M I N U T E S

of the

COUNCIL OF THE COUNTY OF MAUI

May 8, 2017

THE SPECIAL MEETING OF THE COUNCIL OF THE COUNTY OF MAUI, STATE OF HAWAII, WAS HELD IN THE COUNCIL CHAMBER, KALANA O MAUI BUILDING, WAILUKU, HAWAII, ON MONDAY, MAY 8, 2017, BEGINNING AT 9:05 A.M., WITH CHAIR MICHAEL B. WHITE PRESIDING.

CHAIR WHITE: This Special meeting of the Maui County Council shall please come to order.

Mr. Clerk, please call the roll.

ROLL CALL

PRESENT: COUNCILMEMBERS ALIKA ATAY, ELEANORA COCHRAN, KELLY T. KING, YUKI LEI K. SUGIMURA, VICE-CHAIR ROBERT CARROLL, AND CHAIR MICHAEL B. WHITE.

EXCUSED: COUNCILMEMBERS S. STACY CRIVELLO, G. RIKI HOKAMA, AND DONALD S. GUZMAN.

(Councilmember Crivello was not present when the roll was called; however, she arrived at 10:30 a.m.)

COUNTY CLERK DENNIS A. MATEO: Mr. Chair, six Members present, three excused. A quorum is present to conduct the business of the Council.

CHAIR WHITE: Thank you, Mr. Clerk.

And before we proceed, I would just request that everyone in the chambers please put their cellphones on silent or vibrate mode. And, with the large number of individuals we may end of having sign up, and I'll leave, I'll ask the Members, we were going to limit testimony to just the three minutes without allowing the request for an additional minute to conclude. We currently have 13 testifiers signed up and we

will likely get more as the morning goes on. But, because we are, because we don't have as many as we had expected, the Chair is okay, I think I'm okay allowing an additional minute to conclude if necessary. Any objections to that?

MEMBERS VOICED NO OBJECTION.

CHAIR WHITE: Okay, so as most of you know and some of you may not, we have to provide the same opportunity to everyone when it comes to testimony. So, if we cut the first one off at three minutes, then we have to cut everybody else off at three minutes. But we will provide the three minutes and if you need an additional minute to conclude we'll be happy to provide that.

Please don't use minutes if you don't need them. Just in case we have lots of testifiers that, that show up prior to the close of testimony. And we should have a very interesting day today. We've got four presenters, two that are here with us, will be here with us in the chamber and two that will be presenting from their homes on the mainland.

So with that, without objections, we'll move ahead with public testimony.

MEMBERS VOICED NO OBJECTION.

CHAIR WHITE: Okay, thank you.

Mr. Clerk.

COUNTY CLERK: Mr. Chair, proceeding with presentation of testimony on agenda item. We've established limited telephone interactive communication that enables individuals from Hana, Lanai, and Molokai to provide testimony from our District Offices. Individuals who wish to offer testimony from Hana, Lanai, and Molokai should now sign up with the District Office staff.

Individuals who wish to offer testimony in the chamber, please sign up at the desk located on the eighth floor lobby just outside the chamber door.

Testimonies on all locations is limited to the item listed on today's agenda. And pursuant to the Rules of the Council, each testifier is allowed to testify for up to three minutes with one minute to conclude if requested. And when testifying, please state your name and the name of any organization you represent.

Hana Office. Mr. Chair, the Hana Office representative is not available today, she's out on emergency, the office is closed.

CHAIR WHITE: Thank you, Mr. Clerk.

COUNTY CLERK: The Lanai Office, please identify yourself and introduce your first testifier.

MS. DENISE FERNANDEZ: Good morning, Chair. This is Denise Fernandez on Lanai, and there is no one waiting to testify.

COUNTY CLERK: Thank you.

Molokai Office, please identify yourself and introduce your first testifier. Molokai.

MS. ELLA ALCON: Good morning, this is Ella Alcon on Molokai, and my first testifier is Shaeralee Manosa.

MS. SHAERALEE-TIARE MANOSA:

Aloha, my name is Shaeralee-Tiare Manosa, I am testifying in strong support of Bill 127, banning Styrofoam containers. Please protect our environment for our keikis. Mahalo.

COUNTY CLERK: Mr. Chair, Molokai has two additional individuals wishing to testify. Should we complete the Molokai testimonies?

CHAIR WHITE: Yes.

COUNTY CLERK: Ms. Alcon, if you could call up the next testifier.

MS. ALCON: Okay, my next testifier is Kamakaho`ominoaka Adams.

MS. KAMAKAHO`OMINO`AKA ADAMS:

Good morning, Maui Councilmembers. My name is Kamaka Adams, and I'm an eighth grader attending Akaula School. I am here today in support of the passage of Bill 127, restricting the use and sale of polystyrene food service containers.

We investigated and surveyed the use of polystyrene. Polystyrene is not as safe as we thought and we realize that we knew very little about the product. Like us, most Molokaians do not know that polystyrene is a very old product. In 1839, Berlin,

Eduard Simon collected the . . . sap from a Turkish sweetgum tree. Simon left the willow sap to sit for a couple days, letting it thicken and Simon called it Styroloxyd.

Additionally, most Molokai residents do not know that since 1941, Dow Chemical Company has been polymerizing styrene which produces foam polystyrene. While styrene occurs naturally, foam polystyrene is a result of a chemical reaction between monomer molecules to form polymer chains, or three dimensional networks. In terms of use, we found that 73 percent of the people surveyed use single use polystyrene. Majority of respondents use polystyrene for convenience.

Most people use polystyrene on a weekly basis due to weekend activities such as parties, potlucks, and camping and the benefit of no dishes to wash. When I asked how knowledgeable they were about the effect of polystyrene usage because it is single use product that ends up in the landfill, most of the people in our sample . . . who use polystyrene said they were somewhat knowledgeable about the effects of polystyrene. Sadly, most people in our sampling were unaware of Dow's risks, especially to humans because the chemical seeps into our food upon contact.

I ask that you pass Bill 127, banning the use and sale of polystyrene. This will ensure the safety of food, therefore our health and welfare. Thank you for your time and attention to this important matter.

CHAIR WHITE: Thank you, Mr. Adams *[sic].* Any need for clarification, Members. Seeing none, please proceed.

MS. ALCON: Our next testifier is Michael Kahinu.

MR. MICHAEL KAHINU:

Greetings, Maui County Councilmembers. My name is Michael Kahinu and I'm a seventh grader attending Akaula School. I am here today in support of the passage of Bill 127, which restricts the use and sale of polystyrene food service containers.

This year, three classmates researched and surveyed the use and effects of polystyrene on the island of Molokai. We found that while polystyrene is cheap and easy to find, unfortunately it is the cause of many environmental problems as well as health risks and safety issues for animals and humans.

They surveyed 158 Molokai residents and when asked if single use polystyrene should be banned in Hawaii, 27 percent said they strongly agree, and 23 percent said that they agree for a total of 50 percent agreeing to a ban. While 40 percent

disagreed and 40 percent strongly disagreeing, and 6 percent remained neutral. We concluded that most of our sampling on Molokai residents surveyed and agreed or strongly agreed with the ban of single use polystyrene.

One of the reasons for disagreement to a ban is because polystyrene is cheap versus the cost of an alternative product. I was interested in finding out the difference in cost and did some research and found that currently there is a twenty cents difference in price. In my opinion, a very small price to pay in a long run for the increased benefits of a healthier and safer environment.

I urge you to pass Bill 127. This will put Maui County in the lead, committing to keeping Hawaii safe and healthy, safe and healthier for residents, visitors, plants and animals, mauka to makai. Hawaii will join the ranks of numerous counties and states that have taken serious action to eliminate and reduce the dangers of polystyrene to the environment and human.

Mahalo in advance for your vote to pass Bill 27 *[sic]* and mahalo for your time and attention.

CHAIR WHITE: Thank you, Mr. Kahinu. Is there a need for clarification?

COUNTY CLERK: Molokai, should there be any additional testifiers, we'll--

CHAIR WHITE: Wait, hold on just a second, Mr. Clerk.

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Thank you, Chair. I wonder if the last two testifiers Kamaka and Michael Kahinu, it looks like, sounded like they were reading from their scrip. I wonder if they could submit it, it was sometimes hard or garbled when it came through. So I wondered if they might submit written testimony.

CHAIR WHITE: Mr. Clerk, why don't you check with Molokai.

COUNCILMEMBER SUGIMURA: Curious, or interested in what they--

COUNTY CLERK: Molokai Office, Ms. Alcon, the last two testifiers, Member Sugimura requests copies of their testimony. Would that be available.

MS. ALCON: Yes, they, they do have, they are students from Akaula and we have just one more student, if he can testify and they can get back to school.

COUNTY CLERK: Thank you, go ahead.

CHAIR WHITE: And please send their written testimony by email.

MS. ALCON: Yes, they will.

CHAIR WHITE: Thank you.

MS. ALCON: Our next testifier is Peyton Gillespie.

MR. PEYTON GILLESPIE:

Good morning, Maui County Councilmembers. My name is Peyton Gillespie and I'm a eighth grader attending Akaula School. I am here today in support of Bill 127, which restricts the use and sale of polystyrene food service containers. I urge you to pass this bill to protect our environment and human life.

This year my classmates and I researched and surveyed the use and effects of polystyrene on the island of Molokai. We found that while polystyrene is convenient, it is dangerous not only to animals and our environment, but it's also dangerous to humans. We found alarming statistics about the impact on humans.

In the 1986 EPA National Human Adipose Tissue Survey, residues of styrene was found in 100 percent of all human fatty tissue tested in 1982 in America. Additionally, a survey by Foundation for Advancements in Science and Education also found human fatty tissue containing styrene residue with a frequency of 100 percent, 8 to 350 nanograms or grams of styrene were found in the tissue, which is one-third of levels known to cause neurotoxic symptoms.

After reading an education fact sheet published by the Foundations for Achievements and Science, we found that styrene attacks the central and peripheral human nervous systems. Long term exposure to small quantities of styrene can cause fatigue, nervousness, difficulty sleeping, low platelets, hemoglobin values, chromosomal and lymphatic abnormalities, and carcinogenic effects. Indeed disturbing and ominous data.

We know from our community survey that 49 percent of Molokai residents agreed to a ban of single use polystyrene products in Hawaii. When asked how they would be able to help with the ban, 25 percent said they would support a legislative ban, 24 percent said they would tell friends, 23 percent said they would talk to lawmakers, 14 percent said they would ask stores not to sell polystyrene, 5 percent said they

would not go to businesses that use polystyrene and would boycott businesses that use polystyrene.

Today, I am here on behalf of the 49 percent of Molokai residents that agree to a ban of polystyrene products in Hawaii. I urge you to pass Bill 127 and join the ranks of counties and states who are committed to protecting the health and welfare of the people and the fragile life on our planet. Thank you very much for your time and attention.

CHAIR WHITE: Thank you for your testimony.

Mr. Clerk.

COUNTY CLERK: Thank you, Molokai. Those, Mr. Chair, in the chamber we have 21 individuals who have signed up to provide testimony this morning. The first individual to provide testimony is Hannah Bernard, Executive Director, Wildlife Fund, to be followed by John Elkjer.

MS. HANNAH BERNARD, HAWAII WILDLIFE FUND:

Good morning, Council Chair, Members. Mahalo for this opportunity to testify. Thank you so much for hearing this bill. And man, is that a tough act to follow, hearing from our kids.

I was going to say there is a lot of science and you'll hear a lot about it later with the panel speakers including one of the representatives who's a Hawaii Wildlife Fund staff member, Megan Lamson and the head of our Marine Debris Recovery Program on Hawaii island and also our Vice-President. But you heard so much already this morning from our kids, so impressive.

The truth is, and let me, do I to say my name again, Hannah Bernard, Hawaii Wildlife Fund, I'm speaking on behalf of Hawaii Wildlife Fund. But . . . Megan Lamson later on the panel. But the truth is, that what we hear from our kids themselves is that when we did things originally, we were trying to save money with our polystyrene and using this for our plate lunch containers. But when we, we know better, when we know things are bad for the environment, we do better. We try to anyway. Don't we.

So that's the whole reason behind Earth Day, which we just celebrated and had massive festivals all over the place, all over the U.S. Mainland, and here. And it's because there was an epidemic, a problem that was occurring in the sixties, and it was known as the "Silent Spring". The "Silent Spring" is a term that was referred to

by Fish and Wildlife Service scientists, who discovered that DDT was being used by the birds in their eggshells, who were laying eggs and it was actually causing them to crush their own eggs when they sat on their nests. So we learned, okay, DDT, not good, let's take it out of the system.

They use to use it here. I know most of you were too young to remember, but there was a time when people ran behind the trucks spraying DDT on the fields and some of them, like Rell Sunn, one of our most famous surfers is no longer with us partly because of her contraction of cancer. So exposure to carcinogens and toxins that polystyrene can hold, and that can actually hold like a sponge, and then pass to us up the food chain.

What I have here is a piece of foam or polystyrene, that has gooseneck barnacles growing on it, found on one of the beaches of Hawaii, but we have them here on Maui, by Megan. And she will tell you more about this in a few minutes. But this becomes a FAD, or a Fish Aggregating Device, so organisms colonize it, fish come around it, feed on it and so do birds, and so do turtles.

And so, and in closing, what we know is that there is something we can do to begin to address this problem. It's a start, just like the bag ban that Maui led the way on, was a start in helping to reduce plastic debris in our oceans, on our roads, in our beaches. So I am so supportive of this bill, of passing 127 and I thank you in advance for your wisdom and your leadership in taking care of Maui and keeping Maui No Ka Oi. Mahalo.

CHAIR WHITE: Thank you very much. Members, any need for clarification?

COUNCILMEMBER COCHRAN: Chair.

CHAIR WHITE: Ms. Cochran.

COUNCILMEMBER COCHRAN: Ms. Bernard.

CHAIR WHITE: Ms. Bernard.

COUNCILMEMBER COCHRAN: Thanks. Mahalo for being here and thank you for sharing. That piece of Styrofoam in your hand, how was that created? Do you know.

MS. BERNARD: It may have been created locally, it could have been created on Oahu, it could have come from far, far away. It was at sea long enough, for months to go by, could have even been at sea for years for all we know. So, it's hard to say exactly,

but this is an example, it happens with the foam that floats, that gets blown out to sea or is dumped overboard, or was dumped overboard accidentally or on purpose.

CHAIR WHITE: Thank you, Ms. Cochran.

Mr. Clerk.

COUNTY CLERK: The next testifier is John Elkjer, owner, Sustainable Island Products, to be followed by Magdalena Carey.

MR. JOHN ELKJER, SUSTAINABLE ISLAND PRODUCTS:

Good morning, everyone.

CHAIR WHITE: Good morning.

MR. ELKJER: My name is John Elkjer. I'm here in support of Bill 127. My company is called Sustainable Island Products, we are distributors of compostable packaging for the food service industry. That's all we do. We cover all the islands, we do quite a bit of business here on Maui and Molokai. It's great to hear the kids. Wish I was that smart when I was in eighth grade.

I wanted to touch base on the, the position of the industry right now. Petroleum prices have increased as you probably know. While it's not, hasn't been substantial, it's been enough. And when I say enough, it's been enough for the plastic side of our industry to make increases in their costs in the recent quarter, and really the first six months of this year. They were announced in January, and most everything that's made out of petroleum has gone up, is gone or going up between five and twenty percent, somewhere in there. Depends on the product, depends on the manufacturer, variety of different products. It's a huge industry, by the way.

We have not increased our costs in a couple years. The products that the, the agricultural byproducts that are used in our industry stayed more stable, if you will. So, what's happened is we've seen those costs come more into line. And I know in the bill it says 40 percent more is, is too much. Well, we have literally found that we're in some cases actually less. Which really surprised me. But we're closer. And it's getting closer year after year after year.

You will find, and you may have already heard a number of the restauranteurs here that find it not a detriment. And it's going to get less of a detriment. In addition, we live on islands and if we have a solid waste issue. We also have Zero Waste

Initiatives. We have the Aloha Challenge and we have things that have been initiated by government that we're not executing on. I'm a businessman, you have to execute, you have to do what you say you're going to do otherwise you're not going to be in business for very long.

I urge you to execute on the Aloha Challenge, on Zero Waste Initiatives. This is the beginning. Composting will come, other alternatives will come. It will happen, but it starts here. Thank you.

CHAIR WHITE: Thank you very much, Mr. Elkjer.

COUNCILMEMBER KING: Chair.

CHAIR WHITE: Yes, Ms. King.

COUNCILMEMBER KING: Thank you for being here. I don't know if you've seen this, we've got on our desks a transmittal from Josiah Nishita and its a, it's a comparison of compostable versus polystyrene materials for some things like the clamshell, those kinds of containers. And it's, the quantities in here anywhere from 50 to a thousand. The thousand quantity being the lowest differential is like one to four cents.

If you were to, as a, as a provider of these materials, if you were to bring them in in much larger quantities, because we had so many more, you know, if we get so many more restaurants providing them, does that affect the cost, will that, will that drop the cost down even lower than what's in this report?

MR. ELKJER: Great question, great question. I have not seen that, but that's what we do and that's what's happening right now. And, and, when you look at a cost comparison, so, in business, in general, the more you buy the better the price you get right. I mean that's--

COUNCILMEMBER KING: Right.

MR. ELKJER: --how it works. So, in many case, and, and in what we sell, there are different value points, and I call them value points because there's different weights of product. So if you compare a weight of product of a compostable item to the similar weight in a polystyrene as far as it's rigidity, those costs become much closer. But many of the cost comparisons that, at least that I've seen, specifically in, in government, are the cheapest one of this to the most expensive one of this. That's, it's, it's, yes, as, as more happens, as this becomes more prevalent in the Hawaii market, I'm confident that the cost will become more comparable or come down.

Now, we don't manufacture, so I don't want to, there's no promises, right. But, that assumption is correct on your part, I would say.

COUNCILMEMBER KING: Okay, so if we, I mean I would love to see a comparison of those higher quantities and what the differential per unit would be if, if you, if you so choose to do something like that, that would be awesome.

MR. ELKJER: Sure.

COUNCILMEMBER KING: Thank you.

MR. ELKJER: You're welcome.

COUNCILMEMBER KING: Thank you, Chair.

CHAIR WHITE: Any other request? Thank you very much for being here this morning.

MR. ELKJER: Thank you.

CHAIR WHITE: Mr. Clerk.

COUNTY CLERK: The next testifier is Magdalena Carey, to be followed by Kahili Pacarro.

MS. MAGDALENA CAREY:

Aloha, my name is Magdalena Carey. I work with Hawaii Wildlife Fund, I'm the coordinator, very deeply on Maui. I'm here to supporting the Bill 127. I see, my job is to clean up and take care of the aina, the community and I want this to be stopped for this generation. So I from Tahiti, I've been here 15 years and I hope with your help they can understand their job what people doing for long time just supporting.

I'm also supporting Hookipa, with the protection for the honu. So I see the polystyrene everywhere in the ocean, trash, public and what we can do for this big issue over . . . is to supporting those people doing the time too. Mahalo.

CHAIR WHITE: Thank you for being here this morning. Members, any need for clarification?

MS. CAREY: Thank you.

CHAIR WHITE: If not, thank you.

Mr. Clerk.

COUNTY CLERK: The next testifier is Kahili Pacarro, to be followed by Marilyn Jorgensen.

MR. KAHI PACARRO:

Aloha, Chair and Maui County Council. My name is Kahi Pacarro from Sustainable Coastlines Hawaii. I actually flew over here from Oahu this morning as a, to kind of to kill two birds with one stone and it's totally related because there is a giant pile of trash that's been collected by dozens, actually hundreds of volunteers, some of them in this room right now, on the beach at Kaehu. And we're going to be going through that, and try to pull out what we know as recyclable. But why it's related is a lot of that debris that's washing up is polystyrene.

And we in Hawaii kind of need to lead by example. It's really hard for us to point at the people that are dumping into the oceans, and a lot of the debris we're finding is from Japan, China, Taiwan, Philippines, Continental United States, even Canada. Even some stuff from Central America. So for us to point the fingers at them to tell them hey stop dumping, stop using Styrofoam, stop using single use plastics, yet we here in paradise, in Hawaii are openly using it. Using a ton of it. It's a little difficult. It's like calling the kettle black.

So this is our opportunity, especially Maui County to lead again because Honolulu is not going to do it. We urge you to pass Bill 127 and also wanted to just speak to the cultural side of the plate lunch. When I grew up, I use to eat a lot at this place called Grace's and Rainbow Drive-In and all the others. They weren't using Styrofoam so much, and some of them weren't even using it yet, and some of them still don't use it today. They're using a cardboard box with a plate, paper plate inside. And before that, you know, we weren't, we were using, our, our ancestors were using t-leaves. They were using, you know, tapa. We were not using Styrofoam. So, having Styrofoam be a part of our culture is a misnomer. I think it's a, a sad excuse. And our true culture is malama pono. And that's where we should be focusing on. So thank you for your time and I urge you to support Bill 127.

CHAIR WHITE: Thank you, Mr. Pacarro. I'd just like to, I didn't mention anything earlier, but because we have people on both sides of the issue, the Chair will not allow clapping or responding by any member in the chamber. We're all happy you're here, but we want everyone coming up to testify to feel very comfortable and that their

views are being heard by all of us, all the Members on an equal basis. So, please refrain from clapping or hooting and hollering, I haven't heard any of that yet, but. Thank you very much. Thank you for being here.

Members, any need for clarification of Mr. Pacarro's testimony? Thank you for coming.

Mr. Clerk.

COUNTY CLERK: The next testifier is Marilyn Jorgensen, to be followed by Chef CJ.

MS. MARILYN JORGENSEN:

Good morning. My name is Marilyn Jorgensen, owner of CJ's Deli and Diner in Kaanapali, Maui. And I am testifying against this premature Styrofoam ban. I'm not here to fight against protecting the environment. We all love Maui and want to do the right thing. I had some customers from Netherlands the other day that had heard about the Styrofoam ban and they were completely baffled. They said the Netherlands is closing all of their landfills, everything is either composted, incinerated, or recycled. I was intrigued by their comments so I did some research.

The European Union is a leader in trash solutions and is mandating all households recycle 50 percent of their trash and landfills will be eliminated by 2020. Their governments are leading by promoting beneficial behaviors, not focusing and enforcing bans.

Switching from Styrofoam to biodegradable or compostable containers is not going to solve Maui's landfill or waste management problems. Everyone here is saying we have a trash problem. That's what we need to address. These alternative products will not decompose in a landlocked landfill. It's an airlocked landfill, it's severely restricted. It says right on here, compostable, commercial facilities only, which may not exist in your area. Guess what, we don't have one on Maui. Why, we need one. This is what our emphasis should be on. Let's all work together, let's come up with a grassroots solution.

Right now, these are going in the landfill and they're not breaking down. There's been reports of pulling out newspapers from 50 years ago in the landfill and they're still readable. It does not break down in the landfill. So we're exchanging expensive, more expensive products and we still have a trash problem. A compost is an oxygen filled soil that has microorganism that will break it down. Right now, everything is going in the landfill. We need to come up with a solution for the landfill.

We need better recycling programs on the island. I was so dismayed when I read in the Maui News a few weeks ago that the Council had decided to take recycling out of the budget. The Mayor had put it in, you took it out. What kind of message does this send to your Maui residents? We only care about the environment when it doesn't cost us any money.

Passing the Styrofoam ban is not sustainable. All the economic burden is being placed on the food service industry. Maui's trash solutions need to be a collaboration between the businesses, the government, and the community. We all need to work together, the environmentalist in the room, restauranteurs, business owners, and the Council. We need to design sustainable trash solutions for Maui. Let's focus on coming up with solutions, not bans. Thank you.

CHAIR WHITE: Thank you, Ms. Jorgensen. Members, any need for clarification?

COUNCILMEMBER KING: Chair, Chair.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Yeah, I just have two questions. One, are you aware that we are doing composting at the landfill, there's a co-composting operation.

MS. JORGENSEN: That's for green waste from, from what I understand. But--

COUNCILMEMBER KING: It includes paper and wood as well, but and also that we did, we did reinstate the three can plan if that's what you're referring to. But the question I have for you for, is it CJ's that you work for.

MS. JORGENSEN: Yes, my husband and I own it.

COUNCILMEMBER KING: Is your, is your defense of polystyrene have to do mostly with cost?

MS. JORGENSEN: Well the thing is everybody wants to do the right thing. If these were being composted properly, there's a misconception that, that because we use a compostable product, it's automatically breaking down. That's not true and I don't think the public understands that. There are certain procedures for this to be broken down and be compostable.

So to make the whole industry switch or, or ban a product, when we're not handling the replacement correctly is what I'm here testifying against. I want to come up with

a real solution. I don't feel like this ban is a real solution because you're just exchanging one trash for another trash.

COUNCILMEMBER KING: Okay, but you're, but what is, is your concern cost mostly. I mean, why if there, if both, if both are the same equal problem is your concern choosing Styrofoam over compostable cost.

MS. JORGENSEN: Right now this cost is about triple, but I want to come up with a solution for trash for Maui and I think that that's what I'd like to see everyone sitting here talking about. Instead of banning things, let's be leaders and come up with real solutions. Let's, let's build the composting station, let's have the composting bins and that's how we can really be a leader to the world.

COUNCILMEMBER KING: Thank you.

MS. JORGENSEN: Okay.

CHAIR WHITE: Any others, Members? If not, thank you very much for being here, Ms. Jorgensen.

Mr. Clerk.

COUNTY CLERK: The next testifier is Chef CJ, Christian Hugo Jorgensen. And following this testifier we will be accepting testimonies from Molokai.

MR. CHRISTIAN HUGO "CHEF CJ" JORGENSEN:

Aloha, good morning, Mike. Good morning, everybody.

CHAIR WHITE: You can move it up a little bit. There you go.

MR. JORGENSEN: Hard act to follow, that was my boss just speaking there. But any way, I am Christian Jorgensen and if you hear the accent it's because I'm from Denmark, small country up north that is one of the top three leaders in green, in waste, in energy, the list goes on. And right across the pond is a country called Sweden where everything is forbidden, and I'm here to testify about solutions and not band-aids.

And talking about food, it's the chicken and the egg thing. So, the restaurant we use all the Styrofoam, and the catering company that I run we use all the bamboo leaves, the everything, amazing green, fantastic product that is made from leaves falling off the trees right here in Maui. Now the restaurant is one thing, catering is another.

Now, it's the chicken and the egg. We need to line up our ducks, we need to do it step by step. Let's fix the curbside recycling, let's fix the landfill, let's get an incinerator now.

The Styrofoam is not forbidden in Denmark, in Norway, in Sweden, in Germany because it burns good, it burns and the burning is turned into energy. So, all this forbidden things we need to stop, we need to come up with solutions and not do forbidden things.

Now, nobody is going to vote against not being green in Maui. We are all for Maui No Ka Oi. Now let's do the right solution, step by step. This reminds me I did a, some googling and researching, but everybody remember the tin foil and the aluminum, can't even say it but people still come in today, can I get some tin foil to wrap my food and I'm saying, sorry that was forbidden about 27 years ago. But I got some aluminum foil, it's going to be the same thing. But let's fix the steps. Let's make Bill 128 which is going to be the next bill, which is going to be the recycling and then Bill 129 is going to be that their gone because nobody is going to be need to use it. Thank you very much.

CHAIR WHITE: Thank you, Chef. Members, any need for clarification? Thank you for being here this morning.

Mr. Clerk.

COUNTY CLERK: Molokai Office, introduce your next testifier, please.

MS. ALCON: Our next testifier is Walter Ritte.

MR. WALTER RITTE:

Aloha, my name is Walter Ritte from Molokai. First of all I support Akaula and the teaching that they doing with all of these kids testifying. I don't have half the information that they have. I want to congratulate them first. They're the ones that going hold the bag in the future so it's really important for us to get the political will to support people like Akaula and the . . . they represent.

I'm here to talk under the banner of Aloha Aina and the effects on our environment. And I'm also here to support this bill because I think it's pretty ridiculous for us to be using things that are detrimental to our health and to the environment. Whether they break down or not is not the issue for myself. I'm sure that it's just common sense

that we stop using toxic kinds of things when we are delivering food to our people. And stop using toxic kinds of things for any kind of a reason.

So I'm here to support the bill and I don't understand, I thought this bill was already passed, but I guess we're going through another process and I hope that the end result of this process is going to be the same result and we stop using Styrofoam. Aloha.

CHAIR WHITE: Thank you, Mr. Ritte. Any need for clarification, Members?

Mr. Clerk.

COUNTY CLERK: Ms. Alcon, could you introduce your next testifier, please.

MS. ALCON: Our next testifier is Loretta Ritte.

MS. LORETTA RITTE:

Aloha kakahiaka Councilmembers, staff. My name is Loretta Ritte from Molokai and I support, strongly support Bill 127. And I too say congratulations to the manao from the students of Akaula School and the support from their teachers and staff. There was a lot of information that I personally didn't know and so this is all good.

And my experiences with Styrofoam has been on the beaches, I remember walking on the beaches and cleaning up, and going I wish all these lawmakers and policymakers and makers of this product could be here on these beaches, helping us to pick up the tons and tons of Styrofoam that is left on the beaches by boats or people who kind of are like careless. So, I just think that this is a good bill to pass, Styrofoam that we're finding is not good for not only the people and, and the animals but also for our environment. So I strongly support this bill. Mahalo.

CHAIR WHITE: Thank you, Ms. Ritte. Members, any need for clarification?

Seeing none, Mr. Clerk.

COUNTY CLERK: Molokai, we'll take one more testifier at this time before returning back to the chamber, please.

MS. ALCON: Our next testifier is Fay Pacheco.

MS. FAY PACHECO:

Good morning, Councilmembers. My name is Fay Pacheco from Molokai. I would like to speak on behalf of all God's beautiful creatures who do not have a voice and cannot speak for themselves. On behalf of them and myself, I would be in favor of Bill 127. Please stop listening to those big money companies who are concerned only to profit themselves. Mahalo.

CHAIR WHITE: Thank you.

Mr. Clerk.

COUNTY CLERK: Thank you, Molokai. The next testifier in the chamber is Tim Lara, to be followed by Barbara Fernandez. Tim Lara, Chair, Democratic Party of Maui.

MR. TIM LARA:

Thank you, Chair White, and Councilmembers. I want to start off by reading, I submitted this in writing for you guys too, it's a letter from the Democratic Party of Hawaii, the Legislative Affairs Committee. And the main take away is that we are in support of this, this was a legislative priority for 2017 for the state of, party of, the Democratic Party. Also on Maui County, I stand in support of this as well.

I was actually part of the task group that took this on under Mike Victorino and I just wanted to point out that this was passed unanimously last year in front of this, in front of the Council and I thought what the intent was was just to make sure that there wouldn't be a lawsuit if we passed this. And that information came back stating that there would, that could not be a lawsuit for banning a product as long as it was for environmental and health reasons. So, again, just want to point out that this did pass unanimously in front of the Maui County Council and that we were just addressing that issue. So I hope that, or I applaud you guys for passing that again this year.

CHAIR WHITE: Thank you, Mr. Lara. Any need for clarification? Seeing none, thanks for being here.

Mr. Clerk.

COUNTY CLERK: Next testifier in the chamber is Barbara Fernandez, to be followed by Joy Gold.

MS. BARBARA FERNANDEZ:

Aloha.

CHAIR WHITE: Good morning.

MS. FERNANDEZ: Mr. White and Council folks. Nice to see you all smiling again. And right on Molokai. I just, family over there and stuff.

Aloha, I'm Barbara Halai Fernandez from Waiakoa, Kula. I'm testifying in behalf of favoring Bill 127. We all know how much it's changed, but still know that our Maui County is No Ka Oi. Is still a special place and all its residents want to keep it environmentally pono.

I am at places that now have gone to non-polystyrene, on the to go stuff, at restaurants. When we go to certain places that we still kind of know, don't give you an option, we still ask the waitress, oh do you, are you still using Styrofoam to go? And the waitress is kind of almost embarrassed and says, oh, no, we still haven't done it yet. So, this is what, no matter what the restaurant is, is that we bring our own containers and it's not like before where people would think you're a bunch of dirt baggers or something. We bring our containers. And, there is no problem in the nicest restaurants. So I encourage folks to do that for now and you are seeing this more and more. So, no shame, just do it, please.

Costco, more and more folks, especially young families, you see them wondering out now, non-polystyrene. So I'm happy about that. So mahalo to take this step to eliminate the single use polystyrene or foodware, which so many of us, you know a lot of people don't know, Styrofoam is a brand name, so you got to use it here and there. So, whatever is decided on this, the bottom line is, is just aole. Thank you for your concerns.

CHAIR WHITE: Thank you, Ms. Fernandez. Members, any need for clarification? Seeing none, thank you for being here this morning.

Mr. Clerk.

COUNTY CLERK: Next testifier in the chamber is Joy Gold, consultant, KYD, Inc., Dexter Yamada, to be followed by Marjorie Bonar.

MS. JOY GOLD, KYD, INC.:

I have to put my glasses on. Chair White, Members of the Council. I am Joy Gold and as explained consultant to KYD, Dexter Yamada.

And, in past testimony, we have addressed misinformation about health and safety of food-grade polystyrene containers, and provided cost comparisons to compostable containers, which will impact local businesses and ultimately the consumer.

Today, we call your attention to ocean debris, and the presence of PS foam containers compared to Styrofoam a DOW trademark product used for insulation, packaging and other industrial uses. The first testifier held up a chunk of Styrofoam, that is a DOW agro-product, not the food-grade polystyrene food container. It is ironic that the proposed ban bill exempts coolers, ice chests, packing material, when these product fragments, which also include debris from marine floatation devices, are more readily found in coastal areas.

And if you look at the testimony, there is a Pacific Beach Coalition photo of a beach strewn with Styrofoam. Again, that sample product the first testifier presented.

NOAA states that the five most common items found during the International Coastal Cleanups are: plastic cigarette butts, food wrappers, plastic beverage bottles, plastic bottle caps, plastic straws, and drink stirrers.

A recent Ocean Conservancy study based on three decades of international coastal clean-up efforts found fishing related 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 threat for ingestion.

Locally, the composition of ocean debris is similar with NOAA's most common items. Anecdotal testimony from a Big Island marine biologist said that 25 – 89 percent 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 one percent of the debris.

A ban that singles out food-grade EPS food containers does little to reduce litter or ocean debris harmful to marine life and environment.

And in closing, rather than impose a discriminating ban on only polystyrene food service containers and mandate the use of an alternative product, the County of Maui is urged to focus on the cause of ocean debris, much of it from land-based origins.

Better litter management was a unifying recommendation from the Maui Task Force. Thank you.

CHAIR WHITE: Thank you very much, Ms. Gold. Members, any need for clarification?

COUNCILMEMBER COCHRAN: Chair.

CHAIR WHITE: Ms. Cochran.

COUNCILMEMBER COCHRAN: Thank you. Do you have the, that price, price sheet, price list that you could hand over to us.

MS. GOLD: Yes, I can resubmit it.

COUNCILMEMBER COCHRAN: Okay, good, thank you.

MS. GOLD: Thank you.

CHAIR WHITE: Okay, any others?

Seeing none, Mr. Clerk.

COUNTY CLERK: Next testifier is Marjorie Bonar, to be followed by Jill Wirt.

MS. MARJORIE BONAR:

Is this a bribe, if I hand out lilikoi mochi. See this was a . . . way because--

CHAIR WHITE: Wait, we, we can't, you need to speak to the microphone.

MS. BONAR: I can't feed you--

CHAIR WHITE: I can't hear what you're saying.

MS. BONAR: Alright, what I'm saying is this, I'm Marge Bonar and I'll get to my testimony in just one second. But I was wondering if it was bribery because this is my lilikoi butter mochi.

CHAIR WHITE: Depends on how good it is.

MS. BONAR: It's very good. And besides that, these are the containers that CJ's is looking for. You've all, well no, the new Councilmembers haven't seen them. These are polypropylene, three-part container. These are the ones that are currently being used in Portland for their return, these are returnable, these are not a cheap product, but they've gone through a thousand commercial washings, not these particular ones, but in Portland, a thousand commercial washings. And this, my ideal is that this is what you're going to see. So I'll leave this, there's one for . . . but I do want those back later.

Marge Bonar from Pukalani, I am not really affiliated with anything, I was a member of the original Styrofoam task force, EPS elimination task force and the language has been mashed around a lot lately. However, if we had really been free to do our job, you wouldn't be here today because this would have been dealt with two years ago.

So, the distractions aside, I don't know, excuse me, find, maybe I won't find my testimony. You've all got it, you can read it. Because I'm always saying the very same thing, get rid of this stuff.

I can volunteer who may have been here more times in front of this County Council than anyone else simply talking about excess plastic in the environment. After about six years of advocacy with these particular problems, I'm pleased that you've not let this issue die. That you're willing to devote two days with presentations by academic experts, not just listening to industry lobbyists, to clarify questions about the role of plastic in our lifeblood, the marine environment. And this shows your sincerity in making sure that Maui is at the forefront of environmental responsibility.

