

SCR 142 SR 74



MEMORANDUM – March 27, 2008

To: The Honorable Ron Menor, Chair
 Senate Energy and Environment Committee

 The Honorable Clarence Nishihara, Chair
 Senate Tourism and Government Operations Committee

From: Tim Shestek
 Director, State Affairs & Grassroots
 American Chemistry Council

Re: **SCR 142 & SR 74 - OPPOSE**

The American Chemistry Council (ACC) must respectfully oppose SCR 142 and SR 74, resolutions requesting state departments and agencies to voluntarily utilize biodegradable or recyclable non-polystyrene food service-ware. The following information is meant to clarify several misstatements and inaccuracies contained in the WHEREAS sections of both resolutions.

Unfortunately, these resolutions fail to consider the resource conserving benefits of polystyrene foam products and make the false assumption that replacement products are somehow manufactured in a vacuum without the use of any raw materials, energy, or water, or fuel to deliver the product. Polystyrene foam foodservice products, when compared to other food service containers, are very efficient in terms of minimizing air emissions, energy used in the manufacturing process and in reducing the amount of waterborne waste generated during the manufacturing process.

STYRENE IN CONTEXT

Polystyrene is made from the chemical styrene. Modern man has known about styrene for centuries. A naturally occurring substance, styrene is present in many foods and beverages, including wheat, beef, strawberries, peanuts and coffee beans. Also found in the spice cinnamon, its chemical structure is similar to cinnamic aldehyde, the chemical component that elicits cinnamon's flavor. It is naturally present to flavor foods, and is used as a flavoring additive to such food as baked goods, frozen dairy products, soft candy, and gelatins and puddings, with permission from the U.S. Food and Drug Administration (FDA). Styrene is not harmful in the very small amounts we sometimes may encounter in air or food.

Most people are exposed to styrene every day in tiny amounts that may be present in the air, or that occur in food (see 1st paragraph.) These generally are trace amounts, which were difficult to detect until recent technological advances occurred. Some people confuse styrene, which is a

liquid, with polystyrene, which is a solid plastic made from polymerized styrene. Styrene and polystyrene are fundamentally different. Polystyrene is inert and has no smell of styrene. As a polymerized form of styrene, polystyrene is not chemically the same substance as styrene. Also, any residual styrene present in a polystyrene foodservice container is so small that it does not cause negative health effects.

CLARIFYING MIS-STATEMENTS ABOUT POLYSTYRENE

From a health perspective, there is absolutely no “contamination” of food in polystyrene packaging. Polystyrene foodservice disposables meet stringent U.S. Food and Drug Administration (FDA) standards for use in food-contact packaging and have been in use for over 50 years with a proven safety record. FDA, which regulates plastics used in food contact applications, the National Academy of Sciences (NAS), and other highly regarded federal authorities rely not on opinions, but on the weight of validated scientific evidence. The weight of scientific evidence overwhelmingly supports the safe use of polystyrene in food contact applications.

After an exhaustive assessment of styrene’s possible health and environmental effects, an important decision was made in 1994 by the government agencies Health Canada and Environment Canada. These agencies concluded that styrene is "non-toxic" for regulatory purposes. **Health Canada found that styrene "does not constitute a danger to human life and health" and "does not constitute a danger to the environment on which human life depends."**

Moreover, according to the Harvard Center for Risk Analysis (HCRA) report "A Comprehensive Evaluation of the Potential Health Risks Associated with Occupational and Environmental Exposure to Styrene," which was published in the Journal of Toxicology and Environmental Health, Volume 5, Number 1-2 (Part B: Critical Reviews), January-June 2002, **"The margins of exposure estimated for oral exposure to styrene from food, whether naturally occurring or as a result of migration from food packaging or other food contact items, indicate that risks are quite low and of no concern. The comparison dose used to derive the margins of exposure was obtained from a study using newborn rats, so those margins of exposure are expected to be protective of children as well as adults."**

ENVIRONMENTAL BENEFITS OF POLYSTYRENE

All foodservice products – regardless of the material from which they are made – require the use of various natural resources (i.e. energy, water, etc.) across their product life cycle in the manufacturing process. A 2006 Life Cycle Inventory (LCI) study by Franklin and Associates showed that polystyrene foam foodservice products, when compared to other food service containers, are very efficient in terms of minimizing air emissions, energy used in the manufacturing process and in reducing the amount of waterborne waste generated during the manufacturing process. Calls to ban one material type without examining or considering the life-cycle impacts of polystyrene manufacturing and makes the false assumption that those products that would replace polystyrene are somehow manufactured in a vacuum without the use of any raw materials, energy, or water, or fuel to deliver the product.

ECONOMIC BENEFITS OF POLYSTYRENE PRODUCTS

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.

FACTS ABOUT DEGRADABLE CONTAINERS & MARINE DEBRIS

When considering policies to reduce litter and marine debris, some have suggested that “biobased” or “degradable containers” may be an answer. *However, bio-based containers only “degrade” in a controlled composting environment – essentially a large industrial facility where temperatures can exceed 140 degrees for several days. These containers do not degrade if littered along side the road, deposited into a trash can, nor will they degrade if they make their way into a storm drain or other water body.*

Furthermore, some recyclers and end-users of recycled plastic material have raised concerns over how bio-based containers pose a real and significant threat to the current plastics recycling stream.

