

**SB 367**

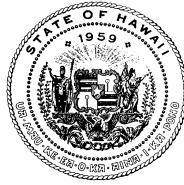
**SB-367**

Submitted on: 1/30/2019 12:33:23 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                    | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Paul Balazs         | Testifying for Department of Education | Support                   | No                        |

Comments:



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

WRITTEN  
TESTIMONY ONLY

**Testimony COMMENTING on SB0367  
RELATING TO ENVIRONMENTAL PROTECTION**

SENATOR MIKE GABBARD, CHAIR  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

SENATOR ROSALYN H. BAKER, CHAIR  
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Hearing Date: February 6, 2019

Room Number: 224

1 **Fiscal Implications:** Unknown

2 **Department Testimony:** This measure proposes to prohibit food service businesses and stores  
3 from using, selling or distributing polystyrene foam containers, expanded polystyrene food  
4 service products, plastic straws, and plastic bags.

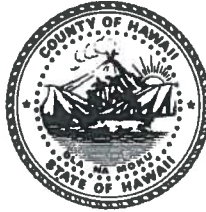
5 The Department of Health (Department) recognizes the urgency to address the impact of  
6 plastic on the environment. However, we note that the polystyrene food container and plastic  
7 bag bans proposed in this bill duplicate existing county bans. Hawaii County, Maui County, the  
8 City and County of Honolulu, and Kauai County each have a plastic bag ban in place.  
9 Polystyrene food container bans are active or about to begin in Maui County and Hawaii County.

10 In general, sales bans such as these do not fit into our existing regulatory programs.  
11 Additionally, many of our programs already operate under constrained resources meaning that  
12 implementing the proposed programs will require additional resources. Therefore, we ask that the  
13 appropriation to implement this measure does not impact the priorities identified in the Governor's  
14 Executive Budget Request and the Department's appropriations and personnel priorities.

15 **Offered Amendments:** None

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

REBECCA VILLEGAS  
Council Member  
District 7, Central Kona



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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 5, 2019

TESTIMONY OF REBECCA VILLEGAS  
COUNCIL MEMBER, HAWAI'I COUNTY COUNCIL  
ON SB 367, RELATING TO ENVIRONMENT PROTECTION.

Committee on Agriculture and Environment  
Committee on Commerce, Consumer Protection, and Health  
Wednesday, February 6, 2019  
1:15 p.m.  
Conference Room 224

Aloha Chair Gabbard, Chair Baker, and Members of the Committee:

I thank you for the opportunity to testify in support of SB 367, relating to environmental protection. My testimony is submitted by my individual capacity as a member of the Hawai'i County Council and Chair of the Committee on Public Safety.

The purpose of this measure prohibits food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, and expands to include polystyrene food service products, plastic straws, and plastic bags.

Amending the Hawai'i Revised Statutes by adding a new chapter to be appropriately designated will assist the State of Hawai'i with littering of polystyrene foam, and includes the prohibition on the sale, use, or distribution of plastic straws, and plastic bags. These materials are detrimental to not only our environment but also affects our local food chain and endangers marine animals and avian populations. These materials are the most common type of litter that pollutes the State of Hawai'i.

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

Mahalo for your consideration.

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

Rebecca Villegas  
Council Member, Hawai'i County Council

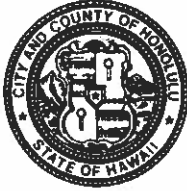
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DEPARTMENT OF ENVIRONMENTAL SERVICES  
**CITY AND COUNTY OF HONOLULU**

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KIRK CALDWELL  
MAYOR



February 5, 2019

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

TIMOTHY A. HOUGHTON  
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.  
DEPUTY DIRECTOR

IN REPLY REFER TO:  
WAS 19-50

The Honorable Mike Gabbard, Chair  
The Honorable Russel E. Ruderman, Vice Chair  
and Members of the Committee on Agriculture and Environment  
The Honorable Rosalyn H. Baker, Chair  
The Honorable Stanley Chang, Vice Chair  
and Members of the Committee on Commerce, Consumer Protection  
and Health  
Senate  
State Capitol, Room 224  
415 South Beretania Street  
Honolulu, Hawaii 96813

Dear Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang, and Members:

SUBJECT: S.B. No. 367  
Relating to Environmental Protection

The Department of Environmental Services of the City and County of Honolulu (ENV) supports the intent of S.B. No. 367 which proposes to reduce the amount of plastic in the waste stream and its potential to become littered into the natural environment, and provides the following comments.

First, the definition of "plastic bag" currently in this measure is overly broad and would include thicker bags made from recycled woven plastic fibers, which are commonly considered reusable. ENV suggests the definition be amended to include a bag made from "plastic film," which could be defined as bag made from thin sheets of plastic with a thickness under 10 mils.

Second, the definition of "undue hardship" should be clarified to state what exact conditions would constitute an undue hardship. ENV finds that hardships in these instances are often cost-based. For example, if the cost of the alternative bag or packaging exceeds the original version, that would constitute an undue hardship. The current definition, which in part states that a hardship exists if no "acceptable" or "reasonable" alternative exists, is subjective and would be difficult to enforce.

Thank you for your consideration of our comments.

Sincerely,

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

**SB-367**

Submitted on: 2/5/2019 12:32:29 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                               | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---|---------------------------|---------------------------|
| Tamara Farnsworth   | Testifying for County of Maui Dep't of Env. Mgmt. | Support                   | No                        |

Comments:

Aloha,

I am writing in favor of SB No. 367 on behalf of the County of Maui Department of Environmental Management, the agency responsible for the implementation and enforcement of the polystyrene food service container ban that became effective on December 31, 2018, as well as the 2010 plastic bag ban. The implementation plan to go "Foam Free" was enacted over a 18 month period with a focus on direct outreach to the food service industry and a comprehensive public education campaign over the last 7 months before effective date. The response has been overwhelmingly positive by both the public and private sectors, with the county working together with businesses that have required more assistance with the transition. We have found that almost all nearly 2000 affected businesses, along with their product distributors, have made the switch and are in compliance at this time.

The majority of feedback we have heard from businesses is they have either absorbed any additional costs for alternative products or they have passed on those costs to their customers. The feedback we have heard from the general public is that people are happy to pay a few cents extra with the knowledge that the environment, including whales, dolphins, fish, and seabirds, are the beneficiaries of their contributions.

Maui County Council and Corporation Counsel deliberated over the issue of interstate commerce challenges and determined that the legislation was sound and that the need to reduce the source of polystyrene foam in our marine and land environments warranted any potential challenges that may arise. As of yet there have been no challenges in this regard from industry or any other party.

Plastic waste is a proven major threat to ocean ecosystems and marine wildlife. It is also a source of climate change from use of fossil fuel-based raw materials as well as greenhouse gas emissions. Those of us living in island environments, in particular, are discovering the significant positive impact that single-use plastic bans can have, as well as the resilient ability of our communities to adapt to these changes for the better. Everything is connected and healthy ecosystems are inextricably linked to healthier lives for all of us.

Maui County is learning to live without polystyrene foam food service containers and other single-use plastic products with relative ease. All of the state of Hawaii can, too. We encourage the Hawaii State Senate to champion this legislation as leaders in environmental protection.

Mahalo,

Tamara Farnsworth

County of Maui

Environmental Protection & Sustainability Division



# Ocean Tourism Coalition

*The Voice for Hawaii's Ocean Tourism Industry*

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COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Russell E. Ruderman, Vice Chair

COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Senator Rosalyn H. Baker, Chair

Senator Stanley Chang, Vice Chair

AMENDED NOTICE OF HEARING

DATE: Wednesday, February 6, 2019

TIME: 1:15 p.m.

PLACE: Conference Room 224

**TESTIMONY OF THE OCEAN TOURISM COALITION IN SUPPORT SB 367 RELATING TO ENVIRONMENTAL PROTECTION**

Chairs Gabbard, Chair Baker, Vice Chair Ruderman, Vice Chair Chang and members of the AEN/CPH Committees:

My name is James E. Coon, President of the Ocean Tourism Coalition (OTC) speaking in support of SB 367 Relating to the Environment.

The OTC represents over 300 Ocean Tourism Businesses across the State. We are an industry that promotes a clean and sustainable environment. We take pictures and leave only bubbles. Most of our companies have already made the necessary changes to their operations to eliminate Polystyrene Foam Food Containers. There are viable biodegradable and reusable options readily available.

The reduction of Polystyrene Foam in our environment will have a positive impact on our oceans.

Please pass SB 367 this is an easy but significant win for the environment.

Sincerely,

James E. Coon, President

Ocean Tourism Coalition

**SB-367**

Submitted on: 2/5/2019 12:55:17 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>   | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---|---------------------------|---------------------------|
| Dean Otsuki         | Testifying for Beach Environmental Awareness Campaign Hawai'i | Support                   | No                        |

Comments:

Beach Environmental Awareness Campaign Hawai'i (B.E.A.C.H.) strongly supports SB367 which bans plastic straws, plastic bags, polystyrene foam containers for food and drinks and expanded polystyrene service products. It would be good if this bill could also include foam bait containers as we have collected many of these from shorelines during beach clean-ups. Bait and other meat, fish and poultry can be wrapped as they used to be in butcher's paper (plain paper).

It is necessary to ban the use of plastic bags, straws and foam containers because they are harmful to marine life. Good alternatives exist such as reusable metal, glass and bamboo straws. There are also disposable paper straws available. People can easily bring their own reusable bags instead of using plastic bags and bring their own containers for food and drinks. Food vendors can also provide compostable alternatives for much the same price as polystyrene. Any cost difference (which would be small - 10 cents or less) could be passed onto the consumer. Consumer will not be concerned about paying an extra 10 cents for a meal or drink knowing that they are getting their food/drink in a healthy container rather than a toxic one, as polystyrene leaches styrene a chemical which is harmful.

Please pass this bill. Thank you.



**SB367**

**RELATING TO ENVIRONMENTAL PROTECTION**

Senate Committee on Agriculture and Environment

Senate Committee on Commerce, Consumer Protection and Health

February 6, 2019

1:15 p.m.

Room 224

The Office of Hawaiian Affairs (OHA) Beneficiary Advocacy and Empowerment Committee will recommend that the Board of Trustees **SUPPORT** SB367, which would prohibit the distribution or use of polystyrene food containers, plastic bags, and similar single-use plastics by food service businesses, as well as the distribution of plastic bags by stores, thereby reducing the impacts of plastic waste on our native wildlife, marine and coastal resources, and associated Native Hawaiian traditional and customary practices.

Single-use plastics, such as polystyrene foam containers and plastic bags, have a well-established impact on native species of cultural significance, including endangered as well as subsistence resource species. For example, global production of polystyrene exceeds 300 million tons annually; approximately **50 percent** of that production is disposed of indiscriminately into the environment, causing significant negative environmental impacts. In Hawaiian waters, the ingestion of discarded plastic debris including polystyrene and plastic bags by native seabirds, such as mōlī, as well as by endangered honu, is a well-documented phenomenon that may have highly injurious or even fatal consequences. Notably, such species hold special significance in Hawaiian culture and traditions: the cultural importance of seabirds includes their role in navigation, meteorology, craftwork, and in their spiritual symbolic significance; likewise, honu are also featured in numerous mo‘olelo, hula, ki‘i pōhaku, and other art forms, and were traditionally raised and harvested for food, medicinal, and other purposes. Such plastic debris may also be ingested by other marine fauna, and its bioaccumulation through the food web may adversely affect numerous other native and culturally significant marine species. **Therefore, reducing or eliminating the amount of disposable single-use plastics in Hawai‘i may help to mitigate the impact of plastics on the native and endangered marine species in our islands’ waters.**

OHA further notes that plastic waste may also threaten the perpetuation of Native Hawaiian cultural and subsistence practices. For example, the toxins contained in discarded polystyrene, including those found in polystyrene itself as well as toxins readily absorbed by polystyrene material, may bioaccumulate in the marine food web, discouraging cultural and subsistence practitioners from the practice of gathering and consuming marine resources. The presence of plastic fragments or microplastics in our nearshore waters may also discourage the traditional gathering and consumption of

pa‘akai and other non-living resources. In addition, the harm caused to endangered and native species may foreclose the future use of such species in Native Hawaiian traditional and customary practices, which depend upon the availability of healthy and abundant resources. Finally, the presence of discarded plastics may compromise the cultural and spiritual integrity of the marine and coastal environment, upon which Native Hawaiian subsistence practices and ways of life are inextricably tied.<sup>1</sup> **Accordingly, reducing the use and inevitable disposal of single-use plastics into our marine environment may also represent a small but important step towards the perpetuation of Native Hawaiian culture.**

Finally, while OHA understands and appreciates that economic concerns may be raised by some, OHA believes it may also be important to consider the economic benefits that would result from a ban on the single-use plastic products covered by this measure. For example, a reduction of plastic waste on our beaches and in our coastal waters will only enhance visitor experience and thereby economic activity in the islands. The outward commitment by our government to prioritize and be responsive to the needs of Hawai‘i’s marine ecology would also be favorable to Hawai‘i’s image as an attractive visitor destination. A single-use plastic ban would further enhance the market for locally produced, environmentally friendly alternatives to these products, injecting life into nascent sectors of our local economy and encouraging local, environmentally conscious entrepreneurship. Finally, the reduction of single-use plastic products’ impacts on our marine and coastal environment, as well as on human health, may result in significant avoided economic costs associated with such impacts. OHA therefore urges the Committee to consider the significant economic benefits of a single-use plastics ban in any weighing of the marginal increased costs of using alternative products, if they are even necessary.

Therefore, OHA urges the Committees to **PASS** SB367. Mahalo nui for the opportunity to testify on this measure.

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<sup>1</sup> In Native Hawaiian understanding the spatial bounds of ‘āina and moana are viewed holistically and maintain powerful and epistemological connections to Hawaiian ancestry and resilience; in one salient example, hāko‘ako‘a, coral reefs, are prayed for and spoken of in the kumulipo, the Hawaiian creation chant.



Senator Mike Gabbard, Chair  
Senator Russell E. Ruderman, Vice Chair  
Senate Committee on Agriculture and Environment  
Senator Rosalyn H. Baker, Chair  
Senator Stanley Chang, Vice Chair  
Senate Committee on Commerce, Consumer Protection and Health

Re: SUPPORT of SB 367 – RELATING TO ENVIRONMENTAL PROTECTION, and SB 522 – RELATING TO PLASTIC

Aloha Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang, members of the Senate Committees on Agriculture and Environment, and Commerce, Consumer Protection and Health,

Dolphin Quest strongly support SB 367 and SB 522. These measures have the potential to reduce plastic-based pollution in the State of Hawaii and ultimately help protect our natural resources and human health.

One of Hawaii's greatest assets is its natural beauty. Unfortunately, plastic debris is one of the most common forms of litter found in Hawaii. We have seen this first-hand during Dolphin Quest's decades of participation in beach, stream, and highway clean-ups.

It is well known that plastic has a devastating effect on Hawaii's beaches, the marine ecosystem, wildlife, and human health. There is also growing concern about the negative impact marine debris may also have on tourism. It is essential that we get ahead of these problems through influential legislation just like this.

Ingestion, entanglement, and habitat degradation are just a few of the complex issues related to plastic pollution. Ingestion of micro-plastics has been observed at every trophic level, from large whales to even corals and zooplankton. High levels of plastic-based persistent organic pollutants (POPs) have been detected in the tissues of marine mammals, sharks, and other large predatory animals due to bioaccumulation and the biomagnification up the trophic system as results of this ingestion. Many of these POPs are known endocrine disrupters and there is growing evidence that humans may also be at risk. In addition to this, the plastic monomer used in manufacturing expanded plastic has been classified by the US National Institutes of Health and the International Agency for Research on Cancer as a possible human carcinogen. Unnecessary plastics need to be regulated for the health and well-being of all.

It is our duty and our responsibility to protect the land and water that allow us to thrive. We must safeguard the future of wildlife and our children so that all may have the opportunity to enjoy nature unadulterated. Supporting this measure would keep Hawaii at the forefront of conservation action and leadership.

Dolphin Quest is an organization of marine mammal specialists, animal advocates and ocean stewards with two business locations in Hawaii. We've championed public education, conservation, and scientific study related to marine mammals and our ocean for thirty years. This issue is critically important to us and we respectfully ask that you support SB 367 and SB 522.

Respectfully yours,

L. Rae Stone, DVM  
Dolphin Quest





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SB 367: Strong Support  
Hearing: February 6<sup>th</sup> 2019, 1:15PM  
Committee on AEN/CPH

Dear Members of the Senate AEN & CPH Committees,

Mahalo for your time, effort and energized focus on a series of bills that are addressing plastic pollution and its associated effects on our environment, climate change, waste generation, and of course on our visitor industry. **We are in strong support of SB367** – a phase out plan for single-use foam, straws, and foam. The problem is dire as the story and data that follow illustrate.

Surfrider Foundation's O'ahu Chapter and our extended community is deeply concerned about plastics on our beaches, in our nearshore waters, and now found in marine life that calls these areas home. As a country, our citizens produce more than double per capita plastic waste of China and five times that of Indonesia, while (with Europe), housing 95% of the companies, lobbyists, and industries in the plastic economy (WEF 2016). By centering our eye on, Hawai'i, the U.S. state with the highest rates of waste generation (doubling the national average) and the beaches inundated with the Pacific Gyre's rapidly increasing plastic pollution (CNN 2016) we are at the heart of the global plastic problem. Up to 80% of the plastic in our oceans comes from land-based sources, estimated at 5-13 million tons of plastic. Hawai'i is uniquely positioned to focus the narrative of plastic solutions and our State has the opportunity to lead the world in a progressive movement that cultivates change at the source.

The United States environmental protection agency (EPA) outlines a waste pyramid in which reduction and re-use stand as the pinnacle to effective waste management. Our Cities, Counties, and State need to rethink the way they create, handle, and discuss waste. Surfrider Foundation believes that we can become a leader in a regenerative economy in which we value reuse and recovery over the single-use items. Single-use plastics, like straws, polystyrene foam, plastic cutlery, bags, and water bottles are a fossil fuel driven, carbon emitting industry that has no place in an island economy where space is limited and our environmental health is the most important issue to our economy.

To date, the majority of dialogue regarding solutions to the plastic problem revolves around how we clean up our how we focus attention on regions of the world that have poorer waste management. These solutions may help slow the flow of waste into our oceans or clean

up what is already there, but do not help solve the underlying issue. As our ocean fills with more plastic by weight than fish (Washington Post 2016) by 2050, as we have seen a 610% increase in raw plastic production since 1975 (Jambeck 2015), and as 95% of plastic packaging globally (resulting in \$80-120 billion cost) is lost after a single-first use (WEF 2016), the solutions must be more geared towards a shift away from the fossil fuel based, greenhouse gas creating industry of plastics. Alternatives derived from compostable materials are widely available now as a stop-gap effort as we shift our economy back towards a system of reuse that is at the foundation of both Hawaiian culture and the ethic that this country began on.

### **United Nations Sustainable Development Goals**

Plastic pollution reduction and movement away from a single-use economy are directly tied to the [United Nations Sustainable Development Goals](#) that our Senate has adopted and correspond to our Aloha + Challenge:

- Goal 12 = Responsible Production & Consumption - “Sustainable consumption and production is about promoting resource and energy efficiency, sustainable infrastructure, and providing access to basic services, green and decent jobs and a better quality of life for all. Its implementation helps to achieve overall development plans, reduce future economic, environmental and social costs, strengthen economic competitiveness and reduce poverty.” If our state aims to work on this goal, removing unnecessary materials from our waste stream is paramount in holding both producers and consumers responsible for their choices.
- Goal 13 = Climate Action - See the climate change section of this testimony
- Goal 14 = Life Below Water - Countless studies globally have assessed the dire impact of plastics on marine life from whales to corals. Many of these studies are referenced in this testimony.
- Goal 15 = Life on Land - Calculations of cleanup costs (See above section) on land for plastic pollution are astronomical as they affect our stormdrains, freshwater systems, and beaches. Not only are their direct costs from cleanup of polluted resources, but their will be mounting indirect costs to our tourism industry should pollution trends continue.

### **Plastics & Climate Change (SDG #13):**

Plastics are made from fossil fuels. The proliferation of plastic production and the current projected increase will mean that plastic production will account for 20% of the global fossil fuel budget by 2050 (United Nations 2018). A recent study from UH Mānoa researchers, published in PLOS One, illustrates that not only are plastics contributing to greenhouse gases in the production & transportation sectors, they are also releasing methane and ethylene as they degrade in water and sunlight. This shed light on the full cycle consequences of plastic from production to disposal as major contributors to the climate crisis.

### **Cost of Plastic Pollution (SDG #12, 13, 14, 15):**

The costs of plastic pollution are mounting in multiple sectors - financially, ecologically, and socially. Plastic is costing cities, counties, states, & countries millions of dollars and our global economy billions. Costs are passed to the taxpayers by burdening our stormwater management systems with the need for expensive best management practices and the costs of cleanups. Hawai'i State Department of Transportation (HDOT) has produced a trash plan that shows polystyrene foam and plastic bags as the top two contributors to the waste stream, while in California, the Natural Resource Defense Council (NRDC) created a plastic cleanup valuation study for 90+ counties in California. The study concluded that CA taxpayers are paying \$428 million per year to clean up plastic through storm drain management, street sweeping, and marine cleanups. San Diego County (with population of 1.3 equivalent to Hawaii) spends \$14 million alone on plastic cleanup. In late 2018, San Diego passed a sweeping prohibition of polystyrene foam and reduction of other single-use plastics, joining hundreds of municipalities across the globe in stemming this plastic tide.

“The economic damage caused by plastic waste is vast. Plastic litter in the Asia-Pacific region alone costs its tourism, fishing and shipping industries \$1.3 billion per year. In Europe, cleaning plastic waste from coasts and beaches costs about €630 million per year. Studies suggest that the total economic damage to the world’s marine ecosystem caused by plastic amounts to at least \$13 billion every year. The economic, health and environmental reasons to act are clear.” (UNEP 2018)

### **Harm to Reefs & Marine Life (SDG #14)**

A recent study published in the renowned journal of *Science* describes the mounting issues of plastics on our fragile and threatened reefs. The study describes corals as being 90% more likely to be diseased when plastic sits on the reef. The billions of pieces of plastic already in the ocean are scarring reefs and then likely infecting them with the contamination that comes from their chemical properties that allow for microbial colonization of pathogens. In other words, plastics bio-accumulate toxins in the water and thus can transfer such toxins to other organisms like coral. This is yet another toxic consequence of plastics in our oceans, of which many more are described in the points below.

The effects to marine life in our oceans are mounting. 50 to 80 percent of dead sea turtles have ingested plastic. Plastic bags, which resemble jellyfish, are the most commonly found item in sea turtles’ stomachs. Worldwide, 82 of 144 examined bird species contained plastic debris in their stomachs; and in some cases, 80 percent of the population had consumed plastic. Researchers found that 66 percent of Giant Petrel shorebirds regurgitated plastic when feeding their chicks. Commercial fish, such as Opah and Bigeye Tuna, consume plastic, which could significantly reduce global populations. A University of Hawaii study reports “[i]n the two [Opah] species found in Hawaiian waters, 58 percent of the small-eye opah and 43 percent of the big-eye opah had ingested some kind of debris.”

On a recent field trip visiting with the Marine Mammal Research Program, we were guided through the facilities where beached and dead Pilot Whales had been examined. The stomach contents of the three animals found on O’ahu, Lana’i, and Kaua’i revealed between 15-30 lbs of plastic in the gut. Plastic does not breakdown like organic material and as marine animals continue to ingest the plastics their stomachs eventually fill to a state in which they can

no longer consume enough food to address proper nutritional maintenance. This is similar to the problem widely shared with Laysan Albatross in Papahānaumokuākea.

**HPower and the problems of incineration (SDG #12):**

Many arguments against polystyrene foam bans and other single-use plastics contend that keeping these products is helpful for our incineration and energy production. In direct interviews with Covanta, the operators of O'ahu's HPOWER, they have stated that plastics are some of the least efficient forms of waste to burn. Given their chemical composition, they burn fast and at high heat. While this may seem advantageous, the boilers are most efficient when running at a more consistent temperature. Covanta stated that it actually takes them adding other material to even out these "hot-flashes." When looked at objectively this is very easy to imagine. If you were creating a fire in a fire pit or place imagine throwing oil or a plastic bottle into the flames - you would see a burst of flames which quickly dissipated after leaving a toxic smelling fume. Now think of burning a more organic material from paper or cardboard to a log; in this scenario you would notice a much slower, more controlled burn that put out a longer-lasting and more efficient source of heat (energy).

Additionally, incineration is a poor choice altogether for dealing with plastic waste. Just based on simple emission calculations on kilowatt/hour, HPOWER produces almost triple the GHG emission of our oil burning plant and just slightly less than coal. This places incineration as one of the dirtiest forms of energy production. In places like Copenhagen, their reliance on incineration actually caused them to go well over their agreed upon Kyoto protocol limits for GHGs. With the State of Hawai'i institutionalizing the Paris Climate agreement and also agreeing to net-zero emissions, incineration should be phased out of any energy production goals. Finally, as noted in a BBC News article in 2018, plastics in a landfill are mostly inert, as they don't break down when buried in the landfill and are thus not emitting anywhere near the emissions that come with incineration. While we understand that Hawai'i is limited in its space as a unique piece to this discussion, it needs to be noted that the environmental consequences of incineration are far greater than advertised. Thus, the emphasis needs to be a continued to push towards reduction of waste.

Ultimately, we have to reduce the problem at its source. Single-use plastics are an unneeded convenience that our society must learn to move away from. The alternatives exist and we must exercise some sort of ethic over our consumer behavior. Our kuleana is to protect our public trust resources like our shorelines for all generations into the future and currently we are not fulfilling that leadership role. Surfrider Foundation strongly urges the State Legislature to pass SB 367, creating a phase out plan for detrimental single-use plastics.

Mahalo for your time and consideration,

Rafael Bergstrom  
Surfrider Foundation, O'ahu Chapter Coordinator

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## **References:**

C. Anela Choy & Jeffery C. Drazen, Plastic for Dinner? Observations of Frequent Debris Ingestion by Pelagic Predatory Fishes from the Central North Pacific, 485 MARINE ECOLOGY PROGRESS SERIES 155 (2013), at 161

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Jambeck, J.R. Plastic Waste Inputs from Land into Ocean. Science. Feb 2015: Vol. 347, Issue 6223, pp. 768-771.

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World Economic Forum. The New Plastics Economy. Rethinking the future of plastics. 2015

Oppose Foam Food Container Bans, SB 367, SB522, SB11  
Feb. 6, 2019 Hearing - Sen Agriculture and Environment  
Committee, Consumer Protection and Commerce Committee

Dear Senators:

We are a small Chinese restaurant in Honolulu Chinatown. It's a family run business with 24 seats and about 40 guests a day. Nearly 60% of our business is take-out. Foam containers do not leak and keep food hot which is important for take-out customers.

I want repeat customers and have only raised my price once in 4 years. \$8.00 plate lunch raised to \$8.50. We serve tasty, affordable meals and try to keep it affordable for our customers who are very familiar with my price.

My sales are predictable and I also cater and deliver to surrounding companies. To keep my prices low and to pay workers I use foam containers. I have gone to Chef Zone and looked at other containers but they cost 3X more than the foam containers.

Rent is very high, cost of vegetables and meat is very high. Meat is the highest wholesale price compared to other states. I can only control labor not these other price increases. I do not want to reduce hours or lay off workers who need jobs.

I want choice of what containers I use. If our business grows I can even get the higher costing containers.

Instead of ban on foam containers, regulate trash and have a place for it to go so it avoids the ocean.

Thank you,

Gaven Wu  
Papa's Café  
1120 Maunakea Street #105  
Honolulu  
(808) 523-8668

**SB-367**

Submitted on: 2/5/2019 9:50:40 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>   | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---|---------------------------|---------------------------|
| Eric Wong           | Testifying for Loco Moco Drive Inn - Ewa Beach and Wiki Wiki Drive Inn - Waterfront Plaza | Oppose                    | No                        |

Comments:

Senate AEN/CPH Hearing – Weds Feb. 6, 2019

Re: Foam Foodservice Container Bans, SB 367 - OPPOSE!!

Aloha Senators:

First off, thank your time to review my written testimony, name is Eric Wong and I am the co-owner of the Wiki Wiki Drive Inn, a small take out window located in the Downtown's Waterfront Plaza and the Loco Moco Drive Inn at the Ewa Beach Shopping Center.

Many of our customers know us in both location as an affordable spot for 'plate lunch', yes — 'cheap eats' thus we use Styrofoam® containers extensively for our customers come in. We hardly see 'sit down' dining as much as our 'take out'.

It's no secret that Styrofoam® containers are sturdy enough for insulation to keep the plate lunch hot, easy to open and eat immediately, and of course it is relatively inexpensive.

Other containers which are available do not insulate as well nor can it be 'piled on', Like others that have expressed their concern, we too is a 'mom and pop' small, family oriented businesses have a hard time as it is keeping our costs low and affordable, and with always rising rents, always rising ingredient prices, and now the possibility of paying even more for take out containers.

The hurdle we have to get over gets higher and higher every year. We are not one of your corporate restaurants who have deep pockets, we are the small, personable, flavorful restaurants that make Hawaii what it is, a place where people can enjoy different flavors from many cultures. By doing away with Styrofoam, it might prove to be the straw that broke the camel's back for many small businesses.

I ask that you DO NOT ban foam containers as it will affect most local businesses around the State. I agree and surmise that while there are ecological reasons but there has to be some other way to resolve the problem without a rash and ultimate ban.

Ask yourself this- will small restaurant owners be capable of taking another added cost? How would you feel if your favorite take-out restaurant that you've been going to for years, just permanently closed shop? We have been in business nearly 25 years supporting our families and our 12 employees'. Approving this ban against Styrofoam ® would affect many small food operators around Hawai'i and may force us to close, thus I humbly ask that you vote against the ban.

Mahalo,

Eric S.S. Wong, Vice President

Imperial Investment, LLC.

d.b.a. Loco Moco Drive Inn-Ewa Beach

Wiki Wiki Drive Inn- Waterfront Plaza

808-689-8321



**SB-367**

Submitted on: 2/5/2019 9:33:05 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                  | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--------------------------------------|---------------------------|---------------------------|
| Cathy Goeggel       | Testifying for Animal Rights Hawai'i | Support                   | Yes                       |

Comments:

**SB-367**

Submitted on: 2/4/2019 7:28:49 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b>   | <b>Organization</b>                                   | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|-----------------------|---|---------------------------|---------------------------|
| Kimiko LaHaela Walter | Testifying for Hawai'i Reef and Ocean Coalition HIROC | Support                   | No                        |

Comments:

Aloha Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang and members of the committees,

The HAWAI'I REEF AND OCEAN COALITION –HIROC– was formed in 2017 by coral reef scientists, educators, local Hawai'i environmental organizations, elected officials, and others to address a crisis facing Hawai'i's coral reefs and ocean, including harms from plastics.

Polystyrene foam containers are ultra-light, produce litter on land, and often are blown into the ocean, where they harm marine life, including sea birds, fish, mammals and even our precious corals that protect Hawai'i's shorelines. Single-use plastics (straws, bags, bottles, utensils) similarly break into smaller and smaller pieces that choke sea birds and other marine life and carry bacteria that harms many forms of sea life. There are more sustainable alternatives to plastics that would involve only a small increase for consumers, with far less impact on our pristine environment. We must act now to protect our environment by reducing plastic use!

We strongly support this bill and urge its passage.

Mahalo,

Kimiko LaHaela Walter on behalf of the Hawai'i Reef and Ocean Coalition

February 5, 2019

The Honorable Mike Gabbard, Chair  
Committee on Agriculture and Environment  
Hawaii State Capitol, Room 201  
Honolulu, HI 96813

The Honorable Rosalyn H Baker, Chair  
Committee on Commerce, Consumer Protection, and Health  
Hawaii State Capitol, Room 230  
Honolulu, HI 96813

SUBJECT: SB 367 – Relating to Environmental Protection – Oppose

Dear Chairs Gabbard and Baker,

On behalf of the Plastics Industry Association (PLASTICS), I am writing to offer our comments on SB 367 – an act that prohibits food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, expanded polystyrene food service products and plastic straws. While we support the intent of the legislature to address plastic marine debris, we do not believe that a ban of the products mentioned in this legislation will achieve the environmental goals the state is striving for.

Expanded polystyrene is among the most efficient materials at keeping foods fresh, free of leaks and spills, and, most importantly, hot or cold. Schools, hospitals, nursing homes, non-profit food programs, delis, and family-owned restaurants are among the many institutions that rely upon expanded polystyrene for its excellent insulation at an economical price. Alternative packaging materials are often as high as 2-3 times more expensive and do not perform as efficiently. Furthermore, recyclers and expanded polystyrene manufacturers have proven that these products can be recycled.