While some of you were not in office at the first reading and vote for the original bill, others had questions about clauses adopted from existing legislation in other jurisdictions. I hope these panel members will be able to ease or give direction for ironing out your concerns.

The financial motivation of vendors and lobbyists from places other than Maui had caused distractions that slowed the initial committee. Now that those interests, no matter how green, are easily identified, you can move forward with your effort to do the best for our County.

It's time for me to stop being the old lady volunteer to advance the cause ad nauseam. I ask that you listen to all the younger volunteers here. They are willing to help you in preserving their future. Make use of their passion for Maui and the environment. We all benefit. That's all.

CHAIR WHITE: Thank you very much. Members, any need for clarification?

COUNCILMEMBER KING: I have a question.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Thank you, Chair. Just, because I know you've been working on this a long time Marge. Do you have examples of other communities that have passed this and, you know, gone through the years of having passed it.

MS. BONAR: There are about a hundred in California alone. Most of the State of Washington, even D.C. has, New York City now has. You do have in your packets some place, list, it's just a huge number because no matter how much we want to believe that there is another way to deal with it, the only way to clean up the environment is by not dirtying it up to begin with. And that's where we are looking.

Including one of the most interesting things is of course the entire country of France, will not be using any single use plastics after, I believe July this year. That was legislated last year and of course that's because everything tastes better if it's off of a natural product. We are talking the French.

COUNCILMEMBER KING: Okay, merci beaucoup.

CHAIR WHITE: Any others? Thank you for being here this morning, Ms. Bonar.

Mr. Clerk.

COUNTY CLERK: Next testifier is Jill Wirt. And following Ms. Wirt, we will be accepting testimony from Molokai.

MS. JILL WIRT:

Okay, hello. My name is Jill Wirt and I am a conservationist, I, I love everything conservation and I think that this is a great bill to pass to support more conservation, especially here on Maui.

I just spent the last two years working on the ocean, pretty much five days a week, and there is nothing worse than pulling into Molokini, you have 130 people from all over the world coming to experience the beautiful little spot in the middle of the Pacific Ocean and then you pull in after a couple days of really strong trade winds and there's patches of floating garbage inside Molokini.

One day we picked up a gas can that had travelled from Japan. There was Japanese writing on it. And my point being plastic products don't break down, they never go away, and they're staying in our ocean forever. They break down into tinier and tinier pieces of plastic, which are really good at harboring toxic chemicals like DDT and PCB's. And polystyrene cannot be recycled after its used with food.

As a consumer, if I were to walk into a restaurant and the restaurant provided compostable containers, I would be more inclined to return to that restaurant because I feel better purchasing their product and it shows to me that that business cares about Maui's environmental health.

Styrene is not only bad for our environment, but also anticipated to be a human carcinogen. When styrene interacts with hot foods, and yes, that includes our Styrofoam coffee cups, the styrene can leach out of the container and into the food.

Maui County needs to be a leader in environmental policy for the State of Hawaii. By passing this ban, we will be role models and show other counties that it's possible like 80 others have done before us. Being environmentally friendly isn't hard, but it can be when you have million dollar plastic corporations controlling everything.

Please vote yes to ban polystyrene food containers in Maui County. Thank you.

CHAIR WHITE: Thank you, Ms. Wirt.

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Thank you for your passion. I have a question. At Molokini, when you found that debris, you mentioned a, sounds like a plastic gas can or container, I guess, it's not a can, which came from the orient or Japan.

MS WIRT: Yes.

COUNCILMEMBER SUGIMURA: And did you find any polystyrene there?

MS. WIRT: Yes, we do find polystyrene there.

COUNCILMEMBER SUGIMURA: Versus Styrofoam, polystyrene.

MS. WIRT: Polystyrene, yeah. We've found little, like blue pieces and white pieces from food containers in Molokini.

COUNCILMEMBER SUGIMURA: Thank you.

CHAIR WHITE: Anyone else. Thank you very much for being here this morning.

Mr. Clerk.

COUNTY CLERK: Molokai District Office, introduce your next testifier.

MS. ALCON: Our next testifier is Keani Rawlins-Fernandez.

MS. KEANI RAWLINS-FERNANDEZ:

Aloha and good morning, Honorable Chair and Councilmembers. Mahalo for this opportunity to testify in strong support of Bill 127. My name is Keani Rawlins-Fernandez and I am from Molokai. The last time I testified before the Council on this measure I talked about the importance of being a voice for those who cannot come to testify here, such as the land, the ocean, the marine and avian life, and the future generations that will be left to clean-up the mess that our generation made.

Polystyrene will not break down in my lifetime nor my children's lifetime. It makes no sense why we would continue to use materials that does not decompose for one meal. This County banned plastic grocery bags with similar intent in mind. I understand that the argument against passing this necessary policy is around the cost and reliability of the alternative. The cost of these alternatives may be a bit more but when given the option, I have as so many others have chosen to pay more for the compostable alternative, instead of the polystyrene containers knowing that my choice of purchasing a container that will be used for this one purpose will not be hanging out wreaking havoc on the environment is worth the additional cost.

Furthermore, if that restaurant offered a fiber-based container, I would return to that restaurant because of their responsibility to the environment. I can speak to the reliabilities from my own experience using these alternative containers. These containers that I've used have never leaked from the bottom, and, even after leaving it in the frig for a couple of days.

Our home is surrounded by an ocean. While I agree that this bill is not a fix all for trash management, it is a step in the right direction. I'll close with a sentiment shared by a testifier before, let's be part of the solution, not continue to be a contributor of the problem. Mahalo.

CHAIR WHITE: Thank you, Ms. Fernandez. Members, any need for clarification.

Mr. Clerk.

COUNTY CLERK: Ms. Alcon, could, could you identify the next testifier.

MS. ALCON: Our next testifier is Makena Fernandez.

MR. MAKENA FERNANDEZ:

Aloha. My name is Makena Fernandez and I'm a resident here on Molokai. I am in support of Bill 127. . . . also polystyrene is non-biodegradable and unrecyclable. As a paddler for the past 15 years paddling around the Hawaiian Islands, I've noticed many Styrofoam trash amongst all the islands throughout the waters and on shorelines. We are trashing our waters and our shorelines, which we don't need to do and if we stop it, stop our trash from happening, there will be no trash. Mahalo.

CHAIR WHITE: Thank you, Mr. Fernandez.

Mr. Clerk.

COUNTY CLERK: Ms. Alcon, introduce your next testifier, please.

MS. ALCON: Our next testifier is Liko Wallace.

MS. LIKO WALLACE:

Good morning, County Council. My name is Liko Wallace, and I would like to say that I'm in strong favor of Bill 127 banning polystyrene. It is used as a single use container and I know there are other options that would be better for our environment. We just recently had our nature, the Nature Conservancy Earth Day which as a booth, as a vendor there we were required to use, how do we say that, recyclable type of material instead of polystyrene. And they also provided us with recyclable type of utensils, which I know is just a start, but everybody stayed with it.

I know the cost right now is a little bit more to a lot of the food establishments, but I think it's well worth it. The effects of, on the people and the animals, to the debris that is found on shorelines, in the ocean, in the mountains, a lot of them just blow all over the place. They are light and you can find them everywhere. And the animals in

some, some instances don't even know the difference between food and non-food and they will ingest it.

I was so happy to hear a lot of the information that our Akaula students had come and shared with us. It brought in my thinking and I appreciate that and I would like our public schools to get more involved in this also.

I appreciated the idea that one of the wahine who came before and talked about it not being the solution. That we can come up with better solutions in time with other ways of getting rid of the waste that we do have. But I think this is a good start by banning this polystyrene food containers and beginning there. Anyway, I thank you also, ahead of time for approving this bill. Mahalo.

CHAIR WHITE: Thank you, Ms. Wallace. Seeing no need for clarification.

Mr. Clerk.

COUNTY CLERK: Molokai, we'll be returning back to you in a few minutes. In the chamber the next testifier is Mike Moran, President, Kihei Community Association, to be followed by Gretchen Losano.

MR. MIKE MORAN, KIHEI COMMUNITY ASSOCIATION:

Good morning, Chair White and Councilmembers. Mike Moran, for the Kihei Community Association. We are dedicated to protecting, sustaining, and enhancing our aina, kai, and ohana.

First I'd like to remind everyone what we did, we looked at what the title was on the, on the agenda and it says "A BILL FOR AN ORDINANCE ESTABLISHING A NEW CHAPTER 20.26, MAUI COUNTY CODE, RESTRICTING THE USE AND SALE OF POLYSTYRENE FOOD SERVICE CONTAINERS". So we don't see the word ban anywhere and sometimes we get misled and we misconstrue things.

And I go back to the mentioned plastic reduction bill, which was passed here several years ago. It was often called the ban bag. And then others would say well no, you're not banning all the bags, you're, you're taking a positive step in the right direction. And that's what we see that you're trying to do today, take a positive step in the right direction.

Now it's not a hundred percent solution, it's not going to clear up everything. I don't think anything clears up everything. So we're taking one more positive step in the right direction. We, unfortunately we see in our Federal government a, a striving toward anti-science where, we're told to go with counter factual thinking instead of reasonable science. Try and get people to base their decisions on ignorance, superstition, hearsay, and fear, instead of science. And we hear it from our youth, we advocate for STEM, the "S" in STEM is "Science".

Our Maui News this morning talks about Molokai Robotics. Boy Molokai has been knocking Maui down today, they're taking over. But all, looking at reasonable scientific evidence, which I'm sure is what your, you guys will make your decisions on in this chamber, not all these other points.

And we've come to many hearings on this from over the years as many others have and the, I think the prime naysayers that we hear is it's going to hurt small local businesses and yet you've heard the testimonies that I've heard from many of these small local businesses who are saying we are for this. We don't want these people saying we're against it, we're for it, we're for doing the right thing. And I'm sure you people are here this morning as well. Thank you very much for the opportunity.

CHAIR WHITE: Thank you, Mr. Moran. Any need for clarification. Thanks for being here this morning.

Mr. Clerk.

COUNTY CLERK: The next testifier is Gretchen Losano, to be followed by Kaliko Teruya.

MS. GRETCHEN LOSANO:

Aloha, my name is Gretchen Losano and I've been here, you've heard me, a lot of times trying to, trying to say, say it in a different way so that maybe, you know, my point gets across a little bit differently but sticks a little bit better. I have been giving testimony in support of this bill since before I was pregnant with her. So, and she's almost seven. So I think it's about time that we pass this.

But, I did want to talk about a couple things that I think are really important for moving towards the future and CJ brought this up as well and it's really important, you know, the concept of what comes first, the chicken or the egg. And I feel the exact same way, and I felt the exact same way, for a long time.

And I'm happy to announce that we are going to be opening West Maui GreenPost, which is a commercial food waste and green waste composter. And our goal is to be in operation by October of this year. We will be accepting food waste, we'll be accepting compostable food service ware. I know because I'm, I'm the head of the composting operations.

And it's probably the most exciting thing that's ever happened in my life besides my children, which you have heard in the Council chambers. But, you know, they, they really are the reason why we do this. And, we'll be partnering with different restaurants, we'll be doing a pickup for their compostable products and we're going to be producing a great compost, great resource. We're going to be using an anaerobic digester. We'll be doing a couple different methods of composting because there's a lot of different things, obviously, that you can use it for and.

So we'll be turning all of the, all of these valuable resources back into what they belong, and that is actually why it is really important that we pass this ban because we're, we don't want to be wasting these resources now and it's silly. I mean, we're on an island in the middle of Pacific and actually after this ban does pass, in the future, what we really need to do is to ban all of the single use plastics that we cannot either recycle or compost because our recycling program on Maui is very, very limited. We can't recycle #5, we can't recycle #6 and we can only recycle 1's and 2's that have necks. So any of the 1's and 2's that are, that are clamshells, we can also not recycle those.

So if we remove all of those out of the waste stream, we'll have a lot less trash to even deal with in the first place. And we'll be able to be a leader for other small communities around the world. So thank you very much.

CHAIR WHITE: Thank you very much for being here this morning.

Ms. Cochran.

COUNCILMEMBER COCHRAN: Chair. Thank you. Thank you, Gretchen for being here and speaking on the restricting the use and sale of polystyrene service containers.

MS. LOSANO: Yeah.

COUNCILMEMBER COCHRAN: Bans, but anyways, I just wanted to know where abouts are you doing this composting facility.

MS. LOSANO: Um, we have a couple of different spots that we have been looking at. But it's going to be on the west side from, in between Lahaina and Napili. Really, there's a couple of different spots, there's one area that might be temporary for about five years, which I am actually kind of, I would rather have obviously a permanent operation out there. We'll only be leasing the land so moving it is an option, but I'm, I'm the one in the group who's like let's not do that, let's wait until we have the perfect spot. So, but it's right around the corner. It's, it's happening. We've been working on it for the last two years, so, that's actually one of the, the last things we're, there's a ton of land so, we're going to find it, it's going to be perfect.

COUNCILMEMBER KING: Chair.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Thank you. Thank you, Gretchen. I'm glad you introduced your daughter up there because I remember seeing you pregnant not too long ago and I didn't realize you had two children, so I was wondering what happened. How did she get so big so fast.

But, no I wanted to ask you is, this is, this is a private enterprise you're talking about for the composting.

MS. LOSANO: It is. It's a private, it's not a, it's not a non-profit, just cause I think it's probably harder. I'm sure we're not going to be making very much money because that's not really the goal of the commercial composting operation. But, it's, it's going to be private.

So actually, we, I did just talk to CJ about this cause we are looking for partners and investors, and whatnot, but we have lots of, lots of people interested. Every restaurant that I talk to about this because I also am one of the people who certifies for ocean friendly restaurants, so whenever I go in to certify, I tell them about this project because almost everybody thinks like this, you know. The chicken and the egg concept. People are really aware, which is awesome. And I'm really happy to be able to share this project with people and they all want to be partners and they all want to support it cause it's like, it's, it's great, it's yeah.

COUNCILMEMBER KING: That's great, I hope you don't turn into a non-profit, I hope you actually do make some profit off of the . . . I know those early years are hard. Are you getting good cooperation from the County?

MS. LOSANO: Um, we--

COUNCILMEMBER KING: Or any cooperation?

MS. LOSANO: Well, we had a little, I mean, yes and no. I, I think that the last time we spoke to the County about this was last year and we modified the concept of our operation and I think, I mean it fits right into what the County does require for a commercial composting operation now that we are adding an anaerobic digester. So, I don't anticipate too much of a hiccup from the County. We are aware of all the things that need to happen. The people who I'm working with are very much by the book and, you know, they do all the research and stuff. I'm more of, you know, the, the--

COUNCILMEMBER KING: The visionary--

MS. LOSANO: So, lucky for all of us that we have them. So, we're just going to follow the regulations that we need to and, and do what we need to get it done because it needs to happen. It's, it's, it's 2017, it should have happened about, I don't know, 30 years ago.

COUNCILMEMBER KING: But thank you for your, for being here and thank you for stepping out and doing this because, and I wanted to also say that there's no perfect spot, so don't wait for that because you're, you think you have the perfect spot and 20 years later you're asked to leave--

MS. LOSANO: Right, true.

COUNCILMEMBER KING: --coming from personal experience. So, so I'm glad you're forging ahead. Thank you.

MS. LOSANO: Thank you.

CHAIR WHITE: Any further clarification? Thank you very much for being here this morning.

MS. LOSANO: My pleasure.

So, my daughter is going to testify. But, is, there's no way to take this off right, this is fixed.

CHAIR WHITE: Staff, could you provide her the microphone.

MS. LOSANO: Oh, perfect. Thank you.

CHAIR WHITE: She can come over to the, where she can reach the microphone.

MISS KALIKO TERUYA:

Aloha. Ou Kalikookalani Teruya kou inoa. I want to ban Styrofoam because it's, I want to, I want to restrict Styrofoam because it's a good thing to do and it helps the earth get healthier and healthier for all of us to live. And, why I want to ban Styrofoam is because it makes lots of pollution and the more it makes pollution the more the earth will die and then when, if it dies too much, we could die too. And, it's really important to me and that's why I wanted to come to share what I, my aloha and, in my heart to the world today. Holomua kakou apau.

CHAIR WHITE: Thank you very much. Good job.

Okay, Mr. Clerk, next testifier.

COUNTY CLERK: Next testifier is Kaliko Teruya.

MS. LOSANO: That was her.

(Councilmember Atay was excused from the meeting at 10:18 a.m.)

COUNTY CLERK: Oh, thank you. Next testifier is Lloyd Johnson. Following Mr. Johnson, we will be going back to Molokai for testimony.

MR. LLOYD JOHNSON:

Good morning. My name is Lloyd Johnson, I do a lot of diving here in Maui waters and I do a weekly cleanup with my dive club. And, I've heard a lot here from the restauranteurs and, and other speakers. And I've noted a few things besides the wildlife choking on this. I think we're talking a lot about composting this stuff and biodegrading this stuff and people aren't quite saying it right, but what happens when we fail to get into the landfill. Okay, what happens is that our wildlife encounters this stuff and they choke on it. Now when we look at these paper products that I'm understand, I hear just this morning that they cost three times as much, do the turtles choke on those, those paper products or do they just go through the digestive system?

Okay, so I'm obviously here to support this restriction on polystyrene and, well that's all I really have to say. Thank you.

CHAIR WHITE: Thank you, Mr. Johnson. I don't think there's a need for clarification. Thank you for being very precise.

Mr. Clerk.

COUNTY CLERK: Molokai Office, Ms. Alcon, please introduce your next testifier.

MS. ALCON: Our next testifier is Nani Kahinu.

MS. NANI KAHINU:

Aloha. My name is Nani Kahinu, mother of Michael Kahinu who testified from Akaula School earlier this morning. We live on the island of Molokai. I am here to support the passage of this Bill 127. The amount of rubbish created by one time use containers is overwhelming and in addition to seeing this bill pass, I would like to see a composting facility established on Molokai so that we may be able to compost one time use containers that are compostable.

As a food sale vendor, we choose to order our compostable and biodegradable containers from Sustainable Island Products. I find it difficult for customers who do not have large enough compost piles to compost them at home. Hawaii will benefit from the restriction of polystyrene food service containers and composting facilities on each island. In addition to the restrictions, more education on the harmful effects should be shared with the public as we see and hear firsthand, how some are not aware of how harmful it is on our environment. Thank you so much for your time and support in passing Bill 127. Aloha.

CHAIR WHITE: Thank you, Ms. Kahinu.

Mr. Clerk.

COUNTY CLERK: Ms. Alcon, could you introduce your next testifier.

MS. ALCON: There is no one else here on Molokai waiting to testify.

COUNTY CLERK: Thank you.

Next testifier in the chamber is Rob Parsons, Environmental Coordinator. And Mr. Parsons will be followed by Trinette Furtado.

MR. ROB PARSONS:

Good morning, Chair, Councilmembers. My name is Rob Parsons. I served two and a half years ago on the Polystyrene Task Force in my capacity as County Environmental Coordinator. Since then, I've worked with several task force members and others to advocate to restrict usage of expanded polystyrene foam food service containers, as over 100 cities and counties have done.

In terms of the Administration's position on this issue, I can report this. I met a couple months ago with Mayor Arakawa and task force member Gretchen Losano, who testified earlier, she's a board member of Styrophobia, a marketing rep. for World Centric compostable products, and as you heard a strong advocate of composting. The Mayor's primary concern for: 1) would the price of alternative products be an impediment to business owners; and 2) would the alternative products perform capably.

Gretchen brought a serving of hot soup to the meeting, and at the end of the half hour, she opened it. The soup was hot and the fiber-based container was good as new. We provided the Mayor with a comparative price sheet and also noted that any small increase could be more than compensated by a pass-through cost, as business owners have noted in previous testimony.

I have recommendations for you as you review this bill. First, I believe it is wise to insert the word "foam" into the title of the bill, to distinguish between hard polystyrene containers, a #6 plastic that may be more reusable and less problematic than polystyrene foam.

Secondly, I believe it is necessary to insert "prepared foods" in the prohibition section. We already have a definition of "prepared foods" in the definition section, and I believe the last draft by Corp. Counsel inadvertently missed adding "prepared foods" in the prohibition section. This helps clarify the discussion of whether shelf-stable, aseptically sealed products such as Cup-O-Noodles would be restricted under this bill.

Last December I was asked to submit scientific studies to illustrate the environmental and human health concerns with polystyrene, and I collected 35 studies which hopefully found their way into your binders. Thus, I'm a bit bewildered as to why we need a panel discussion on these topics today. I can understand bringing information to new Councilmembers, but, but speaking from task force experience, bringing in plastics industry advocates with a history of controverting the truth, serves only to polarize the issue rather than facilitate finding areas of agreement.

It would be a bit like inviting climate change deniers to the Paris Accord. In my mind, the discussion should not be about whether or not to pass a bill to restrict these items, but how to make the language effective and fair.

Nevertheless, I'm happy to see two local Hawaii girls on the panel, who collectively have a resume of removing and categorizing countless tons of marine debris from our beaches. Mahalo nui loa Megan and Cheryl for your dedicated efforts.

Finally, a previous draft of the bill, and I can finish in another sentence or two.

CHAIR WHITE: Please proceed.

MR. PARSON: Finally, a previous draft of the bill had a reference in the purpose section to Maui County Council General Plan, 6.1.2-Action 2, which says develop regulations, programs, funding opportunities, and/or incentives to among other things, discourage the use of slow degradable materials, e.g., Styrofoam. Restricting the use of this fossil-fuel based, single-use plastic is therefore consistent with our General Plan and makes sense from an overall sustainability perspective.

I do hope Council will help Maui County lead the way by polishing and passing the legislation before you today. Mahalo.

CHAIR WHITE: Thank you, Mr. Parsons.

Ms. Cochran.

COUNCILMEMBER COCHRAN: Mr. Parsons, thank you for being here. What you're saying, you see deletion or not in current form, are you saying that it was upon our passing back in 2016, and that what you see today isn't the same as what originally we voted on?

MR. PARSONS: There's been a few iterations of this bill. I believe that what is before you today is what you voted on, language looks the same as what your Committee voted

on and then passed it on to the full Council which voted both unanimously. So, yeah, it is consistent with the, with the last draft of the bill.

COUNCILMEMBER COCHRAN: Okay, well thank you for that clarification. And also the points that you did make just now in your testimony, has that been forwarded to us or can you forward it to us.

MR. PARSONS: I'll do that right now.

COUNCILMEMBER COCHRAN: Okay, great. Thank you, Chair.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Yes, I just wanted to clarify that, I think Mr. Parsons, you are asking that we add the phrase "for prepared foods" into the bill. Is that correct.

MR. PARSONS: Absolutely.

COUNCILMEMBER KING: Okay.

MR. PARSONS: And I sent that by memo to Councilmember Guzman last November. I may have sent it to Chair White as well. It may be somewhere in your binder but I know truthfully you have so much in your binder on this from the past few years of, of the bill. But it was Councilmember Guzman who brought up the question of importing something that's already in a polystyrene container and would it be banned under the current language. And I think that we could really simplify and clarify the language simply by adding "prepared foods" in the prohibition section.

COUNCILMEMBER KING: Okay, and then just, I just want to make it really clear because I do have some testimony from another person that says that the reason why it doesn't, if you put in prepared foods, then it would exempt things like the cup of noodles because you have to do something to them to make them edible, so they're not considered prepared.

MR. PARSONS: Absolutely.

COUNCILMEMBER KING: Okay, I just wanted to clarify that. And then so if, are you, the other, the other issue that I have in this testimony is, I think it touches on what you said is that it calls for, describing as polystyrene foam, and then (PSF), so that's the terminology that you're suggesting as well, or no.

MR. PARSONS: No I just think that, I think the title of the bill would benefit by adding foam in it because polystyrene is a wide class of different, you know, it's one kind of plastic but there's a great deal of variation. And I think that most of the testimony over the past three years that I've heard is concerned with polystyrene foam, which breaks down very readily in the environment. Whereas, hard polystyrene, sushi containers, yogurt containers, there's a lot of things that actually are more reusable so that's, that's the clarification that I would hope to distinguish there.

COUNCILMEMBER KING: Okay, thank you. Thank you, Chair.

CHAIR WHITE: Thank you very much for being here, Mr. Parsons.

And Members, we have a display over here and, and many of the items that are polystyrene are not the foam. One example, I don't know if the camera can show this but, the silver container which is a sushi container is, look, look to me like it was foil, but it's actually polystyrene. And so, and I believe about 75 percent of the testimony specifically identified the foam, the extruded or expanded polystyrene as being the, the focus of the restriction.

Mr. Clerk.

(Councilmember Atay returned to the meeting at 10:29 a.m.)

COUNTY CLERK: The next testifier Trinette Furtado, to be followed by Pamela Tumpap.

MS. TRINETTE FURTADO:

Aloha mai, Chair White, and Councilmembers. I am here, my name is Trinette Furtado, I live in Hamakualoa, Haiku. And I am here to ask you to pass Bill 127, because I think not just for myself, but for many, it, it shouldn't be a cost issue, it's more of an aloha aina issue, yeah.

I hear a lot of, it's the culture, you know you see some of the, the ads that have come out to say don't take away our plate lunch, ours, you know. It's not, who's culture is single use? It's not Hawaiian culture, it's not kanaka culture. If you look at . . . there weren't single use containers, we used ipu, we used different kinds of implements. And, and I think that using that as an excuse for continuing the practice is just lazy. I mean, we can and we have done better.

(Councilmember Crivello arrived at the meeting sat 10:30 a.m.)

(Councilmember Sugimura was excused from the meeting at 10:30 a.m.)

MS. FURTADO: And yes, people that are, yes, we need more recycling facilities, yes we need all of these things. But, it's not just the kuleana of the end user, those of us that are taking these plate lunches, it is also the kuleana of those who are manufacturing and distributing these products. You know, where is their kuleana to aina. Where is their opportunity to help what happens to the end result of these products, because once it leaves their warehouse, once it leaves their stores, once it leaves their establishments, it is not gone, it doesn't disappear.

So you know, yes while we need to look at educating people on littering, we also need to look at educating manufacturers and distributors on looking at alternatives that can constantly be worked in. It doesn't have to be a cost issue because when it comes down to it, what is the cost of our aina. What are we telling our children, the cost of the aina is to us right now because it's convenient, right now because it's cheap. That is not our culture.

And I just want to, I want to stress that because it's so easy to co-opt kanaka culture. It's so easy to use the word aloha and to imprint it, emboss it on a container that is single use, on something that we will throw away. But we live on an island, yeah. We live on a community, a county that is made of islands. Where do we throw these things away? And what happens to them after we throw them away. Because again, we are not the end users. What happens to them when they break down. That's the end use.

So I want you to think about that please, carefully, that's it not about culture and it's not about cost, it's about aloha aina. Thank you.

(Councilmember Sugimura returned to the meeting at 10:32 a.m.)

CHAIR WHITE: Thank you, Ms. Furtado. Members, any need for clarification? Seeing none, thank you for being here this morning.

Mr. Clerk.

COUNTY CLERK: Next testifier is Pamela Tumpap, President, Maui Chamber of Commerce, to be followed by Joan Moore.

MS. PAMELA TUMPAP, MAUI CHAMBER OF COMMERCE:

Aloha, Chair White, Members of the Committee. I'm Pamela Tumpap, President of the Maui Chamber of Commerce and I'm here to provide comments on Bill 127. First, I appreciate that this committee is taking a balanced approach and hearing all sides because that's what we tried to do on the task force, and I served as a member of the task force as well.

I want to note that a comment was made to me by Rob Parsons in the email I received that this body doesn't take in comments to bills like the State Legislature does. And I found that odd because I'm not sure if that's true or not, so I hope you will take my comments as comments as my testimony on this bill has continued to be comments as it's been re-brought back up.

You know, Maui Chamber of Commerce supported the plastic bag, well it was called a ban, but the plastic bag bill to reduce plastic bags. And it was a clear problem that all of our members saw. And so when we went in to serving on the task force, we went in with an open mind and an open heart. We believe in science and we believe in looking at different reports on things and studying things from all sides. We listened to all sides, we heard how we didn't have the proper facilities.

Well first of all we heard it first that polystyrene was considered to be less than one percent of the problem in the landfill. Second we heard how the containers that were considered to be more recyclable or compostable are supposed to be in a commercial facilities and we didn't have those proper facilities, nor did we have the proper landfill management that would allow them to do what they're intended to do.

So we did get a sense that they're better than others to some degree if you don't look at some of the other factors in terms of how they hold up with hot items, or hold up with visual inspection and other things. We also saw that the food service industry as they could, were starting to migrate in this way.

And while the Chamber generally supports proactive approaches versus bans, we did want to look at different alternatives and look at, we looked at the price comparisons as well and, and some considered them quite high. But again, obviously not all businesses do because some are moving in that direction. So we realize that as its moving in that direction, we have more choices, and as we hear about new recyclable programs, that's awesome.

What we were concerned about though is sort of where this is going. And there was also a lot of misnomers as, as Chair White has pointed out, different terms were being used. Styrofoam was being used, which is a Dow Chemical product. People

didn't understand the differences in polystyrene. They didn't understand that styrene exists in food.

So, as we started looking at this, we came down to the biggest issue was litter control. And that was even in NOAA reports that polystyrene wasn't the big thing, they kept pointing out, litter overall was. And we offered to help, the business community offered to help. We've yet been taken up on that offer which we made both to the task force members and the Council before. And we feel there's lots that can be done in recycling, litter control, and looking at the cost, this program will cost to implement along with all the other invasive species and other challenges we face to protect our environment.

CHAIR WHITE: Thank you very much.

MS. TUMPAP: Thank you.

CHAIR WHITE: Members, any need for clarification?

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Thank you, Ms. Tumpap, for being here.

MS. TUMPAP: My pleasure.

COUNCILMEMBER SUGIMURA: So, I, I'm, I wanted to know if you could expand on that you offered to help, the business community offered to help and--

MS. TUMPAP: Yes, I, I mean, you know, one of the things that we saw in the studies, and trash was brought in. And I took pictures of albatross dissection, and if you look at the stomach of the albatross you can see all sorts of litter in there.

And so as we came to this conclusion that funding would be better spent on addressing a wider product, a project of litter control, there were offers from the Chamber to keep doing environmental awareness and litter control awareness with members. Zippy's even offered to do a cute little, oh, I'm sorry, what you call, placemat, the coloring placemat that children could use, that could be, you know looking at recycling.

I brought up, I moved here as a teenager from California, and in California, those who live there know there was a great program where there was an Indian. And this Indian chief basically had a tear just dropping down his eye and rolling down his cheek and, and it changed the culture in California because people didn't want to be

throwing trash on the street and spitting their gum out, and it changed a lot, just by an amazing campaign. So we've also offered to help support campaigns like that.

We've encouraged the County to look at water refilling stations at County facilities because again a lot of the litter that's picked up are the, the water bottles and the water bottle caps.

I think many people know now, of course, we've gotten rid of the bags that fly and to knot those bags. There are heavier bags that still show up a little bit, they don't fly the same way. But continuing those kinds of education and looking at other proactive things we can do.

The Department of Environmental Concerns said this was going to cost $50,000 and an education program to educate people on this reduction program. What we're saying is what could we do on an expanded thing with that $50,000. And how could we better leverage that money because of course they also note, really they don't want to fine any businesses. We don't want to ding the small businesses that are still using these containers because they need to. So then we're spending $50,000 without recouping any of that. If we're going to spend $50,000 without recouping any of that, what else could we do.

COUNCILMEMBER SUGIMURA: Thank you.

COUNCILMEMBER KING: Chair.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Thank you. Thank you for being here.

MS. TUMPAP: Thank you.

COUNCILMEMBER KING: So is the, you were talking about offering to help, is that contingent on getting County funds or are there things you could do without waiting for the County and just. I mean, if Zippy's wants to do a coloring, you know, little informational coloring thing, are they only willing to do that if the County pays for it.

MS. TUMPAP: No, they're not looking necessarily for County funds to do it per se, but they are looking to see where the County's direction is before moving forward with some of that. We as a Chamber have done other things in the interim to continue to educate members on an ongoing basis.

There were certain cleanup days promoted, you know, beach walk and trash cleanup days that were promoted on the task force and then we found really those were mostly open to visitors, not businesses. So we've done a few on our own and I could tell you a whole bunch of other startling things we found that were very dangerous doing beach cleanups that had nothing to do with litter.

But, we are continuing to educate. It's not that we're looking for County funding, but we're looking for a County initiative. We're looking for the County to step in and say this is the direction. As we've been, you know, again, this bill keeps coming up and different things have come up on the administrative side and really at this point the County doesn't have a policy on this. So, but yet many businesses are being told, this is a done deal so they've got to migrate anyway.

COUNCILMEMBER KING: You know, I, I guess we're partially there, this is, we're working on second and final reading so we're getting there but just, I just wanted to say I wouldn't wait for direction. I mean I think you're, I think you've got the right idea and I would just love to see, you know, your, you guys take the initiative and the other businesses you're talking to take the initiative and move in that direction if that's, you know, I mean they've got to be married to that mission and if they are, don't wait.

MS. TUMPAP: Well, I think you see many, many people are doing it. But I also think again that the County should look at what it can do as well. Whether you, we're not looking for you to necessarily partner money and do dollar for dollar matches on these kinds of programs.

But when I come in with my trash and actually I had, oddly enough the rubber fell off my shoes on the way in this morning. I had to put it in the same trash, there's no recyclable here at this building to divert trash that I could see, or I've ever seen as I come in here. There's no filling station, there's things the County can do as well. And we don't want that to be last.

COUNCILMEMBER KING: Sure, no I totally agree with you, I just think that, you know, sometimes private sector has to take the initiative.

MS. TUMPAP: Yes, and we agree with that.

COUNCILMEMBER KING: And thank you for working on that.

MS. TUMPAP: Thank you.

CHAIR WHITE: Anyone else? Thank you for being here this morning.

MS. TUMPAP: Thank you.

(Councilmember Cochran was excused from the meeting at 10:41 a.m.)

CHAIR WHITE: Mr. Clerk.

COUNTY CLERK: Next testifier in Joan Moore, to be followed by Lauren Blickley.

MS. JOAN MOORE:

Good morning. My name is Joan Moore and I have never been here before and I'm here to tell you that I support the passage of Bill 127, the restriction and, of use and sale of polystyrene. And, it, I came down this morning just to read the bill, basically, so that I wouldn't get any fake news. Okay, so I wanted to read what it was and it says here, limit harmful materials from entering the environment. That seems so simple to me. Really simple.

There's, I'm not a scientist, but I know that you've heard all the scientific things. I'm not a business person, but I do see the business side. It will cost more, I do. I am not a Councilmember that has to deal with budgets because it will cost more to build the particular type of landfill that's needed. This needs to happen, you know that from just sitting here this morning. I mean I've only been here two hours and I've learned so many things.

This is one percent as someone spoke, this is just, just only affects one percent of the litter. Good, we start with one percent and get rid of that. That seems very simple to me. It also takes care of, you've put in there, must have been a great committee because you've put in there that if the food needs to be resold to be cooked, then that container is allowable. So that sounds pretty simple.

Yesterday I read the newspaper and found out that this hearing was being held. Okay, I just knew yesterday. I've been here on island fulltime for four years, I'm now a permanent resident. My husband and I were driving down from Kihei, North Kihei to Maalaea on our way to Wailuku and on that little road between North Kihei and the free, and the highway, polystyrene just kept blowing across the road. And it was like, there's another one, there's another one. I mean by the time I made it, you know to the road, it, it was like I have to go down there and just tell them. This is really unacceptable.

So I hope that the Council has the courage, because it will take courage to start with a little piece and the vision to vote this into law. Thank you very much.

(Councilmember Cochran returned to the meeting at 10:44 a.m.)

CHAIR WHITE: Thank you very much, Ms. Moore.

Mr. Clerk. How many, how many more testifiers do we have?

COUNTY CLERK: We have five more, Chair.

CHAIR WHITE: Okay, we're going to take a quick break. I should have given you a break a little while ago, but since we've got five more, we'll take a break. Please be back in your seats at five minutes to eleven. We're in recess.

(THE MEETING WAS RECESSED BY THE CHAIR AT 10:45 A.M., AND WAS RECONVENED AT 11:00 A.M., WITH ALL MEMBERS PRESENT, EXCEPT COUNCILMEMBERS GUZMAN AND HOKAMA, EXCUSED.)

CHAIR WHITE: Let's proceed with the testimony.

COUNTY CLERK: Mr. Chair, the next testifier in Lauren Blickley, to be followed by Ashley Colmain *[sic]*.

MS. LAUREN BLICKLEY:

Good morning, County Councilmembers. My name is Lauren Blickley. I'm here, you know once again over the past three years supporting the bill to phase out polystyrene food containers. I want to thank you for all of your continued support that you guys have shown this bill. You know, couple of months ago you all were the ones who passed this bill through first reading unanimously, eight to zero and I appreciate all the questions that, and the discussion that we've had about this.