An article written by Elizabeth Royte and published in the Smithsonian Magazine (August, 2006) raised many of these environmental issues associated with using biodegradable packaging. Royte writes “But PLA has considerable drawbacks that haven’t been publicized...it turns out that there’s no free lunch after all, regardless of what its container is made of...” Royte also writes “the cultivation of corn uses more nitrogen fertilizer, more herbicides and more insecticides than any other U.S. crop; those practices contribute to soil erosion and water pollution when nitrogen runs off fields into streams and rivers.” **One must acknowledge the environmental trade-offs associated with the use of any packaging material and whether a mandate to use one particular type of container or product will have the desired result of reducing litter and/or marine debris.**

WORKING TOGETHER TO ADDRESS MARINE DEBRIS AND LITTER

Though we oppose bans on polystyrene food service products, ACC believes that all stakeholders, including our industry, grocers, retailers, and government agencies can and should play an active role in reducing litter and marine debris. Specific activities that can be undertaken include:

- Continue and expand litter cleanups organized by organizations like Keep America Beautiful.
- Increase the availability of trash, recycling and cigarette butt receptacles at public places, schools, and commercial establishments statewide.
- Promote environmental education and outreach on the impacts of marine debris and litter prevention.

- Direct all state agencies to implement a coordinated and robust statewide anti-litter campaign.

All of these activities must include the active participation of industry stakeholders, packaging manufacturers, retailers, restaurants, and the public sector if we are to be successful in reducing litter and marine debris.

Thank you for the opportunity to provide these comments. Should you have any questions or comments please contact our in-state representatives Red Morris and John Radcliffe at 808-531-4551 or you may contact me at 916-448-2581.



HAWAII FOOD INDUSTRY ASSOCIATION

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 Direct (808) 479-7966



April 1, 2008

Committee on Energy and Environment

Senator Ron Menor, Chair / Senator Gary L. Hooser, Vice Chair

Committee on Tourism and Government Operations

Senator Clarence K. Nishihara, Chair / Senator Donna Mercado Kim, Vice Chair

By: Lauren Zirbel or Richard C. Botti

Re: SCR 142 / SR 74 REQUESTING STATE DEPARTMENTS AND AGENCIES TO VOLUNTARILY UTILIZE BIODEGRADABLE OR RECYCLABLE NON-POLYSTYRENE FOAM FOOD SERVICE-WARE

Chairs & Committee Members:

Large scale recycling of polystyrene is feasible in Honolulu. However, there is little chance of any venture providing the necessary investment to build such a facility here with continued threats of outright banning the product. Our existing manufacturing facility of polystyrene products is in a situation not much unlike that of Molo-kai's, in that there are over one hundred jobs that may be eliminated if the Legislature continues to bash a product that provides a superior FDA approved product at a very favorable price made in Hawaii creating jobs locally.

Polystyrene has been the product of choice because of its price being 30% less expensive than the alternatives of compostable or biodegradable, and it is certified and approved for use in food service establishments, including schools. Further, school polystyrene food service-ware are currently being picked up at many schools and hauled to HPOWER to generate energy. This same polystyrene can be recycled into resins and used as a blend to make recycled content food-ware in Hawaii, or with new technology, can be turned into a high grade Diesel fuel.

Biodegradable products are moving forward. It is possible now for additives to be added to polystyrene to make it degrade. However, biodegradable polystyrene products can't be mixed with non-biodegradable polystyrene that is going to be recycled, as it would contaminate the mix rendering it non-recyclable.

Compostable is a warm and fuzzy word that does not necessarily mean what it says. Compostable products such as food service ware or grocery bags will not compose in landfills. They must go to commercial compost facilities. Their cost is substantially more to produce, at least at this time. This could easily change if we had more commercial compostable facilities, which would require food waste as the basic component. Compostable bags and food service ware could then piggyback on the food waste, and be composted.

The bottom line here is that the Legislature has to decide what direction you want these issues to go, understanding that for every action you make, there will be a reaction that includes more challenges, which will include the following:

- Higher cost to government;
- Higher cost to business that will be passed on to consumers;
- Biodegradable or compostable policies will abort recycling programs because a mix of ei-

ther into plastics heading to a recycling, will contaminate the batch, requiring the products to go to HPOWER or landfills as waste;

- While compostable products may be the best option for the future, prices will be lowered only if an adequate number of conveniently located commercial compost facilities are available, and production of compostable products move away from plastic. We could call this building an infrastructure with product flow following.

Plastic should not be thrown out with the bath water. Plastics currently provide the best cost, is a source of energy dropped in our lap as packaging, and the mix of compostable, biodegradable, and plastic is not an issue in a Waste To Energy Plants.

With this information, it is a policy decision that only the Legislature can make. However, if the Legislature did nothing, business innovations will solve the problem without government policy, as consumers would be making the decisions with their buying power. New inventions are entering the market weekly. Retailer's marketing strategies are to capture customers. They will do so with innovative ideas. Environmentally friendly products will grow based on consumer demands, price, and of course environmental desirability.

To give you an idea as to what is happening because of consumer demands and the high cost of energy consider the following:

- New additives are being promoted at this time that will allow plastics to be either compostable or biodegradable.
- Technology is now available to turn plastics into a high grade Diesel oil.

Government should be looking to partner with business in new ventures by providing tax credits for:

- Composting facilities; and
- Plastic to Diesel facilities.

Based on the information we have, the most logical decision would be to go in two directions:

- Build the infrastructure for composting food waste using food service establishments both within and outside of government. Then require all compostable products to be a specified color or be easily identifiable so they will not be commingled with plastic designated for recycling like the plastic bag recycling program being considered by this body.
- Build the infrastructure to turn plastic of all types into fuel by creating a separation of plastic waste and diverting it to energy producing facilities, whether they be the plastic to Diesel technology, or Waste To Energy (WTE).

