proposed Committee, for purposes of creating an accurate record, we would respectfully suggest that much of the text in Section 1 be deleted. These proposed amendments are identified as Exhibit "A", attached to this written testimony.

The current Section 1 suggests that the tanks at Red Hill are seriously deteriorated, corroded, and contain holes as a result of corrosion. However, we are unaware of any significant corrosion to the Red Hill tanks presently. In fact, the Navy has for years conducted a program to systematically drain, inspect and repair the tanks to ensure their continued integrity. One of the efforts to be undertaken pursuant to the Order is to fully describe to the Regulatory Agencies the current procedures that the Navy takes at Red Hill as to tank inspection, repair and maintenance. A report will be developed to set forth options for the Regulatory Agencies' review and approval as to improving these procedures and any actions that can be taken to further reduce the risk of releases from these tanks.

We note that certain portions of Section 1 also contain text from an earlier version of the bill when its purpose was to provide State funding for two monitoring wells. Because the bill no longer serves that purpose and is focused solely on a Fuel Tank Advisory Committee, we respectfully suggest that those paragraphs regarding additional monitoring wells be deleted as indicated in Exhibit "A", attached to this written testimony.

We thank you for the opportunity to provide our comments on this proposal.

Exhibit "A"
To Navy Written Testimony for H.B. 2646 H.D. 1

HOUSE OF REPRESENTATIVES
TWENTY-EIGHTH LEGISLATURE,
2016
STATE OF HAWAII

H.B. NO. 2646
H.D. 1

A BILL FOR AN ACT

RELATING TO ENVIRONMENTAL PROTECTION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The legislature finds that protecting the environment and underground sources of drinking water is in the best interest of public health and safety and required under article XI, section 7, of the state constitution.

The legislature also finds that numerous entities have reported release of fuel into the environment from fuel tanks and pipelines. Most recently, the United States Navy reported to the Department of Health, State of Hawaii, a loss of approximately 27,000 gallons of fuel from its Red Hill Bulk Fuel Storage Facility. since 2005, ~~petroleum chemical contaminants have been detected in the groundwater and rocks beneath the United States Department of Navy's Red Hill Bulk Fuel Storage Facility fuel tanks. In January 2014, the facility's tank number five released twenty seven thousand gallons of fuel into underground rocks and groundwater. The current location of the released fuel is unknown.~~

~~The Red Hill Bulk Fuel Storage Facility fuel tanks have been corroding for more than seventy years. The corrosion has caused~~

Exhibit "A"
To Navy Written Testimony for H.B. 2646 H.D. 1

~~significant thinning of the steel tank walls and, in some cases, has fully penetrated the steel. The ongoing corrosion damages the steel walls of the fuel tanks, as well as the steel reinforcement in the surrounding concrete, and can lead to more frequent and larger fuel releases than have occurred in the past.~~

The legislature further finds that additional information is needed to assess the consequences of these various fuel leaks on Hawaii's environment, including its groundwater, drinking water resources, and in some cases, marine environment.~~the installation of monitor wells is crucial to test groundwater underneath and surrounding the Red Hill Bulk Fuel Storage Facility to protect Oahu's fresh water supply. While it should be the duty of the United States Navy to fund efforts to monitor and remediate fuel leaking from the Red Hill Bulk Fuel Storage Facility, the protection of Oahu's drinking water supply is of such critical importance to the health and safety of the people of Hawaii that as a first step, the local board of water supply is funding the installation of two test wells in the area. The State is also funding two test wells in the area, and the people of Hawaii are waiting for the United States Navy to provide funding for at least four additional wells.~~

The purpose of this Act is to protect public health by establishing a permanent fuel tank advisory committee.

SECTION 2. Chapter 342L, Hawaii Revised Statutes, is amended by adding a new part to be appropriately designated and to read as follows:

Exhibit "A"
To Navy Written Testimony for H.B. 2646 H.D. 1

"PART . FUEL TANK ADVISORY COMMITTEE

§342L- Fuel tank advisory committee; established;
composition. (a) There is established in the department of health the fuel tank advisory committee, which shall consist of thirteen ex officio members and at least two public members.