I do want to bring up and clarify a couple of topics that have come up sort of regularly about this bill. The first and you guys should have my testimony in front of you if you want to sort of read along. The first is I do want to specify that this bill is very specific and addresses foods that are essentially takeout foods or foods that are ready to eat. So this is literally only those foods that you can go, you purchase and you could like literally put it in your mouth without doing anything else to it. So that, that definition of "prepared foods" has come up a little bit and its anything like poke, sashimi, fish tacos, you know, any, hot food section at Foodland.

Exempted items are items that require additional preparation, so raw meat, eggs, Cup-of-Noodles, anything that has that shelf stable life, I know that Cup-of-Noodles has come up numerous times, that is exempted in this bill. So I just want to be really clear on that.

I also really want to encourage you because this has been another major sticking point and unfortunately Don Guzman isn't here right now. But, just to limit the language to really focus on the jurisdiction here in Maui County. And I think that I've seen you guys go down a rabbit hole with, you know, exempting or prohibiting items that are coming from outside the County, but are sold in the County, that are prepared foods. I've seen you guys go down the rabbit hole, I've seen Corp. Counsel go down the rabbit hole, this was the whole reason why this particular panel was called.

And I would just, you know, at this point, suggest, let's keep it to Maui County, that's what, what the majority of the other bills that have been passed have done, have kept it to their jurisdiction, focused on their jurisdiction, and that is really getting rid of 95 percent of the problem. I say, you know, at this point, let's pass a bill that is good, let's not sacrifice a good bill for a bill that is perfect, and again, I'm not a lawyer, but I, I really want to see this bill move forward and I think that's been sort of a big distraction point.

I do, you know, I didn't want, want to go into this but I do have to address some of the issues that Pam Tumpap brought up because they're just not true. Obviously, she has not been to one of the multiple beach cleanups that is hosted by the community, on the, I would at least say a bimonthly basis. We reach thousands of community members every single year with our outreach and education, with our beach cleanup, with our community involvement. Now it's just counting me down.

CHAIR WHITE: If you need, need additional time, you'll be the first to have taken me up on my offer for additional time, so, please do so.

MS. BLICKLEY: Well I am a talker. I, I mean, overall I would say that we have learned from and seen firsthand the success of our plastic bag bill, and we have seen that these types of bills work. It's a holistic process, it goes hand in hand with the education. And it's unfortunate that the plastics industry and the paid lobbyist, and individuals like Tom Knox who are representing American Chemistry Council are here again today and on these panels, that this is our community and when they fly out in the next few days, we're still the ones who are left here picking up their polystyrene pollution. So, thank you.

CHAIR WHITE: Thank you very much, Ms. Blickley. Members, any need for clarification?

Ms. King.

COUNCILMEMBER KING: Thank you, Chair. Thank you for being here, Lauren. My question is about the education piece. What is, I know because, are you here representing Maui Nui Marine Resource Council today?

MS. BLICKLEY: No, I'm, I'm representing myself as an individual today.

COUNCILMEMBER KING: Okay, because I know you're involved in the, and I know they do a big education piece on how it's happening with the shoreline waters. But, just my question to you is, is, do you have, do you have an opinion on the solution for, for all these various different pieces of information that are coming out. And what would be the best way to educate the public.

Because I'm looking at a, a, a study that was asked, was done by a Legislative Analyst of the Council and there's a lot of information in here that's directly quoted from the EPA and the EPA Office of Toxic Substances for example that says that 100 percent of Americans have styrene in their bodies and things like that. So how do we get the word out from the sources that have the correct information on a National level and then on a State and County level.

MS. BLICKLEY: So, thank you for asking this question, because the education piece has been a big question and the question kind of has a couple of pieces, so I'm going to try to break some of those down.

The first that I would like to point out is that the plastics industry has repeatedly said, they have a favorite one line that you'll probably hear in the panel tomorrow is that marine debris, plastic pollution, polystyrene pollution is a people problem, it's a litter problem, it's not a product problem. This is shifting the blame and unfortunately they're creating a product that is never broken down to be up taken naturally by the environment again. And that is unfortunate that they're creating a product that's staying in the environment for thousands of years.

What I mentioned before is that marine debris and polystyrene pollution is complicated. We get that. It requires a holistic solution, so that's why you can't just say we have to educate. To point it out, a great example of you know California's anti-litter policy, the first anti-litter PSA was launched in the 1950's and over 60 years, that's still their best thing to prevent, you know, plastic pollution is anti-litter. Well that's obviously not working, it hasn't worked in 60 years. And in the past 40 years,

they've shown that plastic pollution in our ocean has increased a hundred times. So obviously the education piece alone is not going to work.

But I will say that our community groups, and I, and I think this is what frustrates me because we are educating. We are educating thousands of school children every single year. We are educating thousands of community members and we are educating thousands of visitors with companies like Hawaiian Paddle Sports, Trilogy Excursions, Pacific Whale Foundation, who are doing beach cleanups before they go out there educating our visitors. We've had grassroots campaigns.

Our ocean friendly restaurants, we've educated restaurant individuals and Kaimana, a high schooler from Kamehameha Schools who can't be here today because he's in school has personally gone around and probably educated more restaurants than any of us adults. And he now has a full ride to HPU.

So, when we, and, and I apologize you know, for, for being really verbose on this subject, but I just want you guys to know that it's not a lack of education. But again, going back to our plastic bag bill, we saw that despite again 60 years of anti-litter education, that we saw the significant reduction of plastic bags once you cut it off at source. And, it worked then, a hundred other counties and municipalities have already passed similar legislation with regards to the polystyrene. So, yeah, it's, it's a very holistic solution. We reach thousands of people in social media, I mean, I, I think you have to look at it as the whole and education is not, not the only thing that's going to get us there. We have to have the policy.

COUNCILMEMBER KING: Thank you.

COUNCILMEMBER COCHRAN: Chair.

CHAIR WHITE: Ms. Cochran.

COUNCILMEMBER COCHRAN: Yeah, thank you, and thank you, Ms. Blickley for all your perseverance on this subject matter because you've been around for quite a few years too. But can you please give clarification on the pricing issue.

MS. BLICKLEY: Yes, so, Ashley's actually going to go right after me and has some really good pricing information as well. I will share, I like to go back to the 2014 price sheet that VIP Food Service provided, and this has been provided to you guys multiple times, and it was in the task force. So that's why I like to go to it because it was included in the task force reports so everyone can agree on it and see those numbers. The numbers, you know, at this point are, are three years old, so the pricing has become more competitive with compostables. But what those price

sheets show is that no, polystyrene is not significantly lower for every single different piece of, you know, clamshell product that you can buy.

And, let me see, here it is. So for example, if you look at it, I think the average is about ten to fifteen cents different and what we have repeatedly said is that this is a pass-through cost, so it's ten cents extra on your plate lunch that you buy. It is not going to be the twenty times, a hundred times, fifty times more expensive than what fearmongering has led some individuals to believe.

Does that clarify your--

COUNCILMEMBER COCHRAN: Yeah, yeah, and thank you very much, yeah, I'm looking at the sheet Chair and actually two prices are equal, one price is three cents cheaper and two items are 14 and 13 cents difference from that sheet I believe that you have. So--

MS. BLICKLEY: And again there's, there's, as, as we can see from this display, there are multiple options so, yes some of the options for another type of plastic are going to be more expensive than a polystyrene right now. So you can't just, you know, there's not that black and white and again the, the market has changed a lot and when this bill is passed, we do continue to see the prices decrease because you're increasing consumer demand for it, you know, it's demand increases, price decreases. So, I'm not an economist, but I can tell you that.

COUNCILMEMBER COCHRAN: Thank you.

CHAIR WHITE: You done, thank you. Your testimony says keep current bill language and exempt prepared food items that are prepared and packaged entirely outside of Maui County. I believe the current draft does not have that exemption.

MS. BLICKLEY: Um.

CHAIR WHITE: So you're, you're suggesting that we exempt--

MS. BLICKLEY: Well, Don Guzman had added the amendment and I wasn't sure the status on that amendment.

CHAIR WHITE: Yeah, current, I believe the current bill does not allow any, any of the banned or restricted items to be shipped here either. So you're suggesting that we, that we allow things that are prepared entirely outside of Maui County.

MS. BLICKLEY: Right, so I think that, I understand completely where he's coming from with this. I think it is a very small percentage, and a handful of items. And, again, I've just seen you guys get really caught up on this. And I don't want to see issues with this bill because Corp. Counsel is afraid about Interstate Commerce law.

If you guys decide to keep this in, I have gone through and done, I've done extensive research. The City of Portland has a similar bill that does ban everything, whether it's originating inside or outside their jurisdiction for prepared foods. So it has been done.

And then I did, I did find, and I can provide this to you guys, but this was a case law opinion that says "Thus an absolute ban of an item does not by itself raise any commerce clause problems. These cases are illustrative of a State or local government's power to ban products which it finds to be undesirable. As long as a valid public purpose is behind the ban and the incidental burden placed on interstate commerce is not too great the ban should survive commerce clause scrutiny." And then there's another paragraph which, which I won't read. But can provide this.

So, I'm not a lawyer, I do think what you guys have now would stand up to legal scrutiny. But, I don't want you guys to continue to, to go around and around in circle and this be the sticking point for you.

CHAIR WHITE: Yeah, my question really was if the, if the current bill restricts things from being shipped in, in those types of containers, you're suggesting that we not, that we allow them. Correct.

MS. BLICKLEY: Only because it's a very small percentage of what we're actually dealing with.

CHAIR WHITE: Right, yeah, okay, thank you.

Any other Members.

COUNCILMEMBER KING: Chair.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: I'm sorry to be asking two questions, but--

MS. BLICKLEY: That's okay.

COUNCILMEMBER KING: So are you, I mean just to follow up on that discussion. Would this be, if we left the bill alone and we did restrict incoming Styrofoam and polystyrene, would this be different than what we're doing with the requirement for recycled glass. Because my understanding, Chair is we don't allow, the State of Hawaii doesn't allow a beverage to shipped, beverages to be brought in that aren't in recyclable glass as part of the HI-5 Program.

CHAIR WHITE: I'm not aware of that.

COUNCILMEMBER KING: Yeah, so I don't, are you aware of that?

MS. BLICKLEY: I don't--

COUNCILMEMBER KING: Have you, have you done that comparison.

MS. BLICKLEY: I, I did not know about the recycled glass. It doesn't, we do not, the State does not allow--

COUNCILMEMBER KING: My understanding is that the State, that everything that's brought in in a beverage has to be recyclable, it has to fit under the HI-5 Program.

MS. BLICKLEY: Anywhere in the State?

COUNCILMEMBER KING: Right. It's a State program.

MS. BLICKLEY: Okay.

COUNCILMEMBER KING: So, we have to look into that maybe.

MS. BLICKLEY: I mean, again, I support either bill. I just again, I don't want to sacrifice a good bill that we have--

CHAIR WHITE: Yeah, just, you've already--

MS. BLICKLEY: --for the perfect bill.

CHAIR WHITE: --yeah, I'm not going to let you keep going on that. You answered her question. Any other need for clarification? Okay, thank you very much for being here this morning.

MS. BLICKLEY: Thank you, guys.

CHAIR WHITE: Mr. Clerk.

COUNTY CLERK: Next testifier is Ashley O'Colmain, to be followed by Mary Ann Pahukoa.

MS. ASHLEY O'COLMAIN:

Good morning, or what time is it? My name is Ashley O'Colmain and I believe you have this in front of you or something that looks like that. I made these spreadsheets, so if you have any questions on those, I can clarify. And no I didn't do that for fun. I work with the Maui Huliau Foundation, along with my other like four jobs, but we do environmental literacy with youth 7th to 12th grade. And Kaimana is one of our students that Lauren mentioned that has the full ride. And so he's, did a lot of the ocean friendly restaurant campaign.

And I, and I went out there with him too, to certify restaurants. And part of that is using compostable products. And a lot of them were requesting this spreadsheet that was to serve them to help them to understand where they can get it. So I'm just saying that a lot of restaurants already want to do it. They're, this was to help them get there.

Also we do zero waste events by request. People started asking us to set up stations to help sort waste at events cause San Francisco, San Jose, Seattle have all made, all events required zero waste. And what that means is that trash is sorted at the events.

At our, our events we do manned stations with our students and there is compostable, recycling, trash, and however the farmer wants it broken down. So we'll do the food waste and the compostable products separately. So we've done a few events so far, we did Ocean, we did Ocean Vodka last year. Our biggest one was Ho`omau, few weeks ago attended by over 3,000 people. And that went really, really well. We had tons of, nobody said well this is a dumb idea. Like everyone loved it.

We took, we take all of our compost to a local farm, Kupaa Farms in Kula and he composts all of it. And, that is a service that we're providing. We're going to be doing Made In Maui County Festival in November. So it is something that the public wants to see and that is a good idea. And we're already doing it, and because people are asking for it. So, it would be great to take it to the next level and it's not

only about this product and preventing it from going in the ocean, I think the, the side benefit of that is that it sends a really good message to the community that we, we care about our environment and to the visitors coming here. It, it's just a good thing to do.

I know other farmers, Kupaa farmer, Kupaa Farms, he collects compost from restaurants and so this would help add to his compost. So we don't necessarily need these facilities. Farmers need compost, it helps to grow good food. And my neighbor Pono Grown Farms, he collects compost from the restaurants he delivers to. And yeah, at our zero waste events we divert 70 to 85 percent of the waste from the landfill. Just me, Malia, and some of our students like it doesn't take that much to make a difference.

And so passing this bill would really take it to the next level. That's it.

CHAIR WHITE: Thank you, Ms. O'Colmain. Any need for clarification?

Ms. King.

COUNCILMEMBER KING: I do. Thank you, Chair.

So I'm looking at your, the, the Maui Huliau graph that you, that you gave us on the difference of prices. And, I'm going to ask you the same question that I asked of the Sustainable Products of Hawaii. In looking at this you've got, there's one line here which is the highest differential, it's 13 cents more, but it doesn't really compare the same quantity. So you've got a quantity, a 100 three-compartment clamshells that are compostable versus 200 Styrofoam. So is it possible for you to do like a comparison of, I mean cause I'm assuming if you bought 200 or 500 it would be cheaper per unit.

MS. O'COLMAIN: So the, these prices are just prices that you can find if you go to the store. When you, when you call up a distributor, it's not, they don't want to give over prices that easily because it's always changing and then they get undercut, so they really don't want it printed out like this for everybody to see. So, what prices I was able to go with was Maui Chemical, they have everything online. So, all the foam prices on here are from their website and the, the quantities are just the lowest. I went with the lowest quantities that you can buy it in because I knew that would be the greatest price difference, probably.

I, and, and most restaurants don't want to buy like thousands of product. Of course, you can see Costco, can buy a lot, so they and, and I don't know if this is true, but I've heard they don't actually make money on stuff they sell, they make their money

on the membership. So, they are kind of undercutting everybody. But, it makes it really affordable, it's a cent cheaper to buy their clamshells. So there's really no excuse. I mean, you know, some of them are expensive. And the problem with these spreadsheets is that it's always changing, you know, if I buy like thousands of either one of them, it's going to be a different, difference. So it's pretty hard to put together. But, yeah.

COUNCILMEMBER KING: Well, I just noticed that the, all the quantities in the compostable column are lower than the quantities in the foam, and even then, there's, some of them only have a one cent price differential. So, I, it would be great, I don't know how you would do that, but I'm just wondering if there's a way to buy it from a manufacturer.

MS. O'COLMAIN: Well they do like buy the, what do they call it, like the bag and then the case. So this is just the, this is just what they are, so it would be like, I think--

COUNCILMEMBER KING: The only point I wanted to make is, I would like to see like the first thing that says, you know, you're comparing 50 bagasse plates, against 125 foam plates. So if you had 125 of each, you know, maybe the, maybe there wouldn't be a differential, I mean.

MS. O'COLMAIN: Yeah.

COUNCILMEMBER KING: So that, that's, that's my point is if you could find that information that would great to see.

MS. O'COLMAIN: It would probably go up from like they would do a case of like 850. So, it doesn't really, they don't always go with the same number but, I, yeah. I could revise one with the larger quantity to try to. It's, it's really hard to make them all the same, everybody does like different amounts, so.

COUNCILMEMBER KING: Okay, thank you. Thank you, Chair.

CHAIR WHITE: Anyone else? Seeing none, thank you very much for being here today.

Mr. Clerk.

COUNTY CLERK: Next testifier is Mary Ann Pahukoa, to be followed by Adriane Raff Corwin.

MS. MARY ANN PAHUKOA:

Aloha. I support Bill 127. I'm a conscious mother here on Maui, I'm a kanaka maoli. I know that there are economical reasons why this will be a big shift for Maui to change, or to ban polystyrene. But I think it's totally possible and it's definitely necessary. I know that Maui County has a lot of problems with waste and the way we manage our, just waste management in general, and recycling. I mean there's so much to do, but we're on the right track, if you know, this bill gets passed.

And then we have over 300 restaurants here in Maui and like thirty-something, maybe forty food trucks. And I hate to bring up names, but the Thai Me Up Truck, they are my favorite; however, they use, you know, Styrofoam and I know they're, you know the amount of plate lunches they sell is in the hundreds a day. And so just to think about the amount of Styrofoam that gets filled up in the trash cans and then taken to the landfill. It's really shocking, and it's hard for, hard to explain if you're not the one looking at the trash and taking the trash out which, you know, many of us aren't those, isn't that cleanup crew.

But, for all the testifiers that came here today, you know, who do beach cleanups, and ocean dives, and cleaning up our reefs, they are the ones that truly know the detrimental effects of polystyrene and not, you know, micro-plastic and plastic in general. But, I think it's really important that we as Maui County respect these islands as it was stated before. We have limited resources.

I just wanted to bring up a Bolivian law was passed a couple years ago, or maybe five years ago, and it's called the "Law of the Rights of Mother Earth". It defines Mother Earth as "a collective subject of public interest". It declares Mother Earth and life-systems as the titleholders of inherent rights. In this approach, human beings and their communities are considered a part of Mother Earth, by being integrated in life-systems defined as "complex and dynamic communities of plants, animals, micro-organisms and other beings in the environment.

Banning polystyrene will protect these, our coral reefs, our organisms, our wildlife, and you know our keiki for future generations. And that was said, you know, I'd hate to repeat things; however, it's so simple that polystyrene is toxic, like Uncle Walter Ritte said in his testimony early today. This is a toxic bill and so it's so simple just to move forward and pass it.

I wanted to read my girlfriends testimony, if possible

CHAIR WHITE: You have time.

MS. PAHUKOA: Okay, Aloha. I strongly support Bill 127, restricting the use of polystyrene containers. I believe this bill protects our future along with the livelihood of countless marine wildlife and birds that have been directly affected by our careless usage or, or proper disposal of such single use containers. This bill helps invoke the responsibility and discipline the food and beverage industry lacks to be ecologically conscious suppliers in support of Maui County's unique ecosystem.

And that is Kuulei, who will be, I think, two people ahead of me. Other than that, I really like to mahalo those restaurants and food distributors who honor our island and use compostable, like Farmacy Health Bar and what not. I think that's a huge step. Bringing your own containers is something that I started doing, bringing your own straws because we all know, you know, it's not just Styrofoam, it's plastic in general. But this is a huge step and I think, you guys have the chance to make history today and leave with a legacy that will keep our children and our reefs safe. Mahalo.

CHAIR WHITE: Thank you for being here. Members, any need for clarification? Seeing none, appreciate your testimony.

Mr. Clerk.

COUNTY CLERK: Next testifier is Adriane Raff Corwin, Coordinator, Sierra Club Maui Group, to be followed by Kuulei Gunderson.

MS. ADRIAN RAFF CORWIN:

Aloha, Chair. Aloha, Council. Thank you for having me to testify. My name is Adrian Raff Corwin, and I am the coordinator for the Sierra Club Maui Group. Sierra Club is very for, supports this proposed law. And I, I would agree with basically all the other testimony that has come before me that is also in support of this law.

So what I'm going to talk about actually is about the actual containers. There is a sign on one of the South Kihei churches, you know, the churches they have the little billboards outside that says, I can't remember the exact wording, but it's something like you can't testify until you've gone through a test.

So, I decided to test the containers. Actually one of the containers I tested is not over there, it's those little brown, little lunchbox type things, it's like a brown container with little folds that flap in and, you know, like connects, that you can really close it.

So I took that container and I took the paper soup container that's over there, that's like meant for liquids. I boiled water, so we're talking 212 degrees, very, very hot. I immediately poured that boiling water into the soup container, and this little brown container. The brown container is not even meant for liquids, it's meant for, you know, like food with sauce. I did this experiment on the brown container three times and on the soup container five times. All times no leaks, nothing at all. I didn't even cover the containers.

But by the time after about 20 minutes after I basically filled it with boiling water, left it for 20 minutes, checked to see if there was leaks, then poured the water out, then boiled more water, filled them again, did this three times, no leaks any of the times and the water was still quite hot. And you don't want to be, you know, having boiling hot water. McDonald's got sued for that anyway with the coffee.

So, so these containers I found held up extremely well and again we're talking about one of those containers is not even meant to hold liquids. It did in all honesty get a little condensation on the side, I'm sure if I kept testing it like seven times maybe eventually the brown container would have, you know, suffered. But it held up very well for three times. So I think the argument that these containers are not as good as polystyrene food containers does not hold up. They are very, very good at holding all of that food.

In my last 45 seconds I would also just like to mention that I think Council at this moment has a, the, the time to be a real great leader on this issue. None of Hawaii's counties have passed this ban yet and this is like our moment. Maui will stand out, we will be shown as like the eco-leader of the County. Council will get a huge amount of praise for this. It's going to be a momentous occasion if we ban this as the first in Hawaii, and I think that we will be the leader that will help it sweep through the State.

And this will help our oceans throughout the State not just around Maui. And so I really hope that Council takes this mantle and makes Maui the first one through the door on this ban. Thank you very much.

CHAIR WHITE: Thank you. I just have one question for you.

MS. CORWIN: Sure.

CHAIR WHITE: Did you try to carry either of those containers across the room.

MS. CORWIN: Oh, yes I did. So the brown container obviously it's not meant to hold liquid so it was only liquid in there, so it was a little bit shaky, so I closed the flaps on it and then I carried it around and then I opened it up and then I poured out the liquid into the sink, you know. So and carrying it around, no leaks. It's obviously a little shaky cause it's not meant to hold only liquid, it's meant to hold food with liquid. But yes, it held up very well also being moved around the room. And the soup container was completely fine, the White Paper one as well.

CHAIR WHITE: Okay, thank you. Any other need for clarification?

Seeing none, thank you for being here this morning.

MS. CORWIN: Mahalo.

CHAIR WHITE: Mr. Clerk.

COUNTY CLERK: Next testifier, Tiare Lawrence, to be followed by Antonio Gimbernat.

MS. TIARE LAWRENCE:

Aloha, Councilmembers. My name is Tiare Lawrence. So I just kind of wanted to reiterate from the last meeting, so on December 16, the Maui County Council passed this bill on first reading, 8 – 0 as you know.

There was a question to Corporation Counsel about whether the banning of polystyrene would open Maui County up to a lawsuit from the polystyrene industry. In summary, the opinion of Corp. Counsel was a ban of a particular product would hold up to a legal challenge as long as there was substantial scientific evidence that the ban was passed to protect the health of humans and/or the environment.

So in response, Councilmember Hokama requested that there be a panel where experts could present such evidence so that it would be on record in the event of a legal challenge. This purpose of this panel is not to discuss the merits of a polystyrene ban, that has already been done. This panel is to present the scientific evidence that substantiates the ban so that the Council can pass this bill on second reading without fear of a lawsuit.

An opinion issued after the Rockland County polystyrene ban, I wanted to share that opinion which was the other paragraph that Lauren didn't, didn't get to, to talk of. In that opinion it says "There is no doubt that the proposed ban on Styrofoam is intended to further the health, safety and welfare of persons and property within

Rockland County and thus would be within the scope of the delegation of home rule power. Furthermore, the local law is not inconsistent with any provisions of New York's Constitution or general laws; nor is there any indication to date that the Legislature has preempted regulation in this area. There are no Federal laws which preempt the proposed ban on Styrofoam." So just kind of wanted to, to bring that up and then I'll finish with this.

You know Maui County passed the plastic ban years ago and sometimes, you know, change isn't easy but we adapt because simply it's the right thing to do for our environment and for future generations to come. Recycling and litter control awareness is just simply not enough, and we can do a better job with implementing policy plus educational efforts.

So let's get to the root of the problem. Banning polystyrene will send a message once again to Counties across the State that our Maui County Council is No Ka Oi and that our elected officials truly do care about the health of our people, our land, and our resources.

CHAIR WHITE: Thank you, Ms. Lawrence. Members, any need for clarification?

Seeing none, Mr. Clerk.

COUNTY CLERK: Next testifier, Antonio Gimbernat, to be followed by Barbara Barry.

MR. ANTONIO GIMBERNAT:

Good morning, Councilmembers. I was just in the building, I didn't even know there was testimony going on today so I figured since I'm here I might as well give some input. So my name is Antonio Gimbernat, and I will support the passing of this bill cause I've been a lifelong surfer and I also work as a service technician for Pure Water Technology and we support reusable containers such as hydroflasks.

I've been told when your average bottle of water warms, if being left in the sun, toxic chemicals can leach into the water, which is then consumed by consumers, and that's not a good thing. And some of our clients do use those polystyrene cups, you see them just sitting on top of our machines, and you know, they just get tossed away and stuff. So, we, we prefer them use hydroflasks and stuff.

And then I just have some other general testimony on just the same kind of environmental protection stuff. Furthermore, I do my best to recycle all of my groceries packaging. So everything I buy at Costco or whatever, in my house, I'm

like literally taking the Cheerios box and the bag out of the Cheerios so there's cardboard and a plastic bag, and I'm literally recycling every piece of packaging that comes with everything I buy. And then I take it up to the Maui Disposal place.

I read on an internet blog that the recycling is a $250 billion industry. That's a lot of money. That being said, me as a consumer, I would like to get paid for all my trash, you know, not just for the bottles and the cans. You know, cause when I purchase items at Costco, I am paying for that cardboard, I am paying for that plastic packaging. So, I know it costs money to recycle the item, but I should get a partial refund for some of that back. So, and I tweeted that to President Trump too, I want to get paid for my trash, you know. I don't know what he's going to do with it but.

Okay, so that was one other, and then in light of today's testimony I will also mention my concerns about the automobile waste, automobile waste such as tire tread and brake pads, which turn to dust. You know, when you look at your tire treads, where do, where does, can I request a little more time.

CHAIR WHITE: Yeah, you're not exactly, you're not exactly on topic.

MR. GIMBERNAT: Oh, okay. But again, it goes to the pollution issue. The tire tread, as your tire tread goes down, where did all that tread go? Well it turned to dust, and then the next time we have a rain, all that dust, automobile waste, goes into the ocean and pollutes the ocean. So, I think there should be some research into that.

And then regarding sewage spills, you know, I think there should be a tax on toilet paper. If they can't, if you cannot afford to rebuild the wastewater plants, then put a tax on toilet paper, you know. It sounds funny, but it's a serious issue. Because me as a surfer, I don't want to go swimming in the water and have a bunch of sewage floating in, where I'm supposed to be having my recreation, you know, that's not cool. And these hotels and stuff.

And then the last thing I'll mention is I've had a lot of experience with the mental health industry. And, you know, there's corporate greed and what is called, I refer to it as being money hoarder, money hoarding. So these corporate companies who are lobbying to keep these products, perhaps they should have a mental health evaluation based, you know, is, it just seems like the corporate greed sometimes gets out of control and it could be a mental health thing. And that's all I have to say.

CHAIR WHITE: You know, I think you've said enough. Thank you very much.

MR. GIMBERNAT: Okay. Aloha, have a wonderful rest of the day.

CHAIR WHITE: Mr. Clerk.

COUNTY CLERK: Next testifier is Barbara Barry, to be followed by Jerry Riverstone.

MS. BARBARA BARRY:

Aloha, Chair and Councilmembers. Thank you so much for addressing this problem that we're having getting this bill passed. This is such an important bill. When I came up from the lobby . . . my elevator, we had these in, in the lobby of our County Building and I think it's really important because not only are we here to talk about the ban of polystyrene containers, which are toxic to start with, anytime you are trying to ban something and the lobbyist show up, you know you're on the right track because they're going to be losing money

So, I love Maui County, I love being here. I collect trash, I haul Styrofoam to Seattle in my empty suitcases and recycle it there because they have a really smart program on how to recycle Styrofoam, polystyrene containers. So I just want to urge the Council to wrap this up, enough already with all the time being spent on it, you know.

Cities and states are not being sued from the, the chemical industries for banning their product. We have so many awesome substitutes that are very comparable in price. So, you know, I was here on December 15 and/or the 16 and witnessed the Council passing this, the first, the first vote through. So I know you have the courage to do it, the legal stuff is going to work itself out and let's just move on because we have a lot of other recycling issues to face.

And, recycling the Styrofoam that comes in in packaging is one of those issues that still needs to be dealt with. It's not going to just magically all go away when polystyrene is, is banned because there's still a lot of other Styrofoam coming onto the islands that need to be addressed and find a good way to recycle it. So, basically, that's all I have to say and I thank you so much. Thank you for everything.

CHAIR WHITE: Thank you, Ms. Barry. Members, any need for clarification. Seeing none, thank you for being here today.

Mr. Clerk.

COUNTY CLERK: Next testifier is Jerry Riverstone, to be followed by Aviad Cahana.

MR. JERRY RIVERSTONE:

Good morning, Chair and Council. Jerry Riverstone from Pukalani. Thanks for entertaining this issue. I had dinner on Saturday at the Haiku Marketplace and I was happy to see that the containers weren't Styrofoam, they were one of the ones over there, biodegradable container.

Sometimes environmental issues I think can seem overwhelming. Climate change, how we're going to get off of fossil fuels within a few decades. How we're going to handle sea level rise. Some of those things can just seem so huge it's like are we really going to tackle that.

This one seems so doable to me. It seems like a, a slam dunk for the Council. The science is there, the public opinion is there, the alternatives are there. I don't have any new scientific evidence to provide but I just want to say that I, I really support you with the ban and I like some others have said I think it's going to be a great way for the Council to show that you care and that we're willing to take a leadership role in Maui County. Thank you.

CHAIR WHITE: Thank you, Mr. Riverstone. Members, any need for clarification. Seeing none, thank you for being here.

Mr. Clerk.

COUNTY CLERK: Next testifier Aviad Cahanu. Mr. Chair, that would have been the final individual who signed up to provide testimony in the chamber this morning. If there's any individuals in the Council chamber or at the District Offices who would like to offer testimony, please identify yourself to the appropriate staff and proceed to the testimony lectern or the District Office phone at this time.

Lanai Office, are there any additional testifiers?

MS. FERNANDEZ: There is no one waiting to testify at the Lanai Office.

COUNTY CLERK: Thank you.

Molokai Office, are there any additional testifiers?

MS. ALCON: There is no one here on Molokai waiting to testify.

COUNTY CLERK: Mr. Chair, there is no other individual in the District Offices nor the chamber who wish to offer testimony.

CHAIR WHITE: Thank you very much, Mr. Clerk. Members, we were hoping to get to the first two presenters before lunch. But we will, if it's, if you're okay with it I'd like to recess now and be back here at 1:00 instead of 1:30. Any objections?

MEMBERS VOICED NO OBJECTION.

CHAIR WHITE: Okay, so we will be, our presenters, first presenters will be Cheryl King and Megan Lamson. They will be presenting together, each having their own 15 minutes and we have allotted 15 minutes per presentation and then half hour of question and answers following each presentation. Since they are going together, we will allow for an hour of questions and answers following their two presentations. So with that.

COUNTY CLERK: Mr. Chair.

CHAIR WHITE: Yes, Mr. Clerk.

COUNTY CLERK: Mr. Chair, if we could receive the written testimony and close public testimony.

CHAIR WHITE: Oh, thank you very much. Good reminder.

Members, without objection, we'll receive the written testimony into the record.

MEMBERS VOICED NO OBJECTION.

THERE BEING NO OBJECTION, WRITTEN TESTIMONY RECEIVED FROM THE FOLLOWING WERE MADE A PART OF THE RECORD OF THIS MEETING:

1. Democratic Party of Hawaii;
2. Dexter Yamada, KYD, Inc.;
3. Marjorie Bonar;
4. Rob Parsons;
5. Maui Chamber of Commerce;
6. Lauren Blickley;
7. Maui Huliau Foundation;
8. Adriane Raff Corwin;
9. Barbara Barry;
10. Megan Lamson;

11. Maren Anka;
12. Josef and Jamie Birrer;
13. Arianna Feinberg;
14. Nucific - policy@mail.newstatement.org;
15. Archie's Petition;
16. Jack's Inn Petition;
17. Millyard Hamburger Steak House Petition;
18. Minit Stop Petition;
19. Oyako Tei Petition;
20. Sheik's Restaurant Petition;
21. Mark Lau Hee, Lau Hee Chicken Hekka;
22. Roger Santos, Paradise Supermart & Fast Food;
23. Tokyo Tei Restaurant Petition;
24. Raymond Hew, Ah Fooks Supermarket;
25. IHOP;
26. Max's Restaurant;
27. Lance Takamiya, Takamiya Market;
28. Barbara Kikuchi, Waikapu on 30;
29. Kapulani Antonio;
30. Nalani Clark;
31. Bud Antonelis;
32. George Burnette;
33. Karl Hyrenbach;
34. Kaia Hill;
35. Erick Tjom;
36. Emma White;
37. Dinos Zagouras, Dinos Gourment on the Go;
38. Jini's Curry Petition;
39. Wook Jin Yi, Piilani L&L;
40. Lynne Toma, Sam Sato's;
41. Uptown Chevron Petition;
42. Vietnamese Cuisine Petition;
43. Lina Gooley;
44. Danann Mitchell;
45. Theresa Marino;
46. Courtney Thomas;
47. Shane Albritton;
48. Courtney Avichouser;
49. Wyatt Bartlett;
50. Yuri Cardenas;
51. Prue Eade;
52. Sylvia Litchfield, Green Party of Maui;

53. Alana Merry;
54. Bridgett Parker;
55. Lauren Tyler;
56. wolfgang@hawaii.rr.com;
57. Robi Campbell;
58. Angie Sobolev;
59. Mike Donohoe;
60. Lisa Hinano Rey, Environmental Caucus of the Democratic Party of Hawaii;
61. Surfrider Foundation;
62. Sheila Murphy;
63. Laura Parks;
64. Simon and Angela Tay, China Bowl;
65. Tingyan Chen, Maui King's Chinese BBQ #2;
66. Jiamin Jim, Wei BBQ & Noodle House;
67. Nagasako Okazuya Deli;
68. Bale;
69. Sandy Callender;
70. Tova Callender;
71. Liz Foote;
72. Tulsi Greenlee;
73. Cathy Maxwell;
74. Victoria McGee;
75. Alycia Rajendran;
76. Hawaii Food Industry Association;
77. Alan Espiritu;
78. Deborah Kremins;
79. Ann Strong;
80. Denise Boisvert;
81. Donna Brown;
82. Marcy Cayton;
83. Pam Daoust;
84. Nick Drance;
85. Diane Fell;
86. Lauri Fritsch;
87. Laura Hagan;
88. Debbie Hollomon;
89. Georgie Hunter;
90. Kim Jorgensen;
91. Lory Ono; and
92. Sara Patton.

CHAIR WHITE: Thank you. And without objection, we'll close public testimony.

MEMBERS VOICED NO OBJECTION.

CHAIR WHITE: Okay, thank you very much. And thank you all for being here, and we'll be back at 1:00. Recess.

(THE MEETING WAS RECESSED BY THE CHAIR AT 11:46 A.M., AND WAS RECONVENED AT 1:03 P.M., WITH ALL MEMBERS PRESENT; EXCEPT COUNCILMEMBERS ATAY, GUZMAN, HOKAMA, AND SUGIMURA, EXCUSED.)

CHAIR WHITE: This meeting of the Council will please come back to order. Members, we are going to switch gears a little bit. The ladies who are from here Cheryl and Megan have offered to allow the, the folks from the mainland to present first and then they'll follow the mainland presenters.

And, for Mr. Flickner, you have in your binder, or you should have the presentation from Mr. Flickner. And so please follow along with that because since he's doing a presentation, his face will be there but the, the presentation that he's sharing with us will not be up on the screen. On Akaku they have his presentation as well, they will be switching back and forth from covering Mr. Flickner to covering the, the presentation. So with that, Mr. Flickner, if you'd like to proceed.

MR. KERRY FLICKNER, FOODSERVICE SUSTAINABILITY SOLUTIONS, INC.:

Thank you very much. Thank you for allowing me the opportunity to share my perspective on this issue.