In conclusion, we have major concerns with the inaccuracies or wrong assumptions with each WHEREAS in this resolution. The following pages expresses our concerns, which should also be your concerns, since your name will be on anything you adopt.

The first WHEREAS is not an accurate statement of fact. While polystyrene is a petroleum by-product, it is also a renewable resource. It is currently being recycled here in Kalihi on a small scale, and is becoming a major recyclable resource in schools on the Mainland.

The second WHEREAS is false, and should be removed as such. The facts are that all plastics are a recoverable resource, and simply do not belong in landfills. They should be either recycled, or utilized for their fuel value in the generation of electrical power or liquid fuel. From a health perspective, there is absolutely no "leaching of the chemical neurotoxin styrene" into food as a result of polystyrene packaging. Polystyrene foodservice disposables meet stringent U.S. Food and Drug Administration (FDA) standards for use in food-contact packaging and have been in use for over 50 years with a proven safety record. FDA, which regulates plastics used in food contact applications, the National Academy of Sciences (NAS), and other highly regarded federal authorities rely not on opinions, but on the weight of validated scientific evidence. The weight of scientific evidence overwhelmingly supports the safe use of polystyrene in food contact applications.

The third WHEREAS is inflammatory and misguided and should be removed as such. When considering policies to reduce litter and marine debris, it is important to remember that, bio-based containers only "degrade" in a controlled composting environment – essentially a large industrial facility where temperatures can exceed 140 degrees for several days. Furthermore, some recyclers and end-users of recycled plastic material have raised concerns over how bio-based containers pose a real and significant threat to the current plastics recycling stream.

An article written by Elizabeth Royte and published in the Smithsonian Magazine (August, 2006) raised many of these environmental issues associated with using biodegradable packaging. Royte writes "PLA has considerable drawbacks that haven't been publicized... the cultivation of corn uses more nitrogen fertilizer, more herbicides and more insecticides than any other U.S. crop; those practices contribute to soil erosion and water pollution when nitrogen runs off fields into streams and rivers." One must acknowledge the environmental trade-offs associated with the use of any packaging material and whether a mandate to use one particular type of container or product will have the desired result of reducing litter and/or marine debris.

All foodservice products – regardless of the material from which they are made – require the use of various natural resources (i.e. energy, water, etc.) across their product life cycle in the manufacturing process. A 2006 Life Cycle Inventory (LCI) study by Franklin and Associates showed that polystyrene foam foodservice products, when compared to other food service containers, are very efficient in terms of minimizing air emissions, energy used in the manufacturing process and in reducing the amount of water-borne waste generated during the manufacturing process. This bill arbitrarily condemns one material type without examining or considering the life-cycle impacts of polystyrene manufacturing and makes the false assumption that those products that would replace polystyrene are somehow manufactured in a vacuum without the use of any raw materials, energy, or water, or fuel to deliver the product. This is especially important considering many bio-degradable options are produced in China where labor, quality and environmental standards are known to be well below the labor, quality and environmental standards practiced in plants which produce polystyrene here on the island of Oahu. Not to mention the carbon footprint shipping supplies from China creates when we have a more economically viable product produced right here in Hawaii.

The fourth WHEREAS is likewise misleading and ignores the fact that landfills are sealed to prevent leakage of any trash. They are located below the water table, and it is an EPA violation for any liquid from such a facility to go into streams or the ocean.

The fifth WHEREAS which contains the statement, "incineration, it produces a dense, black, irritating smoke containing acidic gases and over ninety different chemical compounds, including carbon monoxide, carbon dioxide, and the known neurotoxin and possible carcinogen, styrene" is misleading to say the least and is referring to an open burn, which has been illegal in the United States for some time now. The technology used at HPOWER is anything but an open burn, in fact their emission standards are well below what is required and thanks to advanced technologies; such as, continuous emissions monitoring systems, electrostatic precipitators and air scrubbers, incinerator generated power is translated into clear emissions. New technologies are constantly being produced to make HPOWER even more environmentally friendly, such as the use of new bag house technology added to HPOWER to reduce the already low amounts of particle left in air byproduct.

The sixth WHEREAS, is a false and unsubstantiated claim. After an exhaustive assessment of styrene's possible health and environmental effects, an important decision was made in 1994 by the government agencies Health Canada and Environment Canada. These agencies concluded that styrene is "non-toxic" for regulatory purposes. Health Canada found that styrene "does not constitute a danger to human life and health" and "does not constitute a danger to the environment on which human life depends."

Moreover, according to the Harvard Center for Risk Analysis (HCRA) report "A Comprehensive Evaluation of the Potential Health Risks Associated with Occupational and Environmental Exposure to Styrene," which was published in the Journal of Toxicology and Environmental Health, Volume 5, Number 1-2 (Part B: Critical Reviews), January-June 2002, "The margins of exposure estimated for oral exposure to styrene from food, whether naturally occurring or as a result of migration from food packaging or other food contact items, indicate that risks are quite low and of no concern. The comparison dose used to derive the margins of exposure was obtained from a study using newborn rats, so those margins of exposure are expected to be protective of children as well as adults."

The seventh, eight and ninth WHEREAS, assume that polystyrene will not be disposed of properly. They also ignore the fact that polystyrene and biodegradable options will meet the same end in a landfill (as landfills are designed to eliminate moisture and air, the elements needed for degradation to occur) or in a waste to energy facility.



Hawaii Foam Products, LLC.