Similarly, plastic straws offer many useful benefits for health and safety. Not all consumers are able to drink beverages without the use of a straw, namely the young, elderly, and infirm. The legislation attempts to assuage these concerns by stipulating a rulemaking process but does not indicate what exemptions the Department of Health should consider. Even if such exemptions were made for those with a disability or medical condition, is the server or cashier expected to make that determination, thus dictating who can and cannot receive a straw? Policy options like "straws upon request" would provide a much better option than banning these products.

In sum, the environmental costs of plastic alternatives are 3.8 times greater than using plastic materials. This is due to the efficient production, use and handling of plastic during the entire lifecycle of these products. We would therefore suggest more resources be placed in improving recycling infrastructure, consumer education and solid waste management strategies than banning these products.

If you have any questions, please contact me directly at 202.974.5206 or [scrawford@plasticsindustry.org](mailto:scrawford@plasticsindustry.org).

Respectfully,



Shannon V. Crawford  
Director, State Government Affairs

**SB-367**

Submitted on: 2/4/2019 10:15:52 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>               | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|-----------------------------------|---------------------------|---------------------------|
| Natalie Parra       | Testifying for Keiko Conservation | Support                   | No                        |

Comments:

We stand in strong support of this bill.



49 South Hotel Street, Room 314 | Honolulu, HI 96813  
www.lwv-hawaii.com | 808.531.7448 | voters@lwv-hawaii.com

## COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair  
Senator Russell Ruderman, Vice Chair

Wednesday, February 6, 2019, 1:15 p.m. and 1:45 p.m., Conference Room 224

**SB11** – Relating to Polystyrene Foam Containers  
**SB367** – Relating to Environmental Protection  
**SB522** – Relating to Plastic

### TESTIMONY

Nancy Davlantes, Legislative Committee Member, League of Women Voters of Hawaii

Chair Gabbard, Vice-Chair Ruderman, committee members:

**The League of Women Voters of Hawaii** supports the intent of all three of these bills which would, respectively, prohibit the sale of polystyrene foam containers statewide; prohibit food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, expanded polystyrene food service products, plastic straws, and plastic bags; and establish an incremental ban on plastic bottles, utensils, polystyrene foam containers, straws, plastic bags, and single-use plastic beverage containers.

Perhaps it was the photos of a honu with a plastic straw in its nostril, the pictures of the Great Pacific Garbage Patch, the stories of the unending piles of plastics that wash up not just on our shores but the shores of Midway and are ingested by the seabirds that nest there, or the micro-plastics that are making their way into our own food supply.

Whatever the confluence that brought this problem front and center to the attention of those with the wherewithal to do something about it, the League is gratified that Hawaii appears now ready to confront what is a monumental problem.

The content of these bills overlaps with one-another and offer common objectives. But they give the legislature much to work with and craft legislation that would at last address the problem here and in the Pacific. We realize the problem is worldwide but getting a handle on how to deal with it here is something we can all support.

No doubt there will be opposition from the food service-related parts of the economy, and that is to be expected, but incentives can be employed to encourage what we realize is a huge change in their way of doing business.

The bottom line is that the alternative of not acting is unacceptable.

Thank you for the opportunity to submit testimony.

Weds. Feb 6, 2019 - Hearing  
Senate Committee on Agriculture and Environment  
Senate Committee on Consumer Protection and Commerce

SB 367, SB 522, SB 11 - Oppose

Chair Gabbard, Chair Baker and members of the Committees:

My name is Mark Ushijima and I am a partner in the Hibachi Kailua. I am strongly against a ban on styrofoam containers in Hawaii. This will truly impact the small businesses in Hawaii. We already have high overhead costs (labor, electricity, taxes, fees, lease rent, etc...) that adding to our cost of goods would be very detrimental.

I also have a small business with my friend in Washington State. Washington State did not impose a ban on styrofoam but they strongly discourage styrofoam. They understand the importance of small businesses in Washington.

State legislators should review the Honolulu City Auditor's Study (which I participated in) about Single Use Polystyrene Food Containers and Plastic Bags.

[http://www.honolulu.gov/rep/site/oca/oca\\_docs/PS\\_Ban\\_Study\\_Final\\_Report.pdf](http://www.honolulu.gov/rep/site/oca/oca_docs/PS_Ban_Study_Final_Report.pdf)

The City Auditor finds that the majority of litter observed was miscellaneous items, and food service items mainly of non-polystyrene material that would remain unaffected by a ban.

Since there are no reusable alternative food containers, the ban will only change the material of the container, and that substitute container will become litter. Customers sometimes bring in personal reusable containers but many do not know that is against the law due to safety and hygiene reasons.

Focusing on styrofoam and only one type of plastic, that is not a big part of the waste stream, doesn't make sense. Someone should look at all the plastics from retail chips to juice pouches to frozen food bags—just walk through a grocery store. Some of these like potato chip bags are littered on streets, parks and beaches far more than foam food containers. I don't understand this. There are so many other plastic litter why go after a economical, useful product that's not even a major part of the litter problem.

Please do not pass this law. Not only will it affect the business owners but it will also affect the employees who work tirelessly for higher wages.

Thank you,

Mark Ushijima  
the Hibachi  
515 Kailua Road  
Kailua, HI 96734  
[thehibachihawaii@gmail.com](mailto:thehibachihawaii@gmail.com)



# SIERRA CLUB OF HAWAII

**MĀLAMA I KA HONUA. *Cherish the Earth.***

**SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT &**

**SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH**

February 6, 2019    1:15 p.m.    Room 224

**In SUPPORT of SB367:** Relating to environmental protection

---

Aloha Chair Gabbard, Chair Baker, Vice Chair Ruderman, Vice Chair Chang, and members of both committees,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **strongly supports SB 367**, which seeks to prohibit food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, polystyrene food service products, plastic straws, and plastic bags.

The Sierra Club of Hawai'i is dedicated to protecting these unique and beautiful islands we call home. Part of our dedication to protect is to keep these valuable public areas free of pollution from plastics and other waste. In this case, we advocate for halting harmful plastic pollution at the source. This measure is one of many that support our collective efforts to reduce pollution across the board.

Single-use plastics pollute our lands and freshwater bodies, clog up drainage systems, harm wildlife and ultimately end up in our ocean waters--settling on our reefs and, in some places, creating large plastic island gyres. Polystyrene food containers are intended for single use, cannot typically be recycled, and pose harm to marine life. The toxins and heavy chemicals found in them are not compostable or biodegradable--*taking 500 years or more to decompose*. Polystyrene food containers, as well as other single use foam products, create an overabundance of waste that continually overflow local landfills, overflow our beaches, and are not a source of clean energy when burned at H-Power. **There are alternatives for single use polystyrene food containers**, including compostable and biodegradable options. By reducing single use plastics like polystyrene food containers at the source, Hawai'i will have the opportunity to reduce and even eliminate one of the most toxic plastic pollutants, thereby showcasing its state sustainability goals to the nation and the world. Banning the distribution and selling of polystyrene food containers will enable Hawai'i to invest in the future aesthetics of the island, and more importantly the health and safety of marine life and local communities.

*We urge the Committee to pass this measure*, which will serve our collective efforts to keep Hawai'i's land, freshwater bodies, and oceans free of plastic pollution as well as protect the health of our people. Thank you for this opportunity to provide testimony in **support of SB 367**.

Mahalo,  
Lori Mallini  
Volunteer, Sierra Club of Hawai'i



AMERICANS FOR DEMOCRATIC ACTION

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January 31 , 2018

TO: Honorable Chairs Gabbard & Baker & Members of AEN & CPH Committees

RE: SB 367 Relating to Environmental Protection.

Support for hearing on Feb. 6

Americans for Democratic Action is an organization founded in the 1950s by leading supporters of the New Deal and led by Patsy Mink in the 1970s. We are devoted to the promotion of progressive public policies.

We support SB 367 as it would prohibit the sale, use, or distribution of polystyrene foam containers, expanded polystyrene food service products, plastic straws, and plastic bags.

One only needs to look at Wikipedia to find evidence in support of this bill: "Polystyrene is slow to [biodegrade](#) and is therefore a focus of controversy among environmentalists. It is increasingly abundant as a form of [litter](#) in the outdoor [environment](#), particularly along shores and waterways, especially in its foam form, and also in increasing quantities in the Pacific Ocean." Save our beaches and ocean; ban polystyrene foam and other plastics that pollute.

Thank you for your favorable consideration.

Sincerely,

John Bickel  
President





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To: Sen. Mike Gabbard, Chair  
Sen. Russell E. Ruderman, Vice Chair  
Members of Committee on Agriculture and Environment

Sen. Rosalyn H. Baker, Chair  
Sen. Stanley Chang, Vice Chair  
Members of Committee on Commerce, Consumer Protection, and Health

From: Victor Lim, Legislative Lead  
Hawaii Restaurant Association

Subj: SB 367 Relating to Environmental Protection  
SB 522 Relating to Plastic

Date: February 3, 2019

The Hawaii Restaurant Association representing over 3,500 restaurants here takes the liberty of addressing these two related bills together and stand opposed to both of them for the following reasons.

Polystyrene Foam Containers are a USDA approved product that is primarily used by ethnic businesses here in Honolulu due to its superior ability in transporting hot foods and soups. The neighbor islands have regulations against the product but here in Honolulu where all the waste go to H Power. A recent report by the City Auditor Edwin Young in Honolulu shows that eliminating of these containers Will basically shift from one type of waste product to another and they all end up at the H Power since we do not have any composting facilities here in Hawaii. It also states that less one percent of our total trash is currently made up of foam food containers.

Plastic Straws. We do support the bills and initiatives that state that straws should be given out only upon request at full service restaurants similar to the California State law that was passed in 2018. How beverages are consumed varies greatly from the sit down restaurants to the quick service restaurants with drive-thru's where many food and beverages are consumed on the go. Alternate straws made from paper, bamboo, metal are all being tested around the world with limited success due to its performance, durability, after taste, and costs.

NextGen Consortium. This is a partnership initially set up by Starbucks and McDonald's to fund research now joined by Coca Cola and Yum for food service containers that will be both environmentally green and meet performance needs of the food and beverage industry. Each of the parties have contributed millions for this to help us find a workable solution.

Many of the major chains's CEOs like Steve Easterbrook has made a corporate commitment that by 2025, 100 percent of McDonald's guest packaging will come from renewable, recycled or certified sources with a preference for Forest Stewardship Council (FRC) certification. Many other major entities like Starbucks are working on a similar path.





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Victor Lim

The alternate industry is in its infancy and that why we at the Hawaii Restaurant Association urges Senators to be patient with these aggressive deadlines for implementation.

Thank you very much for giving us this opportunity to share the Restaurant Industry's perspective on this very important issue.





1050 Bishop St. PMB 235 | Honolulu, HI 96813  
P: 808-533-1292 | e: info@hawaiiifood.com

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---

TO:

Committee on Agriculture and Environment and Committee on Commerce Consumer Protection and Health

Senator Mike Gabbard and Senator Rosalyn H. Baker, Chairs

Senator Russell E. Ruderman and Senator Stanley Chang, Vice Chair

FROM: HAWAII FOOD INDUSTRY ASSOCIATION

Lauren Zirbel, Executive Director

DATE: February 6, 2019

TIME: 1:15pm

PLACE: Conference Room 224

RE: SB367 Relating to Environmental Protection

Position: Oppose

The Hawaii Food Industry Association is comprised of two hundred member companies representing retailers, suppliers, producers, and distributors of food and beverage related products in the State of Hawaii.

HFIA is in opposition to this measure as it will raise prices on essential items for Hawaii consumers and not address the underlying causes of global marine debris or local littering and waste mismanagement.

This measure would ban products that Hawaii consumers rely on because they are safe and durable. The available alternatives to these products often cost several times as much and in many cases don't meet the needs of businesses and customers.

Grocery stores and other food retailers would be especially hard hit by this measure. In general, food retailers operate at a profit margin of around one percent and small businesses, grocers and non-profits have comparably low or non-existent profit margins. With Hawaii's high prices, they struggle everyday to survive. They use plastic and polystyrene products because they are cost effective, sanitary, and sturdy. These products keep food fresh and safe. A recent audit of polystyrene and bag bans by the City and County of Honolulu City Auditor determined that:

"Any attempt to regulate the food service industry will impact a wide segment of Honolulu residents, largely in the form of price increases passed on to customers. Some impacts to

certain vulnerable classes of residents need to be closely examined to prevent unnecessary effects and harms.”

If passed this measure would also threaten hundreds of jobs in Kalihi where locally produced, favorably priced, FDA approved polystyrene food containers are made. Passing this measure will ban a safe, locally created product and in many cases force local businesses to switch to products that are manufactured in China under less stringent environmental regulations, and then must be shipped thousands of miles to the mainland and then thousands more from the mainland to Hawaii. The carbon footprint of transporting the non-polystyrene containers outweighs any potential benefit. All the products targeted by this bill can be recycled and or turned into energy at HPOWER.

No products are created in a vacuum, all products require resources to manufacture and ship. Cardboard and paper products are made by cutting down trees, glass is heavy and requires substantial resources to ship as a new product and when it becomes waste, sugar cane and corn based products require the use of large amounts of water and pesticides. Protecting our environment means responsibly planning for the life cycle of all products, regardless of what they're made of.

Bans may change the composition of litter but they don't address the underlying causes of poor waste management. The City and County of Honolulu City Auditor also determined that: “Minimizing litter to keep our natural environment safe from harm is an important community objective. To be successful, the city should pursue comprehensive methods rather than a simplistic ban on a single kind of litter/trash that is unlikely to effectively reduce the overall amount of litter and its harm to the environment.”

All the products targeted by this measure can be recycled and or turned into energy on Oahu at HPOWER. The legislature should be focusing on ways to ensure that we are reducing all types of litter and responsibly managing all waste rather than imposing and overreaching ban of a few products, which has so many negative consequences. For these reasons we ask that this measure be held.



Nicole Chatterson

Director, Zero Waste O'ahu

[oahu.zerowaste@gmail.com](mailto:oahu.zerowaste@gmail.com)

808.561.7730

February 5, 2019

Aloha Chair Gabbard, Chair Baker, AEN and CPH Committee Members:

My name is Nicole Chatterson, and I am Mānoa resident writing in **strong support of SB 367**, to prohibit the sale, use, and distribution of polystyrene foam containers, plastic straws, and plastic bags.

This type of single-use plastic phase-out policy is being seen around the world. From island nations like New Zealand and the United Kingdom to places in the global south like Costa Rica and Ethiopia, communities are saying no single-use plastics on the basis of climate change mitigation and pollution prevention.

If single-use plastic consumption maintains on the current trajectory, **plastic use will account of 20% of our fossil fuel use by 2050**<sup>1</sup>. While recycling and waste-to-energy are often cited as ways to deal with this plastic waste—we have recently seen that the recycling markets are too unstable to offer a consistent, sustainable solution to our waste. Compounding this, roughly 80% of the Global North's 'recyclable' plastics (exported from places like Hawai'i) are not recycled and instead escape into the marine environment.<sup>2</sup>

While we have the option to incinerate plastic for energy locally via H-POWER, this is also a flawed approach. Per megawatt, **H-POWER produces 3 times more greenhouse gas emissions than Kahe—O'ahu's largest oil-based energy plant**.<sup>3</sup> Further, **H-POWER requires 800,000 tons of waste annually** to maintain operations and profit margins. This means that waste production is incentivized, driving more upstream impacts through the extraction, production, and transportation of products-turned-trash.

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<sup>1</sup> UNEP (2018). SINGLE-USE PLASTICS: A Roadmap for Sustainability

<sup>2</sup> World Economic Forum (2015). The New Plastics Economy. Rethinking the future of plastics.

<sup>3</sup> <https://ghgdata.epa.gov/ghgp/main.do>



According to the U.S. EPA, about 42% of the U.S. greenhouse gas footprint results from this production-disposal chain<sup>4</sup>.

If Hawai'i is indeed serious about our commitment to the Paris Climate Accord and mitigating our climate footprint, it is clear that single-use plastic reduction is a necessary part of our climate change prevention tool-kit.

Plastic pollution reduction and movement away from a single-use economy are directly tied to the Aloha + Challenge goal to reduce our solid waste footprint and build sustainable communities. Further, plastic and single-use reduction also correspond to the following [United Nations Sustainable Development Goals](#), which have been adopted as a framework by the Hawai'i State Senate.

- **SDG 12 = Responsible Production & Consumption**
- **SDG 13 = Climate Action**
- **SDG 14 = Life Below Water**
- **SDG 15 = Life on Land -**

Mahalo for your time and consideration.

Nicole Chatterson

Director, Zero Waste O'ahu

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<sup>4</sup> <https://www.epa.gov/smm/epa-sustainable-materials-management-program-strategic-plan-fiscal-years-2017-2022>

SB 367, SB 522, SB 11 – Oppose Foam Food Container Ban Bills  
Senate Committee on Agriculture and Environment  
Senate Committee on Consumer Protection and Commerce

Aloha Senators,

My name is Gwen Alejo-Herring. I am the owner and operator of the Queen Street Café & Grill in the Aiea Town Square.

My café prepares and sells plate lunches like kiawe grilled steak, firecracker chicken, ahi Belly and more. All entrees come with a choice of two scoops rice, garlic mash or brown rice, along with a choice of potato, mac or tossed salad.

We use foam food containers because it can handle the weight, moisture and retain the heat of our foods. My customers and I believe foam food container bans don't make sense because here on Oahu, foam food containers and even compostable containers all go to HPower for energy production. If there were a biodegradable/compostable plant, it then makes more sense for paying more for biodegradable containers.

I also provide lunch for schools. One school requires biogradable plates, which I find to be flimsy and I worry about if and when a child may get burned from hot lunches. Another school that I work with uses the foam plates. I notice that the biodegradable plates are double or more the price of the foam plates.

If a foam food container ban becomes law, I will need to raise prices and I worry about losing customers. Everyone is very price-conscious.

Please do not support these foam container ban bills.

Sincerely,

Gwen Alejo-Herring  
Queen Street Café & Grill  
99-080 Kauhale Street  
Aiea, HI 96701  
[galejoherring@gmail.com](mailto:galejoherring@gmail.com)

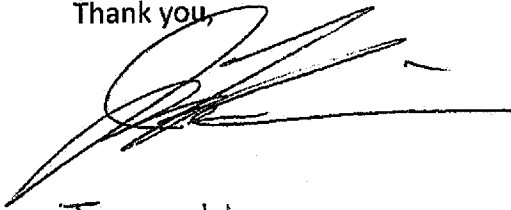
Senate AEN/CPH and CPH Hearing, Weds. Feb. 6, 2019  
SB367, SB522, SB11 - Oppose Bans on Polystyrene Food Service Products

Dear Senator Gabbard and Senator Baker,

I have a small restaurant in the airport area. Hawaii is a very tough place to own a business. A statewide ban on foam food service products will make it even harder. I try not to pass on too much of my business expense to customers because everything is so competitive and I will lose business if my food prices are raised too much.

I have looked at compostable containers and it doesn't work for my business. The good ones are too expensive. The lower cost ones do not work well; hot rice or other food, and even salad make the containers soggy. Customers don't like it when the rice sticks to the container or tastes like pulp.

Thank you,



James Kim  
Jets Fast Food  
2957 Koapaka Street  
(808) 833-7155  
more1s@icloud.com



Weds. Feb 6, 2019 – Hearing

Oppose SB 367, SB 522, SB 11

Senate Committee on Agriculture and Environment  
Senate Committee on Consumer Protection and Commerce

Dear Senators,

My name is Bryce Fujimoto and I am the VP at Shiro's Saimin. For the past 2 years we have been testing alternates to foam products. At this time the green alternatives do not retain hot and cold items effectively. In fact, some of the alternatives are dangerous because instead of being an insulator, they conduct heat. Being that they are hot to the touch from the outside a customer will be more likely to spill the contents and get burned while transporting.

Also, Hawaii currently has no means of composting green products. Thus, if I understand correctly on Oahu this will all be sent to H-Power to be burned anyway. This essentially will force smaller restaurants like us with already paper thin profit margins to use a much more expensive alternative without repurposing what the alternative was supposed to be used for.

The bottom line is why make the switch when we are not ready to do what we are supposed to do with the green containers? We need a more economical and safe alternative to foam products. Until then myself and Shiro's are pleading to stop bills that ban foam food containers. Thank you for your time.

Sincerely,

Bryce Fujimoto  
#488-8824

Shiro's Saimin Haven  
98-020 Kamehameha Highway #109  
Aiea, Hawaii 96701

SB367, SB522, SB11 - Oppose Bans on Polystyrene Food Service Products  
Senate AEN/CPH and CPH Hearing, Weds. Feb. 6, 2019

Dear Senator Gabbard and Senator Baker,

My name is Aaron Wolfe. I am a local male just starting out in the food business. I am the owner of HNA Food Services LLC (Tsukenjo's)

It's hard enough to make it in this business with all the expenses, insurance, hike in food costs etc...Let alone having to worry about higher cost of plates. I oppose these bills and believe government should leave us be. We have enough rules and regulations to abide by. Something like this could put us out of business.

If people are worried about trash getting out to the ocean, they should look at more clean up of homeless on the streets. I pay for my restaurant's bagged trash to be picked up street side. Many times the homeless rip open the bags and then I have to clean it up the next morning.

Aaron Wolfe  
HNA Food Services LLC dba: Tsukenjo's  
1148 Bishop Street  
Hon, HI 96813

To: Hawaii State Senate Committees  
Agriculture and Environment  
Consumer Protection Health

From: Nabeya Maida  
2919 Kapiolani Blvd ste 204  
Honolulu, Hawaii 96826

Date: February 6, 2019 Hearing

Re: Foam Foodservice Container Ban Bills: SB 367, SB 522, SB 11

To whom it may concern,

My name is Kevin Suehiro, and I am the owner of Nabeya Maida, a small restaurant located in Kaimuki. We are a hot pot restaurant, so we use Styrofoam containers when our customers take home our broth. Styrofoam containers are good for insulation to keep the broth hot and are relatively inexpensive. Other containers which are available do not insulate as well, will be difficult to handle (due to the heat of the broths), and are in general very expensive compared to Styrofoam. We small, family oriented businesses have a hard time as it is keeping our costs low and affordable, and with always rising rents, always rising ingredient prices, and now the possibility of paying even more for take out containers, the hurdle we have to get over gets higher and higher every year. We are not one of your corporate restaurants who have deep pockets, we are the small, personable, flavorful restaurants that make Hawaii what it is, a place where people can enjoy different flavors from many cultures. By doing away with Styrofoam, it might prove to be the straw that broke the camel's back for many small businesses.

Please DO NOT ban foam containers as it will affect many, many local businesses in Hawaii. I know there are ecological reasons that exist, but there has to be some other way to resolve the problem without a rash and ultimate ban. When you walk around the island, before you make your decision, please take the time and think of how your decision will affect the community. Will small restaurant owners be capable of taking another punch to the gut? How would you feel if the small, hole in the wall restaurant that you've been going to for years, just closed up for good? This ban would negatively affect many small businesses in Hawaii, please vote against the ban.

Sincerely,

Kevin Suehiro  
Owner  
Nabeya Maida  
(808) 739-7739



# Chamber of Commerce HAWAII

*The Voice of Business*

**Testimony to the Senate Committees on Agriculture and Environment, and  
Commerce, Consumer Protection, and Health  
Wednesday, February 6, 2019 at 1:15 P.M.  
Conference Room 224, State Capitol**

**RE: SB 522, RELATING TO PLASTIC**

Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang, and Members of the Committees:

The Chamber of Commerce Hawaii ("The Chamber") **opposes** SB 522, which prohibits the use of plastic bottles, utensils, stirring sticks, polystyrene foam containers, and straws by state agencies by July 1, 2021 and by businesses selling food or beverages by July 1, 2022. Additionally, this bill would ban the distribution or sale of plastic bags after July 1, 2023 and the sale or distribution of single-use plastic containers after July 1, 2025. SB 522 would also create the plastic source reduction working group

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 2,000+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

We **oppose** SB 522 because it will raise the cost for both business and consumers and will impact jobs in the local manufacturing industry of FDA approved, food-grade food service containers. Creating a mandate for the use of compostable and other plastic containers stifles the free market place, where businesses and consumers have the right to choose among the various types of safe, FDA approved food service containers.

However, the Chamber is not opposed to the section in this bill that would create a plastic source reduction working group and bring in all sides of this issue to begin working towards a solution. Businesses across the State have already begun to voluntarily ban polystyrene containers and recently the Counties have begun to introduce and pass legislation. Through this working group, we can look at the results of these legislative actions to see how we can help to support a coordinated and comprehensive litter reduction program that is not just focused on plastic, but other forms of waste as well.

Thank you for the opportunity to testify.



**TESTIMONY OF TINA YAMAKI  
PRESIDENT  
RETAIL MERCHANTS OF HAWAII  
February 6, 2019**

**Re: SB 367 Relating to Environmental Protection**

Good afternoon Chairpersons Gabbard and Baker and members of the Senate Committee on Agriculture & Environmental and Committee on Commerce Consumer Protection & Health. I am Tina Yamaki, President of the Retail Merchants of Hawaii and I appreciate this opportunity to testify.

The Retail Merchants of Hawaii (RMH) as founded in 1901 and is a statewide, not for profit trade organization committed to the growth and development of the retail industry in Hawaii. The retail industry is one of the largest employers in the state, employing 25% of the labor force.

The Retail Merchants of Hawaii OPPOSES SB 367 Relating to Environmental Protection. Bans are not the simple answer. We need to maintain a fair balance regarding food service containers, bags, straws and other products and look at a coordinated litter reduction programs.

Businesses respond to the wants of the customers that patronize their establishments all while operating on a very thin profit margin. They look for cost effective food containers that ensure that products are durable enough to protect people from spills and burns as well as keep food protected and fresh longer by sustaining appropriate temperature.

A mere substitution of polystyrene type containers, straws, beverage containers and bags to another type will NOT result in reduced trash as more than likely the substitution product would be discarded in the same manner.

We need to be looking into a comprehensive litter reduction program that not only takes into account educating the public, but also looking for alternative solutions like public trash cans that are designed so that it will keep its content from flying out. We also want to point out that the alternative products often creates more waste in volume and energy as well as increase air and water pollution – in the manufacturing of and in the transportation to the business.

In addition, this measure would violate interstate commerce by banning the sale of prepackaged food items like that of Cup of Noodle and single use beverage containers like water bottles.

We urge you to hold this measure. Mahalo again for this opportunity to testify.

**SB-367**

Submitted on: 2/5/2019 6:03:48 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                    | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Natalie McKinney    | Testifying for Kokua Hawaii Foundation | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 11:20:19 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                    | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Christian Robbins   | Testifying for Kokua Hawaii Foundation | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 12:24:21 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>  | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Melodie Aduja       | Testifying for O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i | Support                   | No                        |

Comments:





**KYD, Inc. dba k. yamada distributors**

**An independent leader in packaging and wholesale distribution**

P.O. BOX 29669, Honolulu, Hawaii 96820 Phone: (808) 836-3221 Fax: (808) 833-8995

**SB 367, Relating to Environmental Protection**

**Senate AEN/CPH Hearing**

**Weds Feb 6, 2019**

**1:15 pm – Room 224**

**Position: Oppose**

Chairs Gabbard and Baker, and Members of the Senate AEN/CPH Committee:

I am Dexter Yamada, President of KYD, Inc. dba: K. Yamada Distributors. KYD, Inc. is a local family run business that originated in the 1940's. Today, KYD, Inc and its sister company, Hawaii's Finest Products, LLC, manufacture packaging materials such as food-grade EPS (Expanded Polystyrene) food containers, and distribute a variety of packaging products, to include compostable containers.

As a kamaaina family business in Hawaii, we live here and care about our environment. We believe in stronger litter management programs that curtail land-based litter from migrating to waterways and the ocean. This means public education and consequences for proper disposal of litter and a call for civic responsibility.

We offer the following information for consideration as the Committee deliberates over SB 367:

- PS foam food containers are no more harmful to fish and ocean wildlife than other manmade materials, and are not likely to become marine debris

Marine debris is any manmade material that enters the marine environment. None of it belongs in our oceans regardless of what kind of material it is made of - whether wood, metal, plastic, or paper. A recent Ocean Conservancy study listed the most common types of litter that are found along the world's coastlines, based on data gathered during three decades of international coastal clean-up efforts. Fishing gear, balloons and plastic bags were estimated to pose the greatest entanglement risk to seabirds, sea turtles and marine animals. Plastic bags and plastic utensils ranked as the greatest threats for ingestion.

NOAA (National Ocean and Atmospheric Administration) states that the 5 most common items found during the International Coastal Cleanup are cigarette butts, food wrappers, plastic beverage bottles, plastic bottle caps, and plastic straws and drink stirrers. Plastics can enter into the ocean through ineffective or improper waste management, intentional or accidental dumping and littering on shorelines or at sea, or through storm water runoff. (Trash Talk: Marine Debris and Plastics, NOAA, Sept. 17, 2015)

Locally, the composition of ocean debris appears to be similar to NOAA's list of most common items. Anecdotal testimony from a Big Island marine biologist said that 25-89% of the island's ocean debris is land-based, predominantly straws, wrappers, insulation, shipping containers, hot coffee cups, meat trays, and saimin containers. EPS foam containers were about 1% of the debris. Although large foam block packaging, ice chests and coolers are often found in coastal cleanups, they are usually excluded from ban bills.



- Banning Food Grade PS Foam Containers Will Not Reduce Litter

According to Steven Stein, an environmental scientist who studies litter, banning one material will not reduce the overall litter in waterways. "Food-service containers made of polystyrene are a minor component of litter and, because there is no reusable alternative, a ban simply will substitute other materials that also end up in our waterways."

<https://www.latimes.com/opinion/opinion-la/la-ol-polystyrene-food-takeout-containers-ban-20170628-story.html>

On a local level, the Honolulu City Auditor's Single-Use Polystyrene Food Containers and Plastic Bag Study also conclude that polystyrene bans are not effective in reducing litter, and such containers are a minor component of litter. Like Stein, the Honolulu City Auditor states that because there is no reusable alternative, a ban simply substitutes other containers that will likely be littered. Both Stein and the City Auditor cite the California State Water Resources Board in its NPDES application noted that a ban of PS foam food containers resulted in the substitution of other products that were discarded in the same manner.

Personal reusable food containers are not a takeout option due to FDA regulations that restrict food service businesses from accepting personal, reusable consumer takeout containers due to sanitary and health reasons. Food container replacement for polystyrene containers, whether it is paper, fiber or plastic, would likely be littered in the same fashion.

[http://www.honolulu.gov/rep/site/oca/oca\\_docs/PS\\_Ban\\_Study\\_Final\\_Report.pdf](http://www.honolulu.gov/rep/site/oca/oca_docs/PS_Ban_Study_Final_Report.pdf)

- Replacing PS foam carries significant and unnecessary costs to small locally-owned restaurants and lower-income consumers

As a local distributor of food packaging materials, polystyrene as well as alternative products, we find that polystyrene foodservice products are generally more economical to use than other disposable foodservice products and reusable food service items. The wholesale price of single-use polystyrene foodservice products is often approximately two to three times less than other single-use containers, and four to five times less than a comparable reusable foodservice item when the costs of equipment, labor, water, electricity, and detergent costs are included. This allows schools, hospitals and other institutions to make better use of their limited budgets. For example, local Hawaii pricing shows the average compostable 8 oz cup costs more than twice the average polystyrene cup. This means the razor thin profit margins under which restaurants operate will be cut even lower. This may well translate to rising costs to the consumer, our local citizens and the small business owners working all over the island.

The following is the City Auditor's data about estimated costs to business owners which will more than likely increase cost to consumers.



**KYD, Inc. dba k. yamada distributors**

**An independent leader in packaging and wholesale distribution**

P.O. BOX 29669, Honolulu, Hawaii 96820 Phone: (808) 836-3221 Fax: (808) 833-8995

Exhibit 3.4 Monthly and Annual Cost Estimates for Non-Polystyrene Food Containers by Types of Restaurants

Source: OmniTrak and Office of City Auditor

| Type                                    | Monthly Cost Increase Estimate | Annual Cost Increase Estimate (Monthly x 12) |
|---|--------------------------------|--|
| Total:                                  | \$ 294.64                      | \$3,535.68                                   |
| Small Restaurant (1-10 employees)       | \$ 293.75                      | \$3,525.00                                   |
| Medium Restaurant (11-50 employees)     | \$222.72                       | \$2,672.64                                   |
| Large Restaurant (50 or more employees) | \$420.00                       | \$5,040.00                                   |

Rather than a statewide ban of EPS foam containers, we encourage discussion with the respective Counties, about solutions for managing land- based litter to prevent marine debris since the Counties are responsible for municipal solid waste management.