- (b) The ex officio members of the committee shall be:
- (1) The director of health, who shall serve as the committee's chair;
 - (2) The four members of Hawaii's congressional delegation, or their designees;
 - (3) The Commanding General of the United States Army, Pacific, or the Commanding General's designee;
 - (4) The Commander of the Pacific Fleet of the United States Navy, or the Commander's designee;
 - (5) The Commander of the Pacific Air Forces, or the Commander's designee;
 - (6) A representative from the United States Environmental Protection Agency, or the representative's designee;
 - (7) The president of the senate, or a senator appointed by the senate president;
 - (8) The speaker of the house of representatives, or a representative appointed by the speaker of the house;
 - (9) The chairperson of the board of land and natural resources, or the chairperson's designee; and

Exhibit "A"
To Navy Written Testimony for H.B. 2646 H.D. 1

(10) The chairperson of the board of water supply of a county with a population of five hundred thousand or more, or the chairperson's designee.

(c) The governor shall appoint at least two public members from the community at large in accordance with section 26-34; provided that the advice and consent of the senate shall not be necessary.

(d) The public members of the advisory committee shall receive no salary, but shall be entitled to reimbursement for necessary expenses, including travel expenses.

§342L- Duties. (a) The advisory committee shall study issues related to leaks of underground fuel storage tanks at the Red Hill Bulk Fuel Storage Facility, Kuahua Peninsula, Pacific Missile Range Facility Barking Sands, Hickam Pol Annex, and Schofield Barracks Military Reservation. The advisory committee shall consider:

- (1) The short- and long-term effects of leaks of the fuel tanks, including effects relating to the health of residents, safe drinking water, and the environment;
- (2) Response strategies to mitigate the effects of leaks from fuel tanks;
- (3) Methods to improve communication between the United States Navy, Air Force, and Army; the State; any local board of water supply; and the public in the event of a leak of any fuel tank;

Exhibit "A"
To Navy Written Testimony for H.B. 2646 H.D. 1

- (4) Groundwater test results in relation to the surrounding areas of fuel tank facilities, with a particular emphasis on the groundwater near the Red Hill Bulk Fuel Storage Facility;
- (5) The implications of shutting down any fuel tank facility; and
- (6) Updates on progress toward meeting goals of agreement between the State, the affected county, and the federal government.

(b) No later than twenty days before the convening of each regular session, the advisory committee shall submit a report of its findings, including groundwater test results, and recommendations, including any proposed legislation, to the legislature."

SECTION 3. (a) All rights, powers, functions, and duties of the task force to study fuel tank leaks initially created pursuant to senate concurrent resolution no. 73, H.D. 1, regular session of 2014, and expanded by senate concurrent resolution no. 57, H.D. 1, regular session of 2015, are transferred to the fuel tank advisory committee established pursuant to this Act.

(b) All records, equipment, machines, files, supplies, contracts, books, papers, documents, maps, and other personal property heretofore made, used, acquired, or held by the task force to study fuel tank leaks relating to the functions transferred to the fuel tank advisory committee established pursuant to this Act shall be transferred with the functions to which they relate.

Exhibit "A"
To Navy Written Testimony for H.B. 2646 H.D. 1

SECTION 4. This Act shall take effect on July 1, 2016.

Report Title:

Red Hill Bulk Fuel Storage Facility; Fuel Tank Advisory
Committee; Monitor Wells

Description:

Creates a permanent fuel tank advisory committee to study and
monitor fuel tank leak issues. (HB2646 HD1)

*The summary description of legislation appearing on this page is for informational purposes only and is
not legislation or evidence of legislative intent.*



**Conservation Council
for Hawai'i**

Hawai'i's voice for wildlife

Kō Hawai'i leo no nā holoholona lōhiu



Testimony Submitted to the House Committee on Finance
Hearing: Tuesday, March 1, 2016 3 pm
Conference Room 308

In Support of HB 2646 HD 1 Relating to Environmental Protection

Chair Luke, Vice Chair Nishimoto, and Members of the Committee.

Aloha. Conservation Council for Hawai'i supports HB 2646 HD 1, which creates a permanent fuel tank advisory committee to study and monitor fuel tank leak issues.

The Navy should be paying the full cost of studying, monitoring, and mitigating the effects of the fuel storage facility by independent objective parties. We question why the State did not include such funding requirements in the Administrative Order on Consent in 2015.

Furthermore, the State and the EPA gave the Navy 20 years to fix the leaking fuel storage tanks, so this will be an ongoing and enormous cost to the citizens of Hawai'i. The Navy clearly has the funding to monitor and mitigate the effects of its fuel storage tanks and replace the tanks using the best technology available, but it refuses to do so. Something is not right here.