I'll start with a quick background on who I am and what my company does. My company, Foodservice Sustainability Solutions, we're a waste solutions company. I'm the National Director of Waste Solutions. Our primary mission is to provide a practicable waste solution specifically for polystyrene foam food service waste. And the impetus behind our mission is specifically to mitigate the anthropogenic impacts of this material through reduction and aversion technologies that contribute to preserving and protecting our natural resources and environment.

We are involved in education for future generations in primary and secondary levels on realities of waste streams and their long-term impacts. And mitigating propagation of alternative organic material being disposed in our landfills.

If you look at Slide No. 2, we have currently to date, we have diverted 60 million polystyrene foam trays from landfills and the environment. That equates to approximately 280 tons recovered and diverted for recycling. We have over 200 programs nationwide. So we have proven out all of our betas over the past five years that this material can be recovered, captured, reduced, diverted, and recycled.

I'm an environmentalist and I'm very cognizant of the issues of plastic waste in our environment. And I agree that any form of this anthropogenic resin ending up on our oceans is a terrible thing. However, I do not support any ban that cannot and does not provide quantitative benefits, and in reality will actually have negative impacts on the environment we are attempting to protect.

The National trend right now, if you look at Slide 3, the National trend right now for dealing with this issue of PS foam in the environment is banning for the alternative based organic products which are compostable or biodegradable. Now, there is a difference between compostable and biodegradable. I've not heard the other testimonies so I'm not sure what everybody understands but there is a difference between compostable and biodegradable. If you don't understand the difference between compostable and biodegradable that's a testament too, that this is an issue. There is a lot of misinformation out there both on the product side and the impacts to the environment when it ends up in the waste stream.

What I've realized over the past five years being all over the country, working with communities with this issue, for some reason our brains shutoff when we hear the word compostable and believe that this by default is green and sustainable with no consideration or true understanding of the realities associated with such a transition from PS to an organic based material. Subsequently by embracing this paradigm, we are driving massive amounts, massive amounts of organic material under false assumption that making compost is the answer.

(Council member Sugimura returned to the meeting at 1:07 p.m.)

MR. FLICKNER: However, what we are currently seeing in this industry sector composting, commercial composting is that the end markets for compost product does not meet the growing supply for this material. Many cities and municipalities do not have the infrastructure and the end market demand for this material.

An example of this is Peninsula Composting Corporation. Peninsula Composting Corporation was permitted for 600 tons of organic material, that includes food waste. It was the largest commercial composter east of the Mississippi. It was going to receive all the material from up and down the Eastern Seaboard, from New York down to Florida. Unfortunately this system, this particular outlet was closed down

due to environmental issues such as smell, leachate, and the primary reason for this is that the end markets could not sustain the amount of material that was being produced.

Slide No. 4, the Maui 3-Can guidelines support this reality, so this is where we start to run into a significant environmental consequences choosing bans over practicable solutions to mitigate this litter. Good intentions, but potentially profound long-term residual environmental impacts which I'll talk about at the end of this presentation.

Should a ban be imposed, there is currently no offtake infrastructure for alternative organic waste streams. Subsequently this material is going to end up in the municipal solid waste stream. It will end up in the municipal solid landfill. Any and all organic material that ends up in a landfill will break down anaerobically and that is per EPA landfill design. Thus, creating methane gas.

When we look at the current infrastructure on Maui, there is no offtake as you, I'm sure you've already heard, there is no offtake for the alternative materials, therefore, it will all end up in the landfill and this is not an option. Landfills are designed to prevent aerobic biodegradation, that's what happens in our backyard composting pile, and our commercial composter. Landfills are designed to mitigate any aerobic degradation, therefore it's anaerobic degradation producing methane. The EPA calls this dry tombing. If the EPA could actually petrify the contents of a landfill, they would do so, but instead they come as close as possible by reducing the amount of water oxygen through compression of the landfill to mitigate leachate.

Slide No. 5, there is so much, the methane global warming potential is over 20 times that of CO2 and that's per EPA, and over 60 times per Natural Resource Defense Council. Landfills are the number three contributor of methane to our atmosphere. Twenty-seven percent of the 252 million tons of waste entering our landfills annually is organic. This includes compostable food service, paper fiber, sugarcane fiber, or even PLA, it doesn't matter what the product is, if it's organic based and it ends up in the landfill, it's going to produce methane gas.

This is why California; Massachusetts; Austin, Texas; Boulder, Colorado where I live; Seattle; Vancouver; have all implemented organic diversion legislation to mitigate the amount of methane gas that is entering our atmosphere. A foam ban will exponentially contribute to this waste stream and the residual production of global warming methane.

Slide No. 6, so some of you can't see this, but here's some statements provided and previous comments supporting this bill. These are the paradigms that are keeping us from moving forward as a society and how we manage our waste and mitigate our

litter. You know for 150 years, we have been in a linear model of take, make waste. It's time for a new change, and a new transformation in how we are managing our waste, how we're managing our environmental impacts from our waste and the environmental impacts from our litter.

One of these for those who cannot see this is that "Following in the footsteps of nearly 100 other cities...by allowing only items that are readily compostable or recyclable". That's the argument in, in favor of the ban, that we should follow in the footsteps of 100 other cities.

Another is "A ban on EPS will improve our quality of life, the natural environment...and impacts on marine life and birds." There is nothing quantitative at this time that says that it will improve our quality of life by banning PS foam. In fact, the contrary is actually the truth.

There is so much at stake right now preserving a waste management and recycling system that even after 40 years, after 40 years our society, we still only divert one-third of all our waste. We have not improved or changed in over 40 years. Most of our waste systems and most of our waste management practices have really become an illusion.

So Slide No. 7, Rollo May, he was a mentor of mine while I was in college. He's an existential psychologist and philosopher and he said that the opposite of courage in our society is not cowardice, it's conformity. And here's a few examples of why following the crowd versus leading with an innovative change is, is weak and only contributes to a net negative environmental impact.

On Slide 7, an example is following in the footsteps, what is the trend. We look at the Urban School Food Alliance, it's five of the U.S. largest school district, 4,700 schools. They switched from polystyrene trays to a paper fiber compostable tray. All good intentions, but a misunderstanding of what the overall impacts are, and what these waste streams do to the environment.

They switched from polystyrene foam trays cutting 225 million PS trays per year, that's in nine months, from the waste stream. That's their quote. But what they've done is, all they've done is switched 225 million PS trays, polystyrene foam trays for 225 million organic based paper fiber trays. There is no commercial composter in the universe that can manage that particular carbon feedstock into a composting operation. None of these trays, of these 225 million alternative products are being composted.

My team has done extensive research, has reached to the Urban School Food Alliance, and has asked for qualification on this and we have gotten information from the, the five districts participating in this and none of these trays are being composted. Volume prohibits this. This is just five school districts. Volume prohibits, there's weak infrastructure for the composting to receive this, there's weak end-markets for it, therefore it's landfilled, it's going to create methane gas, and that leads us to my major point, and that is contributing to global warming and ocean warming.

The other issue that I have with this is that what are we teaching this next generation. What are we providing them for the future as far as understanding the ways to manage these issues with . . . into our oceans.

This represents five schools--

CHAIR WHITE: You have about three minutes to go.

MR. FLICKNER: Okay, thank you.

What if China were to follow the same suit in the Pacific Rim, or if Indonesia and India were to do the same thing.

I'd like to take your attention to, skip to Slide 9. Ocean warming, plastic debris in the ocean and what it's doing to our marine ecosystems is a horrible reality. And we need to change our systems and mitigate and clean this up, but we cannot justify any actions that contribute on a massive scale the continued production and release of greenhouse gases into our atmosphere. Banning foam food service and replacing it with organic based alternatives is not a solution, it's a good intention, but with negative net impacts. We know the oceans are warming because we have 15 years' data from the Argo Buoy Program. Over 2,000 papers have been published and refereed journals that have extensively and exclusively used the abiotic data for this program.

Ocean warming, the ICUN Director General, Inger Anderson said "Ocean warming is this generations greatest hidden challenge – and one for which we are completely unprepared. The only way to preserve the rich diversity of marine life, and to safeguard the protection of resources the ocean provides, is to cut greenhouse emissions rapidly and substantially". That's the IUCN World Conservation Congress, Hawaii, 2016.

"Most of the heat from human-induced warming since 1970 – staggering 93 percent – has been absorbed by our oceans, which acts as a buffer against climate change, but this comes at a price. We are surrounded by a scale and extent of ocean

warming that effects on the entire ecosystem." This is Dan Laffoley, Marine Vice Chair of World Commission on Protected Areas, ICUN.

When I see pictures of starving sealion pups because nothing has happened to their food source besides overfishing, California brown pelicans have been experiencing high rates of nesting failures, and thousands have been dying because they can't get enough food to feed their chicks. Any species trying to survive from starvation because of food resources are decimated, in this case from changes in their ecosystem's environment, ocean warming. What do they do? They eat things that are not food. This is a natural survival instinct. Are these animals choosing plastic debris over what they know as food? This may occur in some circumstances but not at the level that is occurring right now.

CHAIR WHITE: Mr. Flickner.

MR. FLICKNER: The Starfish Wasting, the Starfish Wasting Disease that decimated more than 20 species of starfish from Alaska to Mexico is now understood to be the largest observed die-off of wild animal in the oceans. All due to warmer temperatures.

CHAIR WHITE: Mr. Flickner, we're, we need you to provide a concluding comment, please.

MR. FLICKNER: Sure. Transitioning to practicable solutions. We need to transform our current systems instead of banning. What is needed here is a holistic and comprehensive approach to waste management, litter control, and public education and accountability. Quantifying environmental impacts propose alternative organic waste streams. Banning is not a solution.

I'll take questions, thank you.

CHAIR WHITE: Thank you very much for your presentation.

Members, to prevent feedback, we need to keep our microphones off when Mr. Flickner is, is speaking. So at this time, I will open the floor to questions for Mr. Flickner.

I guess, Mr. Flickner your, your presentation was thorough enough. Members, if we, if you don't have questions for Mr. Flickner we'll, I guess we'll let, let him go.

Thank you--

MR. FLICKNER: Thank you very much.

CHAIR WHITE: --so much for your, your time, we really appreciate your providing us the presentation and the, and sending us the written copy.

MR. FLICKNER: Thank you.

CHAIR WHITE: Thank you.

Members, we'll take a quick recess to setup the next presentation.

(THE MEETING WAS RECESSED BY THE CHAIR AT 1:21 P.M., AND WAS RECONVENED AT 1:28 P.M., WITH ALL MEMBERS PRESENT; EXCEPT COUNCILMEMBERS ATAY, GUZMAN, AND HOKAMA, EXCUSED.)

CHAIR WHITE: This meeting of the County Council will please come back to order.

And welcome Ms. Dyer, thank you very much for taking the time to make your presentation to the Council today. We look forward to what you've got to say. Please proceed, and we all have written copies of your documents.

MS. LYNN DYER, FOODSERVICE PACKAGING INSTITUTE:

Thank you very much. I really appreciate the opportunity. I only wish I could be there in person, for sure. So.

Thank you very much for the opportunity. I just wanted to talk to you today, a little bit about some of the comments that I had on the County of Maui's proposed polystyrene ban. So, to quickly go through these, if you switch to Slide No. 2, I want to talk to you a little bit about the Foodservice Packaging Institute so you get a bit of a background on who we are and who I am.

So FPI is a trade association that was founded back in 1933. And we're actually the only trade association that, that focuses specifically on foodservice packaging across all of North America. And our members actually manufacture those . . . containers, boxes, bags, cutlery, whatever it happens to be. And so they are the actual manufacturers of products as well as the raw material suppliers and the machinery folks as well.

In total our members represent about 90 percent of the entire industry. The other thing I would say is that we do offer a free membership for foodservice distributors and operators, so we actually represent the entire supply chain.

Now I mention the membership about FPI because I want to raise, raise one of the questions that I have about the bill. And if you move to Slide No. 3, you know, one of the concerns that I have is that frankly one of my members is located in Hawaii. Hawaii Foam Products and their sister association K. Yamada Distributors is located on Oahu. And they've been in business for over 50 years at this point and they have contributed millions to the State in terms of payroll and taxes. They manufacture foam products and given the fact that they employ about a hundred different people in Oahu and other places. The concern about the impact this bill would have specifically on one of our members. So I did want to mention that one.

If we move to Slide No. 4, I think one of the other things that I know Kerry just talked about in his presentation is that I know one of the, the hopes for this bill is that you are going to be able to encourage the use of recyclable and compostable materials. But in fact, what's really going to happen is that it's really going to limit the marketplace for the foodservice operators and that's something that we can't support. We believe that the foodservice operators themselves should really be able to determine what types of materials they should be using.

Now if you look at what is actually currently being recycled or composted in, in Maui, one of the things is when you look at the recyclable materials, that's really only going to mean that any of the PET materials could be recycled and potentially some of the aluminum materials and frankly that's really in question too. So, are those materials really going to be recycled or not.

And then, as we already talked about I think one of the things that's concerning is suggesting that you move only to compostable materials. And I will tell you from FPI's standpoint we support the use of compostables. But in this case, those products would not actually be composted and all the, would end up going to the landfill and that's certainly concerning. So impact, your hope that this would encourage the use of recyclable or compostable materials is not necessarily going to come to fruition.

So if we move to Slide No. 5, I was told that you wanted my opinion on, on the definition of "food service container" and also the definition of "polystyrene". And my interpretation from the language in the bill. So just that you know, I think it's pretty clear in the bill that it, how it's drafted that food service container includes the cup, containers, dinnerware, trays. I don't think there's anything strange about that, I think it's very clear.

I think what is not clear is your definition of polystyrene. Typically, what we have seen in these types of bills is that it really, the focus is on, on foam polystyrene. But the way your bill is currently drafted it could also include rigid polystyrene, so if you

think about those clear takeout containers or your red solo cups, or those types of items, those might also be caught up in this bill as well. So I'm not sure what the intent of the Council is, but that's unclear at this stage and certainly we would not support a ban on either of those products.

So if we go to Slide No. 6, one of the things that I was asked to talk about is really focusing on what this is going to do to mitigate litter. Certainly no one wants to see litter of any type and I think one of the things that concerns me the most is when you decide to focus on one type of material and in this case I think it's foam for foodservice packaging that you're really focusing on. That's actually a pretty small pieces of the pie when you're talking about what type of litter items you find in the litter stream.

So I did find information from Ocean Conservancy on litter in Hawaii. So in, in your beautiful State, not necessarily in Maui, but if you look at from a statewide perspective, you know, you look at other plastic and foam packaging, that's far down on the list. And when you start considering what percentage, what percentage foam foodservice packaging is in the litter stream, you're talking about 4 percent of all the total, the top ten items and actually only 2 percent of all the total items that they collected in the State. And I would think that what they found at the statewide level would be very similar to what you'd find specifically in Maui.

So if we go to Slide No. 7, I think one of the other things to think about too, is often people think that, you know, a foam ban is going to help to mitigate litter. But I think what you do is you take a look at some real-world examples and I would point you to San Francisco. So San Francisco was one of the first cities that banned foam foodservice packaging and actually they did a litter audit both before the ban took place and after the ban took place. And it was actually pretty interesting to see the results of that, of that audit, because what it showed is that the amount of foam cups, if you just look at the cups for example, if you look at the foam cups, the number of foam cups actually decreased by over 30 percent, but the amount of paper cups increased by over 30 percent.

So I think this really speaks to the thing that it's not about the package, it's about the behavior. Somebody's going to litter no matter what the material is, and that's certainly something that's very concerning. So again, I think that points to, is this ban really going to help to mitigate litter. I don't think that's necessarily the case. And certainly some of this data shows that.

If you go to Slide No. 8, if we know that just changing the type of material that's in the litter stream is not going help, then what would potentially help? Keep American Beautiful has done a lot of research specifically on this topic and it's interesting to

start looking at where does litter specifically come from. In most cases, its coming from motorist dropping things out the window, it's from pedestrians that are dropping things as they're walking around, and actually a small amount is actually related specifically to things like, materials coming out of a truck or out from a vehicle. And then also a very small amount coming from secured containers, dumpsters, trash cans, etc.

So if we go to Slide No. 9, I think one of the interesting things is why people litter. The vast majority of litter happens because an individual purposely decides to drop that cup or container, or whatever it happens to be on the ground. You can't necessarily blame, you know, other things. There are certainly, there are other, other issues, things like the number of receptacles, but I think the vast majority of litter happens because this, that individual person decides to do it.

I think the other thing too, that concerns, that is concerning is that typically litter will happen because if you see litter on the ground people will automatically think oh, well it's okay to litter and so I'm going to add to it. And that's certainly not okay, but that's certainly one of the reasons that we see that people litter. I think, and I mentioned this earlier, I think the other thing is too, you know the availability and proximity for the trash cans themselves or recycling bins, whatever they happen to be. You know, are they available, are they not available and I think ultimately what we find is that people think that it's just frankly not their responsibility to keep an area clean.

And when we see clean beautiful spaces, like Keep America Beautiful talks about, you know, what we end up seeing is that people take pride in their location and they want to make sure to keep it clean and . . . litter.

So if we go to Slide No. 10, so if we think about, if, if, if we take the information that we get from Keep America Beautiful on understanding the consumer behavior and how important that is, and recognizing that we do want to keep Maui clean and we want to make sure, we want to try to mitigate litter, we need to think about what other types of solutions there might be out there.

You know, a foam ban is frankly not going to be the comprehensive solution to mitigating litter in Maui that you're thinking about. And instead you really need to focus on that behavior, that human behavior. And I'm not trying to point fingers, I'm just saying if you take a look at the data, that's where the data leads us to, is we need to make sure we're changing consumer behavior.

So the thing is, you know, how can we work with the County Council, how can we work with citizens to make sure they understand that they shouldn't be littering. And so for example, the Foodservice Packaging Institute a couple years ago actually

developed a guide on typically on how to reduce litter in and around food service establishments. We worked with the National Restaurant Association and Keep American Beautiful with some very simple action oriented . . . some of those food service operators naturally undertake. And I'd be happy to send that to you, that's free, available, you know, something we could easily distribute to a lot of food service operators on your beautiful island.

So if we go to Slide No. 11, you know, I think the other thing we want to think about is, while we talked about consumer behavior being the, the number one reason that we find litter, certainly, you know, things like making sure we have enough trash or recycling bins, making sure we understand where we're placing them, understanding what types of bins we might need, that's going to be important as well. You know, it's interesting, and, and we have this in the, in the litter document that we made for National Restaurant Association and with America Beautiful, like, something like Walt Disney World, they have done actual studies to figure out exactly how many feet you need to have in between some of those litter, in between those receptacles to really make sure that someone's going to actually put it in the right place. And what they found is something like 30 feet is ideal to avoid any kind of litter. Now maybe that's not, not something that you can do on the island, but just look at some of the data that's available and figure out what might work specifically for you.

I think the other thing too is when you start thinking about, even just things as simple as, you know, using carts and not necessarily just putting bags of trash or, or recyclables out on the corner because, or out on the curb because I think what tends to happen is sometimes, you know, something will come out of those bags so is there a better way to actually put your trash and recycling out on the curb so it's not going to end up potentially as litter.

And then I think when we look back at why people litter and where some of the sources of litter are, one of the things that we pointed out although it's a small amount is even something as simple as truckloads and making sure that trucks are, are covered. You know, I know Hawaii has an uncovered truck law and so the question is, is that being enforced, is there an opportunity for stricter enforcement of, and use some of the existing litter laws to make sure that people aren't littering.

So, with that I went very quick, but I do hope that you have any questions for me and I look forward to hearing them.

CHAIR WHITE: Thank you very much, Ms. Dyer.

MS. DYER: You're welcome.

CHAIR WHITE: Members, questions for Ms. Dyer.

I have one on page 4--

MS. DYER: Yes.

CHAIR WHITE: I'm not sure where that interference is coming from. Can you hear me okay?

MS. DYER: I can, yes.

CHAIR WHITE: Okay, thank you.

On page 4, what is PET?

MS. DYER: Ah, PET, so that's the resin that you would think about with plastic bottles, so when you think of plastic water bottles, that's that material. So in, when you look at all foodservice packaging on the plastic side, that material is typically made out of polypropylene, polystyrene, PET, or also PLX. So there are really four different resin types that are available for foodservice packaging. And so right now according to the way your recyclables are listed, PET would be the only resin type that would be allowed.

CHAIR WHITE: Okay, great, thank you.

MS. DYER: Or, actual, it would actually be recycled.

CHAIR WHITE: Okay. Thank you. And, and your feeling is that our current, currently worded definition is not clear as to whether the focus is on foam or foam and rigid. Is that correct.

MS. DYER: That's correct, that's correct. So you may want to take a look at that definition when you as a Council decide what you want to target. Frankly, I hope you don't target either, but I think that's something, you know, as we see other communities decide to go down that path, the clearer you can be, I think that's, that's important.

CHAIR WHITE: Okay, thank you. Members.

Ms. Crivello.

COUNCILMEMBER CRIVELLO: Thank you, Chair. So, as I listen to your presentation, your suggested process is to improve and reduce, find a better solution. But it still does not address, eventually it goes to the landfills, right, and is it biodegradable. So, whether--

MS. DYER: No, but nothing, sorry. So landfills weren't designed for things that biodegrade in them. If you go to today's landfills you find newspapers and banana peels from 50 years ago. You know landfills were designed to entomb materials and that's what they were designed to do. It's not looking to biodegrade at all.

COUNCILMEMBER CRIVELLO: So even if it's compostable, you would still have--

MS. DYER: It's not going to biodegrade, no.

COUNCILMEMBER CRIVELLO: --okay, so--

MS. DYER: Paper, it doesn't matter what the material is, it's not going to biodegrade in a landfill because that's not how landfills were designed.

COUNCILMEMBER CRIVELLO: Right. If I may also ask another question.

So are there price differences versus the alternatives.

MS. DYER: Yes, there are. But to be honest with you, as a trade association, we don't get into price discussions. So, I can't answer that, but I do know that there are price differences.

COUNCILMEMBER CRIVELLO: Okay, alright.

MS. DYER: That would be something you'd want to research separately.

COUNCILMEMBER CRIVELLO: Okay. Thank you. Thank you, Chair.

CHAIR WHITE: Any other questions, Members. Seeing none, I want to thank you very much, Ms. Dyer and appreciate your taking the time and, and thank you for being so flexible that we can call you up and we may do so again. Thank you so much.

MS DYER: The beauty of the internet, right.

CHAIR WHITE: Yes.

MS. DYER: Thank you. Take care.

CHAIR WHITE: Take care.

Okay, Members, we'll be in a brief recess, this is, this should be relatively brief because I think we're, oh, I don't see the computer here but we'll be able to setup the two ladies that are coming up next in relatively short order, so please stay in your seats.

(THE MEETING WAS RECESSED BY THE CHAIR AT 1:44 P.M., AND WAS RECONVENED AT 1:46 P.M., WITH ALL MEMBERS PRESENT; EXCEPT COUNCILMEMBERS GUZMAN AND HOKAMA, EXCUSED.)

CHAIR WHITE: This meeting shall please come back to order.

Members, we will now have a dual presentation from Ms. Cheryl King and Megan Lamson. So whichever one of you would like to start.

MS. MEGAN LAMSON, HAWAII WILDLIFE FUND:

Aloha mai kakou, Chair White and the rest of the Councilmembers. Mahalo nui loa. My name is Megan Lamson, I am a marine biologist and the Vice-President for Hawaii Wildlife Fund and I appreciate the opportunity to speak with you today.

CHAIR WHITE: Before we start your time clock, Members, Ms. Lamson has about 72 slides, so it's going to be a challenge for her to get through it all, but we have, we have the printed presentation so when we get into the, if she doesn't make it within 15 or so minutes, you can still ask questions based on her full presentation.

Please proceed.

MS. LAMSON: I have 19 slides, Cheryl's going to take us home with 72.

At any rate, I, I have a Master's degree in Tropical Conservation Biology and Environmental Science from the University of Hawaii at Hilo and I believe there's a full bio in you packets so I won't go on about that.

But Hawaii Wildlife Fund as you may know is a very small but mighty non-profit organization. We are dedicated to conserving native wildlife here in Hawaii and we

were founded in 1996 by Hannah Bernard and William Gilmartin. We're based out of Paia here on Maui and Volcano on Hawaii Island.

So I'm not going to spend lots of time talking about our history and accomplishments with marine debris removal. In summary, we have removed four hundred and, I'm sorry 242 tons, which is 484,000 pounds of marine debris from shores on Maui, Hawaii Island, Midway, and the French Frigate Shoals. Thousands of volunteer hours, lots of, lots of time and energy. And the reason we do this is because our mission is to protect our native wildlife. And marine debris is severely impacting our, our native wildlife.

So I'm going to be presenting a lot of peer viewed research, journal articles related to what I'm talking about today. But focusing on the fact that, for example this paper published in March 2015 by Gall and Thompson from the UK was a literature of you, of all, of the, the scientific journal articles up to that time that noted some sort of interaction with wildlife and marine debris and they listed at least 693 species of marine debris have, I'm sorry, species of wildlife have interacted with marine debris, e kala mai. And 92 percent of these individual interactions are with plastic debris. Kind of more frightening is 17 percent of those species are listed on the IUCN Red List as threatened or near threatened. So these are creatures that are already struggling and then they are getting hit harder with plastic debris.

So for the majority of my presentation I will be focusing on one particular component of plastic marine debris that we are here all to talk about today which is polystyrene.

So expanded polystyrene foam or what I like to call future marine debris is negatively impacting marine wildlife. And so today my presentation is going to focus on the science, give examples of locally, local sources of marine debris, and also just common sense of the reasons why we should all be supportive of Bill 127.

So this particular article was published last year by Lonnstedt and Eklov, two researchers in Sweden. They actually had a laboratory test where they were feeding European perch microplastic particles, polystyrene microplastic particles. And so this research showed that exposure to environmentally relevant concentrations of microplastic particles, polystyrene particles inhibits hatching, decreases their growth rates, and alters feeding preferences and behaviors of the European perch.

In addition, these individual perch that were exposed to microplastic didn't respond properly to their olfactory cues, and so they were more likely to die of mortality due to predator-induced interactions. So these results are demonstrating that microplastic particles made of polystyrene operate both chemically and physically on larval fish to performance and development. And this is something that should really strike us

close to home here in Hawaii when we are so very reliant on our coral reefs for our own survival.

So another journal article that was published recently in 2014 by Gun Kwon and colleagues in Korea focuses on the beach sand and seawater samples that they were, that were taken from the Northeast Pacific, so areas from Alaska, the West Coast as well as Hawaii Island and Oahu.

And so the study found that polystyrene analogues can originate from polystyrene decomposition. So what this means is the polystyrene, when it's degrading, turns into styrene monomers, styrene dimers and styrene trimers that can be traced and found all throughout the world's oceans. There was not one sample that they took that didn't have styrene analogues in there. And so, this was the first of its kind to report the regional distribution, the study of styrene analogues. And their beach sand and seawater samples taken from Hawaii, investigated, were able to determine that this is, there are detectible levels of polystyrene analogues in sand samples both here locally in the sand samples in Oahu and off the seawater off of the coast of Hawaii Island.

So this concludes that polystyrene including items like these food service containers are new sources of global chemical contamination. And in addition the data suggested that there's a possible proportional relationship between polystyrene pollution in our oceans and population size. So the more people, the more polystyrene.

So with that I'd like to give a couple local examples. This paper was published by Dr. Hank Carson and myself and several colleagues within the UH system. In 2013, and it was a two part study based out of Hawaii Island. And so for the first part, we were actually able to deploy debris-retention booms in rivers that are draining out of Hilo, the city of Hilo. So Wailoa River and Alenaio Stream and we were able to determine that small island communities such as Hilo can produce at least a half ton of marine debris annually from land based sources. And these land based sources, they spike and are coincided with high heavy rainfall events. So things get littered and then they do eventually end up in the ocean. And once at sea, they can pollute both locally and distant locations.

So the second part of this study was deploying these little red blocks. We cut up 1500 of these and etched them and said Hilo Drifter Project and we deployed them from four spots around Hawaii Island. And interestingly enough, 25 percent of which were collected, and of those about 21 percent were retained locally on Hawaii Island, the other four percent came to Maui Nui. We had, within eight days after deployment, one of the Hilo drogues ended up on Hana and we had 42 total land on

Maui, 8 on Lanai, and 5 Kahoolawe. So, this is a picture that Cheryl took from Kanapou and Kahoolawe.

So, you know, Hilo is upstream from Maui, maybe Maui is upstream from Oahu and Kauai, and we're also polluting locally. So, I guess the end message from this study is that plastic pollution has both local and remote sources and it's our responsibility to reduce the local one.

So thanks, Lynn in a previous presentation kind of introduced this international coastal cleanup. This is something that's been hosted by Ocean Conservancy for decades now. And, locally it's managed by the Malama Maui Nui group and so this data is a little bit different from the data Lynn presented. This data is specific to Maui County and it's for this year.

So the top chart is the top ten debris items collected from shorelines on Maui in September 2016. And so these are significant numbers. Number four collected item was foam pieces, 3300 of those. Number eight was other plastic/foam packaging. And number, I'm not sure which number, but take out and take away foam containers there was also an additional 436 of those so in total from collections on Maui in September, at the end of the month, there was over 4600 foam items collected, representing closer to ten percent. So I'm not sure where that one percent number is coming from, but the data we're seeing on our, this island is for ten percent.

And so Ocean Conservancy published an article on their website in July last year celebrating that San Francisco was going totally foam free and they write that as you may know, the problems associated with EPS foam products is that they often fragment into smaller pieces once in the ocean where fish, sea turtles, sea birds can mistakenly eat these tiny plastic . . . So last, so two years ago in 2015, worldwide there was 425,000 foam cups, plates, and food containers removed by volunteers worldwide. Serious issues.

Bringing it back here close to home, photos speak a thousand words, and this is a photo of the Kahului landfill prior to the January 2011, establishment of your plastic bag reduction bill. And so these photos were taken within eight months of each other, so before the reduction ban on plastic bags, grocery store bags, and after. Serious difference. You don't need any sort of scientific study to see that.

However, conveniently Lauren Blickley and colleagues on island published a paper that was published on Earth Day last year and a quote from the author is that over this course of 17 months, so her study began in August 2013, two and a half years after the, the bag ban was passed, they, over 10,000 pieces of debris items, there

was not a single grocery store bag on the beaches during her survey. So this is serious, this is huge. And it brings the message close to home.

So with that I'm going to transition into our common-sense reasons that we should pass Bill 127 and hold the foam. And this picture I took June, last year out, outside of the Kailua Bay Pier in Kona. Just a nice example of our waste stream.

So we've been talking about plastic pollution in the environment and reduction bills for at least over 20 years. This, this scientific article was published in 1994 in the Netherlands talking about how, here's an excerpt, "Land-based marine pollution, including pollution from upland discharges of marine debris, are not to be considered an isolated set of problems. Rather, they are an integral part of a sound environmental management and pollution control for every waste management activity. So the very policies that reduce the generation of solid wastes will prevent them from entering the environment to begin with."

This here is a report and apologies I didn't know they would be printed, all hundred plus pages of them in your packets, so sorry about those trees. But, this report was done in California, dozens of cities in California produced for a National Resource Defense Council and talks about the actual hidden costs of cleanup of our oceans and our waterways. And so the report focused on, focuses on costs to communities for waterway and beach cleanups, street sweepers, storm water capture devices, storm drain cleaning, maintenance and manual cleanups, and public education. But does not include any sort of indirect costs to wildlife, for litter and debris.

And as you can tell, if you fit Maui County, the last census we were at like 163,000 people, we're in the large category give or take another extra 200,000 tourist every year, I don't know large to largest, the average supported annual cost in California is well over a million dollars. So we're talking about pennies to the dollar on each of these products. But the true costs are in the disposal we're not talking about that and we should.

A second report produced in 2016 by the State of Hawaii, Department of Transportation. So this was a report created to focus on long-term plans to enhance successful control measures to meet their trash litter reduction goal, which was the reduction of 297 cubic yards for Oahu. And if you notice in their long-term control measures, considering an ordinance to ban Styrofoam was listed as one of their number one items.

CHAIR WHITE: You have a little less than three minutes.

MS. LAMSON: Okay, thank you.

CHAIR WHITE: Thanks.

MS. LAMSON: So kind of breeze through this, the point is that at least nationally we're only recycling and composting about 35 percent of our debris. If you break this down specifically to Maui, we're creating something line 366,000 tons of municipal solid waste a year and even if we're at the 30 to 35 percent level of recycling, it's kind of dismal. And, we could do a lot better.

According to Smithsonian Magazine, "Styrofoam or expanded polystyrene is made of #6 plastic, so plastics are ranked from one to seven, seven being the great big giant other, and generally speaking they do get more challenging to recycle as you move up the, that number chain. And so there's less of a market of Styrofoam recycling than other recycling and we'll talk a little bit more locally.

This is just another article reiterating that polystyrene waste is basically its unfeasible, economically unfeasible to recycle polystyrene especially in the islands. So here from your Maui County website, we can tell that you guys can recycle #1 and #2 plastics only. So again polystyrene is #6, there is no viable recycling means for this product on island. And so I think we really need to take that fact alone to heart. We live on islands, these are vulnerable island ecosystems, and it's really irresponsible for us knowing what we know now, to continue to bring in products that can't be disposed of properly.

So, polystyrene as far as I know, is, is not recyclable in Maui nor is it recyclable on my island, Hawaii Island, or Oahu. And there are clear foam alternatives available. So, if you're looking here from left to right, these are all quick google search of local vendors who sell foam alternatives. Things that are not made out of petroleum products.

So, with that, thank you for your time and I guess I'll transition to Cheryl and we'll take questions or how does that work.

CHAIR WHITE: Well we'll take questions after Cheryl's presentation.

MS. LAMSON: Okay.

CHAIR WHITE: If that's alright. That's alright with you Members.

MEMBERS VOICED NO OBJECTION.

CHAIR WHITE: Okay, thank you.

Please proceed at your leisure.

MS. CHERYL KING:

Alright, can everybody hear me alright. Aloha, thank you so much for having us here and just really excited about talking about these two topics. And, really impressed with everybody's testimony so far, I think everybody has kind of given us a good summary so far to build on. But we really want to be here to answer any questions you guys have and just do our best on that end.

So I do have 72 slides, I'm going to just breeze through a lot of them. A lot of them are visual, just to kind of show you guys what we deal with on a day to day basis, pretty much.

And so this is the, basically my favorite two topics to talk about, turtles and trash. And they are very comingling, so it's tough to kind of break them apart. But, this is what we're going to talk about today is our grand vision for the ocean, I think everybody here wants to see this happen. That's why we're here, this is the dream. And I really do believe passing this bill will make this vision more of a reality versus not passing it.

So, we'll jump into some, oh yeah, my little quote "More Turtles Less Nurdles!" that's our vision. Nurdles are the preproduction plastic pellets that kind of symbolize the marine debris that we hate so much to see.

So, there are a lot of really good infographic out there describing the pure amounts of impacts that the ocean is having right now. Some say 12 million tons of debris are going into the ocean every year. That's really tough to quantify and I can't quote that but bottom line is the oceans are in serious danger with so many impacts of marine debris. And, it all really starts here at home and these are the kind of photos that we see a lot and we see this every day. And these single use plastics are going to outlive us and that's scary. There's too many of them in the world, and it's our chance to eliminate them.

And so again, they all get into the ocean one way or another and we can't address the littering, the psychology of littering right now, that's a way huge topic, but we know it's getting into the ocean. So if we can stop that at the source, that's the point of this bill. And that's how we're going to be successful in eliminating all of these

impacts to the ocean becoming microplastics and smaller and smaller. The, the whole thing is that this debris doesn't go away. As much as we'd like to think it's going away, we don't see it anymore, it's still there. So these alternative products do go away, in a much safer way for our environment.

So we, this is a huge overwhelming issue even for us scientists, trying to get some good papers to you guys and we did inundate you guys with a lot of studies that I can't imagine anybody could have read. And there are a lot of people though that are trying to quantify this on a bigger level and this is the Litterbase and you can go online and check these guys out and they've kind of brought it together and quantified it a little bit for us, which we very much appreciate, so you guys don't have to read all these right now for sure.

The bottom line is, animals from the smallest Cyano-Bacteria to the largest whales are being impacted by the, by this litter. And how do we know this? A lot of, a lot of researchers from all over the world are conducting necropsies on animals to try to figure out why they died. And so this is what they're finding, stomach contents, contents with this debris in them and you know, this is an ongoing study. But imagine if we just had this for lunch, this is, this is a huge problem that's happening a lot.

And so, this ingestion, besides entanglement, the ingestion part is what we're focusing on here with the polystyrene. And there are a lot of infographics out there and it is being well documented so if we do have an issue of being, having this come up in a court of law or some, something like that, which I doubt will happen, but if we do have that we've got some good ammunition for you to, to deal with.