Thank you for the opportunity to present testimony.

**SB-367**

Submitted on: 1/28/2019 8:19:51 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Autumn Ness         | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/29/2019 3:40:30 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Randy Gonce         | Individual          | Support                   | Yes                       |

Comments:

**SB-367**

Submitted on: 1/29/2019 10:11:22 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|--------------------|--------------------|
| Joy Bitonio  | Individual   | Support            | No                 |

Comments:

SB522: Strong Support

Hearing: February 6, 2019

Dear Members of the AEN/CPH Committe

As a resident of Kaneohe and an active member of Surfrider Foundation's O'ahu Chapter, I have become increasingly concerned about plastics on our beaches, in our nearshore waters, and now found in marine life that calls these areas home. It has become a significant threat to the health of our islands and with over 500 million plastic straws used and discarded per day in the United States alone, I strongly support SB522. As a country, our citizens produce more than double per capita plastic waste of China and five times that of Indonesia, while (with Europe), housing 95% of the companies, lobbyists, and industries in the plastic economy (WEF 2016). By centering our eye on, Hawai'i, the U.S. state with the highest rates of waste generation (doubling the national average) and the beaches inundated with the Pacific Gyre's rapidly increasing plastic pollution (CNN 2016) we are at the heart of the global plastic problem. Up to 80% of the plastic in our oceans comes from land-based sources, estimated at 5-13 million tons of plastic. Hawai'i is uniquely positioned to focus the narrative of plastic solutions and our State has the opportunity to lead the world in a progressive movement that cultivates change at the source.

The United States environmental protection agency (EPA) outlines a waste pyramid in which reduction and re-use stand as the pinnacle to effective waste management. Our Cities, Counties, and State need to rethink the way they create, handle, and discuss waste. Surfrider Foundation believes that we can become a leader in a regenerative economy in which we value reuse and recovery over the single-use items. Single-use plastics, like straws & polystyrene foam, are a fossil fuel driven, carbon emitting industry that has no place in an island economy where space is limited and our environmental health is the most important issue to our economy.

To date, the majority of dialogue regarding solutions to the plastic problem revolves around how we focus attention on regions of the world that have poorer waste

management. These solutions may help slow the flow of waste into our oceans or clean up what is already there, but do not help solve the underlying issue. As our ocean fills with more plastic by weight than fish (Washington Post 2016) by 2050, as we have seen a 610% increase in raw plastic production since 1975 (Jambeck 2015), and as 95% of plastic packaging globally (resulting in \$80-120 billion cost) is lost after a single-first use (WEF 2016), the solutions must be more geared towards a shift away from the fossil fuel based, greenhouse gas creating industry of plastics. Alternatives derived from compostable materials are widely available now as a stop-gap effort as we shift our economy back towards a system of reuse that is at the foundation of both Hawaiian culture and the ethic that this country began on.

The costs of plastic pollution are mounting in multiple sectors - financially, ecologically, and socially. Plastic is costing cities, counties, states, & countries millions of dollars and our global economy billions. Costs are passed to the taxpayers by burdening our stormwater management systems with the need for expensive best management practices and the costs of cleanups. Hawai'i State Department of Transportation (HDOT) has produced a trash plan that shows styrofoam and plastic bags as the top two contributors to the waste stream, while in California, the Natural Resource Defense Council (NRDC) created a plastic cleanup valuation study for 90+ counties in California. The study concluded that CA taxpayers are paying \$428 million per year to clean up plastic through storm drain management, street sweeping, and marine cleanups. San Diego County (with population of 1.3 equivalent to Hawaii) spends \$14 million alone on plastic cleanup. The United Nations Environmental Program has estimates in the billions for the global cost to cleanup plastics with \$14 billion for marine plastic alone.

A recent study published in the renowned journal of *Science* describes the mounting issues of plastics on our fragile and threatened reefs. The study describes corals as being 90% more likely to be diseased when plastic sits on the reef. The billions of pieces of plastic already in the ocean are scarring reefs and then likely infecting them with the contamination that comes from their chemical properties that allow for microbial colonization of pathogens. In other words, plastics bio-accumulate toxins in the water and thus can transfer such toxins to other organisms like coral. This is yet another toxic consequence of plastics in our oceans, of which many more are described in the points below.

The effects to marine life in our oceans are mounting. 50 to 80 percent of dead sea turtles have ingested plastic. Plastic bags, which resemble jellyfish, are the most commonly found item in sea turtles' stomachs. Worldwide, 82 of 144 examined bird species contained plastic debris in their stomachs; and in some cases, 80 percent of the population had consumed plastic. Researchers found that 66 percent of Giant Petrel shorebirds regurgitated plastic when feeding their chicks. Commercial fish, such as Opah and Bigeye Tuna, consume plastic, which could significantly reduce global populations. A University of Hawaii study reports "[i]n the two [Opah] species found in Hawaiian waters, 58 percent of the small eye opah and 43 percent of the big-eye opah had ingested some kind of debris."

On a recent field trip visiting with the Marine Mammal Research Program, Surfrider Oahu members were guided through the facilities where beached and dead Pilot Whales had been examined. The stomach contents of the three animals found on O'ahu, Lana'i, and Kaua'i revealed between 15-30 lbs of plastic in the gut. Plastic does not breakdown like organic material and as marine animals continue to ingest the plastics their stomachs eventually fill to a state in which they can no longer consume enough food to address proper nutritional maintenance. This is similar to the problem widely shared with Laysan Albatross in Papahānaumokuākea.

Ultimately, we have to reduce the problem at its source and work towards a circular economy. Single-use plastics are an unneeded convenience that our society must learn to move away from. The alternatives exist and we must exercise some sort of ethic over our consumer behavior. Our kuleana is to protect our public trust resources like our shorelines for all generations into the future and currently we are not fulfilling that leadership role. I strongly urges the passing of SB522, eliminating one of the most common single-use plastics, straws, from our waste streams and environment.

Mahalo for your time and consideration,

Joy Bitonio  
Resident of Kaneohe, HI  
Proud Member and Volunteer with Surfrider Foundation Oahu



**SB-367**

Submitted on: 1/29/2019 2:22:57 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Devin Wolery        | Individual          | Oppose                    | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:28:41 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>               | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|-----------------------------------|---------------------------|---------------------------|
| Lei Shimabukuro     | Testifying for Kaiser High School | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:30:11 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                            | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Conrad Morgan       | Testifying for Kaiser High School Wipeout Crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:26 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| cassidy             | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:37 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b>   | <b>Organization</b>         | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|-----------------------|-----------------------------|---------------------------|---------------------------|
| emily ramirez miranda | Testifying for wipeout crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:39 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jourdin W           | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:40 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                            | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Alden               | Testifying for Kaiser High School Wipeout Crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:45 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Nanea Kay           | Individual          | Support                   | No                        |

Comments:



**SB-367**

Submitted on: 1/30/2019 12:32:46 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jayna Westbrooks    | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:33:05 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>         | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|-----------------------------|---------------------------|---------------------------|
| Isa                 | Testifying for Wipeout Crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:33:27 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier<br/>Position</b> | <b>Present at<br/>Hearing</b> |
|---------------------|---------------------|-------------------------------|-------------------------------|
| Jordan May          | Individual          | Support                       | No                            |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:33:43 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                            | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Kamryn Conway       | Testifying for Wipeout Crew Kaiser High School | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:36:46 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Will Sato           | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:37:17 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>        | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|----------------------------|---------------------------|---------------------------|
| Thomas Osa          | Testifying for Wipeoutcrew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:38:48 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Ashtyn Cummings     | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:43:12 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sarah Haberman      | Individual          | Support                   | No                        |

Comments:



**SB-367**

Submitted on: 1/31/2019 12:03:14 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Lauren DelaCalzada  | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 3:58:31 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Dyson Chee          | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 4:39:08 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| David Jones, MD     | Individual          | Support                   | No                        |

Comments:

As a local physician and surfer, I support SB11. Polystyrene is not safe for our environment, for marine animal health or for human health. There are other materials that are more environmentally friendly than polystyrene and plastic.

Please pass this bill.

Respectfully, David R Jones, MD

**SB-367**

Submitted on: 1/31/2019 4:44:36 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Kathleen Elliott    | Individual          | Support                   | No                        |

Comments:

As a local health care provider and ocean swimmer, I support SB367. Polystyrene is not safe for our environment, for marine animal health or for human health. There are other materials that are more environmentally friendly than polystyrene and plastic. I'm willing to pay more for them if necessary, or bring my own containers and utensils.

Please pass this bill.

Aloha, Kathleen Elliott, RN, PA-C

Honolulu

**SB-367**

Submitted on: 1/31/2019 7:29:07 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Mio Chee            | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 7:30:18 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| David Chee          | Individual          | Support                   | No                        |

Comments:

I support SB367.

**SB-367**

Submitted on: 1/31/2019 7:31:30 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Micah Chee          | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 8:37:13 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>          | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|------------------------------|---------------------------|---------------------------|
| Phil Schlieder      | Testifying for Delphi Cinema | Support                   | No                        |

Comments:

Thank you for your time in hearing my testimony.

I am writing to express my support in removing (banning) plastic items on all levels from our day to day lives. Even the most well intentioned people still will end up using some of these items if they are presented to them, myself included. Thats why I believe that these need to be banned.

I am an avid ocean enthusiast. Whether its scuba diving, surfing, snorkeling, free diving, swimming, the ocean environment is a place I find much beauty and peace. It is imparitive that we act now to move this sort of legislation forward. It is up to our representitives to hear the peoples wishes and act accordingly.

Mahalo,

-Phil Schlieder



**SB-367**

Submitted on: 1/31/2019 9:35:01 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Cate Waidyatileka   | Individual          | Support                   | No                        |

Comments:

Great!

**SB-367**

Submitted on: 1/31/2019 10:21:34 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Debbie Millikan     | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/1/2019 9:18:10 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Shannon Rudolph     | Individual          | Support                   | Yes                       |

Comments:

Support

**SB-367**

Submitted on: 2/2/2019 8:26:54 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Fawn Liebengood     | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/4/2019 12:03:37 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Amanda N. Kelly     | Individual          | Support                   | No                        |

Comments:

Aloha Chair, Vice Chair, and Members of the Committee,

I am writing in support of these efforts, which will lead to more mindful management and prevention of single-use items across our islands. While individual behavior change can lead to positive outcomes, it alone is not enough. I support allowing people to make decisions for themselves, while encouraging sustainable choices. However, I am also intimately aware of the research and current and serious threat single-use items place on our survival and the survival of our planet. Therefore, I stand in SUPPORT of SB367, which seeks to prohibit the sale, use, or distribution of plastic straws, plastic bags, polystyrene foam containers, and expanded polystyrene food service products here in our state.

In addition to my support, I would also like to ask the committee to consider adding an exemption for individuals with special needs, such as was done with similar legislation in Seattle. "Disposable flexible plastic drinking straws when needed by customers due to medical or physical conditions and for whom flexible compostable paper straws are unsuitable. Otherwise, straws must be compostable or designed to be reusable."

I appreciate the opportunity to submit written testimony on this measure.

Mahalo,

Amanda N. Kelly, PhD, BCBA-D, LBA

**SB-367**

Submitted on: 2/4/2019 12:25:04 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Leah Paulino        | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/4/2019 12:29:29 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Nanea Lo            | Individual          | Support                   | No                        |

Comments:

Hello,

My name is Nanea Lo and I'm a resident of Kaimukā, O'ahu. I am writing in STRONG SUPPORT of this bill. I believe that this bill will help make Hawai'i a better, sustainable, and more responsible one in order to help protect our natural resources from pollution.

Thank you,

Nanea Lo

**SB-367**

Submitted on: 2/4/2019 1:49:16 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Marissa Miller      | Individual          | Support                   | No                        |

## Comments:

As a representative of the youth in Hawaii, I am writing in support of SB 522 as a step towards creating a zero waste community here in the islands. This is an important measure for the keiki of Hawaii because we must take better care of our lands and resources with the intent of preserving them for the future of our generation and for future generations after us. Zero waste measures are necessary in order to prevent widespread pollution of our environment and waste of vital limited resources. Furthermore, plastics are one of the most commonly waste and polluting materials, and they are extremely detrimental to our health and the health of our surrounding environment and the organisms with which we share this earth. Plastics do not break down organically; instead they break up into tiny microplastics that are nearly impossible to remove from the environment and which enter our food chain, carrying persistent organic pollutants and chemicals in high concentrations—essentially poisoning the animals and people that end up ingesting them. Furthermore, there are numerous alternatives to explore that can replace plastics with a much lower level of waste and toxicity. We must transition towards a zero waste culture, economy, and society if we are to sustain human life as well as the life of other organisms on these islands and on this planet. As an island chain in the middle of the Pacific Ocean, we see how important it is to conserve resources and protect the environment in which we live. We must stop trashing this place and move away from disposable lifestyles to make way for a healthier more sustainable future. Thank you for your consideration and I hope that you will pass this bill on behalf of the keiki and future generations who will inherit these lands, and also in respect of the kupuna who came before us and those who inhabited these lands long before we did.



**SB-367**

Submitted on: 2/4/2019 2:46:02 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Coleman Langstaff   | Individual          | Support                   | No                        |

Comments:

I am writing this in support of SB367. In previous testimonies I spoke of a new Hawai'i, where late lunches aren't stereotyped into harmful styrofoam polystyrene containers. I believe that this Hawai'i is achievable, and we are making progress in the right direction. Plastics are harmful for the environment, and while we are one of the smaller states in USA, we can startt the change. Along with SB522 and SB11, Hawai'i can be the start of a revolution inside America, and continue to push humanity in the right direction of a more sustainable planet.

**SB-367**

Submitted on: 2/4/2019 5:52:04 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Alex Filardo        | Individual          | Support                   | No                        |

Comments:

There are numerous more sustainable options than plastic/styrofoam containers and cutlery. If we do not take care of our islands there will be nothing for our keiki. The plastic is suffocating our marine life and pretty soon instead of seeing mediocre coral reefs, all we will see is bottle caps, plastic cutlery, and styrofoam to go containers.

**SB-367**

Submitted on: 2/4/2019 6:10:52 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jordan Macklin      | Individual          | Support                   | No                        |

Comments:

Why let single use plastic into our home? Such a wasteful product she not exist here, or anywhere. Waste will just build and destroy us and all that we love.

**SB-367**

Submitted on: 2/4/2019 6:45:42 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Mackenzie Preble    | Individual          | Support                   | No                        |

## Comments:

Single use plastics are a wasteful and dangerous practice. They are used once and then discarded, more often than not as litter. As litter, polystyrene foam can be ingested by marine and avian animals that mistake the plastic as their food source. Not only does this diminish their appetite, thereby making them eat less and receive insufficient nutrients, the ingestion of plastic leaches chemicals that are known to be carcinogenic and immunodepressants. As such, they will affect the health of those animals and the health of generations to come. Our marine environment is in a constant battle with the impact of humans. Please consider taking this factor out of the battle and side with our natural environment by banning the use single use plastic.

**SB-367**

Submitted on: 2/4/2019 7:00:45 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| carissa cabrera     | Individual          | Support                   | No                        |

Comments:

Foamed polystyrene is a known carcinogen, endocrine disruptor, and neurotoxin. There is absolutely no reason to distribute this to the public without a nontoxic option. Plastic bags are unnecessary, plastic straws are overproduced, and polystyrene contaminates our waterways and oceans. As a marine biologist, I'm begging you to please put the planet's health above profit, for ONCE. We are running out of time!

**SB-367**

Submitted on: 2/4/2019 7:02:42 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jan Oda             | Individual          | Oppose                    | No                        |

Comments:

**SB-367**

Submitted on: 2/4/2019 7:24:07 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Richard Furst       | Individual          | Support                   | No                        |

Comments:

I'm writing to express my support for SB367 to ban plastic straws, plastic bags, and "styrofoam" containers from restaurants in Hawaii. As a surfer, hiker, hunter, and participant in numerous beach and stream cleanup efforts, I can personally attest to the amount of plastic and styrofoam debris that is littering our land and seas. We must take conclusive action now to keep more plastic and styrofoam from ending up in our natural environment. Mahalo for taking positive action to help keep our environment clean!

**SB-367**

Submitted on: 2/4/2019 8:34:07 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Laura Acasio        | Individual          | Support                   | No                        |

Comments:



**SB-367**

Submitted on: 2/5/2019 8:13:08 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Katherine Lau       | Individual          | Support                   | No                        |

## Comments:

Senators, I whole-heartedly support SB 367. As a parent, it gives me great pride to see Hawaii moving forward with phasing out single use plastics and polystyrene containers. It's one step towards preserving our beautiful home for the next generation. Mahalo, Katherine Lau of Hilo

**SB-367**

Submitted on: 2/5/2019 8:58:35 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Andra Janieks       | Individual          | Support                   | No                        |

Comments:

It is common knowledge that our waste, including plastic and polystyrene, is negatively affecting the ocean and our earth. We need to work toward making a change to improve the future of our world. This change needs to happen TODAY. SB367 is a necessary step in the right direction.

**SB-367**

Submitted on: 2/5/2019 10:11:06 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| Submitted By        | Organization | Testifier Position | Present at Hearing |
|---------------------|--------------|--------------------|--------------------|
| Delphine Homerowski | Individual   | Support            | No                 |

Comments:

Honorable Chairs and Members of the Committees,

My name is Delphine Homerowski, I am a resident of Hawaii and a sustainability professional. I am part of the younger generation who works to create a sustainable future and I am writing to **support Bill SB367**.

Styrofoam, plastic straws and plastic bags have well known negative effects that cannot be ignored any longer. These plastic products are harmful throughout their life cycle, as they contribute to oil consumption, climate change and ozone depletion during the production phase, and then poison our water resources, wildlife, oceans and ultimately our very own health after being used.

I am urging you to provide your support in favor of SB367. As an island state that has set major sustainability goals, and that vouched for 100% renewable energy and resiliency, Hawai'i cannot move forward while carrying this huge environmental burden.

Thank you,

Delphine Homerowski

**SB-367**

Submitted on: 2/5/2019 10:48:53 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Amber Weiss         | Individual          | Support                   | No                        |

Comments:

Single use plastic creates so much unnecessary waste, harm to our environment, and community. Single use plastics build a culture with a lack of accountability. Many people are aware of the ways these plastics end up harming the environment but decide their personal ease of throw something in the trash outweighs their feeling of responsibility to care for the environment and reuse some of those items or not buy any single use plastics in the first place. Some people do not see the harm of single use plastics because of how prevalent they have been throughout their lives. For example, I grew up always washing and reusing ziplock bags but most of my friends never even thought about doing that. Throwing their sandwich bags away after lunch was just a normal part of their day. I see this bill making a great step towards a more sustainable future and a community with a greater sense of kuleana.

**SB-367**

Submitted on: 2/5/2019 11:52:44 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Crystal Dombrow     | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 11:48:54 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

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

## Comments:

Please support SB 367. As a longtime resident of Waikiki I have seen an intolerable increase in polystyrene and plastic pollution over the years littering our beaches and walkways. I've also participated in beach cleanups and seen firsthand the devastating effects the gradual breaking down of these unnatural items reeks on our waterways, sea animals and land. It's heartbreaking. It gives me tremendous hope, however, when I see a bill such as this introduced at session. It helps me believe Hawaii can be a leader and set an example worldwide by prohibiting food service businesses and stores from the sale, use or distribution of polystyrene foam products, plastic straws and bags. Please lend your support and help make this happen. Plastics are made from fossil fuels and discarded after one use, in the process contributing significantly to greenhouse gas emissions. As an island nation, Hawaii is at the front lines of the resulting change in our climate and already seeing disturbing events that have impacted communities such as the excessive flooding last year on Kauai and the increase in activity during this past hurricane season. The State of Hawaii has set out to be a leader in climate change, supporting this bill is helping our state government achieve those goals.

**SB-367**

Submitted on: 2/5/2019 1:13:40 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| Submitted By      | Organization | Testifier Position | Present at Hearing |
|-------------------|--------------|--------------------|--------------------|
| Jennifer Milholen | Individual   | Support            | No                 |

Comments:

Aloha, committee members and mahalo for taking the time to consider SB367. My name is Jennifer Milholen, and I work for KĀ• kua Hawai'i Foundation as the Waste Reduction Coordinator. Our programs work with schools and communities across the state who envision a plastic-pollution free Hawai'i. We achieve this through presentations, beach and watershed cleanups, community and business partnerships, and modeling waste free events, all engaging 10s of thousands of Hawa'i residents and visitors. The feedback from these programs is overwhelmingly unified: Get Single-Use Plastics Out! This bill address the "low hanging fruit" of senseless plastic pollution that can be quickly and effectively transitioned out with massive impact. Other municipalities, like Berkeley, CA are already moving on measures like these with massive public support. The path is defined, we only need the courage of lawmakers to push us forward.

The legislature is tasked with considering thousands of bills every session, each taking up matters that impact the health, safety and happiness of Hawai'i residents and visitors. Every single one matters, but I would argue that these bills that address plastic pollution and embracing a zero waste framework for production, consumption, and disposal are THE most important. What is often lost in plastics conversations, is that PLASTIC PRODUCTION = CLIMATE CHANGE.

"99% OF PLASTIC COMES FROM FOSSIL FUELS.

When we think about climate change, we typically focus on factories, coal and cars, but rarely on this fact. As plastic activists, we usually talk about downstream environmental impacts or health threats, but only marginally on the connection between the plastics economy and carbon pollution.

**PLASTIC IS CONNECTED TO CLIMATE CHANGE AND IT POLLUTES AT EVERY STAGE: FROM MATERIALS EXTRACTION TO PRODUCT PRODUCTION TO WASTE DISPOSAL."**

Climate change is the most dangerous issue of our time, and urgent, broad sweeping action is essential. IF we want to truly act as the global environmental leaders that we claim to be, we HAVE to acknowledge that the flood of plastics in our lives are

directly contributing to climate change and take local, but impactful, changes to transition away from these single-use convenience plastics.

Specifically speaking to the EPS foam components of this bill, please consider the following:

The environmental and health detriments of foam for food vending are established and well-documented. We have known for years that, by design, EPS foam is ultra lightweight and escapes collection and management systems. Once in the environment, the foam fractures into billions of pieces of microplastics, which are consumed directly into the food chain - into us. Countless thousands of marine animals and birds starve to death because of ingesting plastics like foam. This is in addition to the leaching of known carcinogens from foam when used with hot and acidic foods.

1) Public Demand: The Honolulu Auditor office's 2018 report on prohibiting foam food containers determined that foam "bans" have overwhelming public support.

From the Report: "Restaurants want to do what is best for the environment. 95% of respondents said that they believe waste and litter is an environmental problem for our streams and ocean, and 98% of respondents stated that they would be willing to do more if they knew it would be green and protect the ocean. A majority (56%) of respondents stated that they would support (i.e., rating of 6-10 on a 10-point scale) a bill that banned the use of single-use polystyrene food containers.

In the 2018 Legislative Session, a foam ban bill (SB2498) was the most supported bill of the session, and recent memory, receiving well over 600 testimonies in support for a single hearing. Students were excused from classes, people took time off work, and business owners left their restaurants all to come show support for measures like these. It was impossible to even get into the hearing room it was so full, so many of us congregated outside waiting for our chance to show support.

2) Economic Imperative: In 2017, the HI DOT Highways division produced a report on roadway flooding that indicated foam containers and plastic bags were the TOP items found to be clogging up storm drains, leading to flooding. The report also indicated that the prohibition of these items would save the division and the counties multiple millions of dollars in cleanup costs.

3) Established Precedent and Modeling: Maui and Hawai'i Island counties have already vetted these arguments and determined the value of prohibiting foam in food service. Maui's foam prohibition has already begun, and their environmental office will testify to the fact that it is well-supported and the transition has been smooth.

Mahalo for your time and consideration. Please support SB367.

Jennifer Milholen





**SB-367**

Submitted on: 2/5/2019 3:24:59 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Megan Adolph        | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 3:38:35 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Kim Jorgensen       | Individual          | Support                   | No                        |

Comments:

Dear Senators,

I strongly support Bill 367. There is too much waste in Hawai'i; and much of it becomes litter and pollution.

The dangers of styrofoam, polystyrene, and plastics to humans, wildlife, oceans, and the environment are substantially documented. Photographs of partially decomposed dead birds with pieces of these products laying where their alimentary tracts used to be is heartbreaking.

You cannot go to any park or beach, drive along any road, or hike along any stream or the Ala Wai canal, without seeing these products littered, floating, or blowing away.

This bill will not only help make Hawai'i cleaner and safer once it goes into effect, but it will make an enormous impact for all future generations. Please don't make our future generations ask why it took us so long.

Sincerely,

Kim Jorgensen

Waikiki

**SB-367**

Submitted on: 2/5/2019 3:53:26 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Denise Boisvert     | Individual          | Support                   | No                        |

Comments:

Dear Senators,

I wholeheartedly support SB367 and cannot thank all those who introduced it enough.

Please pass this bill for the sake of the environment and all marine and wildlife on our shores and in our waters.

Sincerely,

Denise Boisvert

Waikiki

**SB-367**

Submitted on: 2/5/2019 4:02:21 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| june chee           | Individual          | Support                   | No                        |

Comments:

**Testimony**

**February 6, 2019 (1:15 p.m.)  
Conference Room 224**

**By: Tanya Torres**

SB 367 - RELATING TO ENVIRONMENTAL PROTECTION.

Senators and members of the committees:

I strongly support SB 367 because it will phase out a variety of unnecessary and harmful single use plastics from our state. Polystyrene foam, plastic straws, utensils, bags, and water bottles are all examples of single use plastics that more than often are not disposed of properly and make their way to our beautiful beaches. This is a problem because it is unpleasant and unsanitary for local people as well as our tourist economy that depends so much on our pristine shores. These plastics are also harmful to the fragile ecosystems found nowhere else in the world besides Hawaii. Ingestion, suffocation, and entanglement of our sea life is far too common. It is time to take a stand and eliminate these plastics from our communities. The negative impacts associated with these items far outweigh the positives. Especially since readily available alternatives exist. I hope to see Hawaii move in the right direction to protect its land, resources, and people. Thank you for the opportunity to testify in support of this important measure.

**SB-367**

Submitted on: 2/5/2019 7:32:30 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Barbara Wiedner     | Individual          | Support                   | No                        |

Comments:

Aloha Elected Officials,

Please support this bill!

- Plastics are made from fossil fuels. The proliferation of plastic production and the current projected increase will mean that plastic production will account for 20% of the global fossil fuel budget by 2050 (United Nations 2018)

-“The economic damage caused by plastic waste is vast. Plastic litter in the Asia-Pacific region alone costs its tourism, fishing and shipping industries \$1.3 billion per year. In Europe, cleaning plastic waste from coasts and beaches costs about €630 million per year. Studies suggest that the total economic damage to the world’s marine ecosystem caused by plastic amounts to at least \$13 billion every year. The economic, health and environmental reasons to act are clear.” (UNEP 2018)

- A recent study published in the renowned journal of Science describes the mounting issues of plastics on our fragile and threatened reefs. The study describes corals as being 90% more likely to be diseased when plastic sits on the reef. The billions of pieces of plastic already in the ocean are scarring reefs and then likely infecting them with the contamination that comes from their chemical properties that allow for microbial colonization of pathogens.

-Incineration is a poor choice altogether for dealing with plastic waste. Just based on simple emission calculations on kilowatt/hour, HPOWER produces almost triple the GHG emission of our oil burning plant and just slightly less than coal. This places incineration as one of the dirtiest forms of energy production.

Thank you

Barbara Wiedner

1774 Puu Kaa St, Kapaa HI

808-635-2593





**SB-367**

Submitted on: 2/5/2019 8:32:08 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Mary Lacques        | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 9:33:26 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Susan Oppie         | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 9:40:51 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                          | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Kahi Pacarro        | Testifying for Sustainable Coastlines Hawaii | Support                   | No                        |

Comments:

Using materials for a few mintues that once thrown away that persist in our environment for thousands of years is ridiculous. Since we as a general population of Hawaii are not responsible enough to stop using these products under our own volition it's necessary that we rely on our government to regulate these products.

**SB-367**

Submitted on: 2/5/2019 9:42:36 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sara Van Gent       | Individual          | Support                   | No                        |

Comments:

I support this measure. I am against single use plastics.

**SB-367**

Submitted on: 2/5/2019 9:50:25 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Hannah              | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 9:54:36 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Monrudee Osa        | Individual          | Support                   | No                        |

Comments:

I SUPPORT THIS BILL WITH WIPEOUT CREW FROM KAISER HIGH SCHOOL.POLYSTYRENE FOAM IS BAD FOR ENVIRONMENT AND BAD FOR OUR HEALTH. CHEMICAL CAN LEECH INTO FOOD AND DRINK AND CAN NOT RECYCLE. IT'S TAKE A MILLION YEARS TO DECOMPOSE. USE MATERIAL FROM PALM LEAF. IT HAS BOWL, PLATE, UTENSIL, ETC.PLASTIC STRAW TAKE 200 YEARS TO DECOMPOSE. NO NEED STRAW TO DRINK. PLASTIC BAG GET INTO SOIL AND SLOWLY RELEASE TOXIC CHEMICALS THEN EVENTUALLY BREAK DOWN INTO THE SOIL. IF ANIMALS EAT IT THEY CAN DIE. IF WE CAN NOT GET IT DONE RIGHT NEXT TIME YOU WILL GO TO THE PLASTIC BEACH WITH DEAD FISHES, TURTLES, AND OTHER OCEAN CREATURES FLOATING. SORRY NO MORE TOURISM AND WE ARE DONE.

**SB-367**

Submitted on: 2/5/2019 9:58:52 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Zamora Sanchez      | Individual          | Support                   | No                        |

## Comments:

My name is Zamora and I am in love with the islands, doing so, I care for the beautiful crystal clear waters and our beloved marine friends. The islands and oceans provide a lot for us to live well and enjoy time on the beach! The ocean helps metabolize a TON of pollution in our air that we create, so we must protect it as we should do for the rest of the planet. Plastic and other garbage circulates in the currents of many oceans, traveling far and breaking into smaller and smaller particles. These particles are taken into the food chain, killing our ocean friends, and are not biodegradable for thousands and thousands of years if not more. We already pollute the ocean and earth enough not including single use plastic and materials like styrofoam which is also used a lot in the food industry. There are plenty of biodegradable or reusable items that we can replace these harmful products with. Banning these items will not hurt anyone. Think of the small children growing up observing how a lot of people don't treat the earth with respect and grow up doing the same and not understanding how important it is to keep the earth healthy and clean, let us be a good example. This will be a small step toward big things, and will benefit everyone and everything as a whole. Understand how many things trash in our environment affects, and lets take action to help make the world a better place. Mahalo

**SB-367**

Submitted on: 2/5/2019 10:02:32 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Christina Comfort   | Individual          | Support                   | No                        |

Comments:

I strongly support SB367. Single use plastics and polystyrene food containers are shown to be damaging to the environment (via photodegradation into small pieces that are eaten by fish and seabirds, causing integration of an artificial and abundant pollutant into the food web or death when the animals can no longer absorb nutrients), and polystyrene food containers are additionally shown to be harmful to health due to the toxic chemicals released into food items when hot. We have more sustainable alternatives available that are being successfully used by many businesses around the island. It's time to move past single use plastic - Hawaii has the opportunity to be a leader on this important global issue.

Mahalo,

Christina Comfort, Pupukeya, HI



**SB-367**

Submitted on: 2/5/2019 10:07:38 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Matthew Tactacan    | Individual          | Support                   | No                        |

Comments:

10 years ago, it was a common occurrence to see other local families going around picking up trash before they leave, today I feel more and more local families are giving up with tourist coming here littering or leaving their food packaging on the beaches, as if someone has a job to pick it up. Tourist needs to know the difference between the waikiki hotel beach area ( Hotel Maintenance cleaning ) versus the natural beaches around the island ( Us locals keeping it clean ).

**SB-367**

Submitted on: 2/5/2019 11:04:34 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Nadine Lane         | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 11:23:55 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

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

Comments:

**SB 367**

**In Strong Support**

I am writing in strong support of SB 367 which relates to the phasing out of polystyrene foam food containers in the State of Hawai'i. As a coral reef scientist and avid beach user in Hawaii, I have a deep understanding of the negative impacts of polystyrene foam on our environment. When visiting the beach, it is clear that 100% of the foam containers do not make it properly in to the waste stream. These containers break into small pieces that are then potently consumed by wildlife and litter the beach with waste. I have been an advocate of compostable food containers for 10 years and have spoken with many business owners in the food industry on Oahu. It is clear to me that customers don't want to be served on foam and business owners don't want to serve food on it. I am sure that most people would not mine a 25 cent surcharge built into the price of thier meal. In addition, serving hot food just of the fryer presents a health concern when the hot oil melts the foam into the food. This is just plain gross and unhealthy. I urge you to support this bill hand help the people of Hawaii move to a container option that is healthier for Hawaiiis people and environment. Mahalo nui –

Daniel Amato, PhD.