The Navy cannot be trusted to ensure its operations do not harm our land, waters, and natural resources. The Navy has a terrible stewardship record in Hawai'i, including Kaho'olawe (it never paid for its contamination of the island and thorough clean-up), wildlife interactions and conflicts at the Pacific Missile Range Facility on Kaua'i, its continued strafing of Ka'ula Islet to the southwest of Ni'ihau, its failure to protect seabirds, monk seals, and other native wildlife on Ka'ula, including predator control of rodents, and its failure to protect marine mammals and sea turtles from the harmful effects of sonar and explosives training in Hawai'i and Southern California. The failure to prevent contamination of our groundwater by leaking fuel at Red Hill is just the most recent example of the Navy's poor stewardship and failure its failure to protect the environment.

Please support HB 2646 HD 1 and keep our groundwater resources safe.

Mahalo nui loa for the opportunity to testify.

Marjorie Ziegler

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From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 28, 2016 9:14 AM
To: FINTestimony
Cc: amybrinker@mac.com
Subject: *Submitted testimony for HB2646 on Mar 1, 2016 15:00PM*

HB2646

Submitted on: 2/28/2016

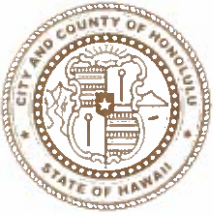
Testimony for FIN on Mar 1, 2016 15:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Amy Brinker	Individual	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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LATE

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February 29, 2016

The Honorable Sylvia Luke, Chair
The Honorable Scott Y. Nishimoto, Vice Chair
and Members of the House Committee on Finance

TESTIMONY IN SUPPORT OF HB2646, HD1

This testimony is to convey strong support of HB 2646, HD1, for the creation of a fuel tank advisory committee to address leaks of underground fuel storage tanks. Of immediate concern are the Red Hill fuel tanks. I continue to have serious concerns with the lack of focus on the immediate protection of our precious and irreplaceable water resource at the Red Hill facility. Should fuel leaks from these Red Hill tanks contaminate our island's drinking water, I believe all parties would agree this would be catastrophic. The seriousness of this situation calls for immediate action.

Actions to address the Red Hill situation could include:

- Reduce the implementation time for upgrading the tank structure to no more than 10 years, in contrast to the Statement of Work (SOW) language where the Navy will conduct a new study, have the technology approved, and then allows twenty-two (22) years for implementation of the technology.
- Immediately implement the installation of advanced leak detection and tank corrosion protection, in contrast to the SOW language where the Navy will conduct a new study to evaluate improvements to tank tightness and release detection, have the technology approved, and then implement improvements.
- Immediately increase and make efforts to enhance groundwater flow models, in contrast to the SOW language where the Navy will further develop models to understand groundwater flow, have the modeling approved, and then develop and improve groundwater monitoring to the extent determined necessary.
- Establish semi-annual tightness testing, in contrast to the SOW language where the Navy will do annual testing starting no later than one year from the effective date of the Administrative Order of Consent (AOC).
- Clean up the fuel that has already leaked beneath the fuel tanks.

The creation of this fuel tank advisory committee could also be pro-active by looking at prevention of fuel spills rather than focusing on the uncertainty and possibly ineffective after-the-fact remediation. By the time remediation is needed, it is likely we will have a serious environmental crisis that potentially could have been averted. We need to assure that these facilities are sound and safe so that remediation is never needed. I support HB2646, HD1.

Sincerely,

Brandon Elefante
Councilmember, District 8

LATE

Testimony in **SUPPORT** of
HB 2648 HD1 Relating to Commercial Organic Waste

To: The Chairs and members of the FIN Committee

Position: **Support**

Hearing: 3/1/16 3:00pm, Rm 308

Dear Chair Luke, Vice Chair Nishimoto and committee members,

I am writing in support of HB 2648 HD1, relating to commercial organic waste diversion. Legislation that guarantees feedstock for potential composting or clean energy facilities is necessary to help fill the infrastructure gap in the State's food waste processing capacity.

Food waste is the second largest component in our waste stream and accounts for 25% of all materials sent to our landfills, according to the United States Environmental Protection Agency (U.S. EPA) and the United States Department of Agriculture (USDA). The EPA and Chapter 342G of the Hawaii Revised Statutes have an established hierarchy of food waste disposal methods calls for landfilling and incineration to be the lowest priority below source reduction, feeding the hungry, livestock production and creating compost for healthy soils.

By providing incentive that encourages the development of food recycling facilities in Hawaii, this law has the potential to create more opportunity for local businesses to recycle food waste and reduce our state's carbon footprint. This food waste reduction model would benefit every county by drastically reducing the landfill and clean air burdens.