737 Umi St., Honolulu, HI 96819 Phone: (808) 847-5269 Fax: (808) 845-7754

April 1, 2008

To: Senate Committee on Energy & Environment
Senator Ron Menor, Chair / Senator Gary L. Hooser, Vice Chair

Committee of Tourism and Government Operations
Senator Clarence K. Nishihara, Chair / Senator Donna Mercado Kim, Vice Chair

By: Gilbert Yamada
Hawaii Foam Products, LLC.

Re: SCR 142 SR 74 REQUESTING STATE DEPARTMENTS AND AGENCIES TO
VOLUNTARILY UTILIZE BIODEGRADABLE OR RECYCLABLE NON-POLYSTYRENE
FOAM FOOD SERVICE WARE.

Chairs & Committee Members

Recycling is the answer. The plan to convert expanded polystyrene foam to alternative products is with prejudice. The polystyrene resin that we use at Hawaii Foam Products is a USDA approved resin by the Federal Food and Drug Administration. If there is a dispute that the chemical styrene is a possible human carcinogen, then this problem should be addressed to the Federal Food and Drug Administration. In the earlier bills, benzene was illustrated as the carcinogen, but when we had written testimony from our resin manufacturers that benzene was not in our resin, we find this issue removed.

I have eaten from Styrofoam food containers for over 30 years and find the accusations untrue. Please have the individual introducing this bill to provide proof that individuals who have suffered from illness or died from the use of Styrofoam. The Federal Food and Drug Administration would immediately ban Styrofoam if this happened.

As to the issue of non-biodegradable nature and chemical composition of expanded polystyrene foam, which causes a significant threat to Hawaii's ecosystem and environment, we question the validity of this statement. Polystyrene is recyclable and we do it in our plant in Kalihi. We provide employment to over 100 people in the State of Hawaii. Currently a company called EPG out of Massachusetts is picking up Styrofoam school lunch trays and reprocessing back to pellets or resin. The resin is then sold to the processors that make styrene containers and recycled. Locally here in Hawaii, an island recycler is picking up our school lunch trays and delivering to H Power (Waste to Energy). Finally on the issue of threat to Hawaii's ecosystem and environment, people litter and pollute any items that is made or produced should be collected or recycled based on the reasons I have outlined. Many countries are collecting glass, aluminum cans, plastic bottles and containers and recycling. Hawaii has fallen behind. Recycling is working for these items, why not Styrofoam.

The issue of landfill should not be an issue, as we are running out of landfills in Hawaii and that is why H Power is being expanded. Due to the success of H Power, we find the Big Island of Hawaii going in that direction and hopefully other island's to follow.



Hawaii Foam Products, LLC.

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On paragraph 4, page 2 of this resolution, pricing increases for biodegradable and environment friendly compostable trays will increase costs by 30% or over \$500,000.00 per year.

In checking with various schools we find usage of compostable school lunch trays being produced in China. We find these trays not very durable, and question the sanitation level.

Based on the solutions that we have provided, we feel that polystyrene can be used in an environmentally friendly way. People litter and Styrofoam can be recycled in the same fashion as aluminum cans, glass bottles, plastic bottles, rubber tires, etc. With the high cost of living food cost and commodities escalating, we must find ways to save money for the Department of Education.

testimony

From: randy ching [oahurandy@yahoo.com]
Sent: Saturday, March 29, 2008 10:23 AM
To: testimony
Subject: ENE/TSG: in support of SCR142/SR74

Senate Committee on Energy and Environment
Chair Menor, Vice Chair Hooser
Senate Committee on Tourism and Government Operations
Chair Nishihara, Vice Chair Kim

Hearing on Tuesday, April 1
at 2:45 p.m. in conference room 414

In support of SCR142/SR74 -- REQUESTING STATE DEPARTMENTS AND AGENCIES TO VOLUNTARILY UTILIZE BIODEGRADABLE OR RECYCLABLE NON-POLYSTYRENE FOAM FOOD SERVICE-WARE.

Chairs Menor and Nishihara, Vice Chairs Hooser and Kim, and members of the committees,

The Sierra Club, Oahu Group supports SCR142/SR74. Oahu residents generate a tremendous amount of solid waste each year (over 1.2 million tons). We need to reduce that amount.

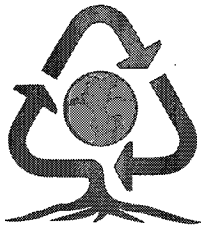
One way to reduce the amount of solid waste going into Waimanalo Gulch landfill is to not use styrofoam. We need to move away from polystyrene products. There are biodegradable and recyclable alternatives available. Let's use them.

By passing SCR142/SR74, you will be moving Hawaii one small step closer toward sustainability. Mahalo.

Sincerely,

Randy Ching
Sierra Club, Oahu Group chair
oahurandy@yahoo.com

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Email: info@styrophobia.com

Ph: (808) BE GREEN

March 31, 2008

Testimony before the: SENATE COMMITTEES ON ENERGY & ENVIRONMENT / TOURISM & GOVERNMENT OPERATIONS

Thursday, April 1, 2008 – 2:45 P.M. – State Capitol Room 414

Re: Support for SCR 142 Requesting state departments and agencies to voluntarily utilize biodegradable or recyclable non-polystyrene foam food service-ware.

Aloha ENE Chair Menor, Vice-Chair Hooser TSG Chair Nishihara, Vice Chair Mercado Kim, and Members of the Committees:

I am writing in strong support of this resolution, which is a short-term compromise from the stalled bills banning Styrofoam disposables in the State.