**SB-367**

Submitted on: 2/6/2019 12:38:28 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Lindsay Terkelsen   | Individual          | Support                   | No                        |

Comments:

Polystyrene foam, plastic straws, and plastic bags aren't necessary for food service establishments and is instead helping destroy our environment and us.

**SB-367**

Submitted on: 2/6/2019 7:58:12 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Joshua Thomas       | Individual          | Support                   | No                        |

Comments:

I strongly support this bill.

**SB-367**

Submitted on: 2/6/2019 8:18:08 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Karen Abe           | Individual          | Support                   | No                        |

Comments:

To whom it may concern,

My name is Karen Abe and I am writing as a representative of youth voices as a resident of the Kahala Area. I am writing in full support of SB 367, Hawaii's plastic ban to commit to following UN's Sustainable Development Goals and being responsible for Hawaii's consumer culture. Thank you for considering this important bill.

As a resident of the Kahala area, Waialae Beach Park has been the closest beach since my childhood, but recently have been devastated by the amount of trash either left or that have flown out of trash cans at the park. Most of the trash tends to be light "plastics" that come from the consumer society of take out foods such as single use plastic forks, spoons and take out containers. I personally take action against the use of plastic by bringing my own containers and straws to my favorite cafes and food stops. However as a teenager, I also understand the large consumer population islands that includes locals as well as international tourists, who uses plastic as it often the only options available to them in stores. Therefore I strongly believe that it is up to the state to control the flow of these polystyrene into the consumers hands.

The consumer society in Hawaii is different from any other it also includes the heavy flow of tourists. I believe that the only way to control the plastic waste production here in Hawaii is through policy and limiting the initial output of these plastics into the consumers hands. As a study abroad student in London (currently), where single-use plastics such are banned, I have felt no difference in convenience and have felt better as a consumer to not use throw-away products so often. My waste footprint here in London is way lower in London just because of the more secure control of plastic flow from businesses to consumers.

The plastic waste produced in Hawaii has detrimental effects on marine life as well as atmospheric CO2 due to the waste flow after consumer use. Plastics end up out of trash cans due to tourist and resident carelessness, overflow or wind movement and the waste ends up in the oceans. These plastics never or takes centuries for it to degrade and usually ends up as micro plastics that marine life mistaken for food as. The plastics used also caused damage in the atmosphere when burned at H power and if not at H power ends up in the lands ruining the islands beauty— which will eventually impact our tourism industry.

By cutting our waste to zero, we will be able to conserve the consumer society (which is hard to change) and have little to no negative impact on the environment.

Hawaii, as a unique state surrounded by the marine life all around, we are one of the few state that has a bold connection and understanding of the environment in the United States. I believe it is our duty to lead our nation by example and implementing this plan as a way to illustrate the “Malama Aina” culture to tourist and other states. The passing of this bill will also connect to the preservation of this unique Hawaiian culture.

Hawaii, it is time to illustrate our native values and beliefs instead of finding business incentives our “priority.” Do it for Hawaii’s Keiki and the following generation.

Thank you for your consideration of my testimony and of this important issue.

Karen Abe

**SB-367**

Submitted on: 2/6/2019 8:54:10 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sara Matsumura      | Individual          | Support                   | No                        |

Comments:





## Taking control of persistent solid waste pollution

James M. Coe<sup>a,\*</sup>, George “Bud” Antonelis<sup>b</sup>, Kirsten Moy<sup>c</sup>

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<sup>b</sup> Nā Kama Kai, P. O. Box 1803, Waiānae, HI 96792, United States of America

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### ARTICLE INFO

#### Keywords:

Persistent solid waste  
Marine debris  
Marine litter  
Plastic pollution  
Waste management

### ABSTRACT

The complexity and scale of the sources, types and environmental impacts of persistent solid waste pollution (PSWP) continue to overwhelm the capabilities of government and private efforts to control it. Global cumulative production of virgin plastics is expected to quadruple by 2050 with a concomitant doubling of plastic waste. All nations must take significant steps to realize eventual mitigation of PSWP. These will include adopting a long-term PSWP elimination policy, creating an overarching authority to lead and coordinate a comprehensive national solid waste management program, and creating an International Convention for the Prevention of PSWP to enable global solutions for this global pollution. Initiating these changes will necessitate major, coordinated efforts on the part of environmental organizations, their supporting foundations and concerned citizens.

### 1. Introduction

While it is difficult to characterize the rise of the petrochemical revolution in a few sentences, the salient features of this industrial-economic phenomenon certainly include cycles of innovation, acceptance and widespread realization of the associated benefits followed by eventual recognition of the environmental consequences with efforts to mitigate them. Examples of these impacts include smog, ozone depletion, climate change, acid rain, ocean acidification, toxic substance pollution, and persistent solid waste pollution (PSWP), to name a few (McLusky, 1982; Mehlman, 2006; Schreck, 1998; Yin et al., 2017). The overall effectiveness of responses to these pollutants depends on the timing of the identification of the types, sources and the assessments of their impacts. The more complex and varied the polluting materials, their sources and types of environmental threats and the longer the period over which they are identified, the more piecemeal and less efficient the collective mitigation response is likely to be.

This pattern may be obvious, but it seems to be at the heart of the on-going marine debris issue, 90% of which is plastics (Kaza et al., 2018). The proportion of persistent solid waste in the waste stream varies globally based on economy, consumption patterns and product availability. Further, the amount of PSWP generated from any waste stream depends significantly on the effectiveness of local waste management processes (Jambeck et al., 2015; Zhang et al., 2010). Plastics specifically constitute over 12% of all municipal solid waste (Kaza et al., 2018) and ‘leakage’ occurs at all phases of the production-

disposal life cycle due to inadequate management (Kershaw, 2016). PSWP includes a staggering number of types and formulations of plastic products with varying characteristics as pollutants (Derraik, 2002; Jepson et al., 2016; Murphy et al., 2015; Vasseur and Cossu-Leguille, 2006). Add to this the range of sizes and shapes of individual pollutant particles from meters to nanometers (they are constantly fragmenting at varying rates; Cole et al., 2011), and one begins to appreciate the complexity inherent in measuring the problem and conceiving strategies for its mitigation.

In general, global solid waste is composed of persistent (plastics, glass, metal, other) and naturally degradable components (food and green, wood, paper and cardboard, rubber/leather, other). While any of these components may be classified as pollutants depending on circumstances, the persistent materials require specific collection and processing to prevent their becoming long-term pollutants. Among the persistent wastes, glass and metals are relatively inert and have, or can have, high rates of recycling because of their value as feedstock, their general purity, and ease of identification and separation in the waste stream. Plastics and other materials make up 26% of global solid waste, an estimated ratio of 12% plastics and 14% other (Kaza et al., 2018). The proportion of that “other” category that is a persistent material like plastic is, as of now, unknown and a topic for future study. While virtually all the following treatise is based on plastics data, we have chosen the term persistent solid waste pollution (PSWP) as our subject in recognition of this potentially significant “other” category of persistent solid wastes. This choice emphasizes the necessary recognition

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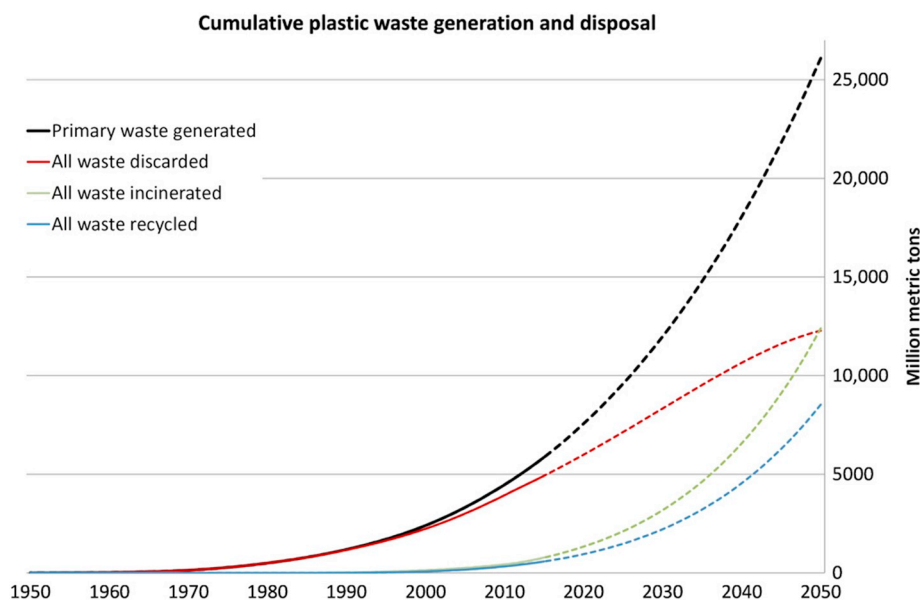


Fig. 1. Cumulative plastic waste generation and disposal (in million metric tons). Solid lines show historical data from 1950 to 2015; dashed lines show projections of historical trends to 2050. From Geyer et al. (2017). Production, use, and fate of all plastics ever made. *Science Advances* 3, e1700782. <https://doi.org/10.1126/sciadv.1700782>. Reprinted with permission from AAAS.

that mitigating the deleterious impacts of marine debris (marine litter) is, in fact, a global solid waste management challenge.

## 2. The status quo

PSWP is now recognized to be ubiquitous in all terrestrial and aquatic ecosystems and in the atmosphere (Derraik, 2002; Dris et al., 2016). A recent assessment of global plastics production and waste management practices concludes that, as of 2015, the world has produced a total of 8300 million metric tons (Mt) of virgin plastics, out of which 6300 Mt. is plastic waste (13.86 trillion lbs.; Geyer et al., 2017). The study predicts that if present production growth rates continue, cumulative production of virgin plastics is expected to rise to 34,000 Mt. by 2050, 12,000 Mt. of which will end up in landfills or extant in the environment (Fig. 1; 2017).

The fate of persistent solid waste depends on the existence and effectiveness of waste management systems on the local level. Jambeck et al. (2015) estimated that in 2010 alone 275 Mt. of plastic waste was generated in 192 coastal countries (representing approximately 93% of the global population) of which 99.5 Mt. was generated within 50 km of the coast. Using information on the types of waste management systems in use in each of the coastal regions, the authors classified 31.9 Mt. as mismanaged, of which between 4.8 and 12.7 Mt. of plastic waste entered the ocean in that year. Presumably, the residual 19.2 to 27.1 Mt. of mismanaged plastic waste remained on land as potential future ocean pollution. Assuming no improvements in current waste management infrastructure, the cumulative amount of mismanaged plastic waste (available to reach the ocean from land) is estimated to grow by an order of magnitude by 2025 (Fig. 2) (Jambeck et al., 2015). While these estimates do not include maritime sources or input resulting from natural disasters (floods, tsunamis, etc.), Kefela et al., 2018 estimate tsunamis to contribute up to 2.4 Mt. and textile fibers add another 0.4 Mt. to the annual flow of PSWP into the oceans. There have been no recent estimates of total maritime sources of PSWP.

By another estimation, approximately 60% of all plastics ever produced were discarded and are accumulating in landfills or in the natural environment (Geyer et al., 2017). Sequestration of persistent waste in landfills is only a temporary measure for the prevention of pollution. Landfilling may delay the release into the environment for periods of weeks to millennia, depending on the product and the design of the landfill, but it is by no means an endpoint disposal option. Perhaps mankind will be mining these landfills for valuable resources in some distant future. Recycling may delay some future primary plastics

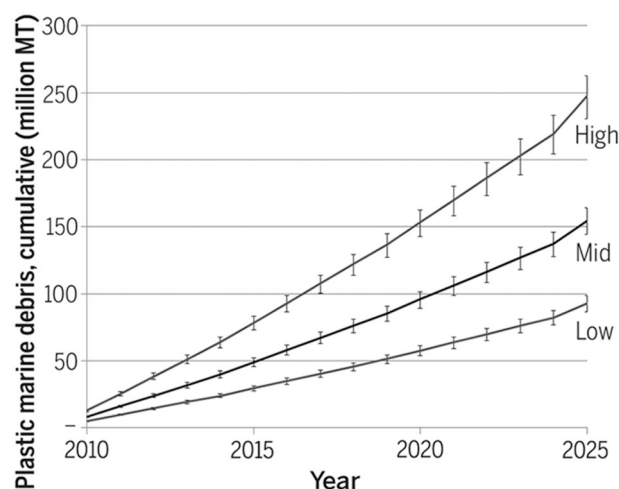


Fig. 2. Estimated mass of mismanaged plastic waste (millions of metric tons) input to the ocean by populations living within 50 km of a coast in 192 countries, plotted as a cumulative sum from 2010 to 2025. Estimates reflect assumed conversion rates of mismanaged plastic waste to marine debris (high, 40%; mid, 25%; low, 15%). Error bars were generated using mean and standard error from the predictive models for mismanaged waste fraction and percent plastic in the waste stream. From Jambeck et al. (2015). Plastic waste inputs from land into the ocean. *Science* 347, 768–771. <https://doi.org/10.1126/science.1260352>. Reprinted with permission from AAAS.

production but this effect is extremely difficult to verify (Geyer et al., 2015). Done properly, incineration or other thermal destruction methods including waste-to-energy programs are potential endpoint disposal strategies for most plastics. The potential large-scale use of thermal destruction, however, will require development and incorporation of significant emission control technology to avoid environmental and public health impacts. Open burning is a common method for reducing trash heaps, but it is a dangerous, potentially toxic and incomplete disposal method (U.S. Environmental Protection Agency, 2016). To date, biodegradable or other enhanced fragmentation formulations for single-use materials may reduce litter and potential rates of physical interactions with megafauna, for example, but are not endpoint solutions as they merely accelerate the dispersion of the polymer materials into the environment as micro- and nano-plastic

bits. Ultimately, the long-term sustainable solution to PSWP will result from global movement toward an economy in which persistent solid waste pollutants are designed out of the production and use cycle (Kershaw, 2016; ISWA, 2017).

One must contemplate the fate of plastics that are not or cannot be recovered from the environment. We know that PSWP is created and distributed world-wide. Some proportion of macro-, or mega-plastics are recovered through waste stream collection systems and by clean-up programs, most to be sequestered in landfills of varying quality. Once plastic waste materials are fragmented into particles less than a 5 mm in diameter, the likelihood of their being removed from the environment becomes vanishingly small (da Costa, 2018; Gallo et al., 2018). While rates of degradation and fragmentation vary based generally on polymer type, additives, and exposure, the process is inexorable (Andrady, 2011). Scientific attention to this micro-plastic phenomenon is accelerating and some mechanisms for biological impacts have been described (Rocha-Santos, 2018; Gallo et al., 2018). The standards and techniques for quantification of micro- and nano-plastics in the environment require further development (Ogonowski et al., 2018) before the extent and character of their potential ecosystem impacts can be realistically evaluated. However, the physics of this degradation suggest that the chemical additives employed in polymer formulations are eventually released into the environment, including colorants, plasticizers and other known toxic materials (Gallo et al., 2018; Murphy et al., 2015; Ng, 2017).

After nearly 40 years we know a great deal about PSWP but struggle to implement mitigating and preventive solutions. While a welter of projects and plans exist to tackle various sources or types of concentrations of PSWP, the obvious fact is that no large-scale progress has been or is being made against the rising tide of marine (and terrestrial) debris. It appears that some combination of vastly improved waste collection, sequestration and destruction technologies will be required to change the course of PSWP growth. Reduction in the demand for virgin plastic production through increasing recycling rates, reusing and creating reusable alternates for disposable materials, adopting minimal packaging strategies, eliminating incentives to discard, and many other innovations in chemical and materials engineering must be pursued (United Nations Environment Programme, 2016; Kershaw, 2016). None of this is new, it just hasn't come to fruition at a scale that will reduce the growing pollution of the entire planet. The concepts are simple and have been voiced for decades, however, under current efforts best estimates suggest cumulative plastic waste will double by 2050 (Geyer et al., 2017) and the amount available to become ocean pollution will grow by an order of magnitude by 2025 (Jambeck et al., 2015). The organizations, resources, leadership and commitment to tackle this problem, with all due respect to the millions of people concerned and involved, are inadequate.

Judging from the rising frequency of relevant keywords in the scientific literature (Google, 2018), the trend in topics presented at International Marine Debris Conferences in 2011 and 2018, and in the growing national participation in the United Nations Environment Programme (UNEP) Clean Seas Program (UNEP, 2017) among others, the time appears ripe for taking control of persistent solid waste pollution. A recent systematic review of the literature on the impacts of plastics in the ocean concluded that irreversible harm may be unavoidable should governments fail to begin mitigating plastic debris (Rochman et al., 2016). The way forward depends on the concerted actions of national governments with the concomitant leadership and support of civil society.

### 3. A national PSWP policy

Because the oceans are a global system, PSWP in the oceans is a global problem. The primary sources of PSWP in the oceans are land-based, and all power and most resources to enact, sustain and enforce solutions to national and international pollution problems are held by

national governments. Therefore, the first step toward marshalling forces for solving the PSWP problem begins with national governments. Despite widespread commitment in many international fora, such as UNEP, the G-7, UNSDG-14, etc., governments around the world have not yet implemented the steps necessary to reverse the growth of PSWP. The steps taken, while laudable and necessary, are typically non-binding and involve single product bans (bags, straws, utensils, microbeads, etc.) aimed primarily at litter control and recycling rates. Absent the full commitment by national governments to research, funding, implementation and enforcement, these steps will not materially change the plastic pollution trajectory. In this paper we propose three major actions for PSWP mitigation using the United States government example to illustrate the problems and types of changes that are necessary to meet the PSWP challenge. With some imagination, the steps described here are likely to be generally adaptable for most other governments.

Persistent solid waste is a major ocean, terrestrial and atmospheric pollutant (fibers) that is rapidly increasing without signs of slowing. The enormity of the PSWP problem will not be adequately addressed in the short-term no matter what actions governments choose to take. Massive amounts are already extant in the environment, inputs are global in scale and effective waste management system capacity is limited, particularly in low income countries, despite the fact that 187 out of 217 (86%) countries and economies reported they had laws or guidelines regarding solid waste management (Kaza et al., 2018). The escalation of this pollution to unimaginable levels and impacts is inevitable without the adoption of a long-term commitment to comprehensive efforts to control it. This begins with national governments adopting and communicating a permanent policy to eliminate PSWP. This does not presume there will be no persistent solid waste. It presumes that a drastic reduction in persistent solid waste pollution over time is in the best interests of all nations and the world. The IUCN listed an improved governance framework as critical to addressing marine plastic pollution (Kershaw, 2016). Adoption of such a national policy tells civil society, the legislature, the courts, agencies and industries and other nations that the most effective way to rise above the status quo must involve a significant level of government leadership and intervention. This in turn enables commitment, stimulates ideas, fosters innovation and elevates attention to potential solutions strategies, all of which lead toward more effective implementation.

Very recently, some nations recognized this need; they articulated broad policy pledges addressing systematic attention to plastic pollution. The UK, is applying the concept of a circular economy (Pearce and Turner, 1991) to plastic waste elimination (Neufeld et al., 2016). Indonesia's Plan of Action on Marine Plastic Debris (The Government of the Republic of Indonesia, 2017) is credible model for PSWP mitigation policy. At an international scale, five of the seven members of the G-7 endorsed the Charlevoix Blueprint for Health Oceans, Seas and Resilient Coastal Communities, including the Ocean Plastics Charter Annex to incorporate "a lifecycle approach to plastics stewardship on land and at sea." While these international pledges remain nonbinding, they are essential steps toward national policy commitments for effective action on PSWP.

### 4. Reorganizing to meet the PSWP challenge

The revelation of, and governments' responses to plastic pollution began in the 1970's and '80s and have continued to evolve over the decades. For example, by 2005 a review of US laws relating to elements of the marine debris problem revealed no less than twenty-one statutes involving seven Federal Departments and at least eleven agencies within them (National Oceanic and Atmospheric Administration, 2008). Also, US commitments in eight international agreements involve at least five Federal Departments (NOAA Marine Debris Program, 2005). Departments, and their respective agencies are in competition with each other for limited resources as well as for executive and

legislative attention and public approval. The dynamics of this competition across these agencies and various responsibilities under the marine debris laws and agreements guarantees a severe compartmentalization (turf) of activities responding to the PSWP challenge. The principal point is that none of the charged agencies has, or will likely ever have sufficient authority, resources or expertise to lead or direct a coherent national effort to mitigate PSWP. Absent this leadership, the current piecemeal, bottom-up approaches are doomed to collective inadequacy. This problem was clearly identified by the US National Research Council's Committee on Shipborne Wastes during its assessment of the US implementation of Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) (International Maritime Organization, 1983) in 1995 (National Research Council, 1995). The NRC Committee's recommendations for the consolidation of leadership to guide the full implementation of MARPOL Annex V were never enacted.

The remedy for this dilemma which may be common among national governments, incorporates the creation of an overarching authority (a permanent national commission or new agency/ministry) to either direct the existing agencies activities with respect to PSWP policy, programs and law or to extract those elements from the agencies and assemble them as a new, independent entity within the national government. Some form of hybridization of these might be workable if based on reasonably independent elements of the overall challenge (e.g., maritime vs. land-based, impacts research vs. waste management R&D, enforcement, etc.). A national policy commitment to the eventual elimination of PSWP coupled with broad public mandate for legislation to create the lead Commission or agency will be necessary to make this happen. A related US example might be the US Marine Mammal Protection Act of 1972 and its creation of the Marine Mammal Commission to oversee and advise multiple US agencies with marine mammal related authority.

Mandates for the new authority should include the development and direction of coordinated strategies to address the technological, economic, legal and bureaucratic features of the PSWP challenge. This effort should begin with the commissioning of a program of studies by competent national (e.g., the US National Research Council) and/or international (e.g., UNEP, ISWA) technical bodies to provide carefully considered strategic guidance for the effective prioritization and accomplishment of the Commission/Agency's objectives.

Broadly, these strategies and the implicated US agencies should include:

1. The analysis and consolidation of existing laws, regulations and policies to establish a coherent, coordinated legal foundation and regulatory authority for actions required to address PSWP (Department of Justice (DOJ), Office of Management and Budget (OMB)).
2. The development of the capacity to conceive, set priorities for, fund and coordinate chemical engineering and waste management technology research to develop non-polluting (or less polluting) materials and disposal alternatives (Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA), Department of the Interior (DOI), Department of Energy (DOE), Department of Agriculture (DOA)).
3. The development, coordination and funding of public awareness and education programs to foster voluntary acceptance of behaviors supporting PSWP reduction (Department of Education (ED), EPA, NOAA, DOI).
4. The research, design and implementation of appropriate incentive systems to foster behavior and business decisions favoring PSWP reduction (Department of Commerce (DOC), Internal Revenue Service (IRS)),
5. The evaluation, implementation and funding of long-term, internationally applicable indices for monitoring changes in key types and sources of PSWP (NOAA, EPA, DOI).

6. The creation and funding of suitable government, industry, university, and NGO grants programs and partnerships to augment the work of the Commission/Agency (OMB, DOJ, IRS).
7. The development and funding of adequate enforcement capacity for both land-based, sea-based and fiscal regulatory regimes as they evolve under national and international programs (US Coast Guard (USCG), US Navy (USN), DOJ, EPA, Department of Defense (DOD)).

Ideally, the entity(s) created to carry out these mandates for mitigating PSWP, whatever form it may take, should be permanently chartered and funded as full success is surely many decades in the future.

## 5. A global framework is essential

Part XII, Section 5, article 207 of the United Nations Convention on the Law of the Sea (United Nations, 1983) delineates States' obligations to prevent, reduce and control pollution of the marine environment from land-based sources. States shall adopt laws and regulations and other measures as necessary for these purposes "taking into account internationally agreed rules, standards and recommended practices and procedures." This Article explicitly recognizes the importance of "taking into account the characteristics of regional features, the economic capacity of developing states and their need for economic development."

While Article 207 was written prior to the recognition of persistent solid waste as significant pollutant and particularly as it originates from land-based sources, these obligations clearly include PSWP in the ocean and on land. The Article suggests that "states acting through international organizations or diplomatic conferences endeavor to establish global and regional rules, standards and recommended practices and procedures to meet these obligations." Because the potential economic and environmental consequences of PSWP are not confined to national boundaries and exhibit multi-scalar and temporal mechanisms (da Costa, 2018), international cooperation is of paramount importance for the effective mitigation of land-based sources of PSWP.

The need for an international convention explicitly for the prevention of persistent solid waste pollution is obvious. Between states' obligations to mitigate land-based sources, current conflicting standards and practices, and the potential benefits of technical, financial and enforcement collaboration, it is unquestionable that constructive actions would result from international consensus on PSWP. While a plethora of international agreements exist addressing various forms of pollution, none was conceived explicitly to address the scope and complexity of PSWP. However, proposals to include PSWP under some existing treaties are under consideration, including the Basel, Rotterdam and Stockholm Conventions that address forms of hazardous wastes, toxic chemicals and POPs. While forming a new convention is time consuming and costly, the notion that adding responsibilities as complex as the mitigation of PSWP to existing, more narrowly conceived treaty structures, is counterintuitive. Adding PSWP mitigation commitments calls for vast increases in new expertise, creates unnecessary conflicts in priority setting and funding, leads inherently to sub-divisions of participants and functions, and creates additional levels of decision making rendering the entire effort less effective. We believe the global, technical and economic scope of this issue demands a PSWP Convention that would provide the foundation for future concerted action.

In contemplating the form of a PSWP Convention, the MARPOL (73/78) Convention may be an appropriate general model. Specifically, within MARPOL (73/78), a Marine Environment Protection Committee (MEPC) was established as a forum for consistent review, clarification and refinement of the various provisions of the Treaty. This mechanism has proven indispensable to the relevance and efficiency of evolving Treaty requirements. The MEPC also provides a forum within which national, industry, and NGO experts work to develop and refine



practical guidelines for the implementation of the many technically complex Treaty requirements. With the possible exceptions of the uniquely difficult maritime (and sovereignty) issues of flag state vs. port state enforcement and the provision of adequate port waste reception facilities, MARPOL and especially its MEPC exemplify the kind of international leadership and coordination needed for PSWP mitigation.

## 6. Why bother?

So, why should we expend the effort to control the future pollution of all ecosystems by billions of tons of persistent solid waste? There can be no doubt that plastics production will continue to increase, and that waste MIS-management rates will decrease slowly if at all, thus adding substantially to the backlog of disintegrating persistent waste materials already in the environment. At present, actions to mitigate PSWP may be categorized as source reduction or prevention, recovery, reuse, sequestration and destruction. In a mass/balance sense, the global data clearly show current efforts addressing PSWP are fighting a losing battle. This is further exacerbated by rising instability in the international trade and infrastructure systems in place to facilitate high volume plastics recycling (Brooks et al., 2018). It is reasonable to conclude that these activities, while vigorously pursued at some local, and a few national scales are thoroughly inadequate at regional and global scales.

With respect to persistent solid waste pollution of the planet, we are already careening down a one-way street with only partial appreciation of the ultimate environmental costs. Of course, this problem is one of many that we have unwittingly perpetrated on ourselves as we have reaped the myriad benefits of the golden age of petrochemistry. Since it is quite certain that most of us and our progeny will not be in on the emigration to Mars or other exoplanets, it would be prudent to take the big steps needed now to protect natal biosystems from certain incremental degradation. Absent major reorganizations, renewed policy commitments, and significant long-term funding from national governments we will certainly continue down this path.

Despite the increasingly compelling case for the implementation of these recommendations, there does not seem to be a mechanism to bring them to fruition. Arguably, the most powerful engines of change in environmental protection, aside from the scientific community, have been the large environmental NGOs and their supporting foundations. Their ability to marshal public opinion, to disseminate scientific findings, and to create and assure the exercise of existing law is unequalled. Unfortunately, the same compartmentalization and competitive circumstances that plague government agencies also exist in the NGO community. While there is no possibility of mandating coordination among major environmental NGOs, the unifying environmental theme and the inevitable direction of the global PSWP problem indicate the need for this coordination to promote national and global PSWP objectives. We recommend coordinated NGO campaigns include the continuing global lead for civil society for PSWP mitigation and the administration of a global petition to demonstrate to national leaders and legislators the overwhelming public support for long-term measures to address PSWP. Further, high priority must be given to the drafting and promotion of national PSWP policies, of national legislation for PSWP oversight agencies/commissions; and, of an International Convention for the Prevention of PSWP.

## Funding

This manuscript was completed without the assistance of external financial contributions.

## Author contributions

James M. Coe – Conceptualization, Methodology, Investigation, Resources, Data Curation, Writing Original Draft and Reviewing & Editing, Project Administration.

George “Bud” Antonelis – Conceptualization, Methodology, Validation, Investigation, Writing Review & Editing.

Kirsten Moy – Conceptualization, Validation, Investigation, Resources, Writing Review & Editing, Visualization.

## Competing interests

We, the authors, declare no competing interests.

## Data and materials availability

All data is available in the main text.

## Acknowledgments

The authors would like to thank Margaret Spring, Kyle Antonelis, NOAA's marine debris office, UN Environment Programme, and the supporters and participants of the 6th International Marine Debris Conference in San Diego, CA. We would also like to thank the two anonymous reviewers who provided early feedback in preparation of this manuscript.

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**SB-367**

Submitted on: 2/6/2019 9:19:41 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Samantha Berberich  | Individual          | Support                   | No                        |

Comments:

Aloha,

As an avid beach goer and freediver I'm tired of seeing disgusting beaches and our ocean filled with tons of trash. I feel like my life is consumed by going to beach clean ups and turning my fun dives into trash clean ups. It's unhealthy for our environment and our economy. No tourist wants to hang out on a filthy beach or dive/snorkel in polluted waters.

Sell an alternative: something reusable or biodegradable and people will buy it.

Mahalo for listening,

Samantha Berberich

**SB-367**

Submitted on: 2/6/2019 9:20:47 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Ryan Cameron        | Individual          | Support                   | No                        |

Comments:

Please take steps to reduce our use of single use plastics. They are polluting the seas and damaging aquatic life . The micro plastic detritus from aged single use and other plastic rubbish is negatively effecting the marine ecosystem at the base level. This effect is harming every level of marine life. We all depend on marine life as a food source. We need to protect and nourish the marine ecosystems so that our children for generations to come will continue to be able to sustain themselves and their families from the sea.

We don't need all this plastic. There are and will be better alternatives. Let's make Hawaii a leader and example to the rest of the world. Let's create the industry to supply Hawaii and the world with biodegradable products . We can protect the sea, boost the local economy with new industry, AND, still enjoy one ONO plate lunch to go.

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**SB-367**

Submitted on: 2/6/2019 9:25:15 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Rebecca Peet        | Individual          | Support                   | No                        |

Comments:

There are so many better, more environmentally-friendly alternatives, that with government support, will be financially accessible to all food services.

**From:** [Bradford Lum](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 5:15:51 PM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Bradford Lum  |
| Email     | <a href="mailto:hawaiianbl@yahoo.com">hawaiianbl@yahoo.com</a>  |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |

**From:** [Randy Gonce](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 6:07:34 PM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Randy Gonce   |
| Email     | rgonce@my.hpu.edu   |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |

**From:** [Claire Muskopf](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Wednesday, February 6, 2019 8:05:16 AM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Claire Muskopf  |
| Email     | senditbecause@gmail.com   |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our society's behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |

**From:** [Kerry Campbell](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 9:40:28 PM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Kerry Campbell  |
| Email     | mrs.kcampbell@yahoo.com   |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |

**From:** [Kiana Otsuka](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 8:18:59 PM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Kiana Otsuka  |
| Email     | Kiana.Otsuka@gmail.com  |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> <p>Kiana Otsuka</p> |

**LATE**

**SB-367**

Submitted on: 2/6/2019 10:20:33 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Kennedy-Anne Marx   | Individual          | Support                   | No                        |

Comments:

We need to protect the islands.

**LATE**

**SB-367**

Submitted on: 2/6/2019 11:16:44 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Aidan Anderson      | Individual          | Support                   | No                        |

Comments:



**LATE**

**SB-367**

Submitted on: 2/6/2019 11:51:04 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Addison Davis       | Individual          | Support                   | No                        |

Comments:

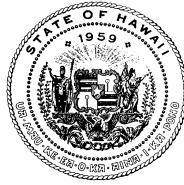
**SB-367**

Submitted on: 1/30/2019 12:33:23 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                    | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Paul Balazs         | Testifying for Department of Education | Support                   | No                        |

Comments:



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

WRITTEN  
TESTIMONY ONLY

**Testimony COMMENTING on SB0367  
RELATING TO ENVIRONMENTAL PROTECTION**

SENATOR MIKE GABBARD, CHAIR  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

SENATOR ROSALYN H. BAKER, CHAIR  
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Hearing Date: February 6, 2019

Room Number: 224

1 **Fiscal Implications:** Unknown

2 **Department Testimony:** This measure proposes to prohibit food service businesses and stores  
3 from using, selling or distributing polystyrene foam containers, expanded polystyrene food  
4 service products, plastic straws, and plastic bags.