And then when it becomes particularly to foam, this is the kind of foam that we pick up on our beaches, and yes this is a definitely a combination of packaging as well as the food service containers. And a lot of studies don't partition those out as far as what exactly they are made of or what products they were before they came to us. But that's really hard to do and, but we're going to work on that a little closer, but we know that this is what's washing ashore.

And the global composition of litter we've, we've seen so many different statistics today, so you know, anything from two to six percent or so. We really do believe that this is only the tip of the iceberg as far as these data go. Because everybody is collecting data but it's, it's, there's still so much out there that we're not seeing.

And I was just at the International Sea Turtle Symposium and this was just a couple of the studies that were presented on this topic and it really is a hot topic right now. Everybody is seeing these impacts and these are just two, two examples of studies, one's Peru and the other one's in the Indian Ocean. And I think this title on the right-

hand poster, the "Alarming trends" is a really good indication of what we're dealing with right now. This is an alarming trend.

And so bringing it down to our local side of things, how we are dealing with the problem. We're right here in Maui Nui and in these beautiful ocean waters, but we're still getting really impacted by marine debris and what Megan kind of touched on a little bit, thanks for sending us your trash. That's happening, it's, we've shown that a lot.

And this is just a couple good photos from what we call "Slipper Island" on Oahu. "Slipper Island" is right off the Honolulu Airport and is really the prime example of the direct impacts from a watershed and the boaters in the harbor. And if "Slipper Island" wasn't there to catch these types of debris, they would, that would have been all out in the ocean already. So, this is just an example of how difficult this stuff is to clean up. These huge piles. And a lot of it is polystyrene, the foam, is very airborne, goes up into the bushes, yeah, this is, this is what we're dealing. It's so scary.

And we also get all the debris from the Gyre, depending on the currents and the winds. And so that's what brings me to talking about Ka`ehu, right makai of here. It's another catchers net so to speak for marine debris, from all over the Pacific, neighbor islands, and from just upstream, essentially. It's a good example of what we're finding.

So I got a call about this place in 2007 about, you know, having a possible turtle nest be in this area. So I went down there check it out. And, I don't know if you can really tell in the photo but this is turtle, a green sea turtle nest and it's nesting in the middle of all of this debris. And of course this was very concerning for us so we started doing cleanups here, you know, off and on, but not until 2012 did we start doing this really regularly. And that's because these kind of situations with hatchlings crawling over single use plastic is just not acceptable. We really want to make it a better habitat for these animals.

And so, there have been hundreds of volunteers from all over the world, all age groups have come and pitched in helping us clean this section of Maui and this is just one beach. There's all these beaches that are being impacted. And so thank you to everyone involve, who has ever been involved in this study.

And so the fun part is going to the beach and picking it up. So, the not so fun part about all this is analyzing it and taking a closer look at what we're picking up. We basically empty the bags onto a sorting table and this is kind of what we're looking at. And this is the part that takes forever. But, we have about a hundred categories on how we identify each piece of debris and I just added the insulation packaging versus

foam food related packaging. So I don't have enough data on that right now, but we will in the future come a year from now.

But yeah, we're looking at everything, we want to know what, what we're picking up. And we try and make it fun for, for people who are involved and educational for sure. And then what we do with it when we're done is we recycle what we can and then the rest of it does have to go to the landfill, which is unfortunate. So I actually brought some visual aids. A bag of this kind of debris for you guys to check out. I'll pass it around in a little bit.

And you guys all have this summary and it's been posted online, so go over it really quickly, we basically find about nine, we have found nine percent of our debris is the foam, and this is just a quick daily, or per cleanup visual of, it's very consistent, foam is always there. We've never had a cleanup where we haven't picked up foam. Yeah.

So another study by Lauren Blickley, same, actually Megan brought it up as well. Her study for three different places on Maui, which did get different current driven accumulations of debris all the time, and another, all of her, all of her sites had polystyrene as well, and her site which was just up from Ka`ehu had a very similar finding, about eight percent of, of ocean debris was polystyrene or foam.

And then crossing the channel at Kahoolawe real quick. Kahoolawe does not have any land based contributors to, to the marine debris, it's this stuff that comes straight in from ocean. And like Megan mentioned, we got three of her blocks, so we know that some of the stuff comes from Hawaii Island. And this is what it looks like from the air looking down and it's a huge amount of debris that goes there.

And we've tried cleaning it up and we've been successful and it really just comes right back. So, it's just a good example of what we're dealing with. And one quick cleanup I took some data on, to present here, we found about 15 percent that was Styrofoam on that one particular cleanup. And so just because it piles up on the beach and is an eye sore, that's one thing, but really when it's in the ocean, how is it affecting the animals, that's what we really want to know. And so these are just some photos from our helicopter surveys around the island and can't go through this data real, too specifically right now, but essentially almost 13 percent of our turtles that we saw from the air were associated with these marine debris lines. And that's a huge issue. Speed up here.

So the questions are they actually eating the debris? They are attracted to it for some reason obviously, and there's, this is a picture from Megan that has the gooseneck barnacles growing on the polystyrene. And if you could look at this piece

of polystyrene particularly, you can tell that there have been bitemarks out of it. So that's a definite indication of issues we're having. And similar to this piece of plastic, there are, they almost are eating it because it looks like food and it smells like food. And part of it is food, so they are getting some of the nutrition out of it, but what remainder is left in their bodies.

So, yeah, we don't know if these guys are dying from this issue, cause they are offshore and we are not going to see them. That's the big indication. And, one of the studies, or one of the summaries of the data collected as our sea turtle training network does necropsies on the turtles, like we were showing pictures of earlier. And for the critically endangered Hawksbill Sea Turtle, that's one thing we're really worried about here in Hawaii is all the impacts that they're facing. And three of them have died from ingesting plastics. So, and I'm not sure if it was foam related or not, I haven't gotten those details back, but it is an issue for them and that's something we need to work really hard at solving.

And, this is another study that's similar to Menger Stricter Study, we let out buoys to see where they would go to replicate where the hatchlings would go. And this is, the trash travels, that's kind of what it shows and one of our hawksbill, one of our hawksbill--

CHAIR WHITE: Two minutes to go.

MS. KING: --that grew, one of our hawksbills that washed ashore, very small juvenile, had plastic and foam in its body and it died.

And real quick to run through some pelagic studies, the Greens and Olive Ridley, and Leatherbacks and Loggerheads, 99 percent of these, I think the stats are in here, you guys can read later, but most of them had plastics in them as well. And the only one that didn't have it was Leatherbacks and that's kind of awesome. Actually, good news for once but this is kind of an example of what was in their systems, not good overall. And about only two percent of it was foam, but that's still a significant amount.

And so that's what we're studying. The, the type of debris and why they're eating it. And so a lot of it's white, similar to Styrofoam and that's what we want to talk about the bitemarks that are left on the plastics that we collect. I'll just zip through those really quick. And this is an example of some polystyrene, or some foam I should say, the products that leave marks on them. A lot, foam isn't the best material to show the bite marks since it's so crumbly. But these are some good examples of the fact that they do bite these, bite these pieces as well.

And so we also color sort those and we also find a lot of white pieces and that may be a factor of what, the more the white debris is in the ocean to begin with. There's not many things that are made out of purple bottles to begin with. So we have more white products. So more research is being done, maybe these animals are just test-biting the plastics, and if they're actually ingesting these items, it can't be good from them, but we are still looking at the long-term and short-term effects of that.

And real quick, some photos from the Marinelife Center in Juno Beach, Florida, they get a lot of wash backs from their hatchlings because the currents that they ride once they leave the beach allow some of them to get washed ashore, versus our turtles that go out and we never see them again. So almost a hundred percent of their hatchlings had marine debris inside of them. So, this is just a photo of each little tube or vial, has, that got contents of individual little hatchling turtles and it's very extensive and so they are seeing a huge issue.

So this is what our ocean is kind of looking like right now, plastic and polystyrene and all these products. Is, is this what we want to see and contribute to, or is this what we want to see. I think we're here to see this. So hopefully we can all come up with a good solution, whatever that may be and pass this bill because this is a really good start. So, thank you very much.

CHAIR WHITE: Well done. We're only about 20 seconds over. Members, questions for the two ladies.

Ms. Crivello.

COUNCILMEMBER CRIVELLO: Hello, thank you for being here, I appreciate the work that you do. I have a question looking at, and maybe you have to clarify for me, so say I take a look at this right here and many of the other photos you have, is actual Styrofoam from fishing and from shipping are, do you identify that as part of the polystyrene containers.

MS. KING: So, yes, a lot of these material, I'll pass this around, so in summary of it is yes, there's a lot of packaging material as well, but there's also a lot of pieces that you can definitely tell were either Styrofoam cups or little take away containers or plates and things. But yeah, and overall data, in most of these studies that's kind of what we're mentioning before that it's tough to really tell for sure sometimes and to quantify that. And most people just throw it into a lump category as foam because you know, you're dealing with volunteers and you know just trying to get it all counted and its so overwhelming. And, but that is what we need to start looking at closer.

COUNCILMEMBER CRIVELLO: Right.

MS. KING: But it is definitely in our cleanups, this is an example of just one cleanup.

COUNCILMEMBER CRIVELLO: So, the other question you show a nice view of what we call slippers or slippahs.

MS. KING: Yeah, slippahs.

COUNCILMEMBER CRIVELLO: Maybe we should ban that too.

MS. KING: Oh, yeah, no, no, it was just, it was kind of a pun, it was a bad pun that didn't go off, a local slipper, local perception of, of marine debris and, yeah, I mean if you, I would love for you guys to come to one of our cleanups just to kind of see--

COUNCILMEMBER CRIVELLO: Right.

MS. KING: I mean everything, every item you've ever probably ever used in your life has washed ashore at some point in time and we're not trying to ban everything by any means, but we know there are good alternatives to polystyrene that we can make a difference and--

COUNCILMEMBER CRIVELLO: On the Northshore of Molokai, there's been massive cleanups and a lot of them are nets and heavy duty type of Styrofoam.

MS. KING: Sure, Mo`omomi. Yeah, yeah, every island kind of has their collecting points of wind driven and current driven deposits so to speak that are typical. And--

COUNCILMEMBER CRIVELLO: So many in your opinion, would many of those debris come from the shipping, the boats, the fisheries, those that are out there because from what I seen in cleanups, lots of those are from, adrift from afar.

MS. KING: Absolutely, yeah, and we're, we're getting inundated by everybody's debris. And it's, it's impossible to target one user group or one, you know, we can't blame the fishermen on everything, we can't blame the kid at the park that always throws his polystyrene container in, in the debris and it washes, it just washes and blows away. So, it's, it's so many reasons, so many sources, its intimidating. But this is one thing that we can control, this debris going into the environment--

COUNCILMEMBER CRIVELLO: Thank you.

MS. KING: --more information on that.

COUNCILMEMBER CRIVELLO: Thank you, Chair.

CHAIR WHITE: Ms. Lamson.

MS. LAMSON: I was just going to add, Lauren could probably chime in on that in terms of composition on the Maui beaches. But, I mean, what we do know is that the debris is coming from humans and so now it's all in our human hands, our responsibility to control things that we do have power over. So, flip that question around, yeah, some, a lot of it is coming from afar, but some of it is coming from local sources so. I don't know if I can punt a question out to the crowd, no, not allowed to.

But Lauren, Lauren's article, that was published in, we can circulate that to the, to the Councilmembers, will discuss exactly land based versus ocean based sources on the three sites that she researched in Maui.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Thank you, Chair. Yeah, I have a couple questions, one is yeah I know there's a lot of this Styrofoam pieces on the beaches because the last time I did a beach cleanup, I mean it was a couple months ago, I spent all my time picking up little pieces like that and filled up a half a bag and my husband who focuses on big pieces like the whole thing, filled up three bags in the same amount of time.

But, my question is I really like that, that test you did of, of finding out where the drift is and where things are ending up from the Big Island. Did we ever, has there been one that's been done from Maui so we could see where our trash ends up when, when it leaves our shores, what other islands it washes up on.

MS. KING: Not that I'm aware of.

COUNCILMEMBER KING: Because I think that's, and that's, you know, that's kind of the reverse kuleana as what is our, you know, responsibility for our trash.

The other question I had was and I think it came up with a testifier earlier who asked this question, couldn't answer it is what, you know, the different, are there any . . . difference between when a piece of that Styrofoam gets into the ocean and the compostable, like how long does it take for or how short does it take for the compostable material to break down in the ocean so that it's not being ingested by marine life.

MS. LAMSON: I hope that you can ask that question to, to Dr. McCauley who will be presenting tomorrow. Cause for the Hawaii Island, Bill 140 efforts to reduce

polystyrene, they actually cut up a clamshell, an alternative compostable container clamshell and a polystyrene clamshell and put it in a glass jar and shook it up to sort of simulate ocean conditions and brought it in a year later for, for show and tell and you know, showing that the degradation of one versus the other. So hopefully he can speak to that. I believe the samples might, I'm not sure if they still exist, but.

COUNCILMEMBER KING: Okay, so I think that was the, the question was, you know, and then the other part of that is the difference between marine life, like a turtle ingesting one of the plastic pieces versus one of the cardboard or compostable pieces. Is there any study on that?

MS. KING: Yeah, well the thing is, the bottom line even without the studies, we don't find these items really, at, on our beach cleanups. Like cardboard container is not going to be around long enough for a turtle to eat it and maybe if it ate it straightaway, but I think that not being that, being my forte, just the common sense of the fact that if they ate a piece of paper based product versus a polystyrene, you now, fuel based product, the, the health effects are going to be way different. And, the, we just don't find those. I don't know if you ever see these on the side? Versus, I mean a Starbucks cup of course is going to wash in right from, right down that road probably. But these aren't things that are going to be in our, in our life very long versus the ones over there. But yeah, that's a great question.

COUNCILMEMBER KING: Well I know I hear from people all the time about how, you know, the landfill doesn't, doesn't really break down compostables.

MS. KING: But the ocean does.

COUNCILMEMBER KING: But, I think in water it's a different situation.

MS. KING: Yeah, absolutely.

MS. LAMSON: And along the shorelines, so I mean the studies that have been done surveying marine debris concentrations in the open ocean versus the shoreline have proven that they're actually greater concentrations of marine debris in these accumulation spots like in the northeast corners of most of the main Hawaiian Islands, like Ka`ehu here on Maui and or for us in the southeast corner at Kamilo on Hawaii Island so there, there are more, more concentrated there. And I completely lost my train of thought. I'm sorry.

Just so going back to what is compostable and biodegradable. Thank you, sorry, got up really early this morning. The, the marine debris if it is along the shoreline, those products will degrade, they will biodegrade. Plastic does not, it will photodegrade, it

will break down into little pieces that are more and more ecologically worrisome because they are more likely to be ingested at all levels of the food chain, whereas those products, so we're talking about ten percent basically on Maui of foam products on our shorelines so those aren't going to last. The polystyrene ones will.

COUNCILMEMBER KING: Thank you, Chair.

CHAIR WHITE: Ms. Cochran.

COUNCILMEMBER COCHRAN: Thank you, Chair and thank you, ladies. Sorry, thank you ladies for being here and thank you for bringing up your, you know the scientific points of view and actual studies and numbers, and, and all of that. So, I want to thank you, and I think the main take away and correct me if I'm wrong, but I would, and Ms. King and you just touched on it too is that there is a difference between, I mean litter is litter is litter, and we're all doing our part to, to deal with it and educate and pick it up ourselves and what have you. But it's what that litter is made of and I think that's what the intent of this entire bill is about is that we want to take away that type of litter that is never ever, ever, ever, ever, ever going to leave. It continues to break down into microscopic pieces as you say versus the other, I believe as you explained does degrade, does compost, does break down and disappears. So is that kind of the gist in the message you ladies are bringing here.

MS. KING: Yes.

MS. LAMSON: Thanks for the executive summary, that was perfect.

COUNCILMEMBER COCHRAN: And, and thank you for condensing I don't know how many hundreds of pages that are here into your presentation and perfect timing and again just thank you for all the work you do.

Another, I think you mention Malama Maui Nui and they are an entity that this County funds to help push forward their programs and I guess just tell me how they are interactive and, and just the, you know, how, what positive impacts they are having on our, in our community and along our shoreline.

MS. KING: Yeah, so they are one of my hero groups as well as all these, the people I mention on the, on my little mahalo slide. There's so many people working on this effort, we have no idea. And they are all dedicated to this cause. And Malama Maui Nui personally comes to Ka`ehu when we can't truck all of the debris away ourselves, they come and get the tires because they can take them to the landfill without us having to pay for that disposal and what not. But yeah, they're a really good resource, they do education all the time, and the amount of debris that they pickup,

land based more, even is astounding. And it, if it weren't for them our islands would be so much more trash. So I very much appreciate that organization so much.

COUNCILMEMBER COCHRAN: Thank you very much for your comments and again your expertise in this. Thank you, ladies. Thank you, Chair.

CHAIR WHITE: Ms. Sugimura:

COUNCILMEMBER SUGIMURA: Thank you, Chair. So question on Cheryl, I guess this is your slide. Marine debris items collected from 40 Ka`ehu cleanups from 2012 to 2017. And on here I think other presenters have similar data, but plastic is 78 percent of it and polystyrene and foam is only, well, what is it 9 percent. So can you make a statement on how do we attack the, the bigger problem which is the 79 percent really and this is only about the, our bill, our bill is only about polystyrene, it's not about plastic in general, so, do you have a statement about that.

MS. KING: Yeah, that's a, that's the million dollar question really, if we all had that answer we wouldn't ever have a problem with pollution again. I know educations been brought up a lot and I don't believe that is the perfect solution because we are all educated about it and its still happening so much.

And plastics are tough to trace the origin of because there's so many different types and they break down to smaller pieces as well. And they are just coming from everywhere, everywhere. And I don't know the solution to that. I wish I did, and I, I don't know, but this, I think this bill, what this bill does most is it creates kind of ripple effect. If we're, if we're tackling this polystyrene issue even though we say oh it might only take, you know, solve our debris problems by ten percent or whatever, that's a huge start. And that is going to create a movement that I think will be far more outreaching than just saying oh we're just only going to save our island ten percent of the debris. But, yeah, it's, it's a, it's a global issue in every, every level and we try to tackle it every day. And I wish I had a good solution to it but, plastics are forever, they are everywhere.

MS. LAMSON: I just want to add on to that. I mean marine debris is a global problem and, and it's, the composition of debris is going to be a little bit different on each island ecosystem, and each mainland peninsula. But, it's going to take a multitude of solutions, it's not just, we're not going to have like one solution. So it's going to be reduction bills like this, it's going to be beach cleanups, it's going to be big pushes for education, you know, we're, we're out into the classrooms, we're looking for innovative solutions. We want designers to come up with products that are cyclical, so when you're thinking with the end in mind like the product that Marge brought up,

that you can reuse over and over and over again. This container versus use it once and throw it away.

It's going to take industry, it's going to take fishermen, it's going to take scientist, community members, all of us and our concerted effort. So this is one great step in, you know, small step, but a great step in the right direction. And, yeah, that's how we get the other 79 percent.

COUNCILMEMBER SUGIMURA: Thank you.

CHAIR WHITE: Mr. Atay.

COUNCILMEMBER ATAY: Yeah, my involvement sitting here is to listen in on this panel seeking connection with substantial scientific evidence that would correlate this bill's passing on the affects, or effects of polystyrene foams or container products into protecting the health of people, the health of, the health of animals and wildlife, marine life and also protecting the health of our environment. And in sitting here through, listening through scientific evidence that will substantiate the reality of this bill towards meeting the protection of all things. So I want to commend your folks and your efforts and all your agencies and I await more evidence tomorrow. Thank you.

CHAIR WHITE: Thank you.

Ms. Crivello, anything more.

Mr. Carroll. Okay, thank you.

Ms. King.

COUNCILMEMBER KING: Thank you, Chair.

You know, I have another question since the idea of plastics has come up. Have you, have you looked into the, the burgeoning industry of bioplastics and is that going to have any, any, does that play a role in what we're seeing here? You know, bio-based plastics.

MS. KING: Bio-based plastics, you mean like the bottles that are coming out that say they are 25 percent recyclable or 25 percent made from plant based products for--

COUNCILMEMBER KING: Um, you know, yeah, yeah, plastics that are made, not with petroleum, but with you know plant matter.

MS. KING: With less--

COUNCILMEMBER KING: Yeah, like the hard plastics, you know, that we're, I don't know what kind of plastics you're talking about here but you know as, as we get more and more into displacing the things we are used to seeing with bio-based material. Is that going to have a, an impact?

MS. KING: Yes, and no, I think. I don't think those are the ultimate solutions either. I think one, for example, straws. Straws can be replaced by paper straws now a days, and so we don't have to use the plastic straws. That's a really easy solution straight up.

The bottles that are created that are partially plastic and partially plant based, are they going to break down faster? Maybe, little bit, but they're still going to be primarily made from petroleum products and that, then you're still kind of getting the same result. I mean it's a good idea, and I think the technology is moving forward and it's going to happen within our lifetime hopefully, and there is hope. But that's sort of sort of, they call greenwashing, that they think that oh it's such a good product because it's whatever their claim is. And it not necessarily be that in reality. But I guess it's just going to depend on the product that's available.

COUNCILMEMBER KING: Right. Yeah, I mean I think it's going to take a while to move in that direction but--

MS. KING: Absolutely.

COUNCILMEMBER KING: --it's better, it's like this, like we're trying to do here with the Styrofoam bill, it's the foot forward instead standing still or going backwards so--

MS. KING: Exactly.

COUNCILMEMBER KING: --I just, I've been, I was curious about that with the plastic component here because I've sort of been periphery following it although I'm not involved in it because, but I just, I thought it was interesting that we had, you know we had two industry trade people give presentations before you ladies and, and both of them were just more focused on recycling and, instead of, instead of talking about the, you know, the restrictions on polystyrene. So, I'm, I'm, I was happy to come back and focus exactly what's happening with the polystyrene but I do, I do appreciate you ladies being here and I appreciate the extent of the information and the sourcing of the information. So, thank you for being here.

MS. KING: Thank you for listening.

CHAIR WHITE: Ladies I have a question on coolers and packaging materials. Because I've, I think most of us have been following or have had an opportunity where we're following a pickup truck and see a, a foam cooler blow out the back and get hit by the next car, and the next car, and the next car, and it breaks into lots and lots of pieces. Why does this bill not include those type of coolers?

MS. LAMSON: That's a really good question. I'm not sure if you could propose an amendment to get rid of exemption "B". I'm not sure why, why that was included. It's also an exemption on the, the current Bill 13 on Hawaii County, there's an exemption for meat trays.

MS. BLICKLEY: Because there's--

CHAIR WHITE: You know, I'm sorry, if--

MS. KING: Yeah, it's supposed to be--

CHAIR WHITE: If you want to come, if you'd like to come to the microphone that's fine, but all this is being recorded and transcribed so if you'd like to make, like to respond, please come to the microphone.

MS. KING: Yeah, just agree with you on that factor, absolutely. I mean, you're, these are the items that you're taking to the beach directly and half of them are breaking apart when you're at the beach and that's exactly our whole point of trying not to let that happen. So it's, it's a tough one but yeah, Lauren will explain a little.

CHAIR WHITE: The, the other question I had was there is a lot of, you know, if you receive a, an appliance, it's inevitably going to have Styrofoam packing material. Sometimes you have to break the packing material to get it out of the box and I've gotten to the point where I, I put the box in a plastic bag before I break it open and so I keep everything in a plastic bag and I tie that up before disposing of it. Are there any efforts to, to deal with the disposal of packing materials responsibly?

MS. LAMSON: Besides giving them to Barbara to bring back to Seattle.

MS. KING: Yeah.

CHAIR WHITE: Yeah, in her luggage.

MS. KING: Yeah.

MS. LAMSON: I think it was, kind of goes back to what Lauren was talking about in her testimony. We don't want to sacrifice a good bill for a perfect bill. And I would imagine that this particular bill was written, keeping in mind with some of the other ordinances that have been passed around the country. But, maybe she can answer your question directly about that particular exemption.

MS. BLICKLEY: I was, I'll be very short. With regard to the foam coolers, we were really trying to target single use plastics and so with the foam coolers, those can be used over and over and over. Some places have outlawed those and this was kind of a concession when we were sitting in the polystyrene task force. And also fishing is such a big deal here, and we didn't want to, you know, start trying to target those different type of user groups so that was a concession that we made, but of course it could be, you know, we'd love to see none of it. But it was because it was more of a reuse thing.

And then in terms of packaging, San Francisco, their bill, they just recently passed a, a very wide sweeping, the largest wide sweeping polystyrene legislation in the country that does ban packaging. And again, I think that's a huge step and we'd love to see that, but that was another concession that we made on the task force and trying to be very specific. But you can take your packaging, any packaging material right down to Dairy Road, I take mine there, and they will actually reuse the packaging material and, and take it back. So, so there are options. But, hopefully that clarifies those two things.

CHAIR WHITE: Yeah, the, the San Francisco bill, I can't imagine it bars the sale of televisions that are packaged and, I'm assuming that the ban means that somebody operating in San Francisco can't use packaging materials that are Styrofoam.

MS. BLICKLEY: Right, like packing peanuts and things like that.

CHAIR WHITE: Thank you. Did one of you have a--

MS. LAMSON: The ban in San Francisco that went into effect January 2017 prohibits the sale of all polystyrene including foam packaging, cups, even . . . There's no foam.

CHAIR WHITE: But it's the sale of packaging material, not, not banning shipments that include existing packaging.

MS. LAMSON: Good question.

CHAIR WHITE: Don't know.

MS. LAMSON: Get back to you on that.

CHAIR WHITE: Any more questions for the two presenters? If not, I'd like to thank you both very much for making the time to be here this afternoon and thank you for your flexibility of letting the others go first.

So, Members we will be in recess until, I believe, Mr. Clerk, it's 9:30 tomorrow morning. So we'll be in recess until 9:30, we'll have four more presenters tomorrow morning and then we'll have an opportunity to get down to working, to see what we can do with this measure.

So any questions, Members? Seeing none, we will see in, see you at 9:30 in the morning. We are in recess until then.

THE SPECIAL MEETING OF *MAY 8, 2017* WAS RECESSED BY THE CHAIR AT 2:44 P.M., AND WAS RECONVENED BY THE CHAIR ON *MAY 9, 2017* AT 9:33 A.M.

CHAIR WHITE: This Special Council meeting of May 8, will reconvene.

Mr. Clerk, please call the roll.

ROLL CALL

PRESENT: COUNCILMEMBERS ALIKA ATAY, ELEANORA COCHRAN, G. RIKI HOKAMA, DONALD S. GUZMAN, KELLY T. KING, YUKI LEI K. SUGIMURA, S. STACY CRIVELLO, VICE-CHAIR ROBERT CARROLL, AND CHAIR MICHAEL B. WHITE.

EXCUSED: NONE.

COUNTY CLERK DENNIS A. MATEO: Mr. Chair, nine Members present. A quorum is present to conduct the business of the Council.

CHAIR WHITE: Thank you very much. Members as you recall we are going to go through four more presentations this morning and our first presenter is Mr. George Cruzan, a toxicologist and you have his bio in your materials and you also have his presentation in your materials, and we look forward to hearing his words of wisdom for us this morning.

Dr. Cruzan, thank you very much for taking the time to join us and please proceed with your presentation. Everyone has a copy of the presentation itself.

DR. GEORGE CRUZAN, TOXWORKS:

Yes, good morning. To me, it's good afternoon, but good morning to you.

I have a bachelor's degree in Chemistry in 1965. A PhD in Biochemistry in 1969. I've been a professional toxicologist since 1976, that's 41 years. A Diplomate of the American Board of Toxicology, 35 years, and I have run my own consulting company, ToxWorks for the last 22 years.

I have been studying the health and environmental effects of styrene since 1989, so for the last 28 years or so. I've been, a great part of my time has been involved in looking at what's in the literature on styrene, estimating what needs to be done to understand the health effects and supervising about a twenty to twenty-five million dollar research program on styrene health effects over that time.

So, let me go on then. Slide No. 2 in the slide deck, in the draft regulation, the last part in Section I says that, "polystyrene is a suspected human carcinogen." That is not a correct statement. There is no one that considers polystyrene could be a suspected carcinogen, and we need to make sure we don't confuse polystyrene with styrene.

Okay, the next Slide No. 3, just contrast that polystyrene is a solid; styrene is a liquid. Polystyrene is quite unreactive; where styrene is a reactive chemical. And in fact, if you have styrene when its stored after it's manufactured, it is stored with an anti-oxidant mixed with it to make sure it doesn't polymerize to polystyrene. So, styrene is somewhat reactive. Now, I thought maybe, since I don't know that you are chemist or toxicologist, that a couple of words on chemistry and toxicology might be important because I find a lot of people get confused on the difference between a polymers and monomers.

First of all, as shown on Slide 4, when chemicals react, the product that's formed has different properties from the materials that it was synthesized from. And I just gave a classic example of that. Sodium is a very reactive solid metal, its silver in color. If you throw it in a glass of water, you would get a very violent reaction with it reacting with water and boiling most of the water away very quickly as it reacts. Also, chlorine, we know is a poisonous gas and to some extent that's been used in some of the conflicts around the world where people are trying to poison people with chlorine gas. But if we mix sodium and chlorine together and get a chemical reaction, then

we have sodium chloride, which is common table salt. It neither has the properties of sodium metal, nor the properties of chlorine gas. The same is true of all chemical reactions.

So if we look then at Slide 5, polymers do not have the same properties as the monomers that compose them. And I give an example here, glucose is sweet tasting, its sugar. We use it for sweetening, but if you polymerize glucose molecules, many glucose molecules together, then you can form cellulose, a polymer. And cellulose is wood fiber or plant fiber. And, so obviously a cellulose has different properties than glucose. You put glucose or sugar on your berries to sweeten um. You certainly wouldn't put saw dust on your berries to sweeten them, that wouldn't, wouldn't be very sweet.

So the same is true for styrene and polystyrene, they have very different properties and we should not confuse those. So again, styrene is a reactive chemical; and polystyrene is a polymer and it is non-toxic. In fact, if someone ingest styrene, that styrene cannot be absorbed into the body. If someone were to ingest polystyrene, that is not absorbed at all into the body, it just passes right on through. So there are major differences.

Now where styrene comes into the issue of polystyrene is that there is a small amount, residual amount of styrene that gets trapped in the polystyrene and doesn't react. And that amounts to less than 300 parts per million. Obviously, the manufacturers would like to keep the amount minimal cause basically their wasting styrene if there is a lot of residual in the polystyrene. Also, if there is more residual styrene, it makes the polystyrene less functional. Creates more holes, etc. So there's a small amount of styrene in there and that can migrate to the surface of the polystyrene.

So, I would like then to move on to Slide 6 and talk about sources of styrene exposure. The biggest exposure for most people is from ambient air. If you take the sample, I'm sure anywhere in Hawaii, you will find styrene in the air. Whether that's in the city. Whether that's out in the country. Maybe if you get out in the ocean, you won't find it. But anywhere on land, you will find styrene in the air. In comes from automobile exhaust, it comes to some extent from factory emissions, it comes from cigarette smoking, it comes from wood burning, it comes from a variety of sources. But there's always styrene in the air, and that averages about 80 micrograms per day.

Now styrene also is naturally occurring in a number of foods. Cinnamon is very high in styrene, in fact, the active ingredient in cinnamon is called cinnamaldehyde and there is only one carbon difference between styrene and cinnamaldehyde. So

styrene has eight carbons in it, Cinnamaldehyde has nine. So, it's not terribly surprising, but the highest levels of styrene we have found in any natural food is in cinnamon. It's also in coffee, it's also in fruit and nuts and so the estimates are that people get about nine micro grams of styrene per day naturally occurring in their food.

Now most people have some amount of their food packaged in polystyrene, whether that is food that's pre-packaged like yogurt or dairy products, ice cream or cream cheese, sour cream. A number of dairy products and other things are packaged in solid polystyrene which is called, "general purpose" polystyrene. As well as, food service polystyrene or foam products like cups and plates. And if you look at the migration of styrene from all of those polystyrene sources, it's estimated that people are exposed to about 6.5 micrograms per day from polystyrene. Now of that 6.5, maybe 4 micrograms per day is migration from food service products.

So all together, people on average are exposed to about 96 micrograms per day of styrene. Now, that sounds like a big number, we could talk about it in terms of milligrams and then we would say it was .09 milligrams, or we could talk about it in terms of grams which would be even a thousand-fold lower number. So the size of the number is relatively meaningless without the units, and so the estimate is about 96 micrograms per day, four micrograms from food service packaging. That is about one millionth of a teaspoon, so imagine that you take a teaspoon and you divide the contents into a million parts, and one of those parts would be the equivalent of styrene from food service packaging.

Okay, so now let me move on to styrene health effects. In 2011, the U.S. National Toxicology Program listed styrene as "Reasonably anticipated to be a human carcinogen" based on suggested increases of cancer in reinforced plastics workers, based on lung tumors in mice. There were no other tumor increases in mice and there are no tumors increased in rat, so it's specifically in terms of animal studies and there are a large number of animal studies actually that have been done, and its only lung tumors in mice.

So on Slide 8, since the Report on Carcinogens listing, most of the human studies that were, that they looked at have been updated and are being published; either have been published or are being published at the present time and the tumors that they were concerned about in the Report on Carcinogen are not showing up at this point. You know when you start looking at a cohort, and the average age of people in the cohort is 60 years of age let's say, you have very few deaths to look at and so, if you have a large number of a particular type, you think well it might be related to the chemical. As the people get older, or the cohort gets older and more of the people die, you have a better handle on what kinds of cancer incidents there is or

cancer deaths among that cohort. And so as these studies have been updated with 10 to 15 years additional looking at people looking at 15 years; 10 to 15 years later, there's not the cancer increases that we're seeing a few years ago.

Okay, now let me move on to Slide No. 9 and the mouse lung tumors. There are five studies that has been done in mice, normally we only have one in rats and one in mice, but we have eight in rats and five in mice. Three of those five show increases in lung tumors, the other two do not. But in all of those studies, there are no other kinds of tumors that are increased and so one asks the question, what's going on in mouse lung that's causing tumors. It's not going on in rat lung, or it's not going on in any other tissues in mice. And in addition, we don't find increased lung tumors in humans.

So a lot of work has been done and there is a specific enzyme now that's been identified in lung, it's called CYP2F2. It occurs to a large extent in mouse lung, very limited in any other mouse tissues, and much less in rat lung, and even much less in human lung. And so, as, as a result of a number of studies that we have, that industry has, has done, we developed some genetically modified mice that do not produce Cytochrome 2F2. So they're just like every other mouse, other, other normal mice, but they don't have any 2F2 in them. And so that way, we can get a real handle on the role of 2F2.

So about, we just finished a study looking at normal mice and these genetically modified mice and about 78 percent of the normal mice had what we call preneoplastic or neoplastic lesions, that is hyperplasia or tumors. And that would be after two year of exposure at 120 parts per million styrene my inhalation.

In contrast, in the genetically modified mice that do not have Cytochrome 2F2, none of the mice had any preneoplastic or neoplastic lesions. So that gives us a really strong indication that it's metabolism by Cytochrome 2F2 that's causing the problem and it, and it also indicates since we know there is very little 2F in humans that this is, should not be much of a problem for humans.

So in Slide 10, I have tried to summarize what we consider the mode of action that is how styrene causes lung tumors in mice and what we look for, or what we call key events, the key things that happen. So first of all its metabolism by Cytochrome 2F2. There is no evidence of gene mutation or genotoxicity. The metabolites damage and kill some of the lung cells. As a result of the lung cells being killed and as a result of stimulation, the lung produces new cells to replace them and they overproduce, basically cells and we end up then with hyperplasia, excess cells in the lung airways and eventually in some mice, tumors develop.

So a little bit on the metabolism in Slide 11. Normal metabolism of styrene is catalyzed by an enzyme CYP2E1, this catalyzes oxidation of a large number of materials and this produces styrene oxide. And, in the next slide I have a picture of that.

In mouse lung, styrene oxide is produced and produced in quite a large amount, but in addition, the Cytochrome 2F2 causes oxidation of the aromatic ring of styrene. So you can see in the next slide, on the top we styrene and it's reaction by CYP2E1 to styrene oxide. And neither of these are toxic. If you give styrene or styrene oxide to normal mice, even over a short period of time, you will see that they kill a lot of lung cells. But if you remove Cytochrome 2F2 so that you don't have any Cytochrome 2F2 metabolism, you get no toxicity, no death of any cells, no affect on cell production. So it's very clear then that neither styrene nor styrene oxide are causing these problems. It is metabolism by Cytochrome 2F2 that produces the ring oxidized that is you can see 4-Hydroxystyrene, you have the oxidation on the side chain, and we also sometimes find Hydroxystyrene oxide. And, the, the, both of those actually can be further oxidized by putting, by Cytochrome 2F2, putting more Hydroxyl groups on the benzene ring.