Food disposed of in our landfills rots and contributes to producing methane gas - a potent greenhouse gas (GHG) with 21 times the global warming potential of carbon dioxide. Recycling food waste and turning it into compost has high environmental benefits such as improving soil health, increasing drought resistance, and reducing the need for supplemental water, fertilizers, and pesticides. It has been demonstrated that applying compost and organic matter to soils sequesters carbon from the atmosphere, mitigating climate change.

Effectively reducing GHG emission in Hawai'i through food waste diversion will move Hawai'i towards our Aloha+ Challenge commitments of 70% waste stream reduction by 2025, and support local Agriculture through building healthy soils.

For the stated reasons, I support HB 2648 HD1 alongside the Surfrider Foundation and Rise Above Plastics coalition.

Sincerely,
Kaily Wakefield



LATE

Surfrider Foundation Oahu Chapter

Rafael Bergstrom, Oahu Chapter Coordinator

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Aloha Chair Luke & the Committee on Finance

RE: HB 2648: In Strong Support
Tuesday, March 1, 2016
TIME: 3:00 PM
PLACE: Conference Room 308

I am writing on behalf of the Surfrider Foundation's Oahu Chapter in support of HB 2648, relating to commercial organic waste. Our support comes based on the information provided below, but we would also like to first comment on the current form of this bill. Amendments made after the hearing in the EEP Committee have the intent to move this bill through with compromise. Surfrider strongly supports this attempt to include the concerns of all counties and stakeholders. Our State will be better served to have an action advisory committee look into an issue that will serve to lessen our impact and create value added products. **While our overarching goal is to have our State move to a complete diversion of food waste, we appreciate the concerns of infrastructure and are open to putting in place tonnage limits that are indicative of our current abilities.** However:

- It should be noted that once we have full understanding of our food waste diversion goals and principles (through the advisory committee established with this bill), there is no reason that **this State cannot mover towards 100% diversion of food waste** away from our landfills and incineration.
- All of our counties should not be beholden to the contracts that H-Power holds over Honolulu. While we understand that waste to energy is part of the solution to waste diversion in our island community, the continued dialogue that incentivizes more waste in unacceptable. The United States Environmental Protection Agency (EPA) **outlines very clearly that incinerating and landfilling food waste is both inefficient and last on the list of techniques for disposal.**
- Hawai'i has an opportunity to use the food waste problem as a method to create local industry and jobs that will support the growth of sustainable local food production.

By providing incentive that encourages the development of food recycling facilities in Hawai'i, this law has the potential to create more opportunity for local businesses to recycle food waste and reduce our state's carbon footprint. The City and County of Honolulu already has a successful program model from Ordinance 96-20 requiring large food waste producers to recycle their food waste, that has spurred new economic opportunities for EcoFeed, while reducing disposal cost burdens on businesses. This food waste reduction model would benefit every county by drastically reducing the landfill and clean air burdens.

Food waste is the second largest component in our waste stream and accounts for 25% of all materials sent to our landfills, according to the EPA and the United States Department of Agriculture (USDA). The EPA's established hierarchy of food waste disposal methods calls for landfilling and incineration to be the lowest priority below source reduction, feeding the hungry, livestock production and creating compost for healthy soils.

Food disposed in our landfills rots and contributes to producing methane gas - a potent greenhouse gas (GHG) with 21 percent times the global warming potential of carbon dioxide. Recycling food waste and turning it into compost has high environmental benefits such as improving soil health, increasing drought resistance, and reducing the need for supplemental water, fertilizers, and pesticides. It has been demonstrated that applying compost and organic matter to soils sequesters carbon from the atmosphere, mitigating climate change. Effectively reducing GHG emission in Hawai'i through food waste diversion will move Hawai'i towards our Aloha+ Challenge commitments of 70% waste stream reduction by 2025, and supporting local Agriculture through building healthy soils. More efforts to feed Hawai'i's hungry versus our landfills and incinerators can help address the one in seven households in the State of Hawai'i that are food insecure, by donating safe and healthy food to a food bank or food rescue organization.

Surfrider Oahu is always concerned with the burden of waste that our culture of consumption has on our environment and are strong proponents of methods of reduction that also include value added products as end results. Converting food waste State-wide into natural soil amendments will benefit multiple sectors of our economy and lifestyles in Hawai'i.

Mahalo for your time and consideration on this important topic.