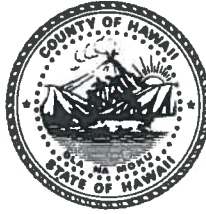
5 The Department of Health (Department) recognizes the urgency to address the impact of  
6 plastic on the environment. However, we note that the polystyrene food container and plastic  
7 bag bans proposed in this bill duplicate existing county bans. Hawaii County, Maui County, the  
8 City and County of Honolulu, and Kauai County each have a plastic bag ban in place.  
9 Polystyrene food container bans are active or about to begin in Maui County and Hawaii County.

10 In general, sales bans such as these do not fit into our existing regulatory programs.  
11 Additionally, many of our programs already operate under constrained resources meaning that  
12 implementing the proposed programs will require additional resources. Therefore, we ask that the  
13 appropriation to implement this measure does not impact the priorities identified in the Governor's  
14 Executive Budget Request and the Department's appropriations and personnel priorities.

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

February 5, 2019

TESTIMONY OF REBECCA VILLEGAS  
COUNCIL MEMBER, HAWAI'I COUNTY COUNCIL  
ON SB 367, RELATING TO ENVIRONMENT PROTECTION.

Committee on Agriculture and Environment  
Committee on Commerce, Consumer Protection, and Health  
Wednesday, February 6, 2019  
1:15 p.m.  
Conference Room 224

Aloha Chair Gabbard, Chair Baker, and Members of the Committee:

I thank you for the opportunity to testify in support of SB 367, relating to environmental protection. My testimony is submitted by my individual capacity as a member of the Hawai'i County Council and Chair of the Committee on Public Safety.

The purpose of this measure prohibits food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, and expands to include polystyrene food service products, plastic straws, and plastic bags.

Amending the Hawai'i Revised Statutes by adding a new chapter to be appropriately designated will assist the State of Hawai'i with littering of polystyrene foam, and includes the prohibition on the sale, use, or distribution of plastic straws, and plastic bags. These materials are detrimental to not only our environment but also affects our local food chain and endangers marine animals and avian populations. These materials are the most common type of litter that pollutes the State of Hawai'i.

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

Mahalo for your consideration.

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

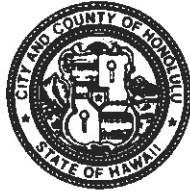
Rebecca Villegas  
Council Member, Hawai'i County Council

*Hawai'i County is an Equal Opportunity Provider and Employer.*

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



February 5, 2019

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

TIMOTHY A. HOUGHTON  
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.  
DEPUTY DIRECTOR

IN REPLY REFER TO:  
WAS 19-50

The Honorable Mike Gabbard, Chair  
The Honorable Russel E. Ruderman, Vice Chair  
and Members of the Committee on Agriculture and Environment  
The Honorable Rosalyn H. Baker, Chair  
The Honorable Stanley Chang, Vice Chair  
and Members of the Committee on Commerce, Consumer Protection  
and Health  
Senate  
State Capitol, Room 224  
415 South Beretania Street  
Honolulu, Hawaii 96813

Dear Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang, and Members:

SUBJECT: S.B. No. 367  
Relating to Environmental Protection

The Department of Environmental Services of the City and County of Honolulu (ENV) supports the intent of S.B. No. 367 which proposes to reduce the amount of plastic in the waste stream and its potential to become littered into the natural environment, and provides the following comments.

First, the definition of "plastic bag" currently in this measure is overly broad and would include thicker bags made from recycled woven plastic fibers, which are commonly considered reusable. ENV suggests the definition be amended to include a bag made from "plastic film," which could be defined as bag made from thin sheets of plastic with a thickness under 10 mils.

Second, the definition of "undue hardship" should be clarified to state what exact conditions would constitute an undue hardship. ENV finds that hardships in these instances are often cost-based. For example, if the cost of the alternative bag or packaging exceeds the original version, that would constitute an undue hardship. The current definition, which in part states that a hardship exists if no "acceptable" or "reasonable" alternative exists, is subjective and would be difficult to enforce.

Thank you for your consideration of our comments.

Sincerely,

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

**SB-367**

Submitted on: 2/5/2019 12:32:29 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                               | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---|---------------------------|---------------------------|
| Tamara Farnsworth   | Testifying for County of Maui Dep't of Env. Mgmt. | Support                   | No                        |

Comments:

Aloha,

I am writing in favor of SB No. 367 on behalf of the County of Maui Department of Environmental Management, the agency responsible for the implementation and enforcement of the polystyrene food service container ban that became effective on December 31, 2018, as well as the 2010 plastic bag ban. The implementation plan to go "Foam Free" was enacted over a 18 month period with a focus on direct outreach to the food service industry and a comprehensive public education campaign over the last 7 months before effective date. The response has been overwhelmingly positive by both the public and private sectors, with the county working together with businesses that have required more assistance with the transition. We have found that almost all nearly 2000 affected businesses, along with their product distributors, have made the switch and are in compliance at this time.

The majority of feedback we have heard from businesses is they have either absorbed any additional costs for alternative products or they have passed on those costs to their customers. The feedback we have heard from the general public is that people are happy to pay a few cents extra with the knowledge that the environment, including whales, dolphins, fish, and seabirds, are the beneficiaries of their contributions.

Maui County Council and Corporation Counsel deliberated over the issue of interstate commerce challenges and determined that the legislation was sound and that the need to reduce the source of polystyrene foam in our marine and land environments warranted any potential challenges that may arise. As of yet there have been no challenges in this regard from industry or any other party.

Plastic waste is a proven major threat to ocean ecosystems and marine wildlife. It is also a source of climate change from use of fossil fuel-based raw materials as well as greenhouse gas emissions. Those of us living in island environments, in particular, are discovering the significant positive impact that single-use plastic bans can have, as well as the resilient ability of our communities to adapt to these changes for the better. Everything is connected and healthy ecosystems are inextricably linked to healthier lives for all of us.

Maui County is learning to live without polystyrene foam food service containers and other single-use plastic products with relative ease. All of the state of Hawaii can, too. We encourage the Hawaii State Senate to champion this legislation as leaders in environmental protection.

Mahalo,

Tamara Farnsworth

County of Maui

Environmental Protection & Sustainability Division



# Ocean Tourism Coalition

*The Voice for Hawaii's Ocean Tourism Industry*

1188 Bishop St., Ste. 1003

Honolulu, HI 96813

(808) 537-4308 Phone (808) 533-2739 Fax

[timlyons@hawaiiintel.net](mailto:timlyons@hawaiiintel.net)

COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Russell E. Ruderman, Vice Chair

COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH

Senator Rosalyn H. Baker, Chair

Senator Stanley Chang, Vice Chair

AMENDED NOTICE OF HEARING

DATE: Wednesday, February 6, 2019

TIME: 1:15 p.m.

PLACE: Conference Room 224

**TESTIMONY OF THE OCEAN TOURISM COALITION IN SUPPORT SB 367 RELATING TO ENVIRONMENTAL PROTECTION**

Chairs Gabbard, Chair Baker, Vice Chair Ruderman, Vice Chair Chang and members of the AEN/CPH Committees:

My name is James E. Coon, President of the Ocean Tourism Coalition (OTC) speaking in support of SB 367 Relating to the Environment.

The OTC represents over 300 Ocean Tourism Businesses across the State. We are an industry that promotes a clean and sustainable environment. We take pictures and leave only bubbles. Most of our companies have already made the necessary changes to their operations to eliminate Polystyrene Foam Food Containers. There are viable biodegradable and reusable options readily available.

The reduction of Polystyrene Foam in our environment will have a positive impact on our oceans.

Please pass SB 367 this is an easy but significant win for the environment.

Sincerely,

James E. Coon, President

Ocean Tourism Coalition



**SB-367**

Submitted on: 2/5/2019 12:55:17 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>   | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---|---------------------------|---------------------------|
| Dean Otsuki         | Testifying for Beach Environmental Awareness Campaign Hawai'i | Support                   | No                        |

Comments:

Beach Environmental Awareness Campaign Hawai'i (B.E.A.C.H.) strongly supports SB367 which bans plastic straws, plastic bags, polystyrene foam containers for food and drinks and expanded polystyrene service products. It would be good if this bill could also include foam bait containers as we have collected many of these from shorelines during beach clean-ups. Bait and other meat, fish and poultry can be wrapped as they used to be in butcher's paper (plain paper).

It is necessary to ban the use of plastic bags, straws and foam containers because they are harmful to marine life. Good alternatives exist such as reusable metal, glass and bamboo straws. There are also disposable paper straws available. People can easily bring their own reusable bags instead of using plastic bags and bring their own containers for food and drinks. Food vendors can also provide compostable alternatives for much the same price as polystyrene. Any cost difference (which would be small - 10 cents or less) could be passed onto the consumer. Consumer will not be concerned about paying an extra 10 cents for a meal or drink knowing that they are getting their food/drink in a healthy container rather than a toxic one, as polystyrene leaches styrene a chemical which is harmful.

Please pass this bill. Thank you.



**SB367**

**RELATING TO ENVIRONMENTAL PROTECTION**

Senate Committee on Agriculture and Environment

Senate Committee on Commerce, Consumer Protection and Health

February 6, 2019

1:15 p.m.

Room 224

The Office of Hawaiian Affairs (OHA) Beneficiary Advocacy and Empowerment Committee will recommend that the Board of Trustees **SUPPORT** SB367, which would prohibit the distribution or use of polystyrene food containers, plastic bags, and similar single-use plastics by food service businesses, as well as the distribution of plastic bags by stores, thereby reducing the impacts of plastic waste on our native wildlife, marine and coastal resources, and associated Native Hawaiian traditional and customary practices.

Single-use plastics, such as polystyrene foam containers and plastic bags, have a well-established impact on native species of cultural significance, including endangered as well as subsistence resource species. For example, global production of polystyrene exceeds 300 million tons annually; approximately **50 percent** of that production is disposed of indiscriminately into the environment, causing significant negative environmental impacts. In Hawaiian waters, the ingestion of discarded plastic debris including polystyrene and plastic bags by native seabirds, such as mōlī, as well as by endangered honu, is a well-documented phenomenon that may have highly injurious or even fatal consequences. Notably, such species hold special significance in Hawaiian culture and traditions: the cultural importance of seabirds includes their role in navigation, meteorology, craftwork, and in their spiritual symbolic significance; likewise, honu are also featured in numerous mo‘olelo, hula, ki‘i pōhaku, and other art forms, and were traditionally raised and harvested for food, medicinal, and other purposes. Such plastic debris may also be ingested by other marine fauna, and its bioaccumulation through the food web may adversely affect numerous other native and culturally significant marine species. **Therefore, reducing or eliminating the amount of disposable single-use plastics in Hawai‘i may help to mitigate the impact of plastics on the native and endangered marine species in our islands’ waters.**

OHA further notes that plastic waste may also threaten the perpetuation of Native Hawaiian cultural and subsistence practices. For example, the toxins contained in discarded polystyrene, including those found in polystyrene itself as well as toxins readily absorbed by polystyrene material, may bioaccumulate in the marine food web, discouraging cultural and subsistence practitioners from the practice of gathering and consuming marine resources. The presence of plastic fragments or microplastics in our nearshore waters may also discourage the traditional gathering and consumption of

pa‘akai and other non-living resources. In addition, the harm caused to endangered and native species may foreclose the future use of such species in Native Hawaiian traditional and customary practices, which depend upon the availability of healthy and abundant resources. Finally, the presence of discarded plastics may compromise the cultural and spiritual integrity of the marine and coastal environment, upon which Native Hawaiian subsistence practices and ways of life are inextricably tied.<sup>1</sup> **Accordingly, reducing the use and inevitable disposal of single-use plastics into our marine environment may also represent a small but important step towards the perpetuation of Native Hawaiian culture.**

Finally, while OHA understands and appreciates that economic concerns may be raised by some, OHA believes it may also be important to consider the economic benefits that would result from a ban on the single-use plastic products covered by this measure. For example, a reduction of plastic waste on our beaches and in our coastal waters will only enhance visitor experience and thereby economic activity in the islands. The outward commitment by our government to prioritize and be responsive to the needs of Hawai‘i’s marine ecology would also be favorable to Hawai‘i’s image as an attractive visitor destination. A single-use plastic ban would further enhance the market for locally produced, environmentally friendly alternatives to these products, injecting life into nascent sectors of our local economy and encouraging local, environmentally conscious entrepreneurship. Finally, the reduction of single-use plastic products’ impacts on our marine and coastal environment, as well as on human health, may result in significant avoided economic costs associated with such impacts. OHA therefore urges the Committee to consider the significant economic benefits of a single-use plastics ban in any weighing of the marginal increased costs of using alternative products, if they are even necessary.

Therefore, OHA urges the Committees to **PASS** SB367. Mahalo nui for the opportunity to testify on this measure.

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<sup>1</sup> In Native Hawaiian understanding the spatial bounds of ‘āina and moana are viewed holistically and maintain powerful and epistemological connections to Hawaiian ancestry and resilience; in one salient example, hāko‘ako‘a, coral reefs, are prayed for and spoken of in the kumulipo, the Hawaiian creation chant.



Senator Mike Gabbard, Chair  
Senator Russell E. Ruderman, Vice Chair  
Senate Committee on Agriculture and Environment  
Senator Rosalyn H. Baker, Chair  
Senator Stanley Chang, Vice Chair  
Senate Committee on Commerce, Consumer Protection and Health

Re: SUPPORT of SB 367 – RELATING TO ENVIRONMENTAL PROTECTION, and SB 522 – RELATING TO PLASTIC

Aloha Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang, members of the Senate Committees on Agriculture and Environment, and Commerce, Consumer Protection and Health,

Dolphin Quest strongly support SB 367 and SB 522. These measures have the potential to reduce plastic-based pollution in the State of Hawaii and ultimately help protect our natural resources and human health.

One of Hawaii's greatest assets is its natural beauty. Unfortunately, plastic debris is one of the most common forms of litter found in Hawaii. We have seen this first-hand during Dolphin Quest's decades of participation in beach, stream, and highway clean-ups.

It is well known that plastic has a devastating effect on Hawaii's beaches, the marine ecosystem, wildlife, and human health. There is also growing concern about the negative impact marine debris may also have on tourism. It is essential that we get ahead of these problems through influential legislation just like this.

Ingestion, entanglement, and habitat degradation are just a few of the complex issues related to plastic pollution. Ingestion of micro-plastics has been observed at every trophic level, from large whales to even corals and zooplankton. High levels of plastic-based persistent organic pollutants (POPs) have been detected in the tissues of marine mammals, sharks, and other large predatory animals due to bioaccumulation and the biomagnification up the trophic system as results of this ingestion. Many of these POPs are known endocrine disrupters and there is growing evidence that humans may also be at risk. In addition to this, the plastic monomer used in manufacturing expanded plastic has been classified by the US National Institutes of Health and the International Agency for Research on Cancer as a possible human carcinogen. Unnecessary plastics need to be regulated for the health and well-being of all.

It is our duty and our responsibility to protect the land and water that allow us to thrive. We must safeguard the future of wildlife and our children so that all may have the opportunity to enjoy nature unadulterated. Supporting this measure would keep Hawaii at the forefront of conservation action and leadership.

Dolphin Quest is an organization of marine mammal specialists, animal advocates and ocean stewards with two business locations in Hawaii. We've championed public education, conservation, and scientific study related to marine mammals and our ocean for thirty years. This issue is critically important to us and we respectfully ask that you support SB 367 and SB 522.

Respectfully yours,

L. Rae Stone, DVM  
Dolphin Quest



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SB 367: Strong Support  
Hearing: February 6<sup>th</sup> 2019, 1:15PM  
Committee on AEN/CPH

Dear Members of the Senate AEN & CPH Committees,

Mahalo for your time, effort and energized focus on a series of bills that are addressing plastic pollution and its associated effects on our environment, climate change, waste generation, and of course on our visitor industry. **We are in strong support of SB367** – a phase out plan for single-use foam, straws, and foam. The problem is dire as the story and data that follow illustrate.

Surfrider Foundation's O'ahu Chapter and our extended community is deeply concerned about plastics on our beaches, in our nearshore waters, and now found in marine life that calls these areas home. As a country, our citizens produce more than double per capita plastic waste of China and five times that of Indonesia, while (with Europe), housing 95% of the companies, lobbyists, and industries in the plastic economy (WEF 2016). By centering our eye on, Hawai'i, the U.S. state with the highest rates of waste generation (doubling the national average) and the beaches inundated with the Pacific Gyre's rapidly increasing plastic pollution (CNN 2016) we are at the heart of the global plastic problem. Up to 80% of the plastic in our oceans comes from land-based sources, estimated at 5-13 million tons of plastic. Hawai'i is uniquely positioned to focus the narrative of plastic solutions and our State has the opportunity to lead the world in a progressive movement that cultivates change at the source.

The United States environmental protection agency (EPA) outlines a waste pyramid in which reduction and re-use stand as the pinnacle to effective waste management. Our Cities, Counties, and State need to rethink the way they create, handle, and discuss waste. Surfrider Foundation believes that we can become a leader in a regenerative economy in which we value reuse and recovery over the single-use items. Single-use plastics, like straws, polystyrene foam, plastic cutlery, bags, and water bottles are a fossil fuel driven, carbon emitting industry that has no place in an island economy where space is limited and our environmental health is the most important issue to our economy.

To date, the majority of dialogue regarding solutions to the plastic problem revolves around how we clean up our how we focus attention on regions of the world that have poorer waste management. These solutions may help slow the flow of waste into our oceans or clean

up what is already there, but do not help solve the underlying issue. As our ocean fills with more plastic by weight than fish (Washington Post 2016) by 2050, as we have seen a 610% increase in raw plastic production since 1975 (Jambeck 2015), and as 95% of plastic packaging globally (resulting in \$80-120 billion cost) is lost after a single-first use (WEF 2016), the solutions must be more geared towards a shift away from the fossil fuel based, greenhouse gas creating industry of plastics. Alternatives derived from compostable materials are widely available now as a stop-gap effort as we shift our economy back towards a system of reuse that is at the foundation of both Hawaiian culture and the ethic that this country began on.

### **United Nations Sustainable Development Goals**

Plastic pollution reduction and movement away from a single-use economy are directly tied to the [United Nations Sustainable Development Goals](#) that our Senate has adopted and correspond to our Aloha + Challenge:

- Goal 12 = Responsible Production & Consumption - “Sustainable consumption and production is about promoting resource and energy efficiency, sustainable infrastructure, and providing access to basic services, green and decent jobs and a better quality of life for all. Its implementation helps to achieve overall development plans, reduce future economic, environmental and social costs, strengthen economic competitiveness and reduce poverty.” If our state aims to work on this goal, removing unnecessary materials from our waste stream is paramount in holding both producers and consumers responsible for their choices.
- Goal 13 = Climate Action - See the climate change section of this testimony
- Goal 14 = Life Below Water - Countless studies globally have assessed the dire impact of plastics on marine life from whales to corals. Many of these studies are referenced in this testimony.
- Goal 15 = Life on Land - Calculations of cleanup costs (See above section) on land for plastic pollution are astronomical as they affect our stormdrains, freshwater systems, and beaches. Not only are their direct costs from cleanup of polluted resources, but their will be mounting indirect costs to our tourism industry should pollution trends continue.

### **Plastics & Climate Change (SDG #13):**

Plastics are made from fossil fuels. The proliferation of plastic production and the current projected increase will mean that plastic production will account for 20% of the global fossil fuel budget by 2050 (United Nations 2018). A recent study from UH Mānoa researchers, published in PLOS One, illustrates that not only are plastics contributing to greenhouse gases in the production & transportation sectors, they are also releasing methane and ethylene as they degrade in water and sunlight. This shed light on the full cycle consequences of plastic from production to disposal as major contributors to the climate crisis.

### **Cost of Plastic Pollution (SDG #12, 13, 14, 15):**

The costs of plastic pollution are mounting in multiple sectors - financially, ecologically, and socially. Plastic is costing cities, counties, states, & countries millions of dollars and our global economy billions. Costs are passed to the taxpayers by burdening our stormwater management systems with the need for expensive best management practices and the costs of cleanups. Hawai'i State Department of Transportation (HDOT) has produced a trash plan that shows polystyrene foam and plastic bags as the top two contributors to the waste stream, while in California, the Natural Resource Defense Council (NRDC) created a plastic cleanup valuation study for 90+ counties in California. The study concluded that CA taxpayers are paying \$428 million per year to clean up plastic through storm drain management, street sweeping, and marine cleanups. San Diego County (with population of 1.3 equivalent to Hawaii) spends \$14 million alone on plastic cleanup. In late 2018, San Diego passed a sweeping prohibition of polystyrene foam and reduction of other single-use plastics, joining hundreds of municipalities across the globe in stemming this plastic tide.

“The economic damage caused by plastic waste is vast. Plastic litter in the Asia-Pacific region alone costs its tourism, fishing and shipping industries \$1.3 billion per year. In Europe, cleaning plastic waste from coasts and beaches costs about €630 million per year. Studies suggest that the total economic damage to the world’s marine ecosystem caused by plastic amounts to at least \$13 billion every year. The economic, health and environmental reasons to act are clear.” (UNEP 2018)

### **Harm to Reefs & Marine Life (SDG #14)**

A recent study published in the renowned journal of *Science* describes the mounting issues of plastics on our fragile and threatened reefs. The study describes corals as being 90% more likely to be diseased when plastic sits on the reef. The billions of pieces of plastic already in the ocean are scarring reefs and then likely infecting them with the contamination that comes from their chemical properties that allow for microbial colonization of pathogens. In other words, plastics bio-accumulate toxins in the water and thus can transfer such toxins to other organisms like coral. This is yet another toxic consequence of plastics in our oceans, of which many more are described in the points below.

The effects to marine life in our oceans are mounting. 50 to 80 percent of dead sea turtles have ingested plastic. Plastic bags, which resemble jellyfish, are the most commonly found item in sea turtles’ stomachs. Worldwide, 82 of 144 examined bird species contained plastic debris in their stomachs; and in some cases, 80 percent of the population had consumed plastic. Researchers found that 66 percent of Giant Petrel shorebirds regurgitated plastic when feeding their chicks. Commercial fish, such as Opah and Bigeye Tuna, consume plastic, which could significantly reduce global populations. A University of Hawaii study reports “[i]n the two [Opah] species found in Hawaiian waters, 58 percent of the small-eye opah and 43 percent of the big-eye opah had ingested some kind of debris.”

On a recent field trip visiting with the Marine Mammal Research Program, we were guided through the facilities where beached and dead Pilot Whales had been examined. The stomach contents of the three animals found on O’ahu, Lana’i, and Kaua’i revealed between 15-30 lbs of plastic in the gut. Plastic does not breakdown like organic material and as marine animals continue to ingest the plastics their stomachs eventually fill to a state in which they can

no longer consume enough food to address proper nutritional maintenance. This is similar to the problem widely shared with Laysan Albatross in Papahānaumokuākea.

**HPower and the problems of incineration (SDG #12):**

Many arguments against polystyrene foam bans and other single-use plastics contend that keeping these products is helpful for our incineration and energy production. In direct interviews with Covanta, the operators of O'ahu's HPOWER, they have stated that plastics are some of the least efficient forms of waste to burn. Given their chemical composition, they burn fast and at high heat. While this may seem advantageous, the boilers are most efficient when running at a more consistent temperature. Covanta stated that it actually takes them adding other material to even out these "hot-flashes." When looked at objectively this is very easy to imagine. If you were creating a fire in a fire pit or place imagine throwing oil or a plastic bottle into the flames - you would see a burst of flames which quickly dissipated after leaving a toxic smelling fume. Now think of burning a more organic material from paper or cardboard to a log; in this scenario you would notice a much slower, more controlled burn that put out a longer-lasting and more efficient source of heat (energy).

Additionally, incineration is a poor choice altogether for dealing with plastic waste. Just based on simple emission calculations on kilowatt/hour, HPOWER produces almost triple the GHG emission of our oil burning plant and just slightly less than coal. This places incineration as one of the dirtiest forms of energy production. In places like Copenhagen, their reliance on incineration actually caused them to go well over their agreed upon Kyoto protocol limits for GHGs. With the State of Hawai'i institutionalizing the Paris Climate agreement and also agreeing to net-zero emissions, incineration should be phased out of any energy production goals. Finally, as noted in a BBC News article in 2018, plastics in a landfill are mostly inert, as they don't break down when buried in the landfill and are thus not emitting anywhere near the emissions that come with incineration. While we understand that Hawai'i is limited in its space as a unique piece to this discussion, it needs to be noted that the environmental consequences of incineration are far greater than advertised. Thus, the emphasis needs to be a continued to push towards reduction of waste.

Ultimately, we have to reduce the problem at its source. Single-use plastics are an unneeded convenience that our society must learn to move away from. The alternatives exist and we must exercise some sort of ethic over our consumer behavior. Our kuleana is to protect our public trust resources like our shorelines for all generations into the future and currently we are not fulfilling that leadership role. Surfrider Foundation strongly urges the State Legislature to pass SB 367, creating a phase out plan for detrimental single-use plastics.

Mahalo for your time and consideration,

Rafael Bergstrom  
Surfrider Foundation, O'ahu Chapter Coordinator

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Oppose Foam Food Container Bans, SB 367, SB522, SB11  
Feb. 6, 2019 Hearing - Sen Agriculture and Environment  
Committee, Consumer Protection and Commerce Committee

Dear Senators:

We are a small Chinese restaurant in Honolulu Chinatown. It's a family run business with 24 seats and about 40 guests a day. Nearly 60% of our business is take-out. Foam containers do not leak and keep food hot which is important for take-out customers.

I want repeat customers and have only raised my price once in 4 years. \$8.00 plate lunch raised to \$8.50. We serve tasty, affordable meals and try to keep it affordable for our customers who are very familiar with my price.

My sales are predictable and I also cater and deliver to surrounding companies. To keep my prices low and to pay workers I use foam containers. I have gone to Chef Zone and looked at other containers but they cost 3X more than the foam containers.

Rent is very high, cost of vegetables and meat is very high. Meat is the highest wholesale price compared to other states. I can only control labor not these other price increases. I do not want to reduce hours or lay off workers who need jobs.

I want choice of what containers I use. If our business grows I can even get the higher costing containers.

Instead of ban on foam containers, regulate trash and have a place for it to go so it avoids the ocean.

Thank you,

Gaven Wu  
Papa's Café  
1120 Maunakea Street #105  
Honolulu  
(808) 523-8668

**SB-367**

Submitted on: 2/5/2019 9:50:40 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>   | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---|---------------------------|---------------------------|
| Eric Wong           | Testifying for Loco Moco Drive Inn - Ewa Beach and Wiki Wiki Drive Inn - Waterfront Plaza | Oppose                    | No                        |

Comments:

Senate AEN/CPH Hearing – Weds Feb. 6, 2019

Re: Foam Foodservice Container Bans, SB 367 - OPPOSE!!

Aloha Senators:

First off, thank your time to review my written testimony, name is Eric Wong and I am the co-owner of the Wiki Wiki Drive Inn, a small take out window located in the Downtown's Waterfront Plaza and the Loco Moco Drive Inn at the Ewa Beach Shopping Center.

Many of our customers know us in both location as an affordable spot for 'plate lunch', yes — 'cheap eats' thus we use Styrofoam® containers extensively for our customers come in. We hardly see 'sit down' dining as much as our 'take out'.

It's no secret that Styrofoam® containers are sturdy enough for insulation to keep the plate lunch hot, easy to open and eat immediately, and of course it is relatively inexpensive.

Other containers which are available do not insulate as well nor can it be 'piled on', Like others that have expressed their concern, we too is a 'mom and pop' small, family oriented businesses have a hard time as it is keeping our costs low and affordable, and with always rising rents, always rising ingredient prices, and now the possibility of paying even more for take out containers.

The hurdle we have to get over gets higher and higher every year. We are not one of your corporate restaurants who have deep pockets, we are the small, personable, flavorful restaurants that make Hawaii what it is, a place where people can enjoy different flavors from many cultures. By doing away with Styrofoam, it might prove to be the straw that broke the camel's back for many small businesses.

I ask that you DO NOT ban foam containers as it will affect most local businesses around the State. I agree and surmise that while there are ecological reasons but there has to be some other way to resolve the problem without a rash and ultimate ban.

Ask yourself this- will small restaurant owners be capable of taking another added cost? How would you feel if your favorite take-out restaurant that you've been going to for years, just permanently closed shop? We have been in business nearly 25 years supporting our families and our 12 employees'. Approving this band against Styrofoam ® would affect many small food operators around Hawai'i and may force us to close, thus I humbly ask that you vote against the ban.

Mahalo,

Eric S.S. Wong, Vice President

Imperial Investment, LLC.

d.b.a. Loco Moco Drive Inn-Ewa Beach

Wiki Wiki Drive Inn- Waterfront Plaza

808-689-8321

**SB-367**

Submitted on: 2/5/2019 9:33:05 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                  | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--------------------------------------|---------------------------|---------------------------|
| Cathy Goeggel       | Testifying for Animal Rights Hawai'i | Support                   | Yes                       |

Comments:

**SB-367**

Submitted on: 2/4/2019 7:28:49 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b>   | <b>Organization</b>                                   | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|-----------------------|---|---------------------------|---------------------------|
| Kimiko LaHaela Walter | Testifying for Hawai'i Reef and Ocean Coalition HIROC | Support                   | No                        |

Comments:

Aloha Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang and members of the committees,

The HAWAI'I REEF AND OCEAN COALITION –HIROC– was formed in 2017 by coral reef scientists, educators, local Hawai'i environmental organizations, elected officials, and others to address a crisis facing Hawai'i's coral reefs and ocean, including harms from plastics.

Polystyrene foam containers are ultra-light, produce litter on land, and often are blown into the ocean, where they harm marine life, including sea birds, fish, mammals and even our precious corals that protect Hawai'i's shorelines. Single-use plastics (straws, bags, bottles, utensils) similarly break into smaller and smaller pieces that choke sea birds and other marine life and carry bacteria that harms many forms of sea life. There are more sustainable alternatives to plastics that would involve only a small increase for consumers, with far less impact on our pristine environment. We must act now to protect our environment by reducing plastic use!

We strongly support this bill and urge its passage.

Mahalo,

Kimiko LaHaela Walter on behalf of the Hawai'i Reef and Ocean Coalition

February 5, 2019

The Honorable Mike Gabbard, Chair  
Committee on Agriculture and Environment  
Hawaii State Capitol, Room 201  
Honolulu, HI 96813

The Honorable Rosalyn H Baker, Chair  
Committee on Commerce, Consumer Protection, and Health  
Hawaii State Capitol, Room 230  
Honolulu, HI 96813

SUBJECT: SB 367 – Relating to Environmental Protection – Oppose

Dear Chairs Gabbard and Baker,

On behalf of the Plastics Industry Association (PLASTICS), I am writing to offer our comments on SB 367 – an act that prohibits food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, expanded polystyrene food service products and plastic straws. While we support the intent of the legislature to address plastic marine debris, we do not believe that a ban of the products mentioned in this legislation will achieve the environmental goals the state is striving for.

Expanded polystyrene is among the most efficient materials at keeping foods fresh, free of leaks and spills, and, most importantly, hot or cold. Schools, hospitals, nursing homes, non-profit food programs, delis, and family-owned restaurants are among the many institutions that rely upon expanded polystyrene for its excellent insulation at an economical price. Alternative packaging materials are often as high as 2-3 times more expensive and do not perform as efficiently. Furthermore, recyclers and expanded polystyrene manufacturers have proven that these products can be recycled.

Similarly, plastic straws offer many useful benefits for health and safety. Not all consumers are able to drink beverages without the use of a straw, namely the young, elderly, and infirm. The legislation attempts to assuage these concerns by stipulating a rulemaking process but does not indicate what exemptions the Department of Health should consider. Even if such exemptions were made for those with a disability or medical condition, is the server or cashier expected to make that determination, thus dictating who can and cannot receive a straw? Policy options like "straws upon request" would provide a much better option than banning these products.

In sum, the environmental costs of plastic alternatives are 3.8 times greater than using plastic materials. This is due to the efficient production, use and handling of plastic during the entire lifecycle of these products. We would therefore suggest more resources be placed in improving recycling infrastructure, consumer education and solid waste management strategies than banning these products.

If you have any questions, please contact me directly at 202.974.5206 or [scrawford@plasticsindustry.org](mailto:scrawford@plasticsindustry.org).