In the event testimony is submitted by industry lobbyists attempting to mark the statements in this resolution as unsubstantiated, we address each of the key issues below confirming the facts and why passing these resolutions is so critical. The birds, seals, turtles, and fish of the Hawaiian Islands are dying, our beaches are polluted with plastic, we pay State and City workers to try and keep up with the loose and tumbling litter that never even makes it to the landfill.

Cities across the mainland such as San Francisco, Oakland, and Toronto and many others have won this environmental battle with powerful plastics lobbies and legislated outright bans on these products. This resolution offers simple encouragement to the public, to business, and to the Counties to change our polluting ways. Let's be an example for the world – the plastic is at our doorstep.

Mahalo for your kokua in supporting this resolution and for your public service,

Mike Elhoff

Marine Ingestion

In June 2006, the United Nations reported that there are, on average, around 46,000 pieces of plastic litter per square mile of ocean worldwide, causing the death of over 100,000 marine mammals and turtles and one million seabirds each year **as a result of eating or getting entangled with plastic debris.**

Polystyrene Spherules in Coastal Waters Edward J. Carpenter 1, Susan J. Anderson 1, George R. Harvey 1, Helen P. Miklas 1, and Bradford B. Peck 1 Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543

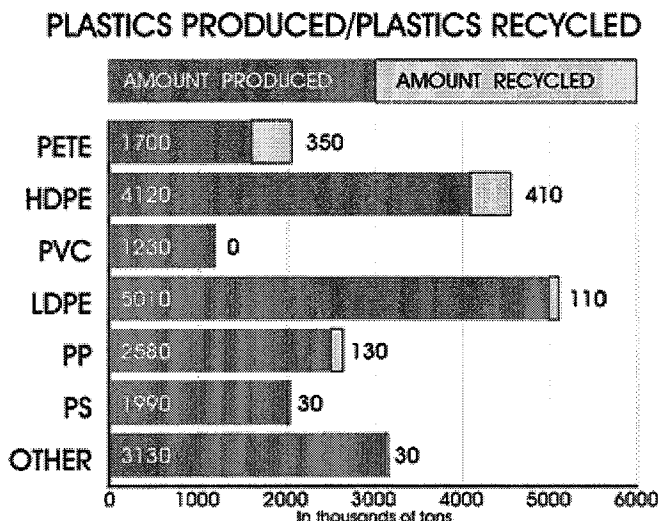
Polystyrene spherules averaging 0.5 millimeter in diameter (range 0.1 to 2 millimeters) are abundant in the coastal waters of southern New England...White, opaque spherules are selectively consumed by 8 species of fish out of 14 species examined...Ingestion of the plastic may lead to intestinal blockage in smaller fish.

Harmful marine debris such as plastic bags, rubber, balloons and confectionery wrappers is frequently ingested by marine species, which confuse them with prey species. Most marine species feed non-selectively and may consume marine debris, particularly ones accumulated in the vicinity of food items. This debris usually causes a physical blockage in the digestive system, leading to internal injuries and pain. Turtles frequently ingest plastic bags, confusing them with jellyfish which is common prey for all turtles. Research indicates at least 56 species of sea birds confuse fish eggs and crustaceans with polystyrene balls and plastic buoys, and so consume the debris. Eventual starvation may occur. Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris.

Advice to the Australian Minister for Environment and Heritage from the Threatened Species Scientific Committee on a public nomination of a Key Threatening Process under the *Environment Protection and Biodiversity Conservation Act 1999*

Recycling

More than 15 million tons of Polystyrene "PS" (aka Styrofoam) is produced each year, but less than 2% is recycled (see chart). Styrofoam can not be practically recycled, it can not be composted, and it is **never biodegradable**.



“In recent years, several plastics recycling companies have closed their doors. They claimed they could not sell their products at a price that would allow them to stay in business. Thanks to the relatively low cost of petroleum today, the price of virgin plastic is so inexpensive that recycled plastic cannot compete. The price of virgin resin is about 40 percent lower than that of recycled resin.

Because recycled plastic is more expensive, people aren't exactly lining up to buy it. Surveys conducted by Procter & Gamble and others show that while most people expect their plastic to be recycled, they won't go out of their way or pay a few cents more to buy a bottle made of recycled plastic.”

Source: Hawaii Food Industry Association website -
<http://www.eia.doe.gov/kids/energyfacts/saving/recycling/solidwaste/plastics.html>

Health

1. From the **US Navy** (Sept. 2007): Naval Medical Center San Diego Nutrition Management Department is taking the lead Sept. 20 to protect its patrons and the environment. Balboa Café, the name given to the hospital galley, will systematically replace polystyrene (Styrofoam) take-out containers with more environmentally friendly biodegradable products. The full conversion will include 14 items with plans to phase in the remaining 12 by the end of the year.

The first items to be introduced are a compostable paper cup and a hinged, three compartment container made from sugar cane. These two items were chosen for the initial kick-off due to their high volume use. Hite said studies have shown the use of Styrofoam, which was initially developed during World War II as flexible electrical insulation, can have a long-term impact on health. In a 1986 U.S. Environmental Protection Agency Human Tissue Survey, styrene was found in 100 percent of all human fat tissues sampled.