Cheers,
Rafael Bergstrom
Surfrider Oahu Chapter Coordinator

LATE

Testimony in support of HB 2648

Legislators, please support HB 2648. As a part time worker in the service industry, I am constantly appalled by the amount of food and material waste that is generated every day. After catering events, there is typically so much food left over that is thrown in the trash because even the staff have eaten more than their fill. First, we have a significant homeless problem in Hawaii that would greatly benefit from donations of perfectly good food and ingredients. Second, all food waste (which exceeds hundreds of pound for large events) would be better off enriching compost to grow more food locally than ending up in landfills or incinerators. Keeping food waste out of our garbage bins clearly has multiple benefits to our Island home and its inhabitants. Mahalo

-Daniel Amato, PhD



Feb. 29, 2016

To: The Chairs and members of the FIN Committee

Position: Strong Support for HB 2648 (Relating to Commercial Organic Waste)

Dear Chair Luke, Vice Chair Nishimoto and Committee members,

I wish to inject some new perspective on the topic of waste management and specifically the value in what most discard as disgusting.

In previous testimony, that I have read, the “value” of our food waste has been expressed by noting that there is a hierarchy where foods should be eaten by people first, then by animals and then composted...



The value of the compost is where I would like to focus. Water retention is a factor for all of our world's lands. Like in many places around the world, ranchers on Big Island were forced to put down more cattle than they would have liked during a time of low rain fall. The grass could no grow and the cattle could not eat. 1.8 billion tons of top soil are lost each year from our crop lands. These two issues related to water and soil health are great cases for the value of compost.

Studies have shown that the application of .5 inches of compost to rangelands dramatically increases the lands capacity to retain water. There are many benefits to this, richer soils, healthier aquafers, reduced soil erosion, greater grass growth for livestock, and a thriving eco system in the soil. Additionally, these studies have shown that the application of compost across rangelands brought about the sequestration of CO2 or carbon dioxide. This result was not limited to the first year of the .5 inch application of compost, in fact, the original layer of compost placed on the land

continued to take carbon out of the atmosphere year after year and is expected to do so for 30 years.

Below is a basic calculation illustrating the amount of carbon and water absorbed and held by a .5 inch application of compost generated by 100 tonnes of organic waste. With an updated waste characterization study, it would be easy to calculate the benefits to our lands.

100	Tonnes of Organic waste
20%	Mass loss from feedstock
80	Tonnes of Compost
176369.6	lbs of Compost (2204.62 lbs per metric tonne)
1400	lbs of Compost per cubic yd of compost (ranges from 1000-1800)
125.9782857	Cubic yds of compost
0.5	inches of compost applied
81276.31336	Square feet of coverage (.0031 per inch per cubic yard)
0.75508239	Hectares of compost covered (107639 sq ft per hectare,
0.75508239	Metric tonnes CO ₂ e sequestered per year after one-time application to rangeland (1 tonnes per year) every year after application
20387.22453	Increased hydrologic retention liters per hectare per year (27,000 liters per hectare)

Some sources:

<http://www.marincarbonproject.org/science/b9-mcp-science-references>

http://www3.epa.gov/epawaste/conservation/tools/warm/pdfs/Food_Waste.pdf

http://www.seas.columbia.edu/earth/wtert/sofos/haaren_thesis.pdf

<http://www.carboncycle.org/wp-content/uploads/2014/10/carbon-farming-brochure.pdf>

<http://globalcompostproject.org/kevin-drew-positive-economy-forum-le-havre-2015-english/>

The data from the California studies was used in a calculation for the entire state. It was determined that if Californian was able to lay .5 inches of compost across 25% of its rangelands, it could offset all of its commercial and residential emissions for a year. These findings bring new light to the importance and value of composting. There is an implication that a wide practice of composting coupled with the application of compost to our lands would reduce and possibly reverse climate change. To be clear here, the world's capacity to compost is currently at a small fraction of what is necessary to test the large scale findings of the study. However, the study alone provide strong incentives to create a thriving composting culture here in Hawaii and all over.

Sincerely

Ari Patz
World Centric



Feb. 29, 2016

To: The Chairs and members of the FIN Committee

Position: Strong Support for HB 2648 (Relating to Commercial Organic Waste)

Dear Chair Luke, Vice Chair Nishimoto and Committee members,

I wish to inject some new perspective on the topic of waste management and specifically the value in what most discard as disgusting.

In previous testimony, that I have read, the “value” of our food waste has been expressed by noting that there is a hierarchy where foods should be eaten by people first, then by animals and then composted...