So if we summarize what we know in Slide 13, lung toxicity occurs, lung tumors occur in mice, they do not occur in rats from styrene. Lung toxicity occurs in mice from styrene, but not in rats. Toxicity and metabolism of styrene occurs in what are called the Club cells in the lining of the, of the airways; the metabolism and toxicity do not occur in those cells in rats. We also find lung toxicity from 4-Hydroxystyrene in mice, but not in rats. We can eliminate the lung toxicity from styrene or styrene oxide by eliminating Cytochrome 2F2 metabolism. And, and again in rats, there's a lower level of the Cytochrome 2F and we do not get toxicity.

CHAIR WHITE: Mr. Cruzan.

DR. CRUZAN: Yes.

CHAIR WHITE: You've, you've reached the 15-minute mark and can you provide us some, just conclude with the more important of the, the notes on the final pages.

DR. CRUZAN: Sure, I'm sorry.

CHAIR WHITE: No problem.

DR. CRUZAN: Let me just jump over to the risk assessment. Again, we looked at reinforced plastics workers are exposed to like two million micrograms per day. Ambient styrene is 80. The total is about 96. So if, if you were to ban polystyrene

food service products as a way to eliminate styrene health effects, you would be reducing the average person's exposure to styrene by less than five percent.

So if you really want to get rid of styrene exposure to people you need to ban automobiles and wood burning and cinnamon and coffee and beer, how's that. And just a couple of comments from the Director of the NTP and the Associate Director, after, after the announcement of the putting styrene itself on the report on carcinogens, both of them saying here that polystyrene is not a health problem. Okay, and just a brief note on, EPA considers 20,000 microgram per day exposure as an acceptable level. The food service exposure is about four, so that's about a 5000-fold safety factor. And no agency considers polystyrene to be carcinogenic. Okay, so I would take any questions that you have.

CHAIR WHITE: Thank you very much, Mr. Cruzan.

Members, we'll open up for questions.

Mr. Guzman.

COUNCILMEMBER GUZMAN: Thank you, thank you, Dr. Cruzan for spending your, your time with us. I had a question on the, the chromosome CYP2F2, the metabolic, metabolic system on that. That CYP2F2, is that in humans as well on the chromosome . . .

DR. CRUZAN: Humans, humans have a, a very similar enzyme which is 2F1, it's not exactly the same, it does not metabolize styrene nearly as well as Cytochrome 2F2 does, and there's, there's probably only one percent as much 2F in humans as there is in mouse lung.

COUNCILMEMBER GUZMAN: Okay, thank you. I had one more question. On the, you mention the $25 million study on the styrene. Who funded that? What source funding did that come from.

DR. CRUZAN: That was all funded by the styrene industry.

COUNCILMEMBER GUZMAN: Okay, thank you.

DR. CRUZAN: And, and all of those studies have been published in the peer reviewed literature.

CHAIR WHITE: Other questions, Members.

Ms. Crivello.

COUNCILMEMBER CRIVELLO: Thank you, Chair. Thank you for being here Dr. or at least via the technology. So can you just basically tell me if there is a difference between, with polystyrene and Styrofoam.

DR. CRUZAN: Well I can say yes and no, how's that. Technically Styrofoam is a trademark of Dow Chemical Company for rigid polystyrene insulation sheets. Now, like a lot of other things, polystyrene foam is often referred to as Styrofoam. But, technically Styrofoam does not refer to cups or plates, it refers to insulation sheets made by Dow.

CHAIR WHITE: Ms. Crivello.

COUNCILMEMBER CRIVELLO: Thank you, so, polystyrene, I guess what I'm trying to determine is what I see with drastic litter affecting marine life is what we call the foams or the Styrofoam that come from the ships or, or our fishing boats that are at deep sea. So, when you say it's more of a rigid type, is that, would you also say it's polystyrene for my--

DR. CRUZAN: Yes, that, that, yes, Styrofoam is polystyrene, but it's a specific brand and a specific purpose.

COUNCILMEMBER CRIVELLO: Okay, so it has different purposes, but it's, you're saying it's basically the same thing.

DR. CRUZAN: Yeah, it's, it's basically foamed polystyrene, yes.

COUNCILMEMBER CRIVELLO: Okay, thank you.

CHAIR WHITE: Thank you.

Mr. Guzman.

COUNCILMEMBER GUZMAN: Mr. Cruzan, in the, the chromosome CYP2F2 is that found in marine animals as well?

DR. CRUZAN: I don't know that it's been studied in any marine animals.

COUNCILMEMBER GUZMAN: Okay, thank you.

CHAIR WHITE: Any other questions?

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Dr. Cruzan, thank you for your presentation. So I just wanted to, if you could just repeat what you had said about polystyrene and styrene and that one element passes through the body, our body, or did I misunderstand that.

DR. CRUZAN: Okay, yes, styrene, whether you breathe styrene in from the air or you take styrene in from your food, that, if it goes in, if you breath it in, it gets absorbed into the blood through your lungs. If it's in your food, and goes into your stomach, it will be absorbed into your blood and pass through your organs, styrene will.

Polystyrene is not absorbed at all. So if, if someone were to ingest polystyrene, you know it will pass through the stomach and the intestines and, and pass out just like it came in.

COUNCILMEMBER SUGIMURA: Okay, thank you. So I guess, what your point is is that the polystyrene is not, is not cancerous.

DR. CRUZAN: Right.

COUNCILMEMBER SUGIMURA: And that it is, it is something that just passes through your body. And I like your statement about if we wanted to ban we would have to ban automobiles and your last closing statement was, was very interesting. I do want to also say that when my husband looked at your presentation, he said, oh you're in Bridgeton, I just wanted to say that's where he grew up, so. Welcome from--

DR. CRUZAN: Oh good.

COUNCILMEMBER SUGIMURA: --yeah he was happy to see that you are there, so thank you Dr. Cruzan.

DR. CRUZAN: Okay.

CHAIR WHITE: Any further questions, Members.

Mr. Cruzan, I have a question. In the presentation there was a mention of the exposure to mice at 120 parts per million. How would that compare, you know comparing the 120 parts per million to the size of a mouse, how would that compare to the 20,000 micrograms that the EPA says is acceptable to humans based on a human's weight.

DR. CRUZAN: Um, that would, just let me get, make sure I get it right. That would be about 40,000 times what humans, the average human is exposed to.

CHAIR WHITE: Okay, thank you.

Members, any other questions for Dr. Cruzan. Dr., Dr. I'd like to--

DR. CRUZAN: Excuse me, let me correct that. Let me correct that statement, it's about 4,000 times what humans are exposed to, not 40,000.

CHAIR WHITE: Okay, we appreciate that, I'm sorry to put your, your math skills to work there for a second. But, we certainly appreciate your taking the time to share your thoughts with us and thank you very much.

Members, no further questions?

DR. CRUZAN: Okay, thank you for the opportunity.

CHAIR WHITE: Thank you. Aloha.

DR. CRUZAN: Aloha.

CHAIR WHITE: Okay, Members, I believe the next presenter will be Gary Saldana. The two presenters Hillary, Doug McCauley and Hillary Young will be here shortly, but in the meantime, Gary is going to present, as I mentioned yesterday the three items that we passed out yesterday, Gary's research, he's going to go through that and also go through a presentation on the, on the display up here. So, we'll take a five-minute recess.

(THE MEETING WAS RECESSED BY THE CHAIR AT 10:03 A.M., AND WAS RECONVENED AT 10:14 A.M., WITH ALL MEMBERS PRESENT EXCEPT FOR COUNCILMEMBER HOKAMA AND VICE-CHAIR CARROLL, EXCUSED.)

CHAIR WHITE: This meeting shall please come back to order.

And Members, we'll be proceeding with a presentation from Gary Saldana. And before I turn it over to Gary, I want to acknowledge the amount of work that both Gary and Josiah Nishita, our Deputy Clerk have done in the last couple of months pulling together the presenters and also doing, doing research to make sure we understand what it is that we're dealing with. And Gary, I believe has gone through, he says around a hundred different ordinances.

So, with that I'll turn it over to Gary to first share the information included in the handouts we provided you yesterday of Gary's research and then he'll get into a presentation of the various items that are here on the, the display in front of you. Gary.

(Vice-Chair Carroll returned to the meeting at 10:15 a.m.)

LEGISLATIVE ANALYST GARY SALDANA: Thank you, Mr. Chair. Thank you for the opportunity. And as the Chair mentioned, there were three memos that were handed out by the Chair yesterday and one of them is quite long, one is, one is eight pages, so I wanted to have the opportunity to kind of summarize that. And then the other two are related, related to research that was done with other entities, other jurisdictions and one that focuses on the actual definition of polystyrene that we have in our bill compared to other jurisdictions. So those are the three that were, that were passed out.

What drove the research was relative to one of the amendments that was made for including outside prepackaged food vendors to comply with our ordinance. The Corporation Counsel stated in the meeting, or in a, in a memo to the Council and to the IEM Committee that a legitimate reliable statement supporting the determination that the ordinance furthers a legitimate public or legitimate local public interest, so basically they're, they're wanting to have evidence of the fact that this, that this bill is substantiated by, by studies, by reports, things of that nature. So that's kind of what drove this particular memo.

(Councilmember Hokama returned to the meeting at 10:16 a.m.)

LEGISLATIVE ANALYST SALDANA: And, what I did was, I initially went to the, to the jurisdictions, to the Federal jurisdictions that I thought might be able to lend some information for me. Initially going to the EPA, I was able to get some assistance from the Southwest Regional Coordinator for Building Waste and Green Buildings and she states in her response to a question of the EPA's position, "EPA does not have a specific policy statement on polystyrene food containers; however, the EPA has supported projects to reduce disposable plastic food packaging".

In, accordingly, she attached some studies to kind of backup the fact that, that EPA does in fact support the reduction of, of plastics into the environment. And I highlight this particular statement "It has now become evident; however, that such materials can also have serious impacts on human health, wildlife, the aquatic environment, and the economy, and therefore the problem of floatable debris should be addressed." The reason I quote this is because the City and County of San Francisco utilized this statement as part of their findings for the adoption of their

ordinance and we thought when it made the pitch that it has serious impacts on human health, wildlife, and the aquatic environment, that was kind of an important statement to follow-up on. So that document is part of our, is part of the documents we received and then we can make it part of the record if you'd like.

Another study that they provided was a White Paper that was quite an extensive review of ingestion of plastics by a variety of different wildlife, birds, Hawaiian Monk Seals, turtles, fish, mussels, all kinds of different, different wildlife. And so they didn't center specifically on, on polystyrene, but they focused on plastics. And in the conclusion, they say plastics in aquatic systems contain chemicals originating from plastic material, chemicals added during the manufacturing process. They also conclude that the potential toxicology impacts of these chemicals associated with plastic once ingested by aquatic organisms and aquatic-dependent wildlife is an area of concern. They did note in their study that it does require further extensive study.

Also, another report that they provided us, not relative to this specific ocean environment, but this particular study you may have heard this statement from testifiers and other people, "100% of Americans have styrene in their bodies". This particular study was where they got that statement is because they conclude "several compounds, including styrene, xylene isomers, dichlorobenzene, ethylphenol, were detected in all composite samples". So they were actually taking cadavers and they were testing their tissues for various types of chemicals that were in their system. And they said 100% of the cadavers or the bodies that they tested had the substance styrene in their bodies. So that's, that's where you may have heard that, and that's where it came from.

The FDA, going to the FDA, they're, they have pretty much so codified their position on, on polystyrene, this is the section and it basically states that "Polystyrene and rubber-modified styrene identified in this section may be safely used as components of articles intended for use in contact with food, subject to the conditions of their, of their section". And, in, in diving a little bit more and trying to get a little more information as to whether or not they actually conduct studies.

Catherine McDermott from the Regional Office of Food & Veterinary Medicine, provided this statement: "In evaluating the safety of an intended food contact use of substance, FDA reviews the toxicology information submitted by the proponent of the use. This includes toxicological studies on any chemicals that might migrate into food as a result of the intended use of a food contact substance." So I think this particular statement in here reviews the toxicology information submitted by the proponent of the use, is telling them that the industry is actually doing testing on this particular item.

And in additional to toxicology information provided by the industry when submitting their intended use for approval, FDA also reviews applicable publicly available information on substances that migrate to food as that information becomes available. So they look on the internet, sounds like just the way we would look on the internet to find information, which is, I, you would think they would do a little bit more. But that's the way it is, I guess.

The other studies that, that were, that in, in the research we were able to come across is a study that was sent to me from the Centers for Disease Control, and it was done by the agency for Toxic Substances and Disease Registry. And the World Health Organization also had a study on styrene exposure which I thought was very important. With regards to the agency for Toxic Substances and Diseases, it states that "most styrene associated with food is the result of packaging of the food material in polystyrene containers." It's a direct quote from their observations. And then, they identify that smokers, and those eating high proportions of foods packaged in styrene may have above average exposure to styrene.

The World Health Organization also stated that polystyrene is a copolymer and it's copolymers have been used widely as food packaging material and residual styrene monomers can migrate into food from such packaging, that's for the World Health Organization, a study they did for them. And "Exposure to general population occurs at levels of micrograms per day, micro-grams per day mainly to inhalation of ambient air, cigarette smoke and the intake of food that has been in contact with polystyrene."

So this is the basic information that was provided in the, in the first memo, the memo that's dated May 1, just to kind of provide this type of information to kind of help determine whether or not this is in your mind sufficient enough for a substantial basis for passing this bill as is.

The second memo is just an attempt to look at other, other jurisdictions. This particular map, you'll notice all these little black dots are all the jurisdictions that have passed polystyrene. One thing that you'll notice that is pretty common is most of the ordinances are passed close to the water. So, one of the main concerns that I, I found that many of the entities and jurisdictions were concerned with polystyrene foam because it breaks down into little bits and pieces and that's what can be ingested by the wildlife. So you'll see a lot of these are in fact along the coastline.

In fact, these two organizations, Surfrider and 5Gyres Institute note that California has 100 bans that they have passed. The Culver City ban which was passed recently is, was noted as the one-hundredth. San Francisco is, is highlighted because it's considered the most extensive. When they passed San Francisco back in 2007, it was just polystyrene food containers. But here it is nine years later, they

wanted to take it to the next step so now they are still banning polystyrene foam containers, but they're also banning styrene foam packing material, coolers, ice chests, pool toys, dock floats, moorings and buoys. It's important to note that if those items, these later items are in a more durable material, then they are allowed. But if they are just polystyrene foam, they are in fact restricted.

The City and, the other important thing to point out about the City and County of San Francisco is the fact that even though it's the most extensive, it only focuses on the foam. It doesn't, it doesn't get into, it doesn't get into other, other types of polystyrene. The ordinance itself does not apply prepackaged food, it states that specifically in the ordinance that it is exempted if the, if the food is packaged outside the City.

And, in fact it does make a statement in their ordinance that they encourage businesses outside to use compostable, recyclable material and that is in whole or in part not made from polystyrene. So I just wanted to identify that particular ordinance because that, that one is considered the most extensive. In my reading of the various ordinances, it looked to me like almost all the, all the ordinances focused on polystyrene foam, they do not restrict polystyrene oriented, which is the hard plastic that will, that will, I'll show you in a minute and that jurisdictions focus all of their intent on their own jurisdictions. So that seem to be common threads throughout most of the ordinances that I, I read. I may, I didn't get through all of them, so there may be one out there, but I, I didn't, I didn't see it.

Now the third memo is the memo that deals with, with the definition of polystyrene and how we, how Maui County has, has developed it. And, before I went into it I kind of wanted to see where the task force was on polystyrene, and they make a statement in there that says every type of foam and non-foam polystyrene is subject to the ordinance. Also in there they, they kind of, it's almost as if they're kind of back peddling a little bit and they say considering whether to limit the restriction to only cups and clamshells and consider to limit on restrictive polystyrene to only foam polystyrene. I guess, that was a major discussion because mostly all the jurisdictions focused on the foam itself.

Now in this third memo, you'll notice there's a lot of, there's four references to different jurisdictions. Why I took these jurisdictions is because a majority of the definitions of these jurisdictions are pretty much the same as, as ours. You'll notice in the red, that that's the same exact language that we use, the items identified in red is the same exact language that is used in our, our, our definition. And you'll notice in each of those, in each of the definitions, it's almost consistent.

The one thing that I need to point out though, is those definitions that are highlighted in that memo are, are polystyrene foam ordinance. So even though there's a lot of similarities, their focus is mainly polystyrene, once again. Now a number of these cities do have the ability to recycle the, the hard polystyrene so that's why they didn't include it. And, they're also, their jurisdictions are really being close to the ocean, they're concerned about the impacts of the breakable polystyrene foam, so that's why they focused a lot on, on that itself. And as I stated before, could not locate a ordinance banning the hard polystyrene.

Now this is our definition, and what I've done is I've highlighted two things. This statement including all polystyrene and vinyl chloride polymer. Those are two things you won't find in the other bills. So in my opinion, this was an attempt to include foam and other polystyrene. What makes it a little bit confusing is the next statement, meaning that any styrene, any styrene or vinyl chloride polymer which is blown into foam-like material. So that, that in itself sounds like it says foam, you know, it's referring to the foam. So it's a little bit confusing in that respect.

Vinyl chloride polymer, polyvinyl chloride is used per PVC piping. So I'm a little bit, I, I tried to find why this was included in there. Corporation Counsel was not clear on it, but the City, or the County of Alameda has vinyl chloride polymer in their definition as well. They've, they have not gotten back to me, I wrote them numerous memos to try to, or emails to try to, to find what their intent was on this to see if I could clarify it for, for us as well. But this kind of identifies how we defer and the difference is to me, which is, which is very blaring is, is this particular statement there. I think the intent itself is that they wanted to include more than just, just foam but I'm kind of new to the dance so to speak, I just came online and started to do the research within the last three months so the, those that were on the task force might be able to lend a little more guidance in that respect.

So Council that's, that's, that particular review of the memo. If you want me to, if you want me to review the difference s in the, in the items I can do that as well.

CHAIR WHITE: Members, are there questions on the first portion of the presentation regarding the definition or any other questions. The reason that Gary did the research as he did with the EPA and other Federal organizations is that they were not willing to participate either by, by phone or any other way. The only way that they would respond I believe is by, and correct me if I'm wrong Gary, but my understanding was that they would respond to written questions and they would respond only in writing. Is that correct.

LEGISLATIVE ANALYST SALDANA: That, that's correct, sir.

CHAIR WHITE: Okay, so hence the sharing of that information in the, in the way we did. Any questions on the definition or any other parts of the initial presentation.

Ms. King.

COUNCILMEMBER KING: Yes, thank you. And thank you so much for doing this Mr. Saldana, it was really eye opening. I just want, there's you know I don't think the big issue is whether it's cancerous to humans or not, I think there's a bigger issue than that that has to do with litter. But we have this big conversation going on and I just wanted to clarify that there seems to be conflicting science, or conflicting opinion, conflicting information on whether polystyrene does have, because I, I highlighted in your report that the statement from the U.S. EPA that says, "Due to the physical properties of polystyrene foam, that such materials can have serious impacts upon human health." So we've heard other people in the polystyrene industry saying it has no impact and it's different from styrene. So, I mean, is that your conclusion that there's just, there's a lot of conflicting information.

CHAIR WHITE: Before you answer that, I'd also like you to include in your answer because Mr. Cruzan said that the EPA standard is 20,000 micrograms exposure per day and I, so I, I agree with Ms. King that there's some disparate perspectives.

LEGISLATIVE ANALYST SALDANA: Yes, Mr. Chair and Councilmember, Councilmember King. I, in doing the research, I, it was, it was very difficult to find specific documentation as to the impacts on, on health and, and finding organizations that actually focused on, on the actual effects of polystyrene on the body. In fact, a report that was given to us by, by the EPA identifies that, that the EPA does not have a carcinogen classification for styrene. The chemical currently is undergoing an EPA Integrated Risk Information System review to establish such a classification. So at this point, the EPA hasn't classified it as such but they are doing a lot of, it sounds like their doing the research on it.

It's also in this same document it says several, several studies suggest that there may be association between styrene exposure and increased risk of leukemia and lymphoma. However, the evidence is inconclusive due to multiple chemical exposures and inadequate information on the level and duration of the exposure. So it, there's the speculation out there, but in terms of, in terms of pinning it down they haven't gotten there yet.

COUNCILMEMBER KING: Okay, well I, I just thought that was a pretty strong statement that, or they, you know they're saying that, that these materials can have serious impacts and the one we heard from other folks that there's nobody saying that they have impacts or that they're toxic so that just kind of leaves a lot of inconclusiveness to that statement.

LEGISLATIVE ANALYST SALDANA: Yes, there are, they, they seem to allude that there's potential and, and they always conclude that more study is needed.

COUNCILMEMBER KING: Okay, thank you.

CHAIR WHITE: Any other questions for Gary, at this time?

Ms. Sugimura, followed by Mr. Guzman.

COUNCILMEMBER SUGIMURA: Thank you, Chair. So, Mr. Saldana, thank you for all the research that you did and for the last three months, good job and . . . of everything else, in midst of everything else.

I'm just curious, I know that Dr. Cruzan who just spoke earlier, I was kind of interested in his analogy and we seem to be using styrene and polystyrene, you know, interchanging it. But he said the styrene, I think was a more harmful one rather polystyrene, and I think he was saying like polystyrene are, is, we get it in, you know, like our daily dosage of different things that we may do including breathing.

But it could be, and the thing, the thought that just struck me is a, a millionth of a teaspoon, is, you know, what we may be exposed to during the day. And from what you read, styrene versus polystyrene foam, foam seems to be the important word that we don't have necessarily in, in ours. Whereas in San Francisco or some of the others, their definition, they did. What is, what is your analysis after, you know that research as to what are the things that we may need to include in our, in our proposed bill.

LEGISLATIVE ANALYST SALDANA: I was afraid you'd ask me that question. The, the, it's evident that, that in the, in the, in the definition there is, there is reference to extruded and expanded foam. So, to that extent, it, the foam is included in our, in our bill. And, where we take it beyond is, is where we're including the, the hard, or the plastic polymer that's used in, in styrene containers that are the firm, clear in colored containers. So, it, our ordinance seems to be wanting to take it a little bit, step further beyond. So we do include the foam, it's just that we're also focusing in on trying to include the, the harder plastic.

And in, in the studies, in one of the studies in the White Paper that I, I, I referenced in, in, in the memo, it, it does a series of studies on, on ingestion by, by various wildlife and marine life. And, and it's, in it, and they focus on plastic. So, to a certain extent, they are finding not only the little beads, and they may not find the beads because they're so small, but they're also finding plastic ingested as well. So, in that respect if you consider you, really wanting to focus in on preserving the health and safety of marine life, avian life, that the plastics, the harder plastics should be included as well.

CHAIR WHITE: Ms. Sugimura.

COUNCILMEMBER SUGIMURA: So I wonder if what you just said, I wonder if I could ask him to show us with your display. Thank you for doing that display because it surely shows the differences.

CHAIR WHITE: Yeah, we can do that as soon as we get through any other questions.

COUNCILMEMBER SUGIMURA: Okay. I would like to see the differences.

CHAIR WHITE: Any other questions, Members, on the presentation.

Okay, oh, I'm sorry, Mr. Guzman.

COUNCILMEMBER GUZMAN: I'm sorry. Mr. Saldana, when you were doing, oh yeah thank you for doing the research, I think the last meeting that we had on this I requested various jurisdictions, the analysis on it. But when we're talking about the non-foam, styrene polymers, versus the foam styrene in the different legislations that you encountered, was there any type of legislative intent behind it wherein there was a difference between the biodegradability of either one. Which one could be biodegraded sooner or faster, and what was the difference when they were trying to look at banning the, the non-foam in San Francisco.

LEGISLATIVE ANALYST SALDANA: I think the main thing that drove their decision in terms of not including the harder plastic polymer type was that they, many of the mainland jurisdictions have the ability to recycle.

COUNCILMEMBER GUZMAN: Right, and, and you pointed that out.

LEGISLATIVE ANALYST SALDANA: And, and that's, that seems to be, that seem to have been the driving force because they, they, because they could they have the equipment to burn and recycle the, the plastic polystyrene. They could, they could make it into park benches and things of that nature and do other things with it. And

the focus of the, the foam in itself is the fact that they, they could not recycle that and they, and the way it broke down into, into the smaller pieces. So I think that's kind of the drive, a lot of them, a lot of them focused on, on, it was partially waste management, but it was focused on, on preserving and protecting the safety and the environment.

COUNCILMEMBER GUZMAN: Okay, it's interesting point that they created an industry from the recycling of the non-foam.

LEGISLATIVE ANALYST SALDANA: Yeah, they have the ability to do that, which is a great thing.

COUNCILMEMBER GUZMAN: Okay, thank you.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Thank you, Chair. That kind of leads me to the question of, I think at one time we had the ability to recycle plastics here and we stopped doing it. I'm not sure why, but I know Aloha Recycling was making those two by fours out of recycled plastic that they don't do any more.

But I wonder if the reason why San Francisco focused on foam was also the fact that their, their restrictions were much, were wider, they were restricting other things that we seem to be excluding in our bill, meat, fish trays and egg cartons, packaging materials and the coolers. So, right now we have, we're including more materials, but we've got, we've got less restrictions within those materials.

(Vice-Chair Carroll was excused from the meeting at 10:44 a.m.)

LEGISLATIVE ANALYST SALDANA: Right, right.

COUNCILMEMBER KING: So we're, we're allowing for a lot of exceptions within that.

LEGISLATIVE ANALYST SALDANA: Yeah, yeah, there's definitely those exceptions in terms of the, in terms of the ice chests that, that, as the Chair say may come flying out of somebody's back of their pickup truck that, that are excluded. But as you stated the meat trays, and those are typically made of polystyrene foam and San Francisco felt it was time to include those because they weren't able to, to recycle those and, and they found that they were attempting to try to get the businesses to move on their own and, and on that particular subject, and they didn't, so they legislated it.

COUNCILMEMBER KING: Okay, and then so since, since 2007 when they passed this ban, have there been, have those, have there been these types of packaging materials . . . components in San Francisco, have you, have you, do you, did you do any research on what is replacing the foam components.

LEGISLATIVE ANALYST SALDANA: Yeah, they, they, actually both, both San Francisco and San Jose have quite extensive lists of, of what they can, what can replace them. And, some of them are on display here. You'll notice there are a lot of different alternatives.

COUNCILMEMBER KING: Okay, I do see a tray there that's made out of compostable--

LEGISLATIVE ANALYST SALDANA: There's, there's fiber, there's, there's bagasse, or bagasse, I don't know if I'm pronouncing that right. But there's, there's the, polylactic acid which is a clearer and there's the fiber that is, that is molded. So there's different types of, different types of options that they are going to. San Jose, this is their list of alternatives, there's 400 alternatives in this list. And, it includes bowls, it includes clamshell containers, it includes cups, things of that nature. So, all total there's about 360 alternatives that they have to, alternative that is either recyclable or compostable.

COUNCILMEMBER KING: Okay, and I'm assuming those are what they're using now because its banned.

LEGISLATIVE ANALYST SALDANA: Right, right.

COUNCILMEMBER KING: Okay, thank you.

CHAIR WHITE: Yeah, that list just to be clear, that list does include some, a selection of hard polystyrene. It just excludes the foam.

Any further questions before we move to. Okay, why don't you.

LEGISLATIVE ANALYST SALDANA: Mr. Chair.

Councilmember Sugimura wanted clarification on, was it the definition, is that correct. Okay, so as you can see, let me get up there. So as you can see, where, where we, where we talk about the foam in our, in our definition is identifying it as a, as a monomer that is actually blown into a foamlike material. It also refers to expandable beads and extruded foam beads. So, those expanded and extruded are the way you make the polystyrene foam. And so that actually includes the foam as part of our

ordinance in addition to the, the harder plastic which is, which is referenced by including all polystyrene and I'm just assuming that by . . . including that, they were attempting to include a wider variety of, of polystyrene in their restriction as well.

Does that answer?

CHAIR WHITE: Okay, Members. Mr. Hokama.

Your, your microphone.

COUNCILMEMBER HOKAMA: So why is that vinyl component in our proposal?

LEGISLATIVE ANALYST SALDANA: That's one of the things that I was, I was noting in my, in my statement that it's, it's not totally clear to me. It's a issue I raised with, with Corporation Counsel as well to try to clarify and we, we've tried to identify whether or not that's appropriate because it refers to, it refers to PVC piping. So, it's like, what is that, my question is why is it in there as well. So that's something that may need to be clarified in terms of our, our definition.

COUNCILMEMBER HOKAMA: So who put it in our proposal?

LEGISLATIVE ANALYST SALDANA: I would imagine it, it happened through, it happened through the Committee study, or Committee recommendations, or through, since they, since they gathered a variety of different jurisdiction's definitions.

COUNCILMEMBER HOKAMA: I don't care about the other jurisdictions, yeah.

LEGISLATIVE ANALYST SALDANA: Yeah, but, but.

COUNCILMEMBER HOKAMA: All I care about is this County.

LEGISLATIVE ANALYST SALDANA: Yeah, but, yeah, I agree, but, but I think that's where, you're asking where it came from and that's all I can say is that it--

COUNCILMEMBER HOKAMA: --explain how it got there.

LEGISLATIVE ANALYST SALDANA: --yeah. So it's not clear at this point, Chair.

COUNCILMEMBER HOKAMA: Okay, so--

CHAIR WHITE: So, Ms. Cochran, maybe you can shed some light on this.

COUNCILMEMBER HOKAMA: I have another--

CHAIR WHITE: Oh, I'm sorry. Go ahead, Mr. Hokama.

COUNCILMEMBER HOKAMA: I, I, you know, my point is made on that one.

So, I'm trying to figure out yeah, what is, we're trying to address, we're trying to address polystyrene as it impacts litter or we're trying to, are we addressing litter as it's been impacted by polystyrene. What is this bill trying to address? Because I'm kind, little confused what is the issue. Is it the litter component and how this particular component impacts us, or is it the other way around.

Because what I've picked up from yesterday, this is a multi-component issue. We got to take care of the landfill. We got to do one recycling program, cause nobody came up and mentioned how we going deal with the excess methane so far that I've been reading about. So, for me this is not the silver bullet. This is one of multiple steps to deal with this environmental concern.

So, is this just step one as you see it, Mr. Saldana, until we get that recycling component, cause we've been supporting a MRF for decades. Council has appropriated big money for MRF. Where are we with that? Okay, we still dealing with expanding landfills. We need to acquire more land.

LEGISLATIVE ANALYST SALDANA: Right.

COUNCILMEMBER HOKAMA: So, let's be clear on how this fits and somebody better tell us what it's going to potentially cost this County to make it happen.

LEGISLATIVE ANALYST SALDANA: Well, in terms of the intent of the bill, I, I perceive it as two-fold, is that you are trying the enhance the environment, you're trying to protect, you're trying to protect the health and safety of human life and marine life and avian life. And not only that, you, it was like the plastic bag ban, we were finding plastic bags on the beach, on the trees, everywhere, on, on fences. And, and as has been stated in, in these meetings is that people are finding polystyrene everywhere, plastics everywhere. So, it relates to the health of the environment as well. So I think it's two-fold.

(Vice-Chair Carroll returned to the meeting at 10:53 a.m.)

LEGISLATIVE ANALYST SALDANA: And, I do agree with you that, that as part of this component, we, we need a more effective recycling and compostable program to, to make the reduction and the dependency on land, on our landfills, a situation where

we're, we're not, we're not just adding on to something that's, that's currently the same. It's like for example if you, if you, if you ban these polystyrene products, you going to have these other products that are going to replace it. And if you don't have a recycling program then they're going to go into the landfill as well. So you, it's almost that you, you absolutely still need that component to it.

So, I, I do agree with you there in terms of the costs that's another, another Committee and I think that's something that you guys might have to address at some point. But, it, it's, if we don't deal with some kind of recycling or compostable program on these, it's not going to do any good in the landfill, you're going to replace liken, you're going to replace one thing with another thing.

CHAIR WHITE: Okay, Members. Our next presenters are here, so the Chair would like to take a five-minute recess and bring on our next presenters which are Hillary Young and Doug McCauley and, and Gary can pick up on his presentation after that.

So, we're in recess for five minutes.

(THE MEETING WAS RECESSED BY THE CHAIR AT 11:01 A.M., AND WAS RECONVENED AT 11:06 A.M., WITH ALL MEMBERS PRESENT.)

CHAIR WHITE: This meeting shall please come back to order.

Members, we are going to proceed with the presentation first from Doug McCauley and second from Hillary Young. So, please proceed.

PROFESSOR DOUGLAS MCCAULEY, UNIVERSITY OF CALIFORNIA SANTA BARBARA:

Thank you, Council Chair. Thank you, Councilmembers. I'm grateful, very grateful for the opportunity to address you today and to entertain any of the questions you may have about this issue. Very grateful through your leadership on what is a hopeful development . . . important issue for ocean health.

I'm a professor of, again, my name is Doug McCauley, I'm a professor of Marine Biology at the University of California Santa Barbara. I've had the privilege of spending a lot of time out here, nearby doing research and also working professionally so I was the Acting Deputy Refuge Manager for Papahanaumokuakea Marine National Monument and I worked prior to arriving UC Santa Barbara as a fisheries observer with National Marine Fisheries Service, NOAA out of Honolulu, fishing boats here around Hawaiian Islands.

So, I know that our charge here with this specialist panel is to explore specifically whether there is a strong case, whether there's research backing as to whether the bill that you're entertaining or discussing has in terms of the protections that it provides for both public health and for environmental health. Of course as a marine scientist, as a Professor of Ocean Sciences, I'm going to stay very close to a conversation about environmental health. There--

CHAIR WHITE: If you could move the microphone just a little further away.

PROFESSOR MCCAULEY: You bet, okay.

CHAIR WHITE: That's good.

PROFESSOR MCCAULEY: The, it's a, a very important time as an environmental scientist to have conversation about issues like this, about ocean health and ways that we can make positive advancements for ocean health, as I think we're all aware on the leadership side at the national level we've lost a little bit of our traction there with having conversations about important moves that we can make to look after ecosystems that matter to our economies, that matter to our own nutrition, that matter to wellbeing, such as the ocean. So we are really looking to local governments, and local leaders like you to carry forward these important conversations at the, at the local level here, at the island level here, at the County level.

I'm going to talk a little bit about marine, material science, I'm going to transition there to marine science. First on the material science front, the estimates that I've reviewed about the production for EPS here across the State are quite staggering. So it's 65,000 pounds of EPS that's produced across the State of Hawaii every day. When you consider material as light as EPS, 65,000 pounds is, is truly impressive.

I, I understand there's been some conversation, I've been following from the sidelines about the relative value of education. Around this is a materials problem versus replacement or a change out of materials. On the education side, of course, I'm an educator, I value education, but as a, a ocean scientist that sees this material, EPS in the ecosystems that I work with, the ecosystems I study, the wildlife that I work on, I've also seen education fall a little bit short on this front.

Since 2008, for example, in May when Maui, or excuse me, when Oahu passed their first education bill as a potential solution for curtailing the amount of EPS that ends up in our oceans, we cranked the numbers and estimate that since that, the passage of the education bill, there has been enough EPS that's produced here across the State to reach from Maui to the moon 8.7 times. So, that clearly is, has been

ineffective at least in terms of slowing the leakage of this insidious material into ocean systems.

There are some serious issues about the persistence of EPS as a material. It is a particularly persistent material, there are a lot of different estimates in circulation in the scientific community about how long EPS lasts. Some scientist go as far as saying that EPS actually doesn't break down whatsoever. So it becomes a permanent product of our waste streams, a permanent presence in our oceans.

Some scientist have seen, have generated minimum estimates that suggest that EPS will break down in 500 years. Now, that's a minimum estimate, 500 years. I think it's important to sort of put that into context. You know, I'm a, a plate lunch guy, first thing I do when I get back out here is I'm actually a chicken katsu guy. I don't know if anyone else out there is plate lunch, but, when I get off the airplane here in, in Hawaii, first thing I do is go get plate lunch.

And it really is striking to me that this food that I love that is sitting in a container that I don't appreciate as an ocean scientist, this container, EPS that my food is served on is in my life for five minutes, the time it takes me to finish my lunch, but again when looking to as material science estimates as here in Maui, here in Hawaii, for 500 years, a minimum estimate.

That means, it becomes a gift that we are passing down to many different generations of younger people in Maui. Again, just to get this right, 500 years is the minimum estimate, means that this gift we're passing on to our oceans, the gift we're passing on to future generations will be there not only for our kids, but our grandkids, and our great great great great great grandkids, will all be experiencing the gift of this EPS that was in my life for five minutes of my chicken katsu lunch.

So an important point of reflection, I think again, on the material side as we think about what kind of archaeology we're leaving for future generations here on Maui. What kind of gifts you're leaving in the environment for these future generations.