"Styrofoam containers lose weight as styrene is absorbed into the food and drink held in the containers," said Hite. Styrene is unwittingly consumed and stored in human fatty tissue where it accumulates. Several factors determine the impact of styrene on an individual such as frequency of use and personal physiological factors. Those more sensitive to styrene build up may experience fatigue, nervousness, difficulty sleeping, blood abnormalities and carcinogenic effects. About half of the galley patrons manage their time with take out. That hectic pace motivated Laeske to want to help educate galley customers on the harmful effects of Styrofoam. For example, **microwaving food in Styrofoam is particularly dangerous.**

2. Bottled water may not be safer, or healthier, than tap water. The present studies have proved that styrene and some other aromatic compounds leach continuously from polystyrene (PS) bottles used locally for packaging. Water samples in contact with PS were extracted by a preconcentration technique called as "purge and trap" and analyzed by gas chromatograph-mass spectrometer (GC/MS). Eleven aromatic compounds were identified in these studies. Maximum concentration of styrene in PS bottles was 29.5 microg/L. Apart from styrene, **ethyl benzene, toluene and benzene** were also quantified but their concentrations were much less than WHO guide line values. All other compounds were in traces. Quality of plastic and storage time were the major factor in leaching of styrene. Concentration of styrene was increased to 69.53 microg/L after one-year storage. **In Styrofoam and PS cups studies, hot water was found to be contaminated with styrene and other aromatic compounds.** It was observed that temperature played a major role in the leaching of styrene monomer from Styrofoam cups. Paper cups were found to be safe for hot drinks. Environmental Control Department, Directorate General for Royal Commission at Yanbu, P.O. Box 30031 Yanbu Al-Sinaiyah, Kingdom of Saudi Arabia. maqbool_60@yahoo.com

3. **"What are the Health Effects?** Short-term: EPA has found styrene to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: nervous system effects such as depression, loss of concentration, weakness, fatigue and nausea. Long-term: Styrene has the potential to cause the following effects from a lifetime exposure at levels above the MCL: liver and nerve tissue damage; cancer.

How much Styrene is produced and released to the environment? Production of styrene was 10.7 billion lbs in 1993. It is released into the environment by emissions and effluents from its production and its use in polymer manufacture. Consumers may be exposed to styrene through contact with resin products used in fiberglass boat construction and repair, and in auto body fillers. **Styrene may also leach from polystyrene containers used for food products."**

United States Environmental Protection Agency. Pollution Prevention and Toxics. November 1994 EPA 749-F-95-019. OPPT Chemical Fact Sheets Styrene Fact Sheet (CAS No. 100-42-5)
<http://www.epa.gov/safewater/dwh/c-voc/styrene.html>

Price

Styrofoam vs Paper vs Sugar Cane Bagasse - we took same case weight paper items manufactured by few different companies and compared the prices to bagasse prices. For a 10" plate, that's 1 cent more. Let's put 1 cent for the environment, for tourism, and our health!

	Pactiv Styrofoam	Chinet Paper	Pactiv Paper	World Centric Bagasse
9" Plate, 500 count/ea.	\$28 / .06ea	\$62 / .12ea	\$62 / .12ea	\$45 / .09ea
7" Plate , 1000 count/ea.	\$36 / .04ea	\$91 / .09ea		\$62 / .06ea
10" Plate, 500 count/ea.	\$48 / .10ea		\$87 / .17ea	\$57 / .11ea
10" 3 Compt. Plate 500 ct./ea.	\$48 / .10ea		\$83 / .16ea	\$57 / .11ea
12 oz bowls, 1000 count/ea.	\$36 / .04ea	\$70 / .07ea	\$67 / .06ea	\$68 / .07ea

Fuel Value

The Hawaii Food Industry Association (HFIA) has claimed that styrofoam has a high fuel value for burning at HPower incinerator. The weight of biodegradable (44g) to Styrofoam (10g) plates is 4.4 times. Styrofoam has a energy/weight value of 16,000BTU/lb. and biodegradable at 6,400BTU/lb. or 2.5 times the fuel energy by weight. Thus, biodegradable plant fiber containers offer $4.4/2.5 = 1.8$ **times the fuel value over their styrofoam counterpart**. The styrofoam argument **fails** at HPower. Biodegradables will produce more BTU energy when burned. As confirmed in a phone interview with HPower officials, in addition to the higher overall fuel value, biodegradables burn at a lower temperature for a longer time, thus producing a more even combustion and higher overall boiler energy. Styrofoam has a high BTU/lb, but very little weight and a lot of volume. On a large scale waste diversion, such as the result of this legislation, converting to biodegradables offers almost twice the power.

Landfill Volume and Commercial Composting

Plastics lobbies claim that styrofoam takes up a very small percentage by weight, of the landfill. We know that styrofoam is light, but takes up a lot of volume. Our landfill is overflowing with volume. Let's report what really matters. Outer-Islands have no incinerator and therefore landfill or commercial composting are the only options. This resolution will encourage commercial composting and landfill diversion. Plastics are the #1 enemy of commercial composting facilities, contaminating product and raising costs. Biodegradable containers and bags help, not hurt composting efforts.

Not Paper vs. Styrofoam: Hawaii-made Sugar cane fiber!

While it is true paper can cost more, sugar cane fiber is very close in price as shown above. By staying with polystyrene, what's the environmental cost we are paying in trash collection, turned off tourists, increased fish prices, and landfill issues? The plastics lobby claims paper is worse than plastic for the environment – they have left out renewable plant fibers, such as Sugar Cane Bagasse – whose production is by far the lowest carbon footprint of all options. Sugar cane absorbs CO2 during growth, is **locally grown**, and is a byproduct, otherwise inefficiently burned due to its initial water content. By making food service ware, we can close the cycle on locally produced, grown, and composted.