The value of the compost is where I would like to focus. Water retention is a factor for all of our world's lands. Like in many places around the world, ranchers on Big Island were forced to put down more cattle than they would have liked during a time of low rain fall. The grass could no grow and the cattle could not eat. 1.8 billion tons of top soil are lost each year from our crop lands. These two issues related to water and soil health are great cases for the value of compost.

Studies have shown that the application of .5 inches of compost to rangelands dramatically increases the lands capacity to retain water. There are many benefits to this, richer soils, healthier aquafers, reduced soil erosion, greater grass growth for livestock, and a thriving eco system in the soil. Additionally, these studies have shown that the application of compost across rangelands brought about the sequestration of CO2 or carbon dioxide. This result was not limited to the first year of the .5 inch application of compost, in fact, the original layer of compost placed on the land

continued to take carbon out of the atmosphere year after year and is expected to do so for 30 years.

Below is a basic calculation illustrating the amount of carbon and water absorbed and held by a .5 inch application of compost generated by 100 tonnes of organic waste. With an updated waste characterization study, it would be easy to calculate the benefits to our lands.

100	Tonnes of Organic waste
20%	Mass loss from feedstock
80	Tonnes of Compost
176369.6	lbs of Compost (2204.62 lbs per metric tonne)
1400	lbs of Compost per cubic yd of compost (ranges from 1000-1800)
125.9782857	Cubic yds of compost
0.5	inches of compost applied
81276.31336	Square feet of coverage (.0031 per inch per cubic yard)
0.75508239	Hectares of compost covered (107639 sq ft per hectare,
0.75508239	Metric tonnes CO ₂ e sequestered per year after one-time application to rangeland (1 tonnes per year) every year after application
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<http://globalcompostproject.org/kevin-drew-positive-economy-forum-le-havre-2015-english/>

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Sincerely

Ari Patz
World Centric

LATE

Testimony in support of HB 2648

Legislators, please support HB 2648. As a part time worker in the service industry, I am constantly appalled by the amount of food and material waste that is generated every day. After catering events, there is typically so much food left over that is thrown in the trash because even the staff have eaten more than their fill. First, we have a significant homeless problem in Hawaii that would greatly benefit from donations of perfectly good food and ingredients. Second, all food waste (which exceeds hundreds of pound for large events) would be better off enriching compost to grow more food locally than ending up in landfills or incinerators. Keeping food waste out of our garbage bins clearly has multiple benefits to our Island home and its inhabitants. Mahalo

-Daniel Amato, PhD

LATE

Testimony in SUPPORT of
HB 2648 HD1 Relating to Commercial Organic Waste

To: The Chairs and members of the FIN Committee

Position: Support

Hearing: 3/1/16 3:00m, Rm 308

Dear Chair Luke, Vice Chair Nishimoto and committee members,

I am writing in support of HB 2648 HD1, relating to commercial organic waste diversion. Composting food waste will drastically reduce the amount of material flowing into our landfills and also keep valuable organic matter from being incinerated. Food waste can be composted and converted into nutrient rich soils. These soils can then be used by local farmers and residents to grow food.

For the past 5 years, I have played a leading role with Permablitz Hawaii and started my own business called Growing Together Edible Landscaping. My intentions have been to educate people how to utilize local resources and grow their own food. One key limitation for more people and farmers to grow organic food is limited supply and high energy costs of creating quality compost. Recycling and composting municipal food waste could serve as a huge step towards filling this niche. If the compost is made available to the public, local organic food production will increase both on a small backyard scale up to larger organic farms. Compost added to soil increases water retention, serves as a valuable fertilizer, and reduces Hawaii's need to import fertilizers. Also, healthier soils lead to less need for pesticides.

Other cities like San Francisco in California have been successfully implementing a similar zero waste program for 8 years with great success. If HB 2648 HD1 is passed, it will serve as a huge stepping stone towards a more sustainable future for Hawaii and create more community resiliency in the form of increased local food production.

I support HB 2648 HD1 alongside the Surfrider Foundation and Rise Above Plastics coalition, Permablitz Hawaii, and as a business owner of Growing Together Edible Landscaping.