Respectfully,



Shannon V. Crawford  
Director, State Government Affairs

**SB-367**

Submitted on: 2/4/2019 10:15:52 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>               | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|-----------------------------------|---------------------------|---------------------------|
| Natalie Parra       | Testifying for Keiko Conservation | Support                   | No                        |

Comments:

We stand in strong support of this bill.





49 South Hotel Street, Room 314 | Honolulu, HI 96813  
www.lwv-hawaii.com | 808.531.7448 | voters@lwv-hawaii.com

## COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair  
Senator Russell Ruderman, Vice Chair

Wednesday, February 6, 2019, 1:15 p.m. and 1:45 p.m., Conference Room 224

**SB11** – Relating to Polystyrene Foam Containers  
**SB367** – Relating to Environmental Protection  
**SB522** – Relating to Plastic

### TESTIMONY

Nancy Davlantes, Legislative Committee Member, League of Women Voters of Hawaii

Chair Gabbard, Vice-Chair Ruderman, committee members:

**The League of Women Voters of Hawaii** supports the intent of all three of these bills which would, respectively, prohibit the sale of polystyrene foam containers statewide; prohibit food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, expanded polystyrene food service products, plastic straws, and plastic bags; and establish an incremental ban on plastic bottles, utensils, polystyrene foam containers, straws, plastic bags, and single-use plastic beverage containers.

Perhaps it was the photos of a honu with a plastic straw in its nostril, the pictures of the Great Pacific Garbage Patch, the stories of the unending piles of plastics that wash up not just on our shores but the shores of Midway and are ingested by the seabirds that nest there, or the micro-plastics that are making their way into our own food supply.

Whatever the confluence that brought this problem front and center to the attention of those with the wherewithal to do something about it, the League is gratified that Hawaii appears now ready to confront what is a monumental problem.

The content of these bills overlaps with one-another and offer common objectives. But they give the legislature much to work with and craft legislation that would at last address the problem here and in the Pacific. We realize the problem is worldwide but getting a handle on how to deal with it here is something we can all support.

No doubt there will be opposition from the food service-related parts of the economy, and that is to be expected, but incentives can be employed to encourage what we realize is a huge change in their way of doing business.

The bottom line is that the alternative of not acting is unacceptable.

Thank you for the opportunity to submit testimony.

Weds. Feb 6, 2019 - Hearing  
Senate Committee on Agriculture and Environment  
Senate Committee on Consumer Protection and Commerce

SB 367, SB 522, SB 11 - Oppose

Chair Gabbard, Chair Baker and members of the Committees:

My name is Mark Ushijima and I am a partner in the Hibachi Kailua. I am strongly against a ban on styrofoam containers in Hawaii. This will truly impact the small businesses in Hawaii. We already have high overhead costs (labor, electricity, taxes, fees, lease rent, etc...) that adding to our cost of goods would be very detrimental.

I also have a small business with my friend in Washington State. Washington State did not impose a ban on styrofoam but they strongly discourage styrofoam. They understand the importance of small businesses in Washington.

State legislators should review the Honolulu City Auditor's Study (which I participated in) about Single Use Polystyrene Food Containers and Plastic Bags.

[http://www.honolulu.gov/rep/site/oca/oca\\_docs/PS\\_Ban\\_Study\\_Final\\_Report.pdf](http://www.honolulu.gov/rep/site/oca/oca_docs/PS_Ban_Study_Final_Report.pdf)

The City Auditor finds that the majority of litter observed was miscellaneous items, and food service items mainly of non-polystyrene material that would remain unaffected by a ban.

Since there are no reusable alternative food containers, the ban will only change the material of the container, and that substitute container will become litter. Customers sometimes bring in personal reusable containers but many do not know that is against the law due to safety and hygiene reasons.

Focusing on styrofoam and only one type of plastic, that is not a big part of the waste stream, doesn't make sense. Someone should look at all the plastics from retail chips to juice pouches to frozen food bags—just walk through a grocery store. Some of these like potato chip bags are littered on streets, parks and beaches far more than foam food containers. I don't understand this. There are so many other plastic litter why go after a economical, useful product that's not even a major part of the litter problem.

Please do not pass this law. Not only will it affect the business owners but it will also affect the employees who work tirelessly for higher wages.

Thank you,

Mark Ushijima  
the Hibachi  
515 Kailua Road  
Kailua, HI 96734  
[thehibachihawaii@gmail.com](mailto:thehibachihawaii@gmail.com)



# SIERRA CLUB OF HAWAII

**MĀLAMA I KA HONUA. *Cherish the Earth.***

**SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT &**

**SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND HEALTH**

February 6, 2019    1:15 p.m.    Room 224

**In SUPPORT of SB367:** Relating to environmental protection

---

Aloha Chair Gabbard, Chair Baker, Vice Chair Ruderman, Vice Chair Chang, and members of both committees,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **strongly supports SB 367**, which seeks to prohibit food service businesses and stores from the sale, use, or distribution of polystyrene foam containers, polystyrene food service products, plastic straws, and plastic bags.

The Sierra Club of Hawai'i is dedicated to protecting these unique and beautiful islands we call home. Part of our dedication to protect is to keep these valuable public areas free of pollution from plastics and other waste. In this case, we advocate for halting harmful plastic pollution at the source. This measure is one of many that support our collective efforts to reduce pollution across the board.

Single-use plastics pollute our lands and freshwater bodies, clog up drainage systems, harm wildlife and ultimately end up in our ocean waters--settling on our reefs and, in some places, creating large plastic island gyres. Polystyrene food containers are intended for single use, cannot typically be recycled, and pose harm to marine life. The toxins and heavy chemicals found in them are not compostable or biodegradable--*taking 500 years or more to decompose*. Polystyrene food containers, as well as other single use foam products, create an overabundance of waste that continually overflow local landfills, overflow our beaches, and are not a source of clean energy when burned at H-Power. **There are alternatives for single use polystyrene food containers**, including compostable and biodegradable options. By reducing single use plastics like polystyrene food containers at the source, Hawai'i will have the opportunity to reduce and even eliminate one of the most toxic plastic pollutants, thereby showcasing its state sustainability goals to the nation and the world. Banning the distribution and selling of polystyrene food containers will enable Hawai'i to invest in the future aesthetics of the island, and more importantly the health and safety of marine life and local communities.

*We urge the Committee to pass this measure*, which will serve our collective efforts to keep Hawai'i's land, freshwater bodies, and oceans free of plastic pollution as well as protect the health of our people. Thank you for this opportunity to provide testimony in **support of SB 367**.

Mahalo,  
Lori Mallini  
Volunteer, Sierra Club of Hawai'i



HAWAII

AMERICANS FOR DEMOCRATIC ACTION

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January 31 , 2018

TO: Honorable Chairs Gabbard & Baker & Members of AEN & CPH Committees

RE: SB 367 Relating to Environmental Protection.

Support for hearing on Feb. 6

Americans for Democratic Action is an organization founded in the 1950s by leading supporters of the New Deal and led by Patsy Mink in the 1970s. We are devoted to the promotion of progressive public policies.

We support SB 367 as it would prohibit the sale, use, or distribution of polystyrene foam containers, expanded polystyrene food service products, plastic straws, and plastic bags.

One only needs to look at Wikipedia to find evidence in support of this bill: "Polystyrene is slow to [biodegrade](#) and is therefore a focus of controversy among environmentalists. It is increasingly abundant as a form of [litter](#) in the outdoor [environment](#), particularly along shores and waterways, especially in its foam form, and also in increasing quantities in the Pacific Ocean." Save our beaches and ocean; ban polystyrene foam and other plastics that pollute.

Thank you for your favorable consideration.

Sincerely,

John Bickel  
President



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To: Sen. Mike Gabbard, Chair  
Sen. Russell E. Ruderman, Vice Chair  
Members of Committee on Agriculture and Environment

Sen. Rosalyn H. Baker, Chair  
Sen. Stanley Chang, Vice Chair  
Members of Committee on Commerce, Consumer Protection, and Health

From: Victor Lim, Legislative Lead  
Hawaii Restaurant Association

Subj: SB 367 Relating to Environmental Protection  
SB 522 Relating to Plastic

Date: February 3, 2019

The Hawaii Restaurant Association representing over 3,500 restaurants here takes the liberty of addressing these two related bills together and stand opposed to both of them for the following reasons.

Polystyrene Foam Containers are a USDA approved product that is primarily used by ethnic businesses here in Honolulu due to its superior ability in transporting hot foods and soups. The neighbor islands have regulations against the product but here in Honolulu where all the waste go to H Power. A recent report by the City Auditor Edwin Young in Honolulu shows that eliminating of these containers Will basically shift from one type of waste product to another and they all end up at the H Power since we do not have any composting facilities here in Hawaii. It also states that less one percent of our total trash is currently made up of foam food containers.

Plastic Straws. We do support the bills and initiatives that state that straws should be given out only upon request at full service restaurants similar to the California State law that was passed in 2018. How beverages are consumed varies greatly from the sit down restaurants to the quick service restaurants with drive-thru's where many food and beverages are consumed on the go. Alternate straws made from paper, bamboo, metal are all being tested around the world with limited success due to its performance, durability, after taste, and costs.

NextGen Consortium. This is a partnership initially set up by Starbucks and McDonald's to fund research now joined by Coca Cola and Yum for food service containers that will be both environmentally green and meet performance needs of the food and beverage industry. Each of the parties have contributed millions for this to help us find a workable solution.

Many of the major chains's CEOs like Steve Easterbrook has made a corporate commitment that by 2025, 100 percent of McDonald's guest packaging will come from renewable, recycled or certified sources with a preference for Forest Stewardship Council (FRC) certification. Many other major entities like Starbucks are working on a similar path.





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Tina Rogers  
Victor Lim

The alternate industry is in its infancy and that why we at the Hawaii Restaurant Association urges Senators to be patient with these aggressive deadlines for implementation.

Thank you very much for giving us this opportunity to share the Restaurant Industry's perspective on this very important issue.





1050 Bishop St. PMB 235 | Honolulu, HI 96813  
P: 808-533-1292 | e: info@hawaiiifood.com

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---

TO:

Committee on Agriculture and Environment and Committee on Commerce Consumer Protection and Health

Senator Mike Gabbard and Senator Rosalyn H. Baker, Chairs

Senator Russell E. Ruderman and Senator Stanley Chang, Vice Chair

FROM: HAWAII FOOD INDUSTRY ASSOCIATION

Lauren Zirbel, Executive Director

DATE: February 6, 2019

TIME: 1:15pm

PLACE: Conference Room 224

RE: SB367 Relating to Environmental Protection

Position: Oppose

The Hawaii Food Industry Association is comprised of two hundred member companies representing retailers, suppliers, producers, and distributors of food and beverage related products in the State of Hawaii.

HFIA is in opposition to this measure as it will raise prices on essential items for Hawaii consumers and not address the underlying causes of global marine debris or local littering and waste mismanagement.

This measure would ban products that Hawaii consumers rely on because they are safe and durable. The available alternatives to these products often cost several times as much and in many cases don't meet the needs of businesses and customers.

Grocery stores and other food retailers would be especially hard hit by this measure. In general, food retailers operate at a profit margin of around one percent and small businesses, grocers and non-profits have comparably low or non-existent profit margins. With Hawaii's high prices, they struggle everyday to survive. They use plastic and polystyrene products because they are cost effective, sanitary, and sturdy. These products keep food fresh and safe. A recent audit of polystyrene and bag bans by the City and County of Honolulu City Auditor determined that:

"Any attempt to regulate the food service industry will impact a wide segment of Honolulu residents, largely in the form of price increases passed on to customers. Some impacts to

certain vulnerable classes of residents need to be closely examined to prevent unnecessary effects and harms.”

If passed this measure would also threaten hundreds of jobs in Kalihi where locally produced, favorably priced, FDA approved polystyrene food containers are made. Passing this measure will ban a safe, locally created product and in many cases force local businesses to switch to products that are manufactured in China under less stringent environmental regulations, and then must be shipped thousands of miles to the mainland and then thousands more from the mainland to Hawaii. The carbon footprint of transporting the non-polystyrene containers outweighs any potential benefit. All the products targeted by this bill can be recycled and or turned into energy at HPOWER.

No products are created in a vacuum, all products require resources to manufacture and ship. Cardboard and paper products are made by cutting down trees, glass is heavy and requires substantial resources to ship as a new product and when it becomes waste, sugar cane and corn based products require the use of large amounts of water and pesticides. Protecting our environment means responsibly planning for the life cycle of all products, regardless of what they're made of.

Bans may change the composition of litter but they don't address the underlying causes of poor waste management. The City and County of Honolulu City Auditor also determined that: “Minimizing litter to keep our natural environment safe from harm is an important community objective. To be successful, the city should pursue comprehensive methods rather than a simplistic ban on a single kind of litter/trash that is unlikely to effectively reduce the overall amount of litter and its harm to the environment.”

All the products targeted by this measure can be recycled and or turned into energy on Oahu at HPOWER. The legislature should be focusing on ways to ensure that we are reducing all types of litter and responsibly managing all waste rather than imposing an overreaching ban on a few products, which has so many negative consequences. For these reasons we ask that this measure be held.





Nicole Chatterson

Director, Zero Waste O'ahu

[oahu.zerowaste@gmail.com](mailto:oahu.zerowaste@gmail.com)

808.561.7730

February 5, 2019

Aloha Chair Gabbard, Chair Baker, AEN and CPH Committee Members:

My name is Nicole Chatterson, and I am Mānoa resident writing in **strong support of SB 367**, to prohibit the sale, use, and distribution of polystyrene foam containers, plastic straws, and plastic bags.

This type of single-use plastic phase-out policy is being seen around the world. From island nations like New Zealand and the United Kingdom to places in the global south like Costa Rica and Ethiopia, communities are saying no single-use plastics on the basis of climate change mitigation and pollution prevention.

If single-use plastic consumption maintains on the current trajectory, **plastic use will account of 20% of our fossil fuel use by 2050**<sup>1</sup>. While recycling and waste-to-energy are often cited as ways to deal with this plastic waste—we have recently seen that the recycling markets are too unstable to offer a consistent, sustainable solution to our waste. Compounding this, roughly 80% of the Global North's 'recyclable' plastics (exported from places like Hawai'i) are not recycled and instead escape into the marine environment.<sup>2</sup>

While we have the option to incinerate plastic for energy locally via H-POWER, this is also a flawed approach. Per megawatt, **H-POWER produces 3 times more greenhouse gas emissions than Kahe—O'ahu's largest oil-based energy plant**.<sup>3</sup> Further, **H-POWER requires 800,000 tons of waste annually** to maintain operations and profit margins. This means that waste production is incentivized, driving more upstream impacts through the extraction, production, and transportation of products-turned-trash.

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<sup>1</sup> UNEP (2018). SINGLE-USE PLASTICS: A Roadmap for Sustainability

<sup>2</sup> World Economic Forum (2015). The New Plastics Economy. Rethinking the future of plastics.

<sup>3</sup> <https://ghgdata.epa.gov/ghgp/main.do>



According to the U.S. EPA, about 42% of the U.S. greenhouse gas footprint results from this production-disposal chain<sup>4</sup>.

If Hawai'i is indeed serious about our commitment to the Paris Climate Accord and mitigating our climate footprint, it is clear that single-use plastic reduction is a necessary part of our climate change prevention tool-kit.

Plastic pollution reduction and movement away from a single-use economy are directly tied to the Aloha + Challenge goal to reduce our solid waste footprint and build sustainable communities. Further, plastic and single-use reduction also correspond to the following [United Nations Sustainable Development Goals](#), which have been adopted as a framework by the Hawai'i State Senate.

- **SDG 12 = Responsible Production & Consumption**
- **SDG 13 = Climate Action**
- **SDG 14 = Life Below Water**
- **SDG 15 = Life on Land -**

Mahalo for your time and consideration.

Nicole Chatterson

Director, Zero Waste O'ahu

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<sup>4</sup> <https://www.epa.gov/smm/epa-sustainable-materials-management-program-strategic-plan-fiscal-years-2017-2022>

SB 367, SB 522, SB 11 – Oppose Foam Food Container Ban Bills  
Senate Committee on Agriculture and Environment  
Senate Committee on Consumer Protection and Commerce

Aloha Senators,

My name is Gwen Alejo-Herring. I am the owner and operator of the Queen Street Café & Grill in the Aiea Town Square.

My café prepares and sells plate lunches like kiawe grilled steak, firecracker chicken, ahi Belly and more. All entrees come with a choice of two scoops rice, garlic mash or brown rice, along with a choice of potato, mac or tossed salad.

We use foam food containers because it can handle the weight, moisture and retain the heat of our foods. My customers and I believe foam food container bans don't make sense because here on Oahu, foam food containers and even compostable containers all go to HPower for energy production. If there were a biodegradable/compostable plant, it then makes more sense for paying more for biodegradable containers.

I also provide lunch for schools. One school requires biogradable plates, which I find to be flimsy and I worry about if and when a child may get burned from hot lunches. Another school that I work with uses the foam plates. I notice that the biodegradable plates are double or more the price of the foam plates.

If a foam food container ban becomes law, I will need to raise prices and I worry about losing customers. Everyone is very price-conscious.

Please do not support these foam container ban bills.

Sincerely,

Gwen Alejo-Herring  
Queen Street Café & Grill  
99-080 Kauhale Street  
Aiea, HI 96701  
[galejoherring@gmail.com](mailto:galejoherring@gmail.com)

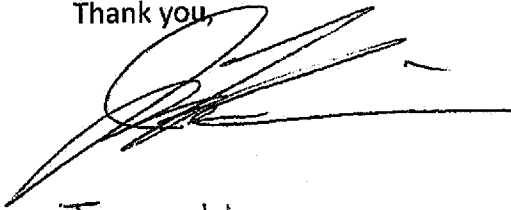
Senate AEN/CPH and CPH Hearing, Weds. Feb. 6, 2019  
SB367, SB522, SB11 - Oppose Bans on Polystyrene Food Service Products

Dear Senator Gabbard and Senator Baker,

I have a small restaurant in the airport area. Hawaii is a very tough place to own a business. A statewide ban on foam food service products will make it even harder. I try not to pass on too much of my business expense to customers because everything is so competitive and I will lose business if my food prices are raised too much.

I have looked at compostable containers and it doesn't work for my business. The good ones are too expensive. The lower cost ones do not work well; hot rice or other food, and even salad make the containers soggy. Customers don't like it when the rice sticks to the container or tastes like pulp.

Thank you,



James Kim  
Jets Fast Food  
2957 Koapaka Street  
(808) 833-7155  
more1s@icloud.com

Weds. Feb 6, 2019 – Hearing

Oppose SB 367, SB 522, SB 11

Senate Committee on Agriculture and Environment  
Senate Committee on Consumer Protection and Commerce

Dear Senators,

My name is Bryce Fujimoto and I am the VP at Shiro's Saimin. For the past 2 years we have been testing alternates to foam products. At this time the green alternatives do not retain hot and cold items effectively. In fact, some of the alternatives are dangerous because instead of being an insulator, they conduct heat. Being that they are hot to the touch from the outside a customer will be more likely to spill the contents and get burned while transporting.

Also, Hawaii currently has no means of composting green products. Thus, if I understand correctly on Oahu this will all be sent to H-Power to be burned anyway. This essentially will force smaller restaurants like us with already paper thin profit margins to use a much more expensive alternative without repurposing what the alternative was supposed to be used for.

The bottom line is why make the switch when we are not ready to do what we are supposed to do with the green containers? We need a more economical and safe alternative to foam products. Until then myself and Shiro's are pleading to stop bills that ban foam food containers. Thank you for your time.

Sincerely,

Bryce Fujimoto  
#488-8824

Shiro's Saimin Haven  
98-020 Kamehameha Highway #109  
Aiea, Hawaii 96701

SB367, SB522, SB11 - Oppose Bans on Polystyrene Food Service Products  
Senate AEN/CPH and CPH Hearing, Weds. Feb. 6, 2019

Dear Senator Gabbard and Senator Baker,

My name is Aaron Wolfe. I am a local male just starting out in the food business. I am the owner of HNA Food Services LLC (Tsukenjo's)

It's hard enough to make it in this business with all the expenses, insurance, hike in food costs etc...Let alone having to worry about higher cost of plates. I oppose these bills and believe government should leave us be. We have enough rules and regulations to abide by. Something like this could put us out of business.

If people are worried about trash getting out to the ocean, they should look at more clean up of homeless on the streets. I pay for my restaurant's bagged trash to be picked up street side. Many times the homeless rip open the bags and then I have to clean it up the next morning.

Aaron Wolfe  
HNA Food Services LLC dba: Tsukenjo's  
1148 Bishop Street  
Hon, HI 96813

To: Hawaii State Senate Committees  
Agriculture and Environment  
Consumer Protection Health

From: Nabeya Maida  
2919 Kapiolani Blvd ste 204  
Honolulu, Hawaii 96826

Date: February 6, 2019 Hearing

Re: Foam Foodservice Container Ban Bills: SB 367, SB 522, SB 11

To whom it may concern,

My name is Kevin Suehiro, and I am the owner of Nabeya Maida, a small restaurant located in Kaimuki. We are a hot pot restaurant, so we use Styrofoam containers when our customers take home our broth. Styrofoam containers are good for insulation to keep the broth hot and are relatively inexpensive. Other containers which are available do not insulate as well, will be difficult to handle (due to the heat of the broths), and are in general very expensive compared to Styrofoam. We small, family oriented businesses have a hard time as it is keeping our costs low and affordable, and with always rising rents, always rising ingredient prices, and now the possibility of paying even more for take out containers, the hurdle we have to get over gets higher and higher every year. We are not one of your corporate restaurants who have deep pockets, we are the small, personable, flavorful restaurants that make Hawaii what it is, a place where people can enjoy different flavors from many cultures. By doing away with Styrofoam, it might prove to be the straw that broke the camel's back for many small businesses.

Please DO NOT ban foam containers as it will affect many, many local businesses in Hawaii. I know there are ecological reasons that exist, but there has to be some other way to resolve the problem without a rash and ultimate ban. When you walk around the island, before you make your decision, please take the time and think of how your decision will affect the community. Will small restaurant owners be capable of taking another punch to the gut? How would you feel if the small, hole in the wall restaurant that you've been going to for years, just closed up for good? This ban would negatively affect many small businesses in Hawaii, please vote against the ban.

Sincerely,

Kevin Suehiro  
Owner  
Nabeya Maida  
(808) 739-7739



Chamber of Commerce HAWAII  
*The Voice of Business*

**Testimony to the Senate Committees on Agriculture and Environment, and  
Commerce, Consumer Protection, and Health  
Wednesday, February 6, 2019 at 1:15 P.M.  
Conference Room 224, State Capitol**

**RE: SB 522, RELATING TO PLASTIC**

Chairs Gabbard and Baker, Vice Chairs Ruderman and Chang, and Members of the Committees:

The Chamber of Commerce Hawaii ("The Chamber") **opposes** SB 522, which prohibits the use of plastic bottles, utensils, stirring sticks, polystyrene foam containers, and straws by state agencies by July 1, 2021 and by businesses selling food or beverages by July 1, 2022. Additionally, this bill would ban the distribution or sale of plastic bags after July 1, 2023 and the sale or distribution of single-use plastic containers after July 1, 2025. SB 522 would also create the plastic source reduction working group

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 2,000+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

We **oppose** SB 522 because it will raise the cost for both business and consumers and will impact jobs in the local manufacturing industry of FDA approved, food-grade food service containers. Creating a mandate for the use of compostable and other plastic containers stifles the free market place, where businesses and consumers have the right to choose among the various types of safe, FDA approved food service containers.

However, the Chamber is not opposed to the section in this bill that would create a plastic source reduction working group and bring in all sides of this issue to begin working towards a solution. Businesses across the State have already begun to voluntarily ban polystyrene containers and recently the Counties have begun to introduce and pass legislation. Through this working group, we can look at the results of these legislative actions to see how we can help to support a coordinated and comprehensive litter reduction program that is not just focused on plastic, but other forms of waste as well.

Thank you for the opportunity to testify.





**TESTIMONY OF TINA YAMAKI  
PRESIDENT  
RETAIL MERCHANTS OF HAWAII  
February 6, 2019**

**Re: SB 367 Relating to Environmental Protection**

Good afternoon Chairpersons Gabbard and Baker and members of the Senate Committee on Agriculture & Environmental and Committee on Commerce Consumer Protection & Health. I am Tina Yamaki, President of the Retail Merchants of Hawaii and I appreciate this opportunity to testify.

The Retail Merchants of Hawaii (RMH) as founded in 1901 and is a statewide, not for profit trade organization committed to the growth and development of the retail industry in Hawaii. The retail industry is one of the largest employers in the state, employing 25% of the labor force.

The Retail Merchants of Hawaii OPPOSES SB 367 Relating to Environmental Protection. Bans are not the simple answer. We need to maintain a fair balance regarding food service containers, bags, straws and other products and look at a coordinated litter reduction programs.

Businesses respond to the wants of the customers that patronize their establishments all while operating on a very thin profit margin. They look for cost effective food containers that ensure that products are durable enough to protect people from spills and burns as well as keep food protected and fresh longer by sustaining appropriate temperature.

A mere substitution of polystyrene type containers, straws, beverage containers and bags to another type will NOT result in reduced trash as more than likely the substitution product would be discarded in the same manner.

We need to be looking into a comprehensive litter reduction program that not only takes into account educating the public, but also looking for alternative solutions like public trash cans that are designed so that it will keep its content from flying out. We also want to point out that the alternative products often creates more waste in volume and energy as well as increase air and water pollution – in the manufacturing of and in the transportation to the business.

In addition, this measure would violate interstate commerce by banning the sale of prepackaged food items like that of Cup of Noodle and single use beverage containers like water bottles.

We urge you to hold this measure. Mahalo again for this opportunity to testify.

**SB-367**

Submitted on: 2/5/2019 6:03:48 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                    | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Natalie McKinney    | Testifying for Kokua Hawaii Foundation | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 11:20:19 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                    | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Christian Robbins   | Testifying for Kokua Hawaii Foundation | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 12:24:21 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>  | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Melodie Aduja       | Testifying for O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i | Support                   | No                        |

Comments:



**KYD, Inc. dba k. yamada distributors**

**An independent leader in packaging and wholesale distribution**

P.O. BOX 29669, Honolulu, Hawaii 96820 Phone: (808) 836-3221 Fax: (808) 833-8995

**SB 367, Relating to Environmental Protection**

**Senate AEN/CPH Hearing**

**Weds Feb 6, 2019**

**1:15 pm – Room 224**

**Position: Oppose**

Chairs Gabbard and Baker, and Members of the Senate AEN/CPH Committee:

I am Dexter Yamada, President of KYD, Inc. dba: K. Yamada Distributors. KYD, Inc. is a local family run business that originated in the 1940's. Today, KYD, Inc and its sister company, Hawaii's Finest Products, LLC, manufacture packaging materials such as food-grade EPS (Expanded Polystyrene) food containers, and distribute a variety of packaging products, to include compostable containers.

As a kamaaina family business in Hawaii, we live here and care about our environment. We believe in stronger litter management programs that curtail land-based litter from migrating to waterways and the ocean. This means public education and consequences for proper disposal of litter and a call for civic responsibility.

We offer the following information for consideration as the Committee deliberates over SB 367:

- PS foam food containers are no more harmful to fish and ocean wildlife than other manmade materials, and are not likely to become marine debris

Marine debris is any manmade material that enters the marine environment. None of it belongs in our oceans regardless of what kind of material it is made of - whether wood, metal, plastic, or paper. A recent Ocean Conservancy study listed the most common types of litter that are found along the world's coastlines, based on data gathered during three decades of international coastal clean-up efforts. Fishing gear, balloons and plastic bags were estimated to pose the greatest entanglement risk to seabirds, sea turtles and marine animals. Plastic bags and plastic utensils ranked as the greatest threats for ingestion.

NOAA (National Ocean and Atmospheric Administration) states that the 5 most common items found during the International Coastal Cleanup are cigarette butts, food wrappers, plastic beverage bottles, plastic bottle caps, and plastic straws and drink stirrers. Plastics can enter into the ocean through ineffective or improper waste management, intentional or accidental dumping and littering on shorelines or at sea, or through storm water runoff. (Trash Talk: Marine Debris and Plastics, NOAA, Sept. 17, 2015)

Locally, the composition of ocean debris appears to be similar to NOAA's list of most common items. Anecdotal testimony from a Big Island marine biologist said that 25-89% of the island's ocean debris is land-based, predominantly straws, wrappers, insulation, shipping containers, hot coffee cups, meat trays, and saimin containers. EPS foam containers were about 1% of the debris. Although large foam block packaging, ice chests and coolers are often found in coastal cleanups, they are usually excluded from ban bills.



- Banning Food Grade PS Foam Containers Will Not Reduce Litter

According to Steven Stein, an environmental scientist who studies litter, banning one material will not reduce the overall litter in waterways. "Food-service containers made of polystyrene are a minor component of litter and, because there is no reusable alternative, a ban simply will substitute other materials that also end up in our waterways."

<https://www.latimes.com/opinion/opinion-la/la-ol-polystyrene-food-takeout-containers-ban-20170628-story.html>

On a local level, the Honolulu City Auditor's Single-Use Polystyrene Food Containers and Plastic Bag Study also conclude that polystyrene bans are not effective in reducing litter, and such containers are a minor component of litter. Like Stein, the Honolulu City Auditor states that because there is no reusable alternative, a ban simply substitutes other containers that will likely be littered. Both Stein and the City Auditor cite the California State Water Resources Board in its NPDES application noted that a ban of PS foam food containers resulted in the substitution of other products that were discarded in the same manner.

Personal reusable food containers are not a takeout option due to FDA regulations that restrict food service businesses from accepting personal, reusable consumer takeout containers due to sanitary and health reasons. Food container replacement for polystyrene containers, whether it is paper, fiber or plastic, would likely be littered in the same fashion.

[http://www.honolulu.gov/rep/site/oca/oca\\_docs/PS\\_Ban\\_Study\\_Final\\_Report.pdf](http://www.honolulu.gov/rep/site/oca/oca_docs/PS_Ban_Study_Final_Report.pdf)

- Replacing PS foam carries significant and unnecessary costs to small locally-owned restaurants and lower-income consumers

As a local distributor of food packaging materials, polystyrene as well as alternative products, we find that polystyrene foodservice products are generally more economical to use than other disposable foodservice products and reusable food service items. The wholesale price of single-use polystyrene foodservice products is often approximately two to three times less than other single-use containers, and four to five times less than a comparable reusable foodservice item when the costs of equipment, labor, water, electricity, and detergent costs are included. This allows schools, hospitals and other institutions to make better use of their limited budgets. For example, local Hawaii pricing shows the average compostable 8 oz cup costs more than twice the average polystyrene cup. This means the razor thin profit margins under which restaurants operate will be cut even lower. This may well translate to rising costs to the consumer, our local citizens and the small business owners working all over the island.

The following is the City Auditor's data about estimated costs to business owners which will more than likely increase cost to consumers.



**KYD, Inc. dba k. yamada distributors**

**An independent leader in packaging and wholesale distribution**

P.O. BOX 29669, Honolulu, Hawaii 96820 Phone: (808) 836-3221 Fax: (808) 833-8995

Exhibit 3.4 Monthly and Annual Cost Estimates for Non-Polystyrene Food Containers by Types of Restaurants

Source: OmniTrak and Office of City Auditor

| Type                                    | Monthly Cost Increase Estimate | Annual Cost Increase Estimate (Monthly x 12) |
|---|--------------------------------|--|
| Total:                                  | \$ 294.64                      | \$3,535.68                                   |
| Small Restaurant (1-10 employees)       | \$ 293.75                      | \$3,525.00                                   |
| Medium Restaurant (11-50 employees)     | \$222.72                       | \$2,672.64                                   |
| Large Restaurant (50 or more employees) | \$420.00                       | \$5,040.00                                   |

Rather than a statewide ban of EPS foam containers, we encourage discussion with the respective Counties, about solutions for managing land- based litter to prevent marine debris since the Counties are responsible for municipal solid waste management.

Thank you for the opportunity to present testimony.