Local Agriculture

There presently are two major sugar cane companies remaining in Hawaii. We currently import our biodegradable plates, cups, bowls, and take-out containers. The fact is, these products could all be made in Hawaii, by local companies, using local waste product. These companies will not move to manufacturing without a major shift away from styrofoam. Thus no incentives to change, no local manufacturing. Please encourage local agriculture by passing these resolutions.

Change

Previous testimony by Hawaii Foam Products / K Yamada Distributors was that they might be put out of business by this bill. The fact is KYD offers a vast array of products other than styrofoam, and it is by diversifying that businesses adapt and grow. We believe KYD could easily diversify into sugar cane molded products. We also point out to legislators to what real effort has been made over the decades as a major local producer of styrofoam, at public recycling awareness? This pollutant can not just be mass-produced without taking responsibility for the ecological consequences. McDonald's recognized this 18 years ago by eliminating styrofoam. The resolutions are a compromise that gives time for Hawaii Foam Products to adapt.

Proven Success

The City of San Francisco passed legislation completely banning food service styrofoam in 2007. In less than a year, according to the City agency SFEnvironment, they have an 80% compliance among the 1,440 restaurants and food establishments sampled. This - without one fine being issued. The bill works, and works well. The City had minimal expenditures, just a basic public education notice and vendor notification. Further, compostable service-ware and food scraps are now out of the landfill and being sent to a commercial composting facility. A resolution for the State of Hawaii promoting environmentally-friendly alternatives is a step in the right direction.

testimony

From: JOHN KUNESH [spiritedmassage@msn.com]
Sent: Monday, March 31, 2008 3:53 PM
To: testimony
Subject: Testimony SCR 142

March 31, 2008

Testimony before the: SENATE COMMITTEES ON ENERGY & ENVIRONMENT / TOURISM & GOVERNMENT OPERATIONS

Thursday, April 1, 2008 – 2:45 P.M. – State Capitol Room 414 Re: Support for SCR 142

Aloha ENE Chair Menor, Vice-Chair Hooser, TSG Chair Nishihara, Vice Chair Mercado Kim, and Members of the Committees:

I am writing in support of **SCR 142**

Simply put, many of Kauai's citizens lack the awareness and discipline in caring for our limited Island resource and it's unique vulnerability to trash especially at our beaches which lowers the attraction to our main income, Tourism.

Banning Styrofoam not only protects our beauty it adds a new sustainable business to Kauai in the form of biodegradable products from Sugar Cane fiber now being used increasingly worldwide.

This is not including the health benefits of not using petroleum containers with our hot food or beverage. Care to know about the toxins released with hot fried oily food that melts the foam? Trust the scientists, that well researched expose, alone will close your jaw! Let us not experiment on our children!

Also, I have seen a noticeable increase in business due to word-of-mouth advertising in support of environmentally friendly alternatives. Customers regularly comment on "how great these products are" and "why doesn't everyone use these?" Honored Legislators, that's your cue.

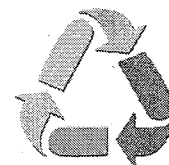
Respectfully,

John Kurtis Kunesh

1000 Friends of Kauai BOD



ALOHA, WE DELIVER!



EcoFriendly Products and Services

To: Testimony before the: SENATE COMMITTEES ON ENERGY & ENVIRONMENT / TOURISM & GOVERNMENT OPERATIONS

Thursday, April 1, 2008 – 2:45 P.M. – State Capitol Room 414

Re: Support for SCR 142

Date: March 31, 2008

Aloha ENE Chair Menor, Vice-Chair Hooser, TSG Chair Nishihara, Vice Chair Mercado Kim, and Members of the Committees:

I am writing in support of **SCR 142**, which proposes to support the discontinued use of polystyrene foam (styrofoam) food service-ware products in the State of Hawaii.

Our business currently purchases and redistributes biodegradable alternatives to petroleum-based service ware. Although these biodegradable products can cost more than styrofoam, we have found the cost is insignificant relative to the total cost of the product served (typically less than 4%). In addition, we have seen a noticeable increase in business due to word-of-mouth advertising in support of environmentally friendly alternatives. Customers regularly comment on "how great these products are" and "why doesn't everyone use these?"

The quality of these 100% plant-based cups, plates, containers and utensils is fantastic. Our customers can't believe the materials all come from plants and we get lots of smiles and support. Customers don't mind the extra 10-25 cents not to have to eat off Styrofoam, and in a recent comparison to other vendors—we found that many of the **biodegradable alternatives were even cheaper** than what the other vendors are currently offering here on Kauai.

We feel strongly that without a legislative message on these products, the majority of food vendors will not make the conversion on a large scale; for fear that they will be at a competitive disadvantage. Although this had not held true for our business, we believe a clear message from the legislature will encourage consumers, and in turn vendors to offer bio-friendly alternatives.

We believe biodegradables offer equal or superior performance, with no foul taste or odor. Our conversion to biodegradable products has been a winning solution for our business, our product quality, and for our conscience.

Any excuse that these products are not affordable is just not true. We face the same costs of doing business as other establishments, yet these products have had only a positive impact on our sales and in turn, our profitability. The time is long overdue for Hawaii to take better care of its aina – we can have healthy business and environment – but it will take encouragement from our elected officials to change our collective thinking.

Please help stop the possibility of more landfills and shipping trash to the mainland. We need to be an example of sustainability and stewardship. We support a total ban on Styrofoam in our food service establishments. Should you have any questions on how easy it was for us to convert to guilt-free biodegradables, please contact us.

Sincerely,

Jennifer Sifuentes

Aloha, We Deliver!