Sincerely,
Drew Wilkinson

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 29, 2016 7:41 PM
To: FINTestimony
Cc: richardfurst@yahoo.com
Subject: Submitted testimony for HB2648 on Mar 1, 2016 15:00PM

LATE

HB2648

Submitted on: 2/29/2016

Testimony for FIN on Mar 1, 2016 15:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Richard Furst	Individual	Support	No

Comments: I would like to express my support of HR 2648 RELATING TO FOOD WASTE DISPOSAL. I firmly believe that diverting food waste from the waste stream is a big plus for Hawaii. Food scraps can be a valuable commodity for building organic soils here on Oahu, and we desperately need to increase our local agricultural production. Please support this bill.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 29, 2016 5:43 PM
To: FINTestimony
Cc: rob@browerhomes.com
Subject: Submitted testimony for HB2648 on Mar 1, 2016 15:00PM

LATE

HB2648

Submitted on: 2/29/2016

Testimony for FIN on Mar 1, 2016 15:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
robert brower	Surfrider foundation kauai	Support	No

Comments: We at Surfrider Foundation Kauai give our strong support to this Bill. We would however like to see pilot programs funded and implemented on the neighbor islands prior to the dates set forth in this Bill.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

Hawai'i Green Growth is a public-private partnership that coordinates across government, non-governmental and cultural organizations, business, academia and philanthropy to achieve Hawai'i's Aloha+ Challenge 2030 sustainability goals.

Steering Committee

Deanna Spooner
June Matsumoto
Matt Lynch
Mark Fox
Mike Hamnett
Piia Aarma
Pono Shim
Scott Enright
Scott Seu
Ulalia Woodside
William J. Aila Jr.

**Testimony of Hawai'i Green Growth
In Support of HB2648 HD1 Relating to Food Waste Disposal
House Committee on Finance
1 March 2016, 11:00am, Room 325**

Aloha Chair Luke, Vice Chair Nishimoto, and Members of the Committee:

Hawai'i Green Growth (HGG) supports the intent of HB2648 HD1 to establish a phased reduction of food waste in the municipal solid waste stream and an advisory committee to evaluate solid waste infrastructure needs. Hawai'i Green Growth defers to implementation comments from the Department of Health and counties.

As an island state, solid waste management is a critical issue for Hawai'i. According to the United States Environmental Protection Agency and the United States Department of Agriculture, food waste is the second largest component in our waste stream and accounts for 25% of all materials sent to our landfills. Establishing a phased reduction of food waste can have significant benefits to Hawai'i's economy and natural environment through increased efficiency and a reduced waste-stream. Joint state, county and private partner action is critical to achieving the 70% solid waste reduction goal by 2030 outlined in the *Aloha+ Challenge*, and long-term discussion and recommendations are needed.

The *Aloha+ Challenge* is a statewide commitment by the State Legislature (SCR 69), Governor, Mayors and Office of Hawaiian Affairs to achieve six sustainability goals for 2030 in the areas of clean energy, local food, natural resources, solid waste reduction, smart growth and climate resilience, and green jobs and education. Statewide HGG public-private partners are identifying shared measures to track progress and provide accountability with the online *Aloha+ Challenge* Dashboard, while developing an annual policy and action agenda to advance Hawai'i's shared 2030 sustainability goals.

The *Aloha+ Challenge* has been recognized nationally and internationally by the US State Department and Global Island Partnership as a model for locally appropriate implementation of UN Sustainable Development Goals. With the upcoming IUCN World Conservation Congress hosted by Hawai'i in September 2016, this legislative session is an important opportunity for Hawai'i to showcase leadership on sustainable development, conservation and resilience.

As a diverse public-private partnership, Hawai'i Green Growth supports the intent of HB2028 HD1 to help drive joint action and implementation on the *Aloha+ Challenge* solid waste reduction goal.

LATE



3409 Sierra Drive / Honolulu, HI 96816

March 1, 2016

To Whom it May Concern,

Seeing the waste in Hawaii through cleaning coastlines and more relevant to this bill, through our Waste Diversion Education at events, I urge you to support Bill 2648. There is just too much food being wasted. With the amount of mixed trash going into our waste stream we are throwing away valuable resources only perpetuating this notion of an overconsumption lifestyle with little care of the consequences. The biggest wasters should be our biggest assets.

We need to take the valuable resource of food waste and turn it into soil amendments. Healthier soil mean better growing environments for our state. Make it easier for the State to return to a less reliant time where we did not need to import the vast majority of our food and ironically soil. We can do it right here on our own, you can help, pass this Bill.

Aloha,

A handwritten signature in black ink, appearing to read "Kahi", written in a cursive style.