**SB-367**

Submitted on: 1/28/2019 8:19:51 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Autumn Ness         | Individual          | Support                   | No                        |

Comments:



**SB-367**

Submitted on: 1/29/2019 3:40:30 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Randy Gonce         | Individual          | Support                   | Yes                       |

Comments:

**SB-367**

Submitted on: 1/29/2019 10:11:22 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| Submitted By | Organization | Testifier Position | Present at Hearing |
|--------------|--------------|--------------------|--------------------|
| Joy Bitonio  | Individual   | Support            | No                 |

Comments:

SB522: Strong Support

Hearing: February 6, 2019

Dear Members of the AEN/CPH Committe

As a resident of Kaneohe and an active member of Surfrider Foundation's O'ahu Chapter, I have become increasingly concerned about plastics on our beaches, in our nearshore waters, and now found in marine life that calls these areas home. It has become a significant threat to the health of our islands and with over 500 million plastic straws used and discarded per day in the United States alone, I strongly support SB522. As a country, our citizens produce more than double per capita plastic waste of China and five times that of Indonesia, while (with Europe), housing 95% of the companies, lobbyists, and industries in the plastic economy (WEF 2016). By centering our eye on, Hawai'i, the U.S. state with the highest rates of waste generation (doubling the national average) and the beaches inundated with the Pacific Gyre's rapidly increasing plastic pollution (CNN 2016) we are at the heart of the global plastic problem. Up to 80% of the plastic in our oceans comes from land-based sources, estimated at 5-13 million tons of plastic. Hawai'i is uniquely positioned to focus the narrative of plastic solutions and our State has the opportunity to lead the world in a progressive movement that cultivates change at the source.

The United States environmental protection agency (EPA) outlines a waste pyramid in which reduction and re-use stand as the pinnacle to effective waste management. Our Cities, Counties, and State need to rethink the way they create, handle, and discuss waste. Surfrider Foundation believes that we can become a leader in a regenerative economy in which we value reuse and recovery over the single-use items. Single-use plastics, like straws & polystyrene foam, are a fossil fuel driven, carbon emitting industry that has no place in an island economy where space is limited and our environmental health is the most important issue to our economy.

To date, the majority of dialogue regarding solutions to the plastic problem revolves around how we focus attention on regions of the world that have poorer waste

management. These solutions may help slow the flow of waste into our oceans or clean up what is already there, but do not help solve the underlying issue. As our ocean fills with more plastic by weight than fish (Washington Post 2016) by 2050, as we have seen a 610% increase in raw plastic production since 1975 (Jambeck 2015), and as 95% of plastic packaging globally (resulting in \$80-120 billion cost) is lost after a single-first use (WEF 2016), the solutions must be more geared towards a shift away from the fossil fuel based, greenhouse gas creating industry of plastics. Alternatives derived from compostable materials are widely available now as a stop-gap effort as we shift our economy back towards a system of reuse that is at the foundation of both Hawaiian culture and the ethic that this country began on.

The costs of plastic pollution are mounting in multiple sectors - financially, ecologically, and socially. Plastic is costing cities, counties, states, & countries millions of dollars and our global economy billions. Costs are passed to the taxpayers by burdening our stormwater management systems with the need for expensive best management practices and the costs of cleanups. Hawai'i State Department of Transportation (HDOT) has produced a trash plan that shows styrofoam and plastic bags as the top two contributors to the waste stream, while in California, the Natural Resource Defense Council (NRDC) created a plastic cleanup valuation study for 90+ counties in California. The study concluded that CA taxpayers are paying \$428 million per year to clean up plastic through storm drain management, street sweeping, and marine cleanups. San Diego County (with population of 1.3 equivalent to Hawaii) spends \$14 million alone on plastic cleanup. The United Nations Environmental Program has estimates in the billions for the global cost to cleanup plastics with \$14 billion for marine plastic alone.

A recent study published in the renowned journal of *Science* describes the mounting issues of plastics on our fragile and threatened reefs. The study describes corals as being 90% more likely to be diseased when plastic sits on the reef. The billions of pieces of plastic already in the ocean are scarring reefs and then likely infecting them with the contamination that comes from their chemical properties that allow for microbial colonization of pathogens. In other words, plastics bio-accumulate toxins in the water and thus can transfer such toxins to other organisms like coral. This is yet another toxic consequence of plastics in our oceans, of which many more are described in the points below.

The effects to marine life in our oceans are mounting. 50 to 80 percent of dead sea turtles have ingested plastic. Plastic bags, which resemble jellyfish, are the most commonly found item in sea turtles' stomachs. Worldwide, 82 of 144 examined bird species contained plastic debris in their stomachs; and in some cases, 80 percent of the population had consumed plastic. Researchers found that 66 percent of Giant Petrel shorebirds regurgitated plastic when feeding their chicks. Commercial fish, such as Opah and Bigeye Tuna, consume plastic, which could significantly reduce global populations. A University of Hawaii study reports "[i]n the two [Opah] species found in Hawaiian waters, 58 percent of the small eye opah and 43 percent of the big-eye opah had ingested some kind of debris."

On a recent field trip visiting with the Marine Mammal Research Program, Surfrider Oahu members were guided through the facilities where beached and dead Pilot Whales had been examined. The stomach contents of the three animals found on O'ahu, Lana'i, and Kaua'i revealed between 15-30 lbs of plastic in the gut. Plastic does not breakdown like organic material and as marine animals continue to ingest the plastics their stomachs eventually fill to a state in which they can no longer consume enough food to address proper nutritional maintenance. This is similar to the problem widely shared with Laysan Albatross in Papahānaumokuākea.

Ultimately, we have to reduce the problem at its source and work towards a circular economy. Single-use plastics are an unneeded convenience that our society must learn to move away from. The alternatives exist and we must exercise some sort of ethic over our consumer behavior. Our kuleana is to protect our public trust resources like our shorelines for all generations into the future and currently we are not fulfilling that leadership role. I strongly urges the passing of SB522, eliminating one of the most common single-use plastics, straws, from our waste streams and environment.

Mahalo for your time and consideration,

Joy Bitonio  
Resident of Kaneohe, HI  
Proud Member and Volunteer with Surfrider Foundation Oahu

**SB-367**

Submitted on: 1/29/2019 2:22:57 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Devin Wolery        | Individual          | Oppose                    | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:28:41 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>               | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|-----------------------------------|---------------------------|---------------------------|
| Lei Shimabukuro     | Testifying for Kaiser High School | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:30:11 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                            | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Conrad Morgan       | Testifying for Kaiser High School Wipeout Crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:26 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| cassidy             | Individual          | Support                   | No                        |

Comments:



**SB-367**

Submitted on: 1/30/2019 12:32:37 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b>   | <b>Organization</b>         | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|-----------------------|-----------------------------|---------------------------|---------------------------|
| emily ramirez miranda | Testifying for wipeout crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:39 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jourdin W           | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:40 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                            | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Alden               | Testifying for Kaiser High School Wipeout Crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:45 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Nanea Kay           | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:32:46 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jayna Westbrooks    | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:33:05 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>         | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|-----------------------------|---------------------------|---------------------------|
| Isa                 | Testifying for Wipeout Crew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:33:27 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jordan May          | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:33:43 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                            | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Kamryn Conway       | Testifying for Wipeout Crew Kaiser High School | Support                   | No                        |

Comments:



**SB-367**

Submitted on: 1/30/2019 12:36:46 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Will Sato           | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:37:17 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>        | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|----------------------------|---------------------------|---------------------------|
| Thomas Osa          | Testifying for Wipeoutcrew | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:38:48 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Ashtyn Cummings     | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/30/2019 12:43:12 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sarah Haberman      | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 12:03:14 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Lauren DelaCalzada  | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 3:58:31 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Dyson Chee          | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 4:39:08 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| David Jones, MD     | Individual          | Support                   | No                        |

Comments:

As a local physician and surfer, I support SB11. Polystyrene is not safe for our environment, for marine animal health or for human health. There are other materials that are more environmentally friendly than polystyrene and plastic.

Please pass this bill.

Respectfully, David R Jones, MD

**SB-367**

Submitted on: 1/31/2019 4:44:36 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Kathleen Elliott    | Individual          | Support                   | No                        |

Comments:

As a local health care provider and ocean swimmer, I support SB367. Polystyrene is not safe for our environment, for marine animal health or for human health. There are other materials that are more environmentally friendly than polystyrene and plastic. I'm willing to pay more for them if necessary, or bring my own containers and utensils.

Please pass this bill.

Aloha, Kathleen Elliott, RN, PA-C

Honolulu



**SB-367**

Submitted on: 1/31/2019 7:29:07 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Mio Chee            | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 7:30:18 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| David Chee          | Individual          | Support                   | No                        |

Comments:

I support SB367.

**SB-367**

Submitted on: 1/31/2019 7:31:30 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Micah Chee          | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 1/31/2019 8:37:13 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>          | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|------------------------------|---------------------------|---------------------------|
| Phil Schlieder      | Testifying for Delphi Cinema | Support                   | No                        |

Comments:

Thank you for your time in hearing my testimony.

I am writing to express my support in removing (banning) plastic items on all levels from our day to day lives. Even the most well intentioned people still will end up using some of these items if they are presented to them, myself included. Thats why I believe that these need to be banned.

I am an avid ocean enthusiast. Whether its scuba diving, surfing, snorkeling, free diving, swimming, the ocean environment is a place I find much beauty and peace. It is imparitive that we act now to move this sort of legislation forward. It is up to our representitives to hear the peoples wishes and act accordingly.

Mahalo,

-Phil Schlieder

**SB-367**

Submitted on: 1/31/2019 9:35:01 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Cate Waidyatileka   | Individual          | Support                   | No                        |

Comments:

Great!

**SB-367**

Submitted on: 1/31/2019 10:21:34 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Debbie Millikan     | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/1/2019 9:18:10 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Shannon Rudolph     | Individual          | Support                   | Yes                       |

Comments:

Support

**SB-367**

Submitted on: 2/2/2019 8:26:54 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Fawn Liebengood     | Individual          | Support                   | No                        |

Comments:



**SB-367**

Submitted on: 2/4/2019 12:03:37 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Amanda N. Kelly     | Individual          | Support                   | No                        |

Comments:

Aloha Chair, Vice Chair, and Members of the Committee,

I am writing in support of these efforts, which will lead to more mindful management and prevention of single-use items across our islands. While individual behavior change can lead to positive outcomes, it alone is not enough. I support allowing people to make decisions for themselves, while encouraging sustainable choices. However, I am also intimately aware of the research and current and serious threat single-use items place on our survival and the survival of our planet. Therefore, I stand in SUPPORT of SB367, which seeks to prohibit the sale, use, or distribution of plastic straws, plastic bags, polystyrene foam containers, and expanded polystyrene food service products here in our state.

In addition to my support, I would also like to ask the committee to consider adding an exemption for individuals with special needs, such as was done with similar legislation in Seattle. "Disposable flexible plastic drinking straws when needed by customers due to medical or physical conditions and for whom flexible compostable paper straws are unsuitable. Otherwise, straws must be compostable or designed to be reusable."

I appreciate the opportunity to submit written testimony on this measure.

Mahalo,

Amanda N. Kelly, PhD, BCBA-D, LBA

**SB-367**

Submitted on: 2/4/2019 12:25:04 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Leah Paulino        | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/4/2019 12:29:29 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Nanea Lo            | Individual          | Support                   | No                        |

Comments:

Hello,

My name is Nanea Lo and I'm a resident of Kaimukā, O'ahu. I am writing in STRONG SUPPORT of this bill. I believe that this bill will help make Hawai'i a better, sustainable, and more responsible one in order to help protect our natural resources from pollution.

Thank you,

Nanea Lo

**SB-367**

Submitted on: 2/4/2019 1:49:16 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Marissa Miller      | Individual          | Support                   | No                        |

## Comments:

As a representative of the youth in Hawaii, I am writing in support of SB 522 as a step towards creating a zero waste community here in the islands. This is an important measure for the keiki of Hawaii because we must take better care of our lands and resources with the intent of preserving them for the future of our generation and for future generations after us. Zero waste measures are necessary in order to prevent widespread pollution of our environment and waste of vital limited resources.

Furthermore, plastics are one of the most commonly waste and polluting materials, and they are extremely detrimental to our health and the health of our surrounding environment and the organisms with which we share this earth. Plastics do not break down organically; instead they break up into tiny microplastics that are nearly impossible to remove from the environment and which enter our food chain, carrying persistent organic pollutants and chemicals in high concentrations—essentially poisoning the animals and people that end up ingesting them. Furthermore, there are numerous alternatives to explore that can replace plastics with a much lower level of waste and toxicity. We must transition towards a zero waste culture, economy, and society if we are to sustain human life as well as the life of other organisms on these islands and on this planet. As an island chain in the middle of the Pacific Ocean, we see how important it is to conserve resources and protect the environment in which we live. We must stop trashing this place and move away from disposable lifestyles to make way for a healthier more sustainable future. Thank you for your consideration and I hope that you will pass this bill on behalf of the keiki and future generations who will inherit these lands, and also in respect of the kupuna who came before us and those who inhabited these lands long before we did.

**SB-367**

Submitted on: 2/4/2019 2:46:02 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Coleman Langstaff   | Individual          | Support                   | No                        |

Comments:

I am writing this in support of SB367. In previous testimonies I spoke of a new Hawai'i, where late lunches aren't stereotyped into harmful styrofoam polystyrene containers. I believe that this Hawai'i is achievable, and we are making progress in the right direction. Plastics are harmful for the environment, and while we are one of the smaller states in USA, we can startt the change. Along with SB522 and SB11, Hawai'i can be the start of a revolution inside America, and continue to push humanity in the right direction of a more sustainable planet.

**SB-367**

Submitted on: 2/4/2019 5:52:04 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Alex Filardo        | Individual          | Support                   | No                        |

Comments:

There are numerous more sustainable options than plastic/styrofoam containers and cutlery. If we do not take care of our islands there will be nothing for our keiki. The plastic is suffocating our marine life and pretty soon instead of seeing mediocre coral reefs, all we will see is bottle caps, plastic cutlery, and styrofoam to go containers.

**SB-367**

Submitted on: 2/4/2019 6:10:52 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jordan Macklin      | Individual          | Support                   | No                        |

Comments:

Why let single use plastic into our home? Such a wasteful product she not exist here, or anywhere. Waste will just build and destroy us and all that we love.

**SB-367**

Submitted on: 2/4/2019 6:45:42 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Mackenzie Preble    | Individual          | Support                   | No                        |

## Comments:

Single use plastics are a wasteful and dangerous practice. They are used once and then discarded, more often than not as litter. As litter, polystyrene foam can be ingested by marine and avian animals that mistake the plastic as their food source. Not only does this diminish their appetite, thereby making them eat less and receive insufficient nutrients, the ingestion of plastic leaches chemicals that are known to be carcinogenic and immunodepressants. As such, they will affect the health of those animals and the health of generations to come. Our marine environment is in a constant battle with the impact of humans. Please consider taking this factor out of the battle and side with our natural environment by banning the use single use plastic.



**SB-367**

Submitted on: 2/4/2019 7:00:45 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| carissa cabrera     | Individual          | Support                   | No                        |

Comments:

Foamed polystyrene is a known carcinogen, endocrine disruptor, and neurotoxin. There is absolutely no reason to distribute this to the public without a nontoxic option. Plastic bags are unnecessary, plastic straws are overproduced, and polystyrene contaminates our waterways and oceans. As a marine biologist, I'm begging you to please put the planet's health above profit, for ONCE. We are running out of time!

**SB-367**

Submitted on: 2/4/2019 7:02:42 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Jan Oda             | Individual          | Oppose                    | No                        |

Comments:

**SB-367**

Submitted on: 2/4/2019 7:24:07 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Richard Furst       | Individual          | Support                   | No                        |

Comments:

I'm writing to express my support for SB367 to ban plastic straws, plastic bags, and "styrofoam" containers from restaurants in Hawaii. As a surfer, hiker, hunter, and participant in numerous beach and stream cleanup efforts, I can personally attest to the amount of plastic and styrofoam debris that is littering our land and seas. We must take conclusive action now to keep more plastic and styrofoam from ending up in our natural environment. Mahalo for taking positive action to help keep our environment clean!

**SB-367**

Submitted on: 2/4/2019 8:34:07 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Laura Acasio        | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 8:13:08 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Katherine Lau       | Individual          | Support                   | No                        |

## Comments:

Senators, I whole-heartedly support SB 367. As a parent, it gives me great pride to see Hawaii moving forward with phasing out single use plastics and polystyrene containers. It's one step towards preserving our beautiful home for the next generation. Mahalo, Katherine Lau of Hilo

**SB-367**

Submitted on: 2/5/2019 8:58:35 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Andra Janieks       | Individual          | Support                   | No                        |

## Comments:

It is common knowledge that our waste, including plastic and polystyrene, is negatively affecting the ocean and our earth. We need to work toward making a change to improve the future of our world. This change needs to happen TODAY. SB367 is a necessary step in the right direction.

**SB-367**

Submitted on: 2/5/2019 10:11:06 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| Submitted By        | Organization | Testifier Position | Present at Hearing |
|---------------------|--------------|--------------------|--------------------|
| Delphine Homerowski | Individual   | Support            | No                 |

Comments:

Honorable Chairs and Members of the Committees,

My name is Delphine Homerowski, I am a resident of Hawaii and a sustainability professional. I am part of the younger generation who works to create a sustainable future and I am writing to **support Bill SB367**.

Styrofoam, plastic straws and plastic bags have well known negative effects that cannot be ignored any longer. These plastic products are harmful throughout their life cycle, as they contribute to oil consumption, climate change and ozone depletion during the production phase, and then poison our water resources, wildlife, oceans and ultimately our very own health after being used.

I am urging you to provide your support in favor of SB367. As an island state that has set major sustainability goals, and that vouched for 100% renewable energy and resiliency, Hawai'i cannot move forward while carrying this huge environmental burden.

Thank you,

Delphine Homerowski

**SB-367**

Submitted on: 2/5/2019 10:48:53 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Amber Weiss         | Individual          | Support                   | No                        |

Comments:

Single use plastic creates so much unnecessary waste, harm to our environment, and community. Single use plastics build a culture with a lack of accountability. Many people are aware of the ways these plastics end up harming the environment but decide their personal ease of throw something in the trash outweighs their feeling of responsibility to care for the environment and reuse some of those items or not buy any single use plastics in the first place. Some people do not see the harm of single use plastics because of how prevalent they have been throughout their lives. For example, I grew up always washing and reusing ziplock bags but most of my friends never even thought about doing that. Throwing their sandwich bags away after lunch was just a normal part of their day. I see this bill making a great step towards a more sustainable future and a community with a greater sense of kuleana.



**SB-367**

Submitted on: 2/5/2019 11:52:44 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Crystal Dombrow     | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 11:48:54 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

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

## Comments:

Please support SB 367. As a longtime resident of Waikiki I have seen an intolerable increase in polystyrene and plastic pollution over the years littering our beaches and walkways. I've also participated in beach cleanups and seen firsthand the devastating effects the gradual breaking down of these unnatural items reeks on our waterways, sea animals and land. It's heartbreaking. It gives me tremendous hope, however, when I see a bill such as this introduced at session. It helps me believe Hawaii can be a leader and set an example worldwide by prohibiting food service businesses and stores from the sale, use or distribution of polystyrene foam products, plastic straws and bags. Please lend your support and help make this happen. Plastics are made from fossil fuels and discarded after one use, in the process contributing significantly to greenhouse gas emissions. As an island nation, Hawaii is at the front lines of the resulting change in our climate and already seeing disturbing events that have impacted communities such as the excessive flooding last year on Kauai and the increase in activity during this past hurricane season. The State of Hawaii has set out to be a leader in climate change, supporting this bill is helping our state government achieve those goals.

**SB-367**

Submitted on: 2/5/2019 1:13:40 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| Submitted By      | Organization | Testifier Position | Present at Hearing |
|-------------------|--------------|--------------------|--------------------|
| Jennifer Milholen | Individual   | Support            | No                 |

Comments:

Aloha, committee members and mahalo for taking the time to consider SB367. My name is Jennifer Milholen, and I work for KĀ• kua Hawai'i Foundation as the Waste Reduction Coordinator. Our programs work with schools and communities across the state who envision a plastic-pollution free Hawai'i. We achieve this through presentations, beach and watershed cleanups, community and business partnerships, and modeling waste free events, all engaging 10s of thousands of Hawa'i residents and visitors. The feedback from these programs is overwhelmingly unified: Get Single-Use Plastics Out! This bill address the "low hanging fruit" of senseless plastic pollution that can be quickly and effectively transitioned out with massive impact. Other municipalities, like Berkeley, CA are already moving on measures like these with massive public support. The path is defined, we only need the courage of lawmakers to push us forward.

The legislature is tasked with considering thousands of bills every session, each taking up matters that impact the health, safety and happiness of Hawai'i residents and visitors. Every single one matters, but I would argue that these bills that address plastic pollution and embracing a zero waste framework for production, consumption, and disposal are THE most important. What is often lost in plastics conversations, is that PLASTIC PRODUCTION = CLIMATE CHANGE.

"99% OF PLASTIC COMES FROM FOSSIL FUELS.

When we think about climate change, we typically focus on factories, coal and cars, but rarely on this fact. As plastic activists, we usually talk about downstream environmental impacts or health threats, but only marginally on the connection between the plastics economy and carbon pollution.

**PLASTIC IS CONNECTED TO CLIMATE CHANGE AND IT POLLUTES AT EVERY STAGE: FROM MATERIALS EXTRACTION TO PRODUCT PRODUCTION TO WASTE DISPOSAL."**

Climate change is the most dangerous issue of our time, and urgent, broad sweeping action is essential. IF we want to truly act as the global environmental leaders that we claim to be, we HAVE to acknowledge that the flood of plastics in our lives are

directly contributing to climate change and take local, but impactful, changes to transition away from these single-use convenience plastics.

Specifically speaking to the EPS foam components of this bill, please consider the following:

The environmental and health detriments of foam for food vending are established and well-documented. We have known for years that, by design, EPS foam is ultra lightweight and escapes collection and management systems. Once in the environment, the foam fractures into billions of pieces of microplastics, which are consumed directly into the food chain - into us. Countless thousands of marine animals and birds starve to death because of ingesting plastics like foam. This is in addition to the leaching of known carcinogens from foam when used with hot and acidic foods.

1) Public Demand: The Honolulu Auditor office's 2018 report on prohibiting foam food containers determined that foam "bans" have overwhelming public support.

From the Report: "Restaurants want to do what is best for the environment. 95% of respondents said that they believe waste and litter is an environmental problem for our streams and ocean, and 98% of respondents stated that they would be willing to do more if they knew it would be green and protect the ocean. A majority (56%) of respondents stated that they would support (i.e., rating of 6-10 on a 10-point scale) a bill that banned the use of single-use polystyrene food containers.

In the 2018 Legislative Session, a foam ban bill (SB2498) was the most supported bill of the session, and recent memory, receiving well over 600 testimonies in support for a single hearing. Students were excused from classes, people took time off work, and business owners left their restaurants all to come show support for measures like these. It was impossible to even get into the hearing room it was so full, so many of us congregated outside waiting for our chance to show support.

2) Economic Imperative: In 2017, the HI DOT Highways division produced a report on roadway flooding that indicated foam containers and plastic bags were the TOP items found to be clogging up storm drains, leading to flooding. The report also indicated that the prohibition of these items would save the division and the counties multiple millions of dollars in cleanup costs.

3) Established Precedent and Modeling: Maui and Hawai'i Island counties have already vetted these arguments and determined the value of prohibiting foam in food service. Maui's foam prohibition has already begun, and their environmental office will testify to the fact that it is well-supported and the transition has been smooth.

Mahalo for your time and consideration. Please support SB367.

Jennifer Milholen



**SB-367**

Submitted on: 2/5/2019 3:24:59 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Megan Adolph        | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 3:38:35 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Kim Jorgensen       | Individual          | Support                   | No                        |

Comments:

Dear Senators,

I strongly support Bill 367. There is too much waste in Hawai'i; and much of it becomes litter and pollution.

The dangers of styrofoam, polystyrene, and plastics to humans, wildlife, oceans, and the environment are substantially documented. Photographs of partially decomposed dead birds with pieces of these products laying where their alimentary tracts used to be is heartbreaking.

You cannot go to any park or beach, drive along any road, or hike along any stream or the Ala Wai canal, without seeing these products littered, floating, or blowing away.

This bill will not only help make Hawai'i cleaner and safer once it goes into effect, but it will make an enormous impact for all future generations. Please don't make our future generations ask why it took us so long.

Sincerely,

Kim Jorgensen

Waikiki

**SB-367**

Submitted on: 2/5/2019 3:53:26 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Denise Boisvert     | Individual          | Support                   | No                        |

Comments:

Dear Senators,

I wholeheartedly support SB367 and cannot thank all those who introduced it enough.

Please pass this bill for the sake of the environment and all marine and wildlife on our shores and in our waters.

Sincerely,

Denise Boisvert

Waikiki



**SB-367**

Submitted on: 2/5/2019 4:02:21 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| june chee           | Individual          | Support                   | No                        |

Comments:

**Testimony**

**February 6, 2019 (1:15 p.m.)**

**Conference Room 224**

**By: Tanya Torres**

SB 367 - RELATING TO ENVIRONMENTAL PROTECTION.

Senators and members of the committees:

I strongly support SB 367 because it will phase out a variety of unnecessary and harmful single use plastics from our state. Polystyrene foam, plastic straws, utensils, bags, and water bottles are all examples of single use plastics that more than often are not disposed of properly and make their way to our beautiful beaches. This is a problem because it is unpleasant and unsanitary for local people as well as our tourist economy that depends so much on our pristine shores. These plastics are also harmful to the fragile ecosystems found nowhere else in the world besides Hawaii. Ingestion, suffocation, and entanglement of our sea life is far too common. It is time to take a stand and eliminate these plastics from our communities. The negative impacts associated with these items far outweigh the positives. Especially since readily available alternatives exist. I hope to see Hawaii move in the right direction to protect its land, resources, and people. Thank you for the opportunity to testify in support of this important measure.

**SB-367**

Submitted on: 2/5/2019 7:32:30 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Barbara Wiedner     | Individual          | Support                   | No                        |

Comments:

Aloha Elected Officials,

Please support this bill!

- Plastics are made from fossil fuels. The proliferation of plastic production and the current projected increase will mean that plastic production will account for 20% of the global fossil fuel budget by 2050 (United Nations 2018)

-“The economic damage caused by plastic waste is vast. Plastic litter in the Asia-Pacific region alone costs its tourism, fishing and shipping industries \$1.3 billion per year. In Europe, cleaning plastic waste from coasts and beaches costs about €630 million per year. Studies suggest that the total economic damage to the world’s marine ecosystem caused by plastic amounts to at least \$13 billion every year. The economic, health and environmental reasons to act are clear.” (UNEP 2018)

- A recent study published in the renowned journal of Science describes the mounting issues of plastics on our fragile and threatened reefs. The study describes corals as being 90% more likely to be diseased when plastic sits on the reef. The billions of pieces of plastic already in the ocean are scarring reefs and then likely infecting them with the contamination that comes from their chemical properties that allow for microbial colonization of pathogens.

-Incineration is a poor choice altogether for dealing with plastic waste. Just based on simple emission calculations on kilowatt/hour, HPOWER produces almost triple the GHG emission of our oil burning plant and just slightly less than coal. This places incineration as one of the dirtiest forms of energy production.

Thank you

Barbara Wiedner

1774 Puu Kaa St, Kapaa HI

808-635-2593



**SB-367**

Submitted on: 2/5/2019 8:32:08 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Mary Lacques        | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 9:33:26 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Susan Oppie         | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 9:40:51 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b>                          | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|--|---------------------------|---------------------------|
| Kahi Pacarro        | Testifying for Sustainable Coastlines Hawaii | Support                   | No                        |

Comments:

Using materials for a few mintues that once thrown away that persist in our environment for thousands of years is ridiculous. Since we as a general population of Hawaii are not responsible enough to stop using these products under our own volition it's necessary that we rely on our government to regulate these products.

**SB-367**

Submitted on: 2/5/2019 9:42:36 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sara Van Gent       | Individual          | Support                   | No                        |

Comments:

I support this measure. I am against single use plastics.



**SB-367**

Submitted on: 2/5/2019 9:50:25 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Hannah              | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 9:54:36 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Monrudee Osa        | Individual          | Support                   | No                        |

Comments:

I SUPPORT THIS BILL WITH WIPEOUT CREW FROM KAISER HIGH SCHOOL.POLYSTYRENE FOAM IS BAD FOR ENVIRONMENT AND BAD FOR OUR HEALTH. CHEMICAL CAN LEECH INTO FOOD AND DRINK AND CAN NOT RECYCLE. IT'S TAKE A MILLION YEARS TO DECOMPOSE. USE MATERIAL FROM PALM LEAF. IT HAS BOWL, PLATE, UTENSIL, ETC.PLASTIC STRAW TAKE 200 YEARS TO DECOMPOSE. NO NEED STRAW TO DRINK. PLASTIC BAG GET INTO SOIL AND SLOWLY RELEASE TOXIC CHEMICALS THEN EVENTUALLY BREAK DOWN INTO THE SOIL. IF ANIMALS EAT IT THEY CAN DIE. IF WE CAN NOT GET IT DONE RIGHT NEXT TIME YOU WILL GO TO THE PLASTIC BEACH WITH DEAD FISHES, TURTLES, AND OTHER OCEAN CREATURES FLOATING. SORRY NO MORE TOURISM AND WE ARE DONE.

**SB-367**

Submitted on: 2/5/2019 9:58:52 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Zamora Sanchez      | Individual          | Support                   | No                        |

## Comments:

My name is Zamora and I am in love with the islands, doing so, I care for the beautiful crystal clear waters and our beloved marine friends. The islands and oceans provide a lot for us to live well and enjoy time on the beach! The ocean helps metabolize a TON of pollution in our air that we create, so we must protect it as we should do for the rest of the planet. Plastic and other garbage circulates in the currents of many oceans, traveling far and breaking into smaller and smaller particles. These particles are taken into the food chain, killing our ocean friends, and are not biodegradable for thousands and thousands of years if not more. We already pollute the ocean and earth enough not including single use plastic and materials like styrofoam which is also used a lot in the food industry. There are plenty of biodegradable or reusable items that we can replace these harmful products with. Banning these items will not hurt anyone. Think of the small children growing up observing how a lot of people don't treat the earth with respect and grow up doing the same and not understanding how important it is to keep the earth healthy and clean, let us be a good example. This will be a small step toward big things, and will benefit everyone and everything as a whole. Understand how many things trash in our environment affects, and lets take action to help make the world a better place. Mahalo

**SB-367**

Submitted on: 2/5/2019 10:02:32 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Christina Comfort   | Individual          | Support                   | No                        |

Comments:

I strongly support SB367. Single use plastics and polystyrene food containers are shown to be damaging to the environment (via photodegradation into small pieces that are eaten by fish and seabirds, causing integration of an artificial and abundant pollutant into the food web or death when the animals can no longer absorb nutrients), and polystyrene food containers are additionally shown to be harmful to health due to the toxic chemicals released into food items when hot. We have more sustainable alternatives available that are being successfully used by many businesses around the island. It's time to move past single use plastic - Hawaii has the opportunity to be a leader on this important global issue.

Mahalo,

Christina Comfort, Pupukeya, HI

**SB-367**

Submitted on: 2/5/2019 10:07:38 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Matthew Tactacan    | Individual          | Support                   | No                        |

Comments:

10 years ago, it was a common occurrence to see other local families going around picking up trash before they leave, today I feel more and more local families are giving up with tourist coming here littering or leaving their food packaging on the beaches, as if someone has a job to pick it up. Tourist needs to know the difference between the waikiki hotel beach area ( Hotel Maintenance cleaning ) versus the natural beaches around the island ( Us locals keeping it clean ).

**SB-367**

Submitted on: 2/5/2019 11:04:34 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Nadine Lane         | Individual          | Support                   | No                        |

Comments:

**SB-367**

Submitted on: 2/5/2019 11:23:55 PM

Testimony for AEN on 2/6/2019 1:15:00 PM

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

Comments:

**SB 367**

**In Strong Support**

I am writing in strong support of SB 367 which relates to the phasing out of polystyrene foam food containers in the State of Hawai'i. As a coral reef scientist and avid beach user in Hawaii, I have a deep understanding of the negative impacts of polystyrene foam on our environment. When visiting the beach, it is clear that 100% of the foam containers do not make it properly in to the waste stream. These containers break into small pieces that are then potently consumed by wildlife and litter the beach with waste. I have been an advocate of compostable food containers for 10 years and have spoken with many business owners in the food industry on Oahu. It is clear to me that customers don't want to be served on foam and business owners don't want to serve food on it. I am sure that most people would not mine a 25 cent surcharge built into the price of thier meal. In addition, serving hot food just of the fryer presents a health concern when the hot oil melts the foam into the food. This is just plain gross and unhealthy. I urge you to support this bill hand help the people of Hawaii move to a container option that is healthier for Hawaiiis people and environment. Mahalo nui –

Daniel Amato, PhD.

**SB-367**

Submitted on: 2/6/2019 12:38:28 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Lindsay Terkelsen   | Individual          | Support                   | No                        |

Comments:

Polystyrene foam, plastic straws, and plastic bags aren't necessary for food service establishments and is instead helping destroy our environment and us.