I'd like to move onward here to my home base of authority, which is marine biology and marine science. We know through a review of the literature and some science that I've been involved in that EPS specifically interacts negatively with lots of ecologically important charismatic marine megafauna here around Maui, that includes things like humpback whales, manta rays, sea turtles, and seabirds. Hillary is seabird specialist and will dive deeper there on the impacts specifically between seabirds and EPS. These four species are just some of the 600 plus species that United Nations Environmental Programme is documented, have interacted with EPS and other plastics globally.

In terms of value, of course there's a diverse set of value as a marine biologist I think first about the value of something like a sea turtle, or the value of something like a manta ray in terms of its ecological role in a coral reef or in a pelagic system in and around Maui. There are also a diverse set of other values I'm sort of preaching to the choir here in Maui about the value of these species. Again if I was having this conversation in D.C., which by the way does have an EPS ban, if I was having this conversation in D.C. today, they, the conversation perhaps would be a little bit longer on the front of making a case that these are not disposable species. Out here, for thousands of years, at least 2,000 years, there has been a strong awareness that there is value in these species in, in the value and safeguarding the future of these species around Maui. Right, they're a part of our cultural identities, your cultural identities here in Maui, they're an important part of the ecosystems in Maui.

Another important value beyond their cultural value, beyond their ecological value relates to the other species you'll see in each of these pictures with the whale, with the manta ray, with the sea turtle, with the seabirds, and that is us, that is humans, right. Important outcome that comes from people in Maui being such amazing stewards for ocean ecosystems, for ocean wildlife for so long is that it's an incredibly important attractor for people from all over the world to come and see and share, and spend time with these amazing wildlife, right. And that is the outcome of very important leadership that people here on Maui have input and looking after the sustained future of these species.

There's a value there. There's a dollar value there, I don't need to tell many of you this, you know this and across the State of course, it's $15 billion of value that comes in through tourist revenue every year. So, whether you identify these as important parts of Maui's cultural heritage, whether you identify these as important interactors in a diverse . . . ecosystem, there are values. If you don't recognize or identify those values, they connect an important way to monetary values through people that come to see these special species.

These species, all of those here that we're looking at on this screen interact with EPS and interact negatively with EPS. There are a variety of different pathways by which they can take up EPS. Here's a manta ray foraging as they do as filter feeders through a flotsam array, through debris fields on the surface. And they are indiscriminate feeders, they just simply have their mouths open, they use their gill rakers as filter feeding devices and they sieve out all kinds of good food from the oceans and unfortunately bad foods.

You're actually seeing them here going through this plume, the same kind of debris field you might see as it aggregates quite often on the inside of Molokini and lots of

other places that . . . fishermen, current breaks out in and around Maui, collect good food, but also collect EPS. So something like a manta ray that feeds indiscriminately, takes up the good, and unfortunately takes up the bad too.

Sea turtles, seabirds, other marine species will also consume EPS directly, and it's not that they're unintelligent animals, it's simply that these species have no ecological history with the material like EPS. Remember, you know, these are species that are thousands, hundreds of thousands of years old and we're talking about a material that's just entered our oceans, perhaps 50 years ago, right. So they're not being dumb, they're just, it's a case of mistaken identity when they see a chunk of EPS floating in the oceans and they mistake if for a, a jellyfish or a clump of, of fish eggs, which would be an important food source.

You can see here specific to sea turtles that in terms of the amount of debris and the kinds of debris that sea turtles as a species, or as a collection of species that are, are taking up, that EPS, Styrofoam ranks quite high, it's one of the top five forms of marine debris found inside the bodies of sea turtles. This is a report that amalgamated, put together and collects results from over 30 different studies, looking at interactions between marine debris and sea turtles. Depending on which species, depending on which region, you see quite high levels of interaction with EPS. Loggerhead Sea Turtles for example 35 percent of any random sea turtle, in the species you take out of the oceans would, have been found present, found marine debris present in that sea turtle. Of those 15 percent were found to have eaten EPS.

There's a variety of ways by which, whatever mechanism, whichever pathway you take in EPS, there's a variety of ways which that's deleterious or harmful to the health of these marine species. The first is a mechanical impacts, you can imagine if you sort of took one of these clamshells, EPS clamshells over there, balled it up and fed it to your kids, there is a mechanical impact, right, your, you would, it causes a blockage in you GI tract.

There is also another potentially even more harmful root, I think, Hillary will speak about that comes from secondary chemical poisoning. These Styrofoam in particular, this EPS material in particular acts as a kind of chemical sponge picking up hydrophobic chemicals, things like PCB's and, and mercury from the environment, concentrating them, so you get this dose of both this blockage and then the leaching of these poisons that are already adhered to this EPS surface.

We have EPS, as I said entering into the bodies of these charismatic marine animals in Maui. But that is not something that's isolated from us. Unfortunately, we interact or fortunately we interact with the same marine system in important ways as predators, as consumers. So there's the sort of Disney like concept that there is this

circle of life, right. My business as an ecologist really sort of in some ways reinforces that indeed ocean ecosystems, all ecosystems do have this interconnected nature, we are part of that circle, we interact and feed in these ecosystems on these species. And unfortunately, EPS also finds its way into some of these species which are important and, commercially important, culturally important parts of our seafood portfolio here in Hawaii, here in Maui, right.

Surveys of fish in the fish markets across Hawaii have documented alarming rates of plastic ingested by some of these commercially important marine species including EPS and that includes, you know, not peripheral species but truly important species in terms of food systems like mahi that have these plastics like EPS in their bodies.

The other important entry point and harmful entry point for some of these plastics like EPS is not at the top, but at the bottom of these food webs. We understand that there's a high fragmentary potential that these, that a material like EPS fragments into microparticles very easily. Can you imagine if you took a EPS cup and you were to smash it? You get all of these little tiny pieces. Those pieces go into the ocean ecosystem, and they are eaten by things at the very, very base of these food chains.

We're looking here at a group of euphausiids, they are taken up by copepods, these are the tiny microscopic plankton that you see on our oceans. Now it's easy to write off, okay, who cares if EPS is being taken up by tiny microscopic animals. Well it's really important as an ocean ecosystem or as stewards of ocean ecosystem health to know that what begins at the bottom transits very rapidly to the top of these ocean food chains.

And in this case these tiny diminutive species like copepods, like euphausiids, like krill, are actually future whale chow. And estimates of the density of microplastic, including EPS particles in things in, in the zooplankton, these tiny particles in our oceans, actually add up to some pretty alarming numbers when you look at, at consumptive potential for something like a great whale.

So you can take for example, the humpback whale which of course is the whale that we all appreciate here around the waters of Maui. Scientist estimate, based on field surveys for how much of the microplastic is found at the bottom of these food chains, estimate that humpback whales ingest over 300,000 microplastic particles per day. That's 300,000 microplastic particles that a humpback whale would be taking up per day.

So the decision you're making today certainly impacts things like turtles, but it also bounces from the bottom to the top of these food chains to impact our largest marine animals around Maui like humpback whales.

You are certainly doing something very important here. You're in good company with this conversation and I'm grateful that you're having it. You're in good company in that the State that I now call home, California has over 60 and rapidly growing more cities have already passed EPS bans that are very, very similar in construction to what you're debating and considering.

Across the U.S. many other cities and many other States have passed similar kinds of replacement measures, this includes places like I mentioned D.C., cities in Texas, cities like New Jersey. Now I think of environmental leadership and I think about progressive stewards, progressive leaders for ocean ecosystems, I don't think about New Jersey, I don't think Texas, I think about Maui first. And so in some ways its quite surprising to me that we have cities in Texas, in New Jersey, across California that have taken a leadership stance in this issue and we're playing a little bit of catchup here. But there's a really important opportunity I think across Hawaii to take a stance, to do something very positive for the oceans with the conversation you're having today.

To just sum up my section, and I would say that my charge was to present information from the marine science community. The bill that you're discussing has a very, it will have very important positive impacts for ocean health. I think there is unambiguous support from the marine research literature that that is there, that you can, that what you'll be doing, what this bill proposes to do would be a very positive step forward for reducing a harmful plastic EPS that's getting in front of, and getting into these food chains and getting in front of these commercially and culturally important marine species around Maui.

CHAIR WHITE: Thank you, Dr. McCauley.

PROFESSOR MCCAULEY: Thank you.

CHAIR WHITE: Dr. Young.

PROFESSOR HILLARY YOUNG, UNIVERSITY OF CALIFORNIA SANTA BARBARA:

Thank you. My name is Hillary Young, I am also a professor at UC Santa Barbara. I've been working out on seabirds in the Central Pacific since 2006 when I did my dissertation at Stanford out there. I am really a community ecologist but I focus particularly on seabird community conservation issues. And so today I wanted to talk to you about what the likely impacts of an EPS ban would be on seabird communities.

So the reason I have been studying seabirds out here in the Central Pacific for so many years is because this is a global seabird hotspot. So you may not be, may or may not be aware, but you have about fourteen million seabirds that use the waters of Hawaii. About 22 species. To put that in context, there's only about 100 million seabirds globally. So you have a really large portion of the world's seabirds using Hawaii's waters.

And globally seabirds are in trouble. So we have experienced more than a 70 percent declines of all seabirds, or all individual animals of seabirds across the world since 1950. So here you can see that data going from about 330 million estimated individual animals in 1950, to less that about 100 million estimated today. So they're really experiencing dramatic declines and many species are in trouble.

Some of the species that are most at risk and most in trouble, include long ranging species like the Hawaiian Albatross, the Laysan Albatross that you can see in waters over Hawaii. These species are experiencing particular threats.

Another group of species in general that are experiencing threats in, in the global context are tropical seabirds. And that's because tropical seabirds face particular foraging challenges. So the waters in the Tropics are warm and they're low productivity and it's hard to find resources for seabirds. The food doesn't aggregate in high intensity patches that the seabirds can just return to. So they have to forage really long distances, this is the track of an individual seabird going from Hawaii back to Alaska. Many times they have to find this food and then return to the nest to feed their chick. They'll be gone for days, even weeks to make the journey back to bring enough food home to their chicks to feed them.

They can only forage in the very top part of the water, so because the waters are . . . productivity all tropical seabirds forage exclusively in the top two meters of the water column. So there's sifting materials, there's various foraging strategies to get the very top parts of the resources in the environment. And so that's a particular problem for EPS, for expanded polystyrene because expanded polystyrene floats. So here, Doug did mention but we put some polystyrene plate, from, you get in a plate lunch and we put an alternative plate and about four days ago, five days ago--

PROFESSOR MCCAULEY: Seven days ago.

PROFESSOR YOUNG: Seven days ago, into the water and you can see what happens is that the polystyrene hasn't changed, it's sitting there and it's floating on the surface of the water. Whereas the plate, you know the natural, the substitution product has sunk to the bottom. It's not only biodegraded but it sunk to the bottom.

So for animals that forage on the top of the ocean, this is a real problem to have EPS or expanded polystyrene because it floats. And it looks, when it breaks down from these into these tiny little pieces that you see up here in the upper right, it looks a lot like their natural food sources which might include small fragments of things like fish eggs, also squid, copepods, small food sources that float near the surface and is their primary food source.

Here you can see at the top, plastic, and EPS heavy refuse drift, and here you see their, them engaging in their natural surface foraging behavior. They have to make these foraging decisions very quickly, split seconds in order to catch their natural food sources and they can't discriminate between their natural food that looks quite like EPS and EPS products.

We've actually observed many seabirds foraging specifically on EPS, you can see there on the right, and many other plastic products. Indeed, because polystyrene is so resistant to biodegradation this, these polystyrene fragments are going to persist in the environment essentially forever. So compared to these alternatives which might take a week or might take months, or potentially, you know, even decades, but nothing like the kind of polystyrene that's going to last forever because of this difference in degradation. We expect that seabirds are going to have enormous rates of exposure to plastics and particularly polystyrene in the next 50 years.

So by 2015, 2050, we predict that 99 percent of all seabirds in the world will have been exposed to plastics in their diet including a large proportion of polystyrene. So you can see here this is data showing the percent of plastic ingestion in seabirds by decades, over time, kind of climaxing at around 99 percent by 2050, kind of full exposure of all seabird communities.

As I and Dr. McCauley have already mentioned, these polystyrenes quickly breaks down into small pieces. Here you can see these little tiny fragments in the soils and the sands. And that can aggregate into the seabirds in many ways, including as Doug mentioned through the bottom of the chain.

So these little green dots here, and Doug showed you a video of earlier, are fluorescently labeled polystyrene microbeads. So you can see that we've, you know, intentionally labelled them so you can see them, that they get into the copepods. So even when the seabirds do eat the right prey, they're getting these polystyrene fragments. And these little tiny fragments are very deleterious to the birds because they contain so many toxins, so many, very negative toxins such as mercury and PCB'S bioaccumulate on these polystyrene fragments.

So what you can see here is some data on mercury in particular. And the level of accumulation, that "Mean" value here of poly, mercury in the polystyrene. So when it comes out it's clean polystyrene has only about .23 nanograms per gram dry weight of polystyrene. But by the time you get it to debris, floating in the ocean, you have a twentyfold increase in mercury levels on these polystyrene, vastly exceeding what is naturally present in their ecosystem and that accumulates into the, up through the system, so it bioaccumulates.

So every kind of eating, foraging, exchange, every time something is eaten this, these levels of mercury aggregate and get higher and higher concentrations. And so the little bit of mercury that was present in the polystyrene can then aggregate and cause a kind of toxicity levels in the seabirds themselves. So because I showed you data on mercury, I just highlighted here the levels of mercury in feathers that have been found in, this is Shearwater fledglings, so baby Shearwaters. And you can see that's at 2.4 levels, much, much exceeding the natural levels in the environment. And we think a lot of that aggregation is coming through the ingestion of these microplastics and EPS particles through their prey.

These, the cause of secondary poisoning, that level of mercury or PCB ingestion some of the negative side effects of this secondary poisoning include obviously mortality, you can actually die of mercury poisoning, but also morbidity, including reduced body size, infertility, disruptive neurological function, altered sex ratios, all of which are probably contributing to some of the large rates of seabird declines that I mentioned globally are occurring.

In addition to these kind of toxic accumulations of mercury and PCB's up the food chain, polystyrene as Dr. McCauley mentioned can also cause mechanical problems in seabirds. So the polystyrene, the larger chunks, can cause gastrointestinal problems, blockages, they also can cause interrupted breathing, so problems getting enough air and they cause false feelings of fullness. And this we think is a major problem for young seabirds because the parents feed them these Styrofoam pieces and they think it's food that they're feeding their young.

So this is a broken down here on right, a picture of the broken down diet contents of an albatross. That black stuff on the right is the real food that the seabird is trying to feed its chick. Everything else is plastic. And that huge chunk in the middle is EPS, it's Styrofoam. And this is a fairly typical albatross bolus that you could find in an young albatross' belly. Indeed 98 percent of dead albatross' now are found to have plastic in their stomachs. And plastic is considered to be one of the leading causes of death of young albatross chicks and many other seabird species.

So, to summarize this, polystyrene and, and plastics in general, but particularly polystyrene because of this unpleasant characteristic by which it floats at the surface and looks like the food that Tropical seabirds in particular are targeting, can cause many, cause declines in seabirds via multiple pathways, both via these chemical effects, secondary poisoning and via these physical effects, the false fullness, the gastrointestinal blockages. These lead to mortality, morbidity, disrupted physiology. All of this is probably a major contributor to the decreases in abundance of seabirds we are experiencing globally and I would argue as a particular reason for the people of Maui and of Hawaii to be concerned because this is . . . Tropical seabirds differentially because of the way Tropical seabirds forage, which is really different than the foraging behavior of seabirds in other parts of the world.

So really, particularly likely to have high exposure and is why we're seeing such high rates of plastics in the stomachs of many of the seabird species here.

Of course as Dr. McCauley already mentioned, seabirds are only one group of wildlife that are exposed. The roots that I have talked about is chemical and physical disruptions will apply to many of the other species, sea turtles, manta rays, are both, and whales and many other . . . are all going to be vulnerable to these multi mechanisms of exposure to EPS in particular.

There has been hundreds, you can count it in different ways, but certainly we know of hundreds of species that are now exposed to plastics and EPS in particular. As we've already discussed this is not only a conservation concern, I, I care about these species in particular because I think about their conservation, their intrinsic value, I would like to see them persist and survive.

But these species have economic value, and they also have cultural significance. Seabirds have very important roles in Hawaiian culture including their traditional wayfinding roles for voyagers. And it would be a true loss to lose these charismatic and really iconic species of Hawaii.

And so I'll just conclude to say that, you know, I think that this ban is well supported not only by conservation people that focus on these issues like myself, but also a broader segment of Hawaiian society. So there was a study out of University of Hawaii a few years ago in 2011 that surveyed a bunch of Hawaiian residents and found that the vast majority, 81 percent of Hawaiian surveyed supported an EPS ban on food products in particular.

So with that I'll just thank the Council for your support and really hope and advocate for this issue for the conservation of marine species and seabirds in particular. Be happy to take any questions.

CHAIR WHITE: Thank you very much.

I've got a question for you.

PROFESSOR MCCAULEY: Council Chair, if I may, I wanted to--

CHAIR WHITE: Sure.

PROFESSOR MCCAULEY: If we have a few minutes remaining to, a quick slide that interprets some science that was shared for young scientist here in Hawaii, in Maui.

CHAIR WHITE: Sure, do you have--

PROFESSOR MCCAULEY: If we have a few minutes left. Let me--

PROFESSOR YOUNG: Do you want me to address the question while we're waiting for this to load.

CHAIR WHITE: Yeah, the, you mention that a variety of toxins aggregate on EPS. To what degree do those same toxins aggregate on other plastics?

PROFESSOR YOUNG: So, EPS, you can answer too, Doug, but EPS is particularly receptive to these toxins and so we get higher rates and accumulation on EPS than many other forms of plastics. I don't know the exact rates, maybe you can--

CHAIR WHITE: That's what, that's what I had heard but I just wanted to clarify that.

PROFESSOR MCCAULEY: I don't think I have much to add except that yeah, its particular to the, you know, these hydrophobic, these, sort of water aiding compounds like mercury and PCB's find a very strong attractive force to EPS in particular. They, you do find them on other plastics but my understanding is that it's a very good settlement substrain for those--

PROFESSOR YOUNG: I think part of the reason is that EPS breaks down so well into these microparticles with high surface area to volume ratio so really high areas for these chemicals to attract to.

CHAIR WHITE: Yeah, you need to speak into the microphone.

PROFESSOR YOUNG: Oh, sorry, yes, because of the structure of EPS and how it breaks down into these small particles with these high surface area to volume ratios that the chemicals can adhere to it particularly well.

CHAIR WHITE: Okay, thank you. Please go ahead.

PROFESSOR MCCAULEY: Thank you, Mr. Chair.

What I want to do, I think, I'm very grateful for the opportunity for a group of professors to present a view of the impacts of EPS on ocean ecosystems and, and the survey of the science of these impacts. I wanted to just in a couple minutes, share, a similar summary that was produced by young scientists, the next generation of scientists, and the reason for this is simply the conversation that we had that really the decision that you'll be making today will be influencing ocean health for our kids and our grandkids, and of course way, way down the line.

What we did to try to get them involved in understanding more about the importance of this conversations you're hosting, more about these impacts is we took kids from across Hawaii, we took several kids here from Maui, in fact some students cinematographers from Maui to go and meet with some of Hawaii's best scientists and researchers. A researcher from NOAA that shared impacts and science about interactions between sea turtles and EPS and plastics. They dissected fish at NOAA headquarters in Honolulu and found plastic in, in, an array of plastics they found in these fish they dissected.

They went over to UH and they worked with a set of seabird biologists to actually look at these boluses, boluses are actually puke from, from seabirds, from albatross. You can imagine some students were delighted by this exercise, some less so, and, looked at the contents of EPS and plastics in this. And I think as I say, there is something important in hearing their summary in addition to a set of professors' summary, their summary of the state of the impact and the state of the science of interactions with EPS and oceans.

(Played a video presentation.)

PROFESSOR MCCAULEY: Mahalo.

CHAIR WHITE: Thank you. Members, questions.

Mr. Hokama.

COUNCILMEMBER HOKAMA: Chairman, thank you. So, just couple of questions for you.

I suppose, prolonged exposure to sunlight, you know, of this EPS floating in the ocean, does it change the chemical structure of the material when it's exposed to direct sunlight for a period of time. Does it get worse, does it get, does it make any difference?

PROFESSOR MCCAULEY: The major issue with it--

COUNCILMEMBER HOKAMA: I just say that because if you leave a plastic bottle of water in the sun for a long time--

PROFESSOR MCCAULEY: Yeah.

COUNCILMEMBER HOKAMA: --when you open it up, it will taste different from the time you first purchased it.

PROFESSOR MCCAULEY: Yeah, that's right.

COUNCILMEMBER HOKAMA: Okay.

PROFESSOR MCCAULEY: It's a good point. So UV degradation and the UV impacts amongst other sorts of weathering impacts will definitely change materials including EPS in different ways. The one major impact, I, is going to think as a marine biologist think, mostly what's the fate of a clamshell, an EPS clamshell that's rolling around in the surf, out in the reef and then beyond is, is simply fragmentation, is that the mechanical influence of being pushed and pulled around along with this UV influence causes it to slowing break down into smaller and smaller fragments. As I mentioned, unfortunately it doesn't break down into eventually nothing and biodegrade. I mean, again, you know, you end up with a fiber container doing that, but this very jar, I could give to you, and you could, as I say, pass on to your great grandkids, etc.--

COUNCILMEMBER HOKAMA: Right, right.

PROFESSOR MCCAULEY: --etc. and it would look just like that. So unfortunately, you know, it doesn't, it doesn't break down in the way that other materials would but, that is a very good question because certainly a lot of materials are UV sensitive in that way.

PROFESSOR YOUNG: As far as I understand it's, it's mainly the physical degradation that will happen with UV radiation, it will enhance and further that physical radiation, physical break down to smaller microplastic pieces, or micro-EPS pieces and not change it from its form.

COUNCILMEMBER HOKAMA: And then, so, you know, let's say on the fiber areas. Is that what we going look forward to, more cloudy turbidity in our water since that's what it's going to look like? I, I would, so are we dealing with now another issue in the water.

PROFESSOR MCCAULEY: Yeah, so that's a good, that's a good question here, so is this our future right. Well you have to understand this is a liter of seawater so the minute that this hits the water, if I was to take this and pour this out in the beach out here, it would completely dissipate. And I, as a marine scientist, as a parent, as a aficionado and someone who appreciates sea turtles, I would very gladly take a drink of this, but I would not serve up any part of that, the material, the top of that into any of these marine food chains in, well, I certainly wouldn't feed that to my children . . . wouldn't be delighted with feeding that, as we are to sea turtles.

This is basically like a piece of paper that has degraded into . . . so you end up, the same kind of thing if you have coconut husk washing out to the oceans, or any of the stuff from, you know, any of the beaches on Hana side or, Hana side or whatever, all that material from land that goes in the ocean. An important and natural part of material sourcing, natural fibers, sourcing from land to the ocean. This is a bit more in that genre of, of transfer, this is something quite different.

PROFESSOR YOUNG: Yeah, I mean I think anytime you put trash into our ocean it's not going to have a positive impact. But we just shook this up five minutes ago. This would rapidly settle out in a, in a real system and you would get this settling to deep sea, so I don't think you're going to experience a negligible decrease in water clarity or water quality due to organic inputs and certainly no more than you would from putting coconut husks or any other organic material you could think of into the water.

COUNCILMEMBER HOKAMA: No I just want--

PROFESSOR YOUNG: To be honest, we like to keep--

COUNCILMEMBER HOKAMA: to be aware--

PROFESSOR YOUNG: Yeah.

COUNCILMEMBER HOKAMA: You know, taking one option over another and there's still consequences.

PROFESSOR YOUNG: Yeah, I mean, I don't think you would experience, if, serious effects in water clarity or quality.

COUNCILMEMBER HOKAMA: Right.

PROFESSOR MCCAULEY: I feel confident to say you would experience none, just given the volume of currents leaving offshore and the amount of water that we're talking. . . . classic is the solution to pollution is dilution, right, that doesn't really work, please don't take that to heart, but when it comes to a natural fiber, this immediately becomes dissipated and becomes . . .

I think this is an important point, you're having some important conversation about what do we do with some of these materials here on the right when they're on land and I think you have some important conversation to have about that. But we raise this to say look, as ocean scientist, as a reef scientist, this is what you want to see hitting your reefs because this is innocuous, this is very much what has been hitting your reefs the last several thousand years here on Maui.

COUNCILMEMBER HOKAMA: And lastly, the current technology of longline fishing, what is that material considered? Is it a plastic, polymer plastic, is it, what is now the new, because that to me is one of the bigger environmental marine issues is--

PROFESSOR MCCAULEY: Yeah.

COUNCILMEMBER HOKAMA: --the lines.

PROFESSOR MCCAULEY: Yeah, unfortunately, you have a handful of marine issues to have conversation about around Hawaii, around Maui. So, it's a monofilament, but the base polymer, I'm actually not sure what, I spend a lot of time around long-liners and, different types of fishing line, but I'm not actually sure what the plastic compound is in--

COUNCILMEMBER HOKAMA: Would that be under that vinyl something polymer.

PROFESSOR MCCAULEY: I'm afraid I can't say, Councilmember. I, I don't know what the actual compound is that makes up these mainlines or even the, the offset meter lines from a longline, so I'm glad to look it up and to return with that. It's obviously not EPS, but which plastic compound it is I'm not certain.

PROFESSOR YOUNG: And I would certainly echo your concerns about that from a marine wildlife, as another issue, it's not the EPS issue, but it certainly is a wildlife health issue is longlines.

COUNCILMEMBER HOKAMA: Well for me, you know, if we looking at litter as the issue and this is one of the components that we got to deal with litter, then I think we in the right area.

PROFESSOR MCCAULEY: Yeah.

COUNCILMEMBER HOKAMA: Because it's sad, all of these things that you talking about that's in the ocean is basically because a human person decided to let it go.

PROFESSOR MCCAULEY: Yeah, I know I think that's a good point. I mean, I think, we highlighted EPS and where it stands in terms of its impact on marine wildlife health. But there are other plastics in circulation including fishing line, you saw the student scientists talking about fishing line they encountered next to EPS.

The question just becomes, what is politically tenable and what can you actually make some action on, you know. Because there is this right side of the table where there's a substitute product that to me suggests that there is an opportunity for tenable action. And, and a substitute product that costs, in most cases only cents more, that's a different conversation for other experts.

But, you know, you're not going to be fixing all problems, just of course to be clear, you're not fixing all problems that are facing sea turtles, that are facing whales, that are facing overfishing or seabird health with this bill.

But what you are doing is you're fixing an important problem that is solvable, that there is a solution for. They're not solutions for all parts of fish and health and, so we're talking about climate change, right, my gosh, how do you make a, a . . . this is something that you can pass today that would fix one part of the problem.

I think of it as like this way, that you have a patient, think of a sea turtle or a seabird as a patient that has a broken leg and a sprained ankle and a cold right. Can't fix the cold, but you can maybe fix the broken leg, and maybe you can fix the sprained ankle. You're fixing one part of a composite of illnesses that are affecting the, the health of many of these species and that will matter.

COUNCILMEMBER HOKAMA: I just replaced that one piece of trash with another.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Thank you. Thank you, both for being here. I don't, I don't know, it's frightening but like you said there is something we can do about it today. I had, I had a lot of questions here, but the, one of the things that struck me because I have a friend who got mercury poisoning from eating fish here and you know like me she's Japanese American and she ate a lot of sashimi. She was not diagnosed for a couple of years and she had this horrible illness until someone finally tested her mercury. So what I'm wondering, when you start talking about the mercury that is absorbed by the, is that, is that like one of the main causes of that kind of mercury poisoning in the ocean.

PROFESSOR MCCAULEY: So, mercury will naturally, bioaccumulate. Mercury does so the, so you have the fragments of EPS that are floating out there right and they are basically, they have their own set of chemistry, but they then become as I was describing these sponges for mercury pollutants. Mercury is mostly, enters our environment, enters our oceans through other industrial pathways like certain kinds of coal, for example will get mercury into the environment. It rains down in the oceans and stays in the oceans.

So when that mercury that's in the oceans, you know, floating in these relatively defused form, latches on in a concentrated way onto this sponge, then the turtle eats it, or the mahi eats it, or the ahi eats it, or whatever, and that ends up with a sponge that's now leaching, this higher concentration as Hillary has showed, higher concentration you add the sea water much higher concentration, much, much higher concentration than found on, on virgin EPS. That then is the sponge that's leaching mercury out, contributing to these problems of biomagnification of mercury in species like ahi or, in Maui here in Hawaii. So, yes.

COUNCILMEMBER KING: Okay, because my understanding is it doesn't dissipate, it accumulates and it actually compounds and so it's a really intense therapy as a human being to try to get that out of your system.

PROFESSOR MCCAULEY: That's right. And it's for myself, I think one of the most special things about being in Hawaii, being an ocean person is the privilege of eating from healthy ocean ecosystems. It's a concern when we're actually making that a risk factor, it's a, it is, the pathology again, I think more about sea turtles than I think about human health, so it's better to stay with my expertise, but my understanding is that the pathology and the treatment for some of these mercury seafood based mercury illnesses are, are quite unpleasant.

COUNCILMEMBER KING: Right, yeah, I think it took as long to get out of it as she did to get, she had that illness.

But the other thing I wanted to ask you about was the, I mean there's no, there isn't any manufacturing of polystyrene in the islands, is that correct. So when you talk about like the 65,000 pounds per day, that's what we're throwing away from the islands, that's what people in Hawaii are putting into the, the waste stream.

PROFESSOR MCCAULEY: Yeah, unless I'm mistaken, I think in Oahu, you do have a production facility for EPS.

COUNCILMEMBER KING: Okay.

PROFESSOR MCCAULEY: And--

COUNCILMEMBER KING: One, one, I think one--

PROFESSOR MCCAULEY: --but, but the vast majority of what EPS that hits Maui is imported, a fair amount from Michigan, thank you Michigan. And a fair amount from China and from abroad. But I don't know if that addresses your question.

COUNCILMEMBER KING: Yeah, yeah, no, you just reminded, yeah, I forgot, I mean I knew that that there was one, one--

PROFESSOR MCCAULEY: Yeah, that's actually, the 65,000 pounds a day is how much is consumed, in circulation by consumers.

COUNCILMEMBER KING: Okay.

PROFESSOR MCCAULEY: So, across--

COUNCILMEMBER KING: So that's what I was trying to get is that what we're actually making in Hawaii or is that what we're--

PROFESSOR MCCAULEY: --consuming--

COUNCILMEMBER KING: --we're consuming--

PROFESSOR MCCAULEY: --what you're bringing in and--

COUNCILMEMBER KING: --and throwing away. Okay.

PROFESSOR MCCAULEY: That's right.

COUNCILMEMBER KING: Thank you.

PROFESSOR MCCAULEY: Thank you.

COUNCILMEMBER KING: Thank you, Chair.

CHAIR WHITE: Thank you.

Ms. Crivello.

COUNCILMEMBER CRIVELLO: Thank you. Thank you, for your presentation and for being here. So, you said the 65,000 pounds of Styrofoam that you collected, the ocean.

PROFESSOR MCCAULEY: No, I'm sorry, I should be more clear on that. That 65,000 pounds of Styrofoam that are used by consumers across the State every day. So that's how much essential Styrofoam is used in all retail restaurants and in all the forms that you're talking about, how much EPS is used per day.

PROFESSOR YOUNG: I don't think we, I don't know what proportion of that leaks into the ocean but--

COUNCILMEMBER CRIVELLO: I guess that was my next question because you show a photo of all the debris floating when you have that statement up there--

PROFESSOR MCCAULEY: Yeah.

COUNCILMEMBER CRIVELLO: And I often, you know, I, I, I support the intent and, but my question to you as a marine scientist is that do you find that these debris come off from shore, you know, a majority, or does it come from deep waters like cruise ships, you know, fishing fleets, that sort. Because I think a more scary stuffs are just solid Styrofoam that I see the seabird munching on, if you want to put it that way. But we're exempting, this, this bill exempts the, those Styrofoam and then we have different types that's available, I guess to replace.

So, that, that being said, do you find that it's basically food containers that are your biggest mess of debris or is it more like the Styrofoam, the other kind of fishing lines--

PROFESSOR MCCAULEY: Yeah.

COUNCILMEMBER CRIVELLO: --or you know what they use for their floaters or what have you.

PROFESSOR MCCAULEY: Yeah, that's a great question. So, there's unfortunately a fair amount of uncertainty around some of the numbers so what is easy to calculate is that number 65,000 pounds of Styrofoam that are produced. Some of that goes into landfills, of course that's still better, there's no difference, that's there for the next 500 years for all of the generations to have present on the, on the land. Some, some fraction of that leaks out of waste streams and, and then ends up in the oceans, and that's what I think some of the scientists that were speaking yesterday were giving you some estimates of how much container material, how much EPS you actually find here on the beaches of Maui, right.

There is a diverse array of plastics that end up on our beaches, a diverse array of plastics that end up in front of these marine animals. And my sense here and of course this is more a matter for Council discussion, but which of this portfolio of problems can you actually make an inroad on. We can layout the dots for you that there's a lot of EPS, more EPS produced per capita in Hawaii than any other State. There's a lot of EPS containers, specific container material that end up in the ocean and on the beaches and we find EPS container material in these marine species that we're talking about, in sea turtles, and, and some of the seabirds. So, we can connect a line between all those dots and know that the decision that you make, and a decision that you would make on EPS will influence the future of ocean health. But we can't put a number on it. I can't tell you exactly how many sea turtles we save.

COUNCILMEMBER CRIVELLO: Thank you. I'm just trying to make some sort of understanding to determine when we say polystyrene food containers, we're not identifying the other mess that floats out there that--

PROFESSOR MCCAULEY: Sure.

PROFESSOR YOUNG: I agree, you're just going to be hitting, you know, one part of the problem, but I think you're hitting a substantial chunk of the problem, at least from the seabird perspective. We can't tell you when we look inside the seabird definitively, especially with those microplastics, what their source was. But we know that a major use of EPS is in food containers. So if we get rid of one major source of EPS, we can assume that we will dramatically cause a reduction. Absolutely there's going to be other sources of EPS, including sources that aren't from Maui--

COUNCILMEMBER CRIVELLO: Right.

PROFESSOR YOUNG: --much less Hawaii, but I think that this is an important step and you, you really don't have much leverage to kind of negotiate those other, with those other parties until you've kind of done your part in banning EPS here.

PROFESSOR MCCAULEY: I would, I would emphasize that last point is that, you know, right now, if Hawaii, if the State, if Maui doesn't have a stance for leadership on EPS and you're, maybe, I wouldn't say, you're floating in a glass boat, living in a glass, you can't, there's not a lot of foundation to, to have conversation with other industries with some of these offshore polluters, with other neighbors in the Pacific about some of their plastic use unless there's some leadership here in Maui, here in Hawaii on a, on a plastic that could easily be substituted.

COUNCILMEMBER CRIVELLO: We, we also note that, can you also say that many of the debris floats from afar as to how our current brings everything in.

PROFESSOR MCCAULEY: That's an excellent point and I think as one of the student scientists pointed out, Hawaii, Maui in particular is an aggregate, unfortunately we're using the Pacific, and I don't mean just the waters around Maui, we're using the Pacific Ocean as a rubbish bin right now. That some EPS that's coming from states in, cities in California that haven't banned EPS containers, some of that's coming from Japan, some of that's coming from China. I guess the point I was trying to make was if you're really trying to begin bit by bit to solve this problem, you can't have very meaningful conversations with your neighbors in California, Japan or China unless Hawaii itself, unless Maui itself decides I want to actually take a step forward because this is ocean health problem.

COUNCILMEMBER CRIVELLO: So, Chair, if I can ask one more question because he, you mention the bill. Have you, have you noted the 20.26.050 all of the exemptions.

PROFESSOR MCCAULEY: Yeah, I, I have seen those, and I mean I guess what I would say is simply the more bold action you can take to curtail the amount of plastic that ends up in the oceans, the more positive that will be as an outcome for the ecosystems and species we're talking about. The less ambitious, the least ambitious forms that, of just what you have on paper right now will still make a tangible and important difference to ocean health. If no action is taken, we'll still be looking at the same problems in the same animals for decades. But I think, thank you for raising that point, I don't know if you have anything to add to that.

PROFESSOR YOUNG: I think certainly the more of these plastics and the less exemptions we can have and the more plastics and the polystyrene products we can get out of the oceans the better. I mean these are not isolated around food products, but this is

an important first step, or an important step, you guys have already taken important first steps with banning plastic bags and other things here on Maui.

COUNCILMEMBER CRIVELLO: Thank you.

CHAIR WHITE: Further questions?

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Thank you, Chair. Thank you, for being here. I, my question is EPS. So what is EPS, you're using it interchangeable, is it polystyrene?