Kahi Pacarro

Executive Director

LATE

Testimony in SUPPORT of
HB 2648 HD1 Relating to Commercial Organic Waste

To: The Chairs and members of the FIN Committee

Position: Support

Hearing: 3/1/16 3:00m, Rm 308

Dear Chair Luke, Vice Chair Nishimoto and committee members,

I am writing in support of HB 2648 HD1, relating to commercial organic waste diversion. Legislation that guarantees feedstock for potential composting or clean energy facilities is necessary to help fill the infrastructure gap in the State's food waste processing capacity. Even in the absence of mandates, there are multiple entrepreneurs across the State seeking to build food waste diversion infrastructure, because they see it for what it is - a resource to be utilized not wasted. By providing incentive that encourages the development of food recycling facilities in Hawaii, this law has the potential to create more opportunity for local businesses to recycle food waste and reduce our state's carbon footprint. The City and County of Honolulu already has a successful program model from Ordinance 96-20 requiring large food waste producers to recycle their food waste, that has spurred new economic opportunities for EcoFeed, while reducing disposal cost burdens on businesses. This food waste reduction model would benefit every county by drastically reducing the landfill and clean air burdens.

Food waste is the second largest component in our waste stream and accounts for 25% of all materials sent to our landfills, according to the United States Environmental Protection Agency (U.S. EPA) and the United States Department of Agriculture (USDA). The EPA's (and Hawaii Revised Statutes 342G) established hierarchy of food waste disposal methods calls for landfilling and incineration to be the lowest priority below source reduction, feeding the hungry, livestock production and creating compost for healthy soils.

Food disposed of in our landfills rots and contributes to producing methane gas - a potent greenhouse gas (GHG) with 21 percent times the global warming potential of carbon dioxide. Recycling food waste and turning it into compost has high environmental benefits such as improving soil health, increasing drought resistance, and reducing the need for supplemental water, fertilizers, and pesticides. It has been demonstrated that applying compost and organic matter to soils sequesters carbon from the atmosphere, mitigating climate change.

Effectively reducing GHG emission in Hawai'i through food waste diversion will move Hawai'i towards our Aloha+ Challenge commitments of 70% waste stream reduction by 2025, and support local Agriculture through building healthy soils. More efforts to feed

Hawaii's hungry versus our landfills and incinerators can help address the one in seven households in the State of Hawai'i that are food insecure, by donating safe and healthy food to a food bank or food rescue organization.

As you consider the merits of HB 2648 HD1, I respectfully request that you consider our overflowing landfills and the need to increase our State's waste management efficiency as we strive to become a leader among the several states for environmental protection and green policy initiatives.

I support HB 2648 HD1 alongside the Surfrider Foundation and Rise Above Plastics coalition.

Sincerely,

LATE



March 1, 2016

To: The Chairs and members of the FINANCE Committee

Position: Strong Support for HB 2648 HD1 (Relating to Commercial Organic Waste)

Dear Chair Luke, Vice Chair Nishimoto and Committee members,

On behalf of Surfrider Foundation's Hawai'i Chapters and thousands of members across the state, I am writing in strong support of HB 2648 HD1. We worked with many groups to help sponsor the bill, which reduces the amount of food waste going to landfills and incinerators by diverting it to food distribution centers and composting or clean energy facilities.

Along with setting guidelines for food waste reduction, the bill will create an Advisory Council. Their mission will be to study successful models in other states, work with the counties to come up with practical solutions and create incentives to encourage the development of food recycling facilities in Hawaii. This law has the potential to create more opportunity for local businesses to recycle food waste and reduce our state's carbon footprint.

At a time when homelessness and hunger is on the rise, it's hard to conceive that food waste is the second largest component in our waste stream, making up 25% of all materials sent to our landfills (according to the EPA and USDA). The EPA has established a hierarchy of food waste disposal methods and calls for landfilling and incineration to be the lowest priority below: source reduction, feeding the hungry, livestock production and creating compost for healthy soils.

Food disposed in our landfills rots and contributes to producing methane gas - a potent greenhouse gas (GHG) with 21 times the global warming potential of carbon dioxide. Recycling food waste and turning it into compost has high environmental benefits such as improving soil health, increasing drought resistance, and reducing the need for supplemental water, fertilizers, pesticides. It has been demonstrated that applying compost and organic matter to soils sequesters carbon from the atmosphere, mitigating climate change. Incinerating wet food waste is also a waste of energy.

Reducing GHG emissions in Hawai'i through food waste diversion will move Hawai'i towards our Aloha+ Challenge commitment of 70% waste stream reduction by 2025. By donating safe and healthy food to a food bank, we can help feed Hawaii's hungry and address the 1 in 7 households that are food insecure. Along with Surfrider, the RAP Coalition and many other groups, we ask you to support HB 2648 HD1. Mahalo for your consideration.

Aloha,
Stuart Coleman
Hawaii Regional Manager