(808)631-9138

fast@alohawedeliver.com

testimony

From: Jobs at Down to Earth [jobs@downtoearth.org]
Sent: Monday, March 31, 2008 8:58 AM
To: testimony
Subject: support of SCR 142

March 31, 2008

Testimony before the: SENATE COMMITTEES ON ENERGY & ENVIRONMENT / TOURISM & GOVERNMENT OPERATIONS

Thursday, April 1, 2008 – 2:45 P.M. – State Capitol Room 414

Re: Support for SCR 142

Aloha ENE Chair Menor, Vice-Chair Hooser, TSG Chair Nishihara, Vice Chair Mercado Kim, and Members of the Committees:

I am writing in support of **SCR 142**, which proposes to support the discontinued use of polystyrene foam (styrofoam) food service-ware products in the State of Hawaii.

Biodegradable alternatives are important to our islands and make good business sense. I feel that more businesses will convert to biodegradables with the encouragement of the legislature, and that these resolutions are a good step in increasing consumer awareness and ultimately demand.

Please help stop the possibility of more landfills and shipping trash to the mainland. We need to be an example of sustainability and stewardship.

Mahalo,

Michele McKay

testimony

From: Lisa Dacalio [kaucoffee@gmail.com]

Sent: Monday, March 31, 2008 8:00 AM

To: testimony

Subject: SCR142

Aloha, as coffee growers selling coffee, at times it is absurd how many styrofoam products are wasted and building up in our landfills.

We support the use of biodegradeable products and we ourselves have begun using sugar cane by products in using paper products such as cups that will go back into compost.

We support the efforts to keep our landfills minimally impacted and encourage users of biodegradables to get tax benefits and whatever else can make us further our mission to keep Hawaii an active and viable place to live which can sustain growing populations by using conservative/biodegradeable products.

Much Mahalo for any support to rid the landfills of syrofoam.

Lisa and James Dacalio
PO Box 393
Pahala, HI 96777
www.kaucoffee.com

testimony

From: ginniberries [mailto:ginniberries.com]
Sent: Monday, March 31, 2008 7:33 AM
To: testimony
Subject: SCR 142 & SCR 146

It is strongly my opinion as a business owner that we have the solution to ban styrofoam and use a local product to support changes in the future of our environment.

Furthermore, because our economy is so dependant on the tourism that is primarily based on the beauty of our islands, this just makes complete sense and proactive planning our part.

You will no doubt be commended for your forward thinking if you push forward to approve this resolution. Please support this change and make a difference in the years to come.

Sincerely,

S. Michelle Nakaya
Owner
Ginniberries Catering
(808)371-7574
www.ginniberries.com

testimony

From: Kelly Buskirk [kellybuskirk@yahoo.com]
Sent: Monday, March 31, 2008 8:22 PM
To: testimony; info@styrophobia.com
Subject: Styrofoam Ban

March 31, 2008

Testimony before the: SENATE COMMITTEES ON ENERGY & ENVIRONMENT / TOURISM & GOVERNMENT OPERATIONS

Thursday, April 1, 2008 – 2:45 P.M. – State Capitol Room 414

Re: Support for SCR 142

Aloha ENE Chair Menor, Vice-Chair Hooser, TSG Chair Nishihara, Vice Chair Mercado Kim, and Members of the Committees:

I am writing in support of **SCR 142**, which proposes to support the discontinued use of polystyrene foam (styrofoam) food service-ware products in the State of Hawaii.

Our restaurant currently purchases biodegradable alternatives to petroleum-based service ware. Although these biodegradable products can cost more than styrofoam, we have found the cost is insignificant relative to the total cost of the product served (typically less than 4%). In addition, we have seen a noticeable increase in business due to word-of-mouth advertising in support of environmentally friendly alternatives. Customers regularly comment on “how great these products are” and “why doesn’t everyone use these?”

The quality of these 100% plant-based cups, plates, containers and utensils is great. Our customers can’t believe the materials all come from plants and we get lots of smiles and support. Customers don’t mind the extra 10-25 cents not to have to eat off Styrofoam.

We feel strongly that without a legislative message on these products, the majority of food vendors will not make the conversion on a large scale; for fear that they will be at a competitive disadvantage. Although this had not held true for our business, we believe a clear message from the legislature will encourage consumers, and in turn vendors to offer bio-friendly alternatives.

We believe biodegradables offer equal or superior performance, with no foul taste or odor. Our conversion to biodegradable products has been a winning solution for our business, our product quality, and for our conscience.

Any excuse that these products are not affordable is just not true. We face the same costs of doing business as other establishments, yet these products have had only a positive impact on our sales and in turn, our profitability. The time is long overdue for Hawaii to take better care of its aina – we can have healthy business and environment – but it will take encouragement from our elected officials to change our collective thinking.

Please help stop the possibility of more landfills and shipping trash to the mainland. We need to be an example of sustainability and stewardship. We support a total ban on Styrofoam in our food service establishments. Should you have any questions on how easy it was for us to convert to guilt-free biodegradables, please contact us.

Mahalo,

Kelly Buskirk, Kauai Resident

3/31/2008

March 31, 2008

Testimony before the: SENATE COMMITTEES ON ENERGY & ENVIRONMENT / TOURISM & GOVERNMENT OPERATIONS

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Mahalo,

Barbara Childers

testimony

From: Thomas Pickett [bluh2o@aloha.net]
Sent: Tuesday, April 01, 2008 4:24 AM
To: testimony
Subject: scr142

Please Pass this bill.

Help put Hawaii on the cutting edge of common sense.

Tom Pickett
Kilauea, Kauai