**SB-367**

Submitted on: 2/6/2019 7:58:12 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Joshua Thomas       | Individual          | Support                   | No                        |

Comments:

I strongly support this bill.

**SB-367**

Submitted on: 2/6/2019 8:18:08 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Karen Abe           | Individual          | Support                   | No                        |

Comments:

To whom it may concern,

My name is Karen Abe and I am writing as a representative of youth voices as a resident of the Kahala Area. I am writing in full support of SB 367, Hawaii's plastic ban to commit to following UN's Sustainable Development Goals and being responsible for Hawaii's consumer culture. Thank you for considering this important bill.

As a resident of the Kahala area, Waialae Beach Park has been the closest beach since my childhood, but recently have been devastated by the amount of trash either left or that have flown out of trash cans at the park. Most of the trash tends to be light "plastics" that come from the consumer society of take out foods such as single use plastic forks, spoons and take out containers. I personally take action against the use of plastic by bringing my own containers and straws to my favorite cafes and food stops. However as a teenager, I also understand the large consumer population islands that includes locals as well as international tourists, who uses plastic as it often the only options available to them in stores. Therefore I strongly believe that it is up to the state to control the flow of these polystyrene into the consumers hands.

The consumer society in Hawaii is different from any other it also includes the heavy flow of tourists. I believe that the only way to control the plastic waste production here in Hawaii is through policy and limiting the initial output of these plastics into the consumers hands. As a study abroad student in London (currently), where single-use plastics such are banned, I have felt no difference in convenience and have felt better as a consumer to not use throw-away products so often. My waste footprint here in London is way lower in London just because of the more secure control of plastic flow from businesses to consumers.

The plastic waste produced in Hawaii has detrimental effects on marine life as well as atmospheric CO2 due to the waste flow after consumer use. Plastics end up out of trash cans due to tourist and resident carelessness, overflow or wind movement and the waste ends up in the oceans. These plastics never or takes centuries for it to degrade and usually ends up as micro plastics that marine life mistaken for food as. The plastics used also caused damage in the atmosphere when burned at H power and if not at H power ends up in the lands ruining the islands beauty— which will eventually impact our tourism industry.

By cutting our waste to zero, we will be able to conserve the consumer society (which is hard to change) and have little to no negative impact on the environment.

Hawaii, as a unique state surrounded by the marine life all around, we are one of the few state that has a bold connection and understanding of the environment in the United States. I believe it is our duty to lead our nation by example and implementing this plan as a way to illustrate the “Malama Aina” culture to tourist and other states. The passing of this bill will also connect to the preservation of this unique Hawaiian culture.

Hawaii, it is time to illustrate our native values and beliefs instead of finding business incentives our “priority.” Do it for Hawaii’s Keiki and the following generation.

Thank you for your consideration of my testimony and of this important issue.

Karen Abe

**SB-367**

Submitted on: 2/6/2019 8:54:10 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Sara Matsumura      | Individual          | Support                   | No                        |

Comments:



## Taking control of persistent solid waste pollution

James M. Coe<sup>a,\*</sup>, George “Bud” Antonelis<sup>b</sup>, Kirsten Moy<sup>c</sup>

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<sup>b</sup> Nā Kama Kai, P. O. Box 1803, Waianae, HI 96792, United States of America

<sup>c</sup> Hawai'i Coral Reef Initiative, Social Science Research Institute, University of Hawai'i at Mānoa, 2424 Maile Way, Honolulu, HI 96822, United States of America

### ARTICLE INFO

#### Keywords:

Persistent solid waste  
Marine debris  
Marine litter  
Plastic pollution  
Waste management

### ABSTRACT

The complexity and scale of the sources, types and environmental impacts of persistent solid waste pollution (PSWP) continue to overwhelm the capabilities of government and private efforts to control it. Global cumulative production of virgin plastics is expected to quadruple by 2050 with a concomitant doubling of plastic waste. All nations must take significant steps to realize eventual mitigation of PSWP. These will include adopting a long-term PSWP elimination policy, creating an overarching authority to lead and coordinate a comprehensive national solid waste management program, and creating an International Convention for the Prevention of PSWP to enable global solutions for this global pollution. Initiating these changes will necessitate major, coordinated efforts on the part of environmental organizations, their supporting foundations and concerned citizens.

### 1. Introduction

While it is difficult to characterize the rise of the petrochemical revolution in a few sentences, the salient features of this industrial-economic phenomenon certainly include cycles of innovation, acceptance and widespread realization of the associated benefits followed by eventual recognition of the environmental consequences with efforts to mitigate them. Examples of these impacts include smog, ozone depletion, climate change, acid rain, ocean acidification, toxic substance pollution, and persistent solid waste pollution (PSWP), to name a few (McLusky, 1982; Mehlman, 2006; Schreck, 1998; Yin et al., 2017). The overall effectiveness of responses to these pollutants depends on the timing of the identification of the types, sources and the assessments of their impacts. The more complex and varied the polluting materials, their sources and types of environmental threats and the longer the period over which they are identified, the more piecemeal and less efficient the collective mitigation response is likely to be.

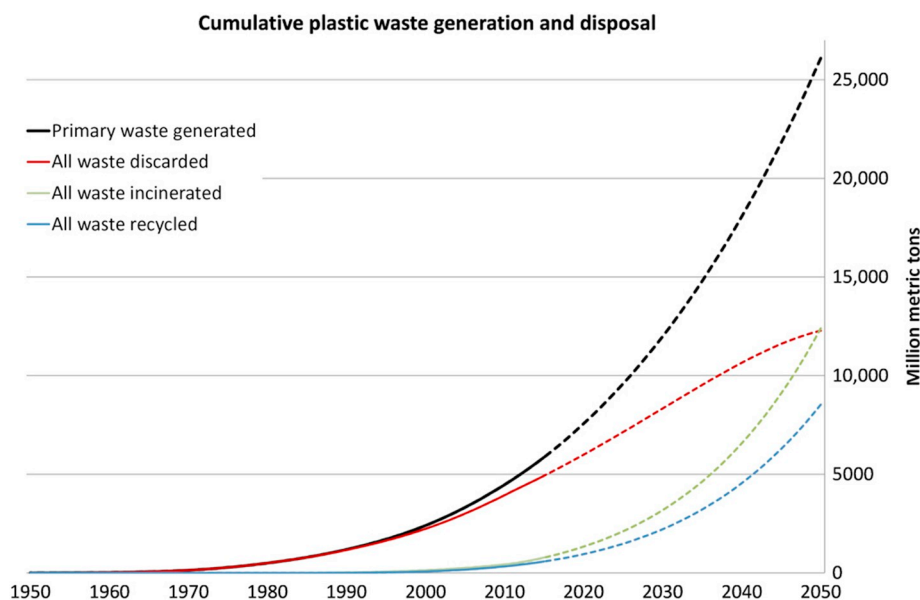
This pattern may be obvious, but it seems to be at the heart of the on-going marine debris issue, 90% of which is plastics (Kaza et al., 2018). The proportion of persistent solid waste in the waste stream varies globally based on economy, consumption patterns and product availability. Further, the amount of PSWP generated from any waste stream depends significantly on the effectiveness of local waste management processes (Jambeck et al., 2015; Zhang et al., 2010). Plastics specifically constitute over 12% of all municipal solid waste (Kaza et al., 2018) and ‘leakage’ occurs at all phases of the production-

disposal life cycle due to inadequate management (Kershaw, 2016). PSWP includes a staggering number of types and formulations of plastic products with varying characteristics as pollutants (Derraik, 2002; Jepson et al., 2016; Murphy et al., 2015; Vasseur and Cossu-Leguille, 2006). Add to this the range of sizes and shapes of individual pollutant particles from meters to nanometers (they are constantly fragmenting at varying rates; Cole et al., 2011), and one begins to appreciate the complexity inherent in measuring the problem and conceiving strategies for its mitigation.

In general, global solid waste is composed of persistent (plastics, glass, metal, other) and naturally degradable components (food and green, wood, paper and cardboard, rubber/leather, other). While any of these components may be classified as pollutants depending on circumstances, the persistent materials require specific collection and processing to prevent their becoming long-term pollutants. Among the persistent wastes, glass and metals are relatively inert and have, or can have, high rates of recycling because of their value as feedstock, their general purity, and ease of identification and separation in the waste stream. Plastics and other materials make up 26% of global solid waste, an estimated ratio of 12% plastics and 14% other (Kaza et al., 2018). The proportion of that “other” category that is a persistent material like plastic is, as of now, unknown and a topic for future study. While virtually all the following treatise is based on plastics data, we have chosen the term persistent solid waste pollution (PSWP) as our subject in recognition of this potentially significant “other” category of persistent solid wastes. This choice emphasizes the necessary recognition

\* Corresponding author.

E-mail address: [jim.coe@comcast.net](mailto:jim.coe@comcast.net) (J.M. Coe).



**Fig. 1.** Cumulative plastic waste generation and disposal (in million metric tons). Solid lines show historical data from 1950 to 2015; dashed lines show projections of historical trends to 2050. From Geyer et al. (2017). Production, use, and fate of all plastics ever made. *Science Advances* 3, e1700782. <https://doi.org/10.1126/sciadv.1700782>. Reprinted with permission from AAAS.

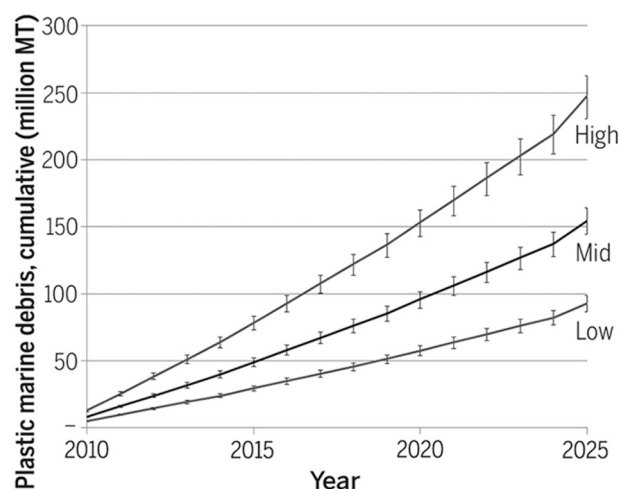
that mitigating the deleterious impacts of marine debris (marine litter) is, in fact, a global solid waste management challenge.

**2. The status quo**

PSWP is now recognized to be ubiquitous in all terrestrial and aquatic ecosystems and in the atmosphere (Derraik, 2002; Dris et al., 2016). A recent assessment of global plastics production and waste management practices concludes that, as of 2015, the world has produced a total of 8300 million metric tons (Mt) of virgin plastics, out of which 6300 Mt. is plastic waste (13.86 trillion lbs.; Geyer et al., 2017). The study predicts that if present production growth rates continue, cumulative production of virgin plastics is expected to rise to 34,000 Mt. by 2050, 12,000 Mt. of which will end up in landfills or extant in the environment (Fig. 1; 2017).

The fate of persistent solid waste depends on the existence and effectiveness of waste management systems on the local level. Jambeck et al. (2015) estimated that in 2010 alone 275 Mt. of plastic waste was generated in 192 coastal countries (representing approximately 93% of the global population) of which 99.5 Mt. was generated within 50 km of the coast. Using information on the types of waste management systems in use in each of the coastal regions, the authors classified 31.9 Mt. as mismanaged, of which between 4.8 and 12.7 Mt. of plastic waste entered the ocean in that year. Presumably, the residual 19.2 to 27.1 Mt. of mismanaged plastic waste remained on land as potential future ocean pollution. Assuming no improvements in current waste management infrastructure, the cumulative amount of mismanaged plastic waste (available to reach the ocean from land) is estimated to grow by an order of magnitude by 2025 (Fig. 2) (Jambeck et al., 2015). While these estimates do not include maritime sources or input resulting from natural disasters (floods, tsunamis, etc.), Kefela et al., 2018 estimate tsunamis to contribute up to 2.4 Mt. and textile fibers add another 0.4 Mt. to the annual flow of PSWP into the oceans. There have been no recent estimates of total maritime sources of PSWP.

By another estimation, approximately 60% of all plastics ever produced were discarded and are accumulating in landfills or in the natural environment (Geyer et al., 2017). Sequestration of persistent waste in landfills is only a temporary measure for the prevention of pollution. Landfilling may delay the release into the environment for periods of weeks to millennia, depending on the product and the design of the landfill, but it is by no means an endpoint disposal option. Perhaps mankind will be mining these landfills for valuable resources in some distant future. Recycling may delay some future primary plastics



**Fig. 2.** Estimated mass of mismanaged plastic waste (millions of metric tons) input to the ocean by populations living within 50 km of a coast in 192 countries, plotted as a cumulative sum from 2010 to 2025. Estimates reflect assumed conversion rates of mismanaged plastic waste to marine debris (high, 40%; mid, 25%; low, 15%). Error bars were generated using mean and standard error from the predictive models for mismanaged waste fraction and percent plastic in the waste stream. From Jambeck et al. (2015). Plastic waste inputs from land into the ocean. *Science* 347, 768–771. <https://doi.org/10.1126/science.1260352>. Reprinted with permission from AAAS.

production but this effect is extremely difficult to verify (Geyer et al., 2015). Done properly, incineration or other thermal destruction methods including waste-to-energy programs are potential endpoint disposal strategies for most plastics. The potential large-scale use of thermal destruction, however, will require development and incorporation of significant emission control technology to avoid environmental and public health impacts. Open burning is a common method for reducing trash heaps, but it is a dangerous, potentially toxic and incomplete disposal method (U.S. Environmental Protection Agency, 2016). To date, biodegradable or other enhanced fragmentation formulations for single-use materials may reduce litter and potential rates of physical interactions with megafauna, for example, but are not endpoint solutions as they merely accelerate the dispersion of the polymer materials into the environment as micro- and nano-plastic

bits. Ultimately, the long-term sustainable solution to PSWP will result from global movement toward an economy in which persistent solid waste pollutants are designed out of the production and use cycle (Kershaw, 2016; ISWA, 2017).

One must contemplate the fate of plastics that are not or cannot be recovered from the environment. We know that PSWP is created and distributed world-wide. Some proportion of macro-, or mega-plastics are recovered through waste stream collection systems and by clean-up programs, most to be sequestered in landfills of varying quality. Once plastic waste materials are fragmented into particles less than a 5 mm in diameter, the likelihood of their being removed from the environment becomes vanishingly small (da Costa, 2018; Gallo et al., 2018). While rates of degradation and fragmentation vary based generally on polymer type, additives, and exposure, the process is inexorable (Andrady, 2011). Scientific attention to this micro-plastic phenomenon is accelerating and some mechanisms for biological impacts have been described (Rocha-Santos, 2018; Gallo et al., 2018). The standards and techniques for quantification of micro- and nano-plastics in the environment require further development (Ogonowski et al., 2018) before the extent and character of their potential ecosystem impacts can be realistically evaluated. However, the physics of this degradation suggest that the chemical additives employed in polymer formulations are eventually released into the environment, including colorants, plasticizers and other known toxic materials (Gallo et al., 2018; Murphy et al., 2015; Ng, 2017).

After nearly 40 years we know a great deal about PSWP but struggle to implement mitigating and preventive solutions. While a welter of projects and plans exist to tackle various sources or types of concentrations of PSWP, the obvious fact is that no large-scale progress has been or is being made against the rising tide of marine (and terrestrial) debris. It appears that some combination of vastly improved waste collection, sequestration and destruction technologies will be required to change the course of PSWP growth. Reduction in the demand for virgin plastic production through increasing recycling rates, reusing and creating reusable alternates for disposable materials, adopting minimal packaging strategies, eliminating incentives to discard, and many other innovations in chemical and materials engineering must be pursued (United Nations Environment Programme, 2016; Kershaw, 2016). None of this is new, it just hasn't come to fruition at a scale that will reduce the growing pollution of the entire planet. The concepts are simple and have been voiced for decades, however, under current efforts best estimates suggest cumulative plastic waste will double by 2050 (Geyer et al., 2017) and the amount available to become ocean pollution will grow by an order of magnitude by 2025 (Jambeck et al., 2015). The organizations, resources, leadership and commitment to tackle this problem, with all due respect to the millions of people concerned and involved, are inadequate.

Judging from the rising frequency of relevant keywords in the scientific literature (Google, 2018), the trend in topics presented at International Marine Debris Conferences in 2011 and 2018, and in the growing national participation in the United Nations Environment Programme (UNEP) Clean Seas Program (UNEP, 2017) among others, the time appears ripe for taking control of persistent solid waste pollution. A recent systematic review of the literature on the impacts of plastics in the ocean concluded that irreversible harm may be unavoidable should governments fail to begin mitigating plastic debris (Rochman et al., 2016). The way forward depends on the concerted actions of national governments with the concomitant leadership and support of civil society.

### 3. A national PSWP policy

Because the oceans are a global system, PSWP in the oceans is a global problem. The primary sources of PSWP in the oceans are land-based, and all power and most resources to enact, sustain and enforce solutions to national and international pollution problems are held by

national governments. Therefore, the first step toward marshalling forces for solving the PSWP problem begins with national governments. Despite widespread commitment in many international fora, such as UNEP, the G-7, UNSDG-14, etc., governments around the world have not yet implemented the steps necessary to reverse the growth of PSWP. The steps taken, while laudable and necessary, are typically non-binding and involve single product bans (bags, straws, utensils, microbeads, etc.) aimed primarily at litter control and recycling rates. Absent the full commitment by national governments to research, funding, implementation and enforcement, these steps will not materially change the plastic pollution trajectory. In this paper we propose three major actions for PSWP mitigation using the United States government example to illustrate the problems and types of changes that are necessary to meet the PSWP challenge. With some imagination, the steps described here are likely to be generally adaptable for most other governments.

Persistent solid waste is a major ocean, terrestrial and atmospheric pollutant (fibers) that is rapidly increasing without signs of slowing. The enormity of the PSWP problem will not be adequately addressed in the short-term no matter what actions governments choose to take. Massive amounts are already extant in the environment, inputs are global in scale and effective waste management system capacity is limited, particularly in low income countries, despite the fact that 187 out of 217 (86%) countries and economies reported they had laws or guidelines regarding solid waste management (Kaza et al., 2018). The escalation of this pollution to unimaginable levels and impacts is inevitable without the adoption of a long-term commitment to comprehensive efforts to control it. This begins with national governments adopting and communicating a permanent policy to eliminate PSWP. This does not presume there will be no persistent solid waste. It presumes that a drastic reduction in persistent solid waste pollution over time is in the best interests of all nations and the world. The IUCN listed an improved governance framework as critical to addressing marine plastic pollution (Kershaw, 2016). Adoption of such a national policy tells civil society, the legislature, the courts, agencies and industries and other nations that the most effective way to rise above the status quo must involve a significant level of government leadership and intervention. This in turn enables commitment, stimulates ideas, fosters innovation and elevates attention to potential solutions strategies, all of which lead toward more effective implementation.

Very recently, some nations recognized this need; they articulated broad policy pledges addressing systematic attention to plastic pollution. The UK, is applying the concept of a circular economy (Pearce and Turner, 1991) to plastic waste elimination (Neufeld et al., 2016). Indonesia's Plan of Action on Marine Plastic Debris (The Government of the Republic of Indonesia, 2017) is credible model for PSWP mitigation policy. At an international scale, five of the seven members of the G-7 endorsed the Charlevoix Blueprint for Health Oceans, Seas and Resilient Coastal Communities, including the Ocean Plastics Charter Annex to incorporate "a lifecycle approach to plastics stewardship on land and at sea." While these international pledges remain nonbinding, they are essential steps toward national policy commitments for effective action on PSWP.

### 4. Reorganizing to meet the PSWP challenge

The revelation of, and governments' responses to plastic pollution began in the 1970's and '80s and have continued to evolve over the decades. For example, by 2005 a review of US laws relating to elements of the marine debris problem revealed no less than twenty-one statutes involving seven Federal Departments and at least eleven agencies within them (National Oceanic and Atmospheric Administration, 2008). Also, US commitments in eight international agreements involve at least five Federal Departments (NOAA Marine Debris Program, 2005). Departments, and their respective agencies are in competition with each other for limited resources as well as for executive and

legislative attention and public approval. The dynamics of this competition across these agencies and various responsibilities under the marine debris laws and agreements guarantees a severe compartmentalization (turf) of activities responding to the PSWP challenge. The principal point is that none of the charged agencies has, or will likely ever have sufficient authority, resources or expertise to lead or direct a coherent national effort to mitigate PSWP. Absent this leadership, the current piecemeal, bottom-up approaches are doomed to collective inadequacy. This problem was clearly identified by the US National Research Council's Committee on Shipborne Wastes during its assessment of the US implementation of Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) (International Maritime Organization, 1983) in 1995 (National Research Council, 1995). The NRC Committee's recommendations for the consolidation of leadership to guide the full implementation of MARPOL Annex V were never enacted.

The remedy for this dilemma which may be common among national governments, incorporates the creation of an overarching authority (a permanent national commission or new agency/ministry) to either direct the existing agencies activities with respect to PSWP policy, programs and law or to extract those elements from the agencies and assemble them as a new, independent entity within the national government. Some form of hybridization of these might be workable if based on reasonably independent elements of the overall challenge (e.g., maritime vs. land-based, impacts research vs. waste management R&D, enforcement, etc.). A national policy commitment to the eventual elimination of PSWP coupled with broad public mandate for legislation to create the lead Commission or agency will be necessary to make this happen. A related US example might be the US Marine Mammal Protection Act of 1972 and its creation of the Marine Mammal Commission to oversee and advise multiple US agencies with marine mammal related authority.

Mandates for the new authority should include the development and direction of coordinated strategies to address the technological, economic, legal and bureaucratic features of the PSWP challenge. This effort should begin with the commissioning of a program of studies by competent national (e.g., the US National Research Council) and/or international (e.g., UNEP, ISWA) technical bodies to provide carefully considered strategic guidance for the effective prioritization and accomplishment of the Commission/Agency's objectives.

Broadly, these strategies and the implicated US agencies should include:

1. The analysis and consolidation of existing laws, regulations and policies to establish a coherent, coordinated legal foundation and regulatory authority for actions required to address PSWP (Department of Justice (DOJ), Office of Management and Budget (OMB)).
2. The development of the capacity to conceive, set priorities for, fund and coordinate chemical engineering and waste management technology research to develop non-polluting (or less polluting) materials and disposal alternatives (Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA), Department of the Interior (DOI), Department of Energy (DOE), Department of Agriculture (DOA)).
3. The development, coordination and funding of public awareness and education programs to foster voluntary acceptance of behaviors supporting PSWP reduction (Department of Education (ED), EPA, NOAA, DOI).
4. The research, design and implementation of appropriate incentive systems to foster behavior and business decisions favoring PSWP reduction (Department of Commerce (DOC), Internal Revenue Service (IRS)),
5. The evaluation, implementation and funding of long-term, internationally applicable indices for monitoring changes in key types and sources of PSWP (NOAA, EPA, DOI).

6. The creation and funding of suitable government, industry, university, and NGO grants programs and partnerships to augment the work of the Commission/Agency (OMB, DOJ, IRS).
7. The development and funding of adequate enforcement capacity for both land-based, sea-based and fiscal regulatory regimes as they evolve under national and international programs (US Coast Guard (USCG), US Navy (USN), DOJ, EPA, Department of Defense (DOD)).

Ideally, the entity(s) created to carry out these mandates for mitigating PSWP, whatever form it may take, should be permanently chartered and funded as full success is surely many decades in the future.

## 5. A global framework is essential

Part XII, Section 5, article 207 of the United Nations Convention on the Law of the Sea (United Nations, 1983) delineates States' obligations to prevent, reduce and control pollution of the marine environment from land-based sources. States shall adopt laws and regulations and other measures as necessary for these purposes "taking into account internationally agreed rules, standards and recommended practices and procedures." This Article explicitly recognizes the importance of "taking into account the characteristics of regional features, the economic capacity of developing states and their need for economic development."

While Article 207 was written prior to the recognition of persistent solid waste as significant pollutant and particularly as it originates from land-based sources, these obligations clearly include PSWP in the ocean and on land. The Article suggests that "states acting through international organizations or diplomatic conferences endeavor to establish global and regional rules, standards and recommended practices and procedures to meet these obligations." Because the potential economic and environmental consequences of PSWP are not confined to national boundaries and exhibit multi-scalar and temporal mechanisms (da Costa, 2018), international cooperation is of paramount importance for the effective mitigation of land-based sources of PSWP.

The need for an international convention explicitly for the prevention of persistent solid waste pollution is obvious. Between states' obligations to mitigate land-based sources, current conflicting standards and practices, and the potential benefits of technical, financial and enforcement collaboration, it is unquestionable that constructive actions would result from international consensus on PSWP. While a plethora of international agreements exist addressing various forms of pollution, none was conceived explicitly to address the scope and complexity of PSWP. However, proposals to include PSWP under some existing treaties are under consideration, including the Basel, Rotterdam and Stockholm Conventions that address forms of hazardous wastes, toxic chemicals and POPs. While forming a new convention is time consuming and costly, the notion that adding responsibilities as complex as the mitigation of PSWP to existing, more narrowly conceived treaty structures, is counterintuitive. Adding PSWP mitigation commitments calls for vast increases in new expertise, creates unnecessary conflicts in priority setting and funding, leads inherently to sub-divisions of participants and functions, and creates additional levels of decision making rendering the entire effort less effective. We believe the global, technical and economic scope of this issue demands a PSWP Convention that would provide the foundation for future concerted action.

In contemplating the form of a PSWP Convention, the MARPOL (73/78) Convention may be an appropriate general model. Specifically, within MARPOL (73/78), a Marine Environment Protection Committee (MEPC) was established as a forum for consistent review, clarification and refinement of the various provisions of the Treaty. This mechanism has proven indispensable to the relevance and efficiency of evolving Treaty requirements. The MEPC also provides a forum within which national, industry, and NGO experts work to develop and refine



practical guidelines for the implementation of the many technically complex Treaty requirements. With the possible exceptions of the uniquely difficult maritime (and sovereignty) issues of flag state vs. port state enforcement and the provision of adequate port waste reception facilities, MARPOL and especially its MEPC exemplify the kind of international leadership and coordination needed for PSWP mitigation.

## 6. Why bother?

So, why should we expend the effort to control the future pollution of all ecosystems by billions of tons of persistent solid waste? There can be no doubt that plastics production will continue to increase, and that waste MIS-management rates will decrease slowly if at all, thus adding substantially to the backlog of disintegrating persistent waste materials already in the environment. At present, actions to mitigate PSWP may be categorized as source reduction or prevention, recovery, reuse, sequestration and destruction. In a mass/balance sense, the global data clearly show current efforts addressing PSWP are fighting a losing battle. This is further exacerbated by rising instability in the international trade and infrastructure systems in place to facilitate high volume plastics recycling (Brooks et al., 2018). It is reasonable to conclude that these activities, while vigorously pursued at some local, and a few national scales are thoroughly inadequate at regional and global scales.

With respect to persistent solid waste pollution of the planet, we are already careening down a one-way street with only partial appreciation of the ultimate environmental costs. Of course, this problem is one of many that we have unwittingly perpetrated on ourselves as we have reaped the myriad benefits of the golden age of petrochemistry. Since it is quite certain that most of us and our progeny will not be in on the emigration to Mars or other exoplanets, it would be prudent to take the big steps needed now to protect natal biosystems from certain incremental degradation. Absent major reorganizations, renewed policy commitments, and significant long-term funding from national governments we will certainly continue down this path.

Despite the increasingly compelling case for the implementation of these recommendations, there does not seem to be a mechanism to bring them to fruition. Arguably, the most powerful engines of change in environmental protection, aside from the scientific community, have been the large environmental NGOs and their supporting foundations. Their ability to marshal public opinion, to disseminate scientific findings, and to create and assure the exercise of existing law is unequalled. Unfortunately, the same compartmentalization and competitive circumstances that plague government agencies also exist in the NGO community. While there is no possibility of mandating coordination among major environmental NGOs, the unifying environmental theme and the inevitable direction of the global PSWP problem indicate the need for this coordination to promote national and global PSWP objectives. We recommend coordinated NGO campaigns include the continuing global lead for civil society for PSWP mitigation and the administration of a global petition to demonstrate to national leaders and legislators the overwhelming public support for long-term measures to address PSWP. Further, high priority must be given to the drafting and promotion of national PSWP policies, of national legislation for PSWP oversight agencies/commissions; and, of an International Convention for the Prevention of PSWP.

## Funding

This manuscript was completed without the assistance of external financial contributions.

## Author contributions

James M. Coe – Conceptualization, Methodology, Investigation, Resources, Data Curation, Writing Original Draft and Reviewing & Editing, Project Administration.

George “Bud” Antonelis – Conceptualization, Methodology, Validation, Investigation, Writing Review & Editing.

Kirsten Moy – Conceptualization, Validation, Investigation, Resources, Writing Review & Editing, Visualization.

## Competing interests

We, the authors, declare no competing interests.

## Data and materials availability

All data is available in the main text.

## Acknowledgments

The authors would like to thank Margaret Spring, Kyle Antonelis, NOAA's marine debris office, UN Environment Programme, and the supporters and participants of the 6th International Marine Debris Conference in San Diego, CA. We would also like to thank the two anonymous reviewers who provided early feedback in preparation of this manuscript.

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**SB-367**

Submitted on: 2/6/2019 9:19:41 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Samantha Berberich  | Individual          | Support                   | No                        |

Comments:

Aloha,

As an avid beach goer and freediver I'm tired of seeing disgusting beaches and our ocean filled with tons of trash. I feel like my life is consumed by going to beach clean ups and turning my fun dives into trash clean ups. It's unhealthy for our environment and our economy. No tourist wants to hang out on a filthy beach or dive/snorkel in polluted waters.

Sell an alternative: something reusable or biodegradable and people will buy it.

Mahalo for listening,

Samantha Berberich

**SB-367**

Submitted on: 2/6/2019 9:20:47 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Ryan Cameron        | Individual          | Support                   | No                        |

Comments:

Please take steps to reduce our use of single use plastics. They are polluting the seas and damaging aquatic life . The micro plastic detritus from aged single use and other plastic rubbish is negatively effecting the marine ecosystem at the base level. This effect is harming every level of marine life. We all depend on marine life as a food source. We need to protect and nourish the marine ecosystems so that our children for generations to come will continue to be able to sustain themselves and their families from the sea.

We don't need all this plastic. There are and will be better alternatives. Let's make Hawaii a leader and example to the rest of the world. Let's create the industry to supply Hawaii and the world with biodegradable products . We can protect the sea, boost the local economy with new industry, AND, still enjoy one ONO plate lunch to go.

♻️™♻️• ½

**SB-367**

Submitted on: 2/6/2019 9:25:15 AM

Testimony for AEN on 2/6/2019 1:15:00 PM

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Rebecca Peet        | Individual          | Support                   | No                        |

Comments:

There are so many better, more environmentally-friendly alternatives, that with government support, will be financially accessible to all food services.

**From:** [Bradford Lum](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 5:15:51 PM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Bradford Lum  |
| Email     | <a href="mailto:hawaiianbl@yahoo.com">hawaiianbl@yahoo.com</a>  |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |

**From:** [Randy Gonce](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 6:07:34 PM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Randy Gonce   |
| Email     | rgonce@my.hpu.edu   |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |

**From:** [Claire Muskopf](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Wednesday, February 6, 2019 8:05:16 AM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Claire Muskopf  |
| Email     | senditbecause@gmail.com   |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our society's behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |



**From:** [Kerry Campbell](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 9:40:28 PM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Kerry Campbell  |
| Email     | mrs.kcampbell@yahoo.com   |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |

**From:** [Kiana Otsuka](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Tuesday, February 5, 2019 8:18:59 PM

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## Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Kiana Otsuka  |
| Email     | Kiana.Otsuka@gmail.com  |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> <p>Kiana Otsuka</p> |

**From:** [Donna Lay](#)  
**To:** [patrickroyfan@gmail.com](mailto:patrickroyfan@gmail.com); [AEN Testimony](#)  
**Subject:** Testimony in SUPPORT of SB 367  
**Date:** Wednesday, February 6, 2019 10:44:07 AM

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### Testimony in Support of phasing out and eliminating Single Use Plastics -SB 367

|           |   |
|-----------|---|
| Name      | Donna Lay   |
| Email     | donnarlay@gmail.com   |
| Testimony | <p>Aloha!</p> <p>Thank you committee members for giving this extremely important measure a hearing. I am writing in STRONG SUPPORT of SB 367.</p> <p>This bill would put us on a path of accountability and sustainability that our next generations desperately need. It is our duty to steward this place and do our best to be grow and be better leaving earth better than we came into the world.</p> <p>This is a great way to change our societies behavior of waste and pollution. We must be good stewards of the earth. Please pass this measure! Mahalo</p> <p>Respectfully,</p> |