PROFESSOR MCCAULEY: No, when I mention EPS, I'm specifically talking about expanded polystyrene and so I think when I arrived there was materials definition before expanded polystyrene where you're actually air blowing, you're blowing air into creating a foam out of polystyrene. I know that there have been various, we, we try to, if you will cast a bit of a wide net in the way that we present it and summarize some of those research because there's been some conversation about exactly which material you're going to be deciding upon so we wanted to have a broad view of the science in front of you to help you make a decision.

COUNCILMEMBER SUGIMURA: Okay, thank you. So you're talking about more foam, is that right.

PROFESSOR MCCAULEY: Yeah, so for example, when I showed you the results for sea turtle ingestion, the, what is mislabeled is Styrofoam by the researchers that produced that study is expanded polystyrene is EPS. So it depends exactly which part of the conversation, or which of these graphs you're referring to. We included both polystyrene and expanded polystyrene to give you all that information to have it available to you.

COUNCILMEMBER SUGIMURA: Thank you.

PROFESSOR YOUNG: It also varies a little bit, some of the studies that we cite include all polystyrene products and some of them include only expanded polystyrene. So, we've moved a little bit between both of those in, in the data we've provided.

COUNCILMEMBER SUGIMURA: If I could Chair.

CHAIR WHITE: Sure.

COUNCILMEMBER SUGIMURA: So the photos that you had Dr. McCauley in, in your opening presentation and then what Dr. Young had, I think when you're talking about the, one of your photos you have all this, all this foam in the ocean. Is that in Hawaii?

PROFESSOR MCCAULEY: So there's some pictures are for example, the image of the manta ray feeding underneath that debris field, that's not a Hawaiian image, but I was just in Molokini this weekend and the same thing occurs out there just a little harder to film. And so, the research that we're reporting comes directly in almost all these cases from Hawaiian studies, from Hawaiian species, from Hawaiian coastal waters and, and so, you can draw directly inference from the results we're seeing, interactions from EPS and these wildlife. This is the conversation you're having, this is the debate you're having, this is germane to a marine biological discussion for, for Maui.

COUNCILMEMBER SUGIMURA: So that, that opening photo of yours is not a Hawaiian photo of all this Styrofoam in, in some bay, is what it looked like, it's not Hawaii, or is it Hawaii.

PROFESSOR MCCAULEY: Well, that's not Hawaii, but I'll have to say some of the capture booms that you see, now unfortunately you guys aren't Oahu, but Ala Wai Canal and there are days when some of those capture booms look, and unfortunately quite similar to that. And the challenge is seeing that, which is why we draw on some of these visuals, when we have this number like 65,000 pounds produced every day. How do you actually get that into your head. And there's leakage that comes out of that stream.

Now of course I'm not saying 65,000 pounds every, every plate lunch that, every EPS plate lunch does not end up on the ocean. But, it's the hidden nature of this that makes it so challenging. It's the hidden nature because it gets directly out onto the reef and then beyond into the world of these marine species. So, an image like that I think helps us gets our head around to what does it look like to see that amount of material and it . . . you cherish the oceans.

PROFESSOR YOUNG: And from my photos I can say that the images mostly came from the published papers, and I actually don't know the sources that they took their images from. Much of their data comes from the Pacific region, but I don't know where they got their images from.

PROFESSOR MCCAULEY: Images for the albatross are from Hawaii, with the EPS, the images and the video for the students that dissecting and removing Styrofoam from the bodies of fish and from albatross that's from Hawaii.

COUNCILMEMBER SUGIMURA: If I could Chair.

So, I was wondering with your, both of your studies because you're talking about, you know, fish and marine and turtles and whales, and all the, you know, what Federal agencies are you working with to get to better control of, of our marine life and, you know, safety of, of them, birds and whales, and manta ray and turtles, I think is your study.

PROFESSOR MCCAULEY: Sure, so NOAA is one of the principle, the National Oceanic and Atmospheric Administration is one of the principle organizations at the Federal level that looks after the wellbeing of animals like sea turtles and whales. They also have a marine debris program, basically like a trash removal program, they go out, for example they do some trash removal, marine debris removal in the main Hawaiian Islands, but a lot up in Papahanaumokuakea. They are essentially trash collectors, right, they are cleaning up the trash, all this, all this EPS and other plastic that leak out of these food systems.

So, a decision that you're making, makes their life easier. They are there to, to try to deal with what happens at the County, at the local level when we have this EPS that leaks off an island like Maui into the system, how do they then capture it, can they actually capture it and get some fraction of it back onto land. And then, they're in charge of, of, you know, doing the very costly work of, of animal wildlife rehabilitation.

There's also quite a lot of local level work, of course Maui Ocean Center, right, they do a lot of work with sea turtles and so there is, there is both work done at the local and Federal level, the principle agent at the Federal level is NOAA.

COUNCILMEMBER SUGIMURA: And you're working with them?

PROFESSOR MCCAULEY: We do, I like literally worked for them previously. Now what I do is I, my current position is professor, so most of what I do is on the research sector. There are researchers in the NOAA arm as well so we pool results, some of the results I even talked about today are drawn in aggregate from some of the science they produce. I think I see our role really in collaboration is getting science like this in front of you to help you to make decisions about ocean health.

PROFESSOR YOUNG: Yeah, I would just add, you know, for clarity that neither myself nor Dr. McCauley are, work for a regulatory agency of any kind. So my work is research and I work independently, it is regulated by U.S. Fish and Wildlife Service and I provide all of my data and results to Fish and Wildlife Service. But I don't actually work for any agency and neither do you--

PROFESSOR MCCAULEY: Sure.

PROFESSOR YOUNG: --at this point.

PROFESSOR MCCAULEY: So to make that clear, yeah, our only affiliations are simply as, as professors at UC Santa Barbara.

COUNCILMEMBER SUGIMURA: Thank you.

CHAIR WHITE: Ms. Cochran.

COUNCILMEMBER COCHRAN: Thank you, Chair. And thank you very much for bringing not only just the scientific background and first hand actual, you know, knowledge and experience with this and the environment, but you know, bringing us back to where we are, who we are, what we're doing to our culture, what we're doing to our oceans, to our environment as a whole and to be part of the change we want to see.

And so, just, you know, reconfirm for me that those two bottles and the left and right, you know, piles of stuff over there. One definitely is something that is never ever, ever going to go away. The other has clearly shown only within seven days in a bottle of water, has started to break down and go back to nature so to speak. Is that, I mean, really, I'm just trying to bring it back home to some everyday language and thank you for bringing keiki into the picture because they get it. So, if you can just elaborate. Thank you.

PROFESSOR YOUNG: I think this was so compelling, you know, we put this in an, and just amazed to see it and how clear about a fact that this is just a bottle of seawater. And, seven days, this is okay, this is okay to put in your oceans and, and this is not, and it's not going to change. So I honestly think that if you think about this from a marine biologist perspective, what is leaking into the marine ocean, you don't need to go too much farther, you know, we can tell you why this is bad. But it's pretty apparent that this is a problem for your oceans.

PROFESSOR MCCAULEY: I think you summarize it very well, Councilmember. I mean the only thing that I would have to add is that it's very clear on the research side, unambiguous in the marine research side that this bottle, this future is not positive for ocean health, not positive for not just biodiversity but for income, you know. However you want view a species like a sea turtle whether it's you know, aumakua or whether it's, you know part of the billion dollar trade for tourism, it's not good for that future of the ocean health.

And one thing that I think has been brought up in the conversation is that it's clear that there are a lot of agents and this is a large problem. But unfortunately, there's, in this part of Pacific there's been a lot of passing the buck. Like it's NOAA's responsibility, it's California's responsibility, it's Japan's responsibility. Unless somebody steps forward, in California, as I say, we're stepping forward, you know, we have over 60 cities that have banned that future, we now have a State level bill that is, looks very similar in composition to the bill that you've put forward.

And, and, as I say, I think of Maui as a place where, we're thinking about keiki, we're thinking about the future, we're thinking about oceans, we get that. You guys got that memo 2000 years ago that ocean health and human health, and ocean futures were interconnected. I just hope for leadership here on this issue as well.

COUNCILMEMBER COCHRAN: Thank you. And Chair, lastly, I know we're kind of cutting into our lunch hour. Thank you for bringing up economics of this. So not, yes, in relation to our culture and why people come to visit and our marine life and what have you. But also, as I am reading it, the industry has profits. I mean that's why they're here is to sell us a product to get profits.

So this, the biodegradable, compostable is also a product that's created, sold on the market, utilized by people but in the end result does break down and go away versus the other type of product does not. So, I think there's room for everyone and can be a win/win all the way around whether you are in business solely as a, you know, a manufacturer, a producer of sorts or not and that's kind of, so thank you for, you know, enlightening me on that aspect too.

PROFESSOR MCCAULEY: I think that's an important point. I think it's important you all represent constituencies for which cost is important. Of course, it's expensive here on Maui. But I would just urge you to think about cost all the way from start to finish. It's several cents for whatever it is you're debating, then that would cause you to go from the, this side of the table to an alternative on this side of the table.

But perhaps what you're not seeing is the rather immense cost that it costs us to try to rehabilitate a sea turtle that has ingested EPS. A rather immense cost that's lost as an opportunity cost when you have less sea turtles around Maui and it becomes, you know, less of a known destination for people to come interact with ocean wildlife. And this is, you know, your economic future as much as it is your cultural future, and I think you couldn't have said it better. Thank you.

COUNCILMEMBER COCHRAN: And Chair, in reference to that I handed out, everyone should have on their desk, the latest price list as of today from VI, is it, I'm not sure, I think it's VIP. Yeah, and everything is, cost less. The alternative product actually as of today as we sit here costs less. So, closing, thank you.

CHAIR WHITE: Thank you, Ms. Cochran.

Question for you. In, in your reaction to somebody's question about the exemptions. Which of the exemptions, I have a problem with the Styrofoam cooler going out of backs of cars. I have a problems with seeing peanuts flying out of the backs of people's cars as well. Your focus is significantly on the expanded polystyrene, the polystyrene foam because it's more of an, if I'm understanding you correctly it's more of an aggregator than the other polystyrenes and it also is more likely to breakup relatively easily. If we were to focus on eliminating some of these exemptions, which ones would you first focus on.

PROFESSOR MCCAULEY: I, I should probably have a more careful look at the exemption list before, but I--

CHAIR WHITE: Well I'll, I'll just lead off with, well basically, if I'm not mistaken, the, the, the San Francisco ordinance doesn't allow buoys, coolers, etc., unless the polystyrene or Styrofoam, whichever it is, is encapsulated for lack of a better word.

PROFESSOR MCCAULEY: Right.

CHAIR WHITE: So it's protected from being distributed or disbursed. Is that something that you feel would be an important step in addition to what we are already dealing with.

PROFESSOR MCCAULEY: Right. So, on the, again, when we move from marine science to material science, I just want to be clear that there's a little bit of less expertise here so I want to be clear what I do know well and don't know well. We, when we end up seeing expanded polystyrene, EPS in, in, as Hillary mentioned in marine animals it's very difficult to, to determine an origin.

I think the, the way that I would lay out the logic is best pathways forward is that a core conversation about EPS is going to solve a large part of this problem. EPS in food systems that there's clearly a lot of this EPS in food systems that are ending up on the beaches and then we see out at ocean, we see in these fish and animals. So a home base from there is clearly going to make a difference.

Anything you can do that is politically . . . economically feasible in your own context here on Maui to then reduce inflows of EPS through, you know, thinking about what it means for . . . on coolers, thinking about what it means for you know, material that could be for meat packing, thinking about what it could be for, for Styrofoam floats. Any reduction you make, it's incremental that goes out from there will make a difference. You know, I guess, to just re-summarize.

A, for me a bullseye target and a major source of progress would be doing something . . . in a way that no other county, no other island has yet been able to do and yet states across the U.S. have been able to do for expanded polystyrene. How exactly you expand from there, the, the more rings, the more buffers you're able to add that are politically tenable, the better that will be for ocean health. And quite where you draw that line, I would defer to people that know more about Maui industry and more about Maui economics. I don't know if you have more to add.

PROFESSOR YOUNG: I would only say that those encapsulated polystyrenes that you talk about is a very powerful tool by which to contain some of those break down and so would be a great set of exemptions to add, in particular those, that is a powerful tool to contain it.

PROFESSOR MCCAULEY: Sure, yeah, specifically we end up for example, at Papahanaumokuakea, you see a lot of fishing floats, that's, that is more innocuous if it's an encapsulated fishing float than say a, some floats are not encapsulated, they fragment and that's the source of a lot of the ingestion, a lot of the chemical compositions, chemical concentration and the ingestion. So a hard, a buoy that is encapsulated that would use for, you know, for . . . fishing or you would use for some of the longline boats, they don't, most of the longline fishing boats don't even use Styrofoam, it's air encapsulation amongst a hard-plastic exterior. But, no one is swallowing a buoying that is encapsulated that size, I guess is what you said better than I did.

CHAIR WHITE: Okay, any further questions.

Mr. Guzman, do you have one.

COUNCILMEMBER GUZMAN: Yeah, I was wondering on, when I'm looking at the table on the alternative products, and this harder shell here that almost is similar to the hard plastic, it's not the foam type which I completely understand in the consumption of that via the marine life. But the hard plastic one, the hard type of foam, how does that degrade in comparison to. I, I just don't want to replace one piece of trash with another piece of trash. So, can you explain, is that even viable to even go with that route, you know for the marine life.

PROFESSOR MCCAULEY: Yeah, from an ocean science perspective, what you really want is materials that head in this direction and that's the fiber, fiber alternative, right. So that harder plastics are designed, you know, there's an array of different plastics and again, it would be better to have somebody who could speak to their degradation capabilities and different kinds of context as you know, some of these are designed to be able to break down quite well in compostable facilities; however, you know is that environment here in Maui. The very best alternative is something that is more fiber based, more paper based and that is what this sample is.

COUNCILMEMBER GUZMAN: Right, right, cause when you're pointing to that sample, I'm sure that's not comparable to the hard--

PROFESSOR MCCAULEY: That's right.

COUNCILMEMBER GUZMAN: --the hard foam right there, that's, as an alternative.

PROFESSOR MCCAULEY: Right.

COUNCILMEMBER GUZMAN: So you can't break that down in seven days, right.

PROFESSOR YOUNG: Fiber based.

PROFESSOR MCCAULEY: One of the, the, the challenge with EPS as we talked about are that it fragments very easily and it's not recyclable. It's not economically feasible to recycle that. I mean that's, any conversation you hear to the, to the contrary is at least in my experience trying, hoping for a recyclable solution is simply an alternative fact. But, the, what you, you don't want to be replacing one problem with another. If you get to some of these other types of plastic, some of them are recyclable and some of them are recyclable Maui and some aren't. And I think you'd want to look hard at which of these are actually, which can be recycled locally.

Like for example in California, replacement can be made from EPS that is non-recyclable to a plastic that is recyclable and that ends up being reused multiple times and, not ends up in landfills and not, ends up much less in the oceans. If you were looking at a future where you have capabilities, as I hope you're thinking about, about increasing bandwidth for recycling capabilities here on Maui, and composting facilities on Maui, that'll help you engage more of these products into an end point that looks like this. May not be five days, but it may be 180 days, or 365 days in the right conditions, so, because you have such a diverse array of different materials, the answer is a little bit, idiosyncratic to each of those different types of containers. But each of those has a more positive future than EPS.

I would say, you know, if the sky was the limit in terms of economic and political opportunity, engage in compostables, engage in biodegradable alternatives, engage in these sort of fiber products, you know, again seven days and you end up with future like that.

PROFESSOR YOUNG: I would also say that the EPS is maybe the worst of many of these, so you, because in particular of this floating capacity which makes it highly vulnerable to a lot of marine wildlife and the high rates of break down. So, you know, in discussing the polystyrene, you know, my understanding, and again I'm also not a material scientist, but comparing the, the polystyrene, EPS is, you know, even some polystyrene, you know, a non, EPS is kind of the worst because it breaks down so quickly and because it's buoyant and it breaks down these microplastics.

So even though some of these other plastics, these other alternatives are not as good as the fiber, we'd like to see everything go to fiber based alternatives. They're still probably better than EPS plastic. So, you know, there's the perfect solution and then there's kind of levels of bad, and they should be moving away from the worst.

COUNCILMEMBER GUZMAN: Thank you, Chair.

CHAIR WHITE: Thank you. Members, thank you very much. And thank you both for being here, and really appreciate your contributions.

We will be in recess until 1:30.

PROFESSOR MCCAULEY: Thank you for a wonderful set of thoughtful questions.

(THE MEETING WAS RECESSED BY THE CHAIR AT 12:15 P.M., AND WAS RECONVENED AT 1:39 P.M., WITH ALL MEMBERS PRESENT, EXCEPT FOR COUNCILMEMBERS CRIVELLO, GUZMAN, HOKAMA, AND KING, EXCUSED.)

CHAIR WHITE: This meeting shall please come back to order.

And Members, before I invite Dr. Lunn to begin her presentation, I just wanted to point out that one of the, you know, one of the issues that we wanted to discuss was, you know, whether there were concerns, constitutional concerns with banning polystyrene products from being shipped in.

But the other concern that I had, which we haven't really mentioned was the continual reference that, that styrene is a really difficult and likely carcinogen. And, so I wanted

to know because I think the public should know and needs to know whether styrene or polystyrene is a challenge for them to use in a food product.

And I think Mr. Cruzan this morning shed a significant amount of light on that. At the same time Mr. Cruzan is focused on studies that have been paid for by the styrene industry. The importance for me of, of Dr. Lunn's presentation is that she is the Director of the Office of the Report on Carcinogens, so it's her organization that is responsible for identifying through various studies what is and what is not a carcinogen. I'm not, and I'm not going to try to explain her job, I'll let her do that. And with that, Dr. Lunn we'll be happy to welcome you to start your presentation.

DR. RUTH M. LUNN, DIRECTOR, OFFICE OF THE REPORT ON CARCINOGENS, DIVISION OF THE NATIONAL TOXICOLOGY PROGRAM, NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES:

Okay, so I want to thank the Council for giving me this opportunity to provide and share some information about styrene's listing in the Report on Carcinogens as reasonably anticipated to be a carcinogen. And so what I want to talk about in this presentation is just to tell you want NTP is, what the RST is. What does reasonably anticipated to be a human carcinogen mean? Go over just briefly the process that we use for the 12th Report on Carcinogen and the scientific evidence supporting the listing and then just briefly talk about how people are exposed to styrene and potential exposure to styrene from polystyrene containers.

I'm going to really focus on styrene, I do not know a lot about polystyrene and I want to point out that the NTP's review was on styrene. So the National Toxicology Program is an interagency program and we do testing and research, and we also carry out analysis activities to determine both cancer and noncancer effects. And so the analysis activities aren't studies per se, but it's literature based research where we go out and look, gather out all the studies that have been published and assess their quality and interpret them and, and make conclusions about whether they pose a hazard. And so, my office is part of this analysis activity.

And so just to give you some background information on the Report on Carcinogen, this report is congressional mandated. And the mandate was under the Public Health Service Act. And this Act directs the Secretary of the Department of Health and Human Services to publish a list of carcinogens in which the significant number of people residing in the United States are exposed. So what I want to point out is that the language of the legislation defines both the listing categories and the language of the two categories. So, the language define "known" and "reasonably anticipated

human carcinogens". And we often get this, why reasonably and why just two categories. But that came from the legislation.

(Councilmember Crivello returned to the meeting at 1:43 p.m.)

DR. LUNN: But the legislation didn't define the criteria by which we assess whether something fits into these categories or the process for how we do that and NTP has developed a formal process and established listing criteria. And I'm going to show you that in a little bit.

And the other thing I would like to point about this report it's what we call hazard identification. And so we're identifying something that poses a hazard. We do not make any determination of the risk for, in people's daily lives and so there's many things that might determine whether somebody gets cancer when they're exposed to something and that might be the potency, the level, the duration, and susceptibility.

And then lastly, the 14th Report on Carcinogens was released in November of 2016. It's a cumulative report and it contains all the listings of the previous edition including styrene as well as newly reviewed listings.

So what does reasonably anticipated to be a carcinogen? Well, we have known, and that's when you have causality. Recently, we see the association but a causal relationship in humans has not been clearly established, meaning there is some uncertainty. And so, we've developed this criteria for how we evaluate whether things should "known" or "reasonably anticipated to be a human carcinogen". And I will go into that in a little more detail in the next slide.

But first I wanted to just give you an example of there's 186 substances that are listed in the report as "reasonably anticipated to a human carcinogen". Some of them including Acrylamide, a Phthalate that's used in plastics, lead and lead compounds, Polycyclic aromatic hydrocarbons that are environmental pollutants, and there's more. So, I invite you to go to our website and google it and you can see all the stuff, the substances.

(Councilmember Guzman returned to the meeting at 1:45 p.m.)

DR. LUNN: So now I want to talk a little bit more about our criteria and so for known to be a human carcinogen, we need sufficient evidence from studies in humans. And these are usually human epidemiological studies. And, we're concerned about humans.

I, to be reasonably anticipated to be a human carcinogen, well there's three different ways by which something can be listed as reasonably anticipated. We can have

epidemiological studies, but in this case, the evidence isn't sufficient, there is, it shows an association, but we can't rule out chance by . . . finding. Or, we can have sufficient evidence in animals, so we're very clear that it causes cancer in animals, but because animals is not humans, there's some uncertainty, and that's why it's reasonably anticipated. And then the third reason why, the way that something can be listed in the RoC is via some mechanistic or structure related, it belongs to classes that are listed in there.

And finally, the criteria allows us to use our scientific judgement using all relevant information. So this is just a short-condensed version of the criteria and again if you're interested the criteria is available on our website.

So we looked at styrene, we used that criteria, and we also followed a formal process. And our process has undergone some revisions and this is not the process that we use now, but it, there are some very similar elements to this process. So the process had scientific input, we had experts who helped us evaluate this. We had peer view of this by experts of our scientific information supporting our conclusions. And there was plenty of opportunity for public comments.

So, in, basically there are four parts of the process, one is just really where we're identifying what we're going to review. The second is where we prepare these documents, scientific documents where we review all the relevant literature and interpret it and apply the criteria and make a decision. In this case the expert panel in the 12th RoC is the one who peer reviewed that document and made a recommendation.

And then, we for the 12th RoC we also had, we had something called a substance profile, which is written for each of the different substances and that's what goes in the report. And so that substance profile was peer reviewed by another board of experts.

And then the last process is where we submit the substance profiles and the recommended listings to the Secretary for review and approval, and as I mentioned before this is, we prepare the document for the Secretary.

Okay, so with the evidence for the evaluation of styrene. So I just want to point out that this is mainly based on the literature published in 2009, the report was released in 2011, but the, the meetings, those expert panel meetings were around 2009. And so for styrene, we concluded from the Epi studies, which are the studies of styrene-exposed workers, that they showed an association between exposure to styrene and an increased risk of lymphohematopoietic cancers, which are lymphomas and leukemia. But we did not feel like we could rule out chance . . . so we said that this

evidence was limited. And then in addition to that, we had, there were some studies that didn't look at cancer, but they looked at blood cells from these exposed workers and saw that they were genetic damage, chromosome aberrations, DNA damage. And, and that, we thought also supported this limited evidence.

Then we looked at the animal studies and we thought this met our criteria for sufficient evidence, both oral exposure and inhalation exposure caused these lung tumors. And then finally there was some mechanistic data where styrene is metabolized to styrene-7, 8-oxide, that metabolized . . . toxic and listed in the Report on Carcinogens.

So subsequent to our review, Congress requested that the Department of, the Secretary of the Department of Health and Human Services commission a National Academy of Science panel to review our listing of styrene in the 12th Report of Carcinogens. So in addition to peer reviewing our documents, they also carried out their own independent assessment. And they looked at the literature up to November 2013 and they agreed with our assessment. So, they endorsed our listing in the 12th RoC, and not only did they agree that it should be reasonably anticipated to be a human carcinogen, but they agreed with our conclusions from human studies, from studies in experimental animals and the mechanistic studies.

So now I just want to switch gears and now talk a little about exposure to styrene. So, I think I mentioned at the beginning that one of the reasons, one of the legislation also need to be a significant number of people exposed to styrene. So that's why we look at exposure information. And I want to point out that in the workplace, people are exposed to very high levels of, of styrene and it in what we call the parts per million range. And the workers come from three main industry; the reinforced plastics, which are laminators that make the boats; the styrene-butadiene which makes the tires; and the styrene, and people who are producing styrene that are polystyrene. And so these are in the parts per million, they range, this is just meant to be representative and these are just different levels that have been reported in different studies.

The general public is also exposed to styrene, but at orders of magnitude lower than what's in the workplace. They are in parts per billion. So you know, one here is equal to a thousand in this scale of parts per billion. And how, and we do have blood levels on, that show people have styrene in their blood, but it's really just the top five percent of people who you can really detect those levels. And so the sources to the general public are coming from tobacco smoke; from food, there's a wide range; indoor air, there's higher levels as you would expect near an industry that's emitting styrene; and then outdoor air.

So then lastly I just want to talk a little bit, this is not really my area of expertise but, about exposure to styrene from polystyrene containers. It's my understanding that the USDA has regulations for polystyrene, about how much styrene can be in there and there's levels that are reported here. There was a study, this study was published after the styrene was listed in the 12th RoC where they measured styrene in different types of polystyrene containers and reported these level that seems to be higher in coffee lids and these levels are under the regulated levels.

So it seems that polystyrene which is a solid, you can get very low migration of styrene from polystyrene. My understanding is, is that it's very low and it depends on the duration, contact, the fat content and some other things. So, in some of the information we had in our document, butter seemed to have the higher levels, but again, this is parts per billion, so it's low levels and it depended on how it was stored. If it was in the refrigerator for a long time, there were higher levels. And this has higher fat and then these are just some values of what has been reported either by our document or this newer study of levels in food.

So then I just want to conclude and summarize styrene is listed and it's reasonably anticipated to be a human carcinogen. This is mainly based on cancer studies of workers who are exposed to very high levels of styrene. It is also based on studies in mice that were exposed in somewhat of the range of the levels that we see in the workers.

I want to remind you that NTP's evaluation is a cancer hazard evaluation and did not make a risk assessment to determine the level that is safe. That is left up to the regulatory agencies. But I also want to point out that at least with the exposure information we know, that the general public is exposed to really orders of magnitude lower levels than what is seen in the workers. And that the levels of, in addition to styrene being found in food with contact with polystyrene packaging, it, it can be found in food maybe from the environment, from natural sources, and there's been some reports of very high levels of styrene found in some cinnamon samples, but not in others. And from what my understanding is that might be from a mold that's growing on, in the cinnamon, and that's contaminating it.

And that's, that's, I'd be happy to take any questions.

CHAIR WHITE: Thank you very much, Dr.

I've got a question. We have heard about levels of concentration in the studies that, the mice were exposed to and you note that they are exposed to 20 to 160 ppm. I'm just wondering, you know, when we hear from various agencies or various people,

they, I believe the EPA says the, the acceptable level for them is 20,000 micrograms and I'm just wondering who makes the call on acceptable levels of exposure.

DR. LUNN: The regulatory agencies do what's called a risk assessment and . . . of expertise but what they would do is they would take an animal study or a human study in which they have so-called dose response data, meaning that they had animals exposed to different levels, or humans exposed to different levels, and then they can do some regression and statistics to try and figure out what level they think, because they have the incidence of the tumors, or the cancer incidents and they can do some modeling, and to figure out what level they think is safe.

CHAIR WHITE: Okay, thank you.

Members, are there any other questions for Dr. Lunn.

I think you did a pretty good job of going over information and helping us understand the challenge and I think especially for me because that was my, my concern was the toxicity.

So, oh, I'm, yes, Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Thank you very much. So I wanted to read this, which was part of our proposed ordinance to see what your general statement is. In Section 1, I'm going to, the very last part of the sentence relates to, to your discussion but it says: "SECTION 1. Due to its lightweight nature and ability to break down into smaller fragments that persist for decades, polystyrene has significant negative impacts on the environment, contributes to the potential death of marine animals and avian populations through ingestion, and is a suspected human carcinogen."

Could you make a statement about "and is a suspected human carcinogen".

(Councilmember King returned to the meeting at 1:58 p.m.)

DR. LUNN: I would modify that to say styrene as a suspected human carcinogen.

COUNCILMEMBER SUGIMURA: But not, not, okay. I think, yeah, cause polystyrene is what we're talking about in, in this proposal, so this in incorrect.

DR. LUNN: Right and we did not study polystyrene, styrene can be released from polystyrene, but we did not evaluate. So it, it's sort of like, we evaluate a chemical, a chemical might be in a product, we're not evaluating the entire product. In this case,

the styrene levels are low so I, I don't think you, at least my personal opinion is that you, you probably cannot say polystyrene is a suspected human carcinogen, you can say styrene is a suspected human carcinogen. You could add a modifier if you believe that, that you could say that styrene, low levels of styrene might be released from polystyrene, but that to me is what the data is saying. I think you haven't evaluated polystyrene, or we haven't.

COUNCILMEMBER SUGIMURA: Thank you. I think that Dr. Cruzan who was a speaker earlier also kind of confirms what you just said too. That was his assessment also on this one statement, so thank you.

CHAIR WHITE: Members, any other questions for Dr. Lunn.

Seeing none, thank you so much for your time this afternoon, or I guess it's evening where you are. Really appreciate your helping us out with this.

DR. LUNN: Thanks. Thank you so much. Have a good evening--

CHAIR WHITE: You too.

DR. LUNN: --or day or, alright, bye.

CHAIR WHITE: Bye bye.

Members before we move on, I did want to point out that there was a, evidently one of you got a comment that the folks that have participated in our presentations were paid a stipend. None of them were paid a stipend, nor did the Council pay for any air fares or anything of the sorts. So this was all done at no cost to the Council and they, the folks that came definitely did, well either came or presented on video, none were provided a stipend of any kind. So no compensation, I just wanted to make that clear.

Okay, with that, Members, I, are there any general questions or shall we get into our deliberation? I think we've, I think we've had a pretty good list of presentations and I think they've been very helpful in kind of shaping, shaping what we may want to do whichever side of the issue you might be on. So, are there any items or anything that you would like to hear more on at this point from others than the, the nine of us.

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: So, Chair I have a, and it's because I'm getting in on this at probably the second and final reading, but I wondered if, I had heard that Jason

Higa from Zippy's or there was another group that could kind of talk about the business aspect of it. I think this was framing all of the health and scientific aspects of this. And I wondered if there was a summary of the business side of this because I am concerned about this and how it would affect small businesses. And, and, you know I know this is about, you know, those kinds of businesses and I just would like to hear from them also. Although you may have had it, maybe as film, you can direct me to where I can look on Granicus.

CHAIR WHITE: Yeah, I believe Mr. Higa sent all of you a link to a video. I don't know whether that was, let's take a quick recess.

(THE MEETING WAS RECESSED BY THE CHAIR AT 2:02 P.M., AND WAS RECONVENED AT 2:17 P.M., WITH ALL MEMBERS PRESENT, EXCEPT FOR COUNCILMEMBER HOKAMA, EXCUSED.)

CHAIR WHITE: This meeting shall please come back to order. Members, without objection, with respect to Ms. Sugimura's request for a business perspective, if you don't have objections, I would like to ask Pam Tumpap from the Chamber of Commerce to come down and, and share her thoughts for us.

COUNCILMEMBER KING: Chair. Thank you. I think we already heard from Ms. Tumpap, and, you know, my feeling is that the business community has sent in testimony, has had opportunity like everybody else and so are we going to just keep calling more people back as we--

CHAIR WHITE: No this is, we're going to, I think this, to the fact that the three, the three new Members didn't sit through the variety of things that the rest of sat through. I think it's a reasonable request to give Ms. Tumpap five minute or so and then, then as far as I'm concerned we're, we're going to move on.

COUNCILMEMBER KING: Okay, but is this different than we, I mean we heard from Ms. Tumpap--

CHAIR WHITE: I don't know, I don't know what she's going to share and, it maybe the same thing that you have heard, but I think the Chair feels it's a reasonable request, and a reasonably small request based on the, the amount of time that we've allotted for the various presentations.

Other comments?

Okay, Ms. Tumpap.

MS. PAMELA TUMPAP, MAUI CHAMBER OF COMMERCE:

Aloha, Chair. Thank you for the opportunity to share again, a little bit more about the business concerns. You know, I think looking back as a member of the task force, I think what's occurred over the last two days would have been ideally really done during the task force setting because so much new information is coming out.

One of our, one of my concerns today would be, and it never came out in the task force is the issue of PVC pipe. So that was something new, so it was really great to hear the experts and learn along the way. And that's something I think, you know there's remedies for that, given that expanded definition. And as the Council works through that, you could look at that as a definition issue.

From the business standpoint over the last couple of days, I think a lot of the things that a lot of the business members who sat through the task force, our, our takeaways continue to be reinforced. So, you know, we continue, when we left, when we went in, we were learning about polystyrene. I did think we learned more today, a little bit about polystyrene and some of the toxins that can attach as we get to smaller particles. So that was new and not something that was really presented.

But overall the issues continue to come back to the challenge that really what we're dealing with is the bigger issue as being litter overall. And looking at how we can address the challenges that we face. You know all care about the marine environment, all of us live and work here and care about our environment and the marine environment and our community. And so we all want to see how we can best help and work towards this.

We continue to feel as we go through the issues and it continues to be reinforced that whether polystyrene is actually a one person issue or one or nine, or whatever it is, it's still a small fraction of the bigger issue which is litter control. So we want to continue to see the focus be on litter control and how we address that and best protect our environment.

I was deeply concerned about the definition now including PVC pipe, because that never came up and obviously that impacts agriculture and landscaping. And obviously landscaping doesn't deal with food, but agriculture does. And, currently while this bill is centered around food, the definition of polystyrene isn't specific to we're only looking at polystyrene bans in, in relation to food. So there's some concerns there.

We, we really honestly feel that, you know, the County is looking at all of this and it comes down to priorities. As, as I have said before and I'll say it again, we, we looked at the health issues and the science and we couldn't, again there was too many studies this way and that way and things were inconclusive. So on the health side, we felt it was inconclusive.

When we looked at how we best protect the marine environment, you know, terms keep getting, throughout this whole process, terms keep getting mishmash back and forth. Polystyrene, Styrofoam, foam, you know, we use those terms interchangeable. We also seem to use some of the other terms interchangeably, plastic but, plastic that includes polystyrene. So as I listened today over and over again, the overarching theme was plastic, plastic, plastic and it includes polystyrene.

So we feel that in many ways, the issue is about priorities. And the issue is about resources as well. You know for many small businesses, the people who are mostly going to be hurt by this bill are some of the mom and pops that need, feel they need this. A lot of the industry is moving to recyclables. There's a story that I tell where you talk about some of the restaurants, say TS Restaurant is an example, they indicate and have moved towards more recyclable materials, but they note that that's because their clientele can pay more and also that by the time the clientele need that container, it's after the food is already cold because they spent their evening eating dinner, the food's now cooled off, it will work in those containers.

There are some who still feel they need those, the existing containers for the type of materials that they're serving whether it be hot or heavy, or some of those other uses, or visual inspection. So we feel the market is moving in this direction and we feel, I see I'm being filmed so, we feel the market is moving in this direction, we feel it's about a level of priorities and the County needs to look at sort of where things are going overall and where we best spend our resources.

We have felt more could be done addressing the larger issue of recycling overall and working on keeping things from going into the ocean. And I also understand and, and obviously I'm not an expert in pricing, but we have experts here today with Joy and Dexter. There's so many different charts and pricing is so hard to tackle. And as was noted in a lot of testimony there's competitive issues and, and people feeling challenged to share those things. So I think it's really important that we get a clear handle on what that actual pricing really is so we can understand what the impact really are.

And, and if I can answer any questions I'd be happy to.

CHAIR WHITE: Okay, thank you.

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Appreciate your perspective because it, and thank you Members also for allowing Pam Tumpap to speak because today we had a lot of the scientific knowledge that was presented and I just wanted to hear, you know, kind of, and, and sounds like you were on the polystyrene committee or something.

MS. TUMPAP: I served on the polystyrene task force.

COUNCILMEMBER SUGIMURA: Task force.

MS. TUMPAP: So the way we operated was it was a group of people brought together sort of from an environmental perspective and a business perspective and that's sort of how we were redeemed the sides if you will. People with more of a business background and, and, but you know those who came from the environmental side also had a business background. Some of the business people also had some environmental perspectives but that's sort of how the group was tallied up.

We did not have the opportunity to get to hear a lot of these experts. Often what was put forward was if you have research on these issues or your side of the perspective, if you have environmental issues and you can put forth papers that, that share your perspective, submit those. If you have business issues or pricing of things that you want to share, put that. Those were all sent into the Chair and the gentleman who helped him with that Mr. Molina, and so that data was compiled and then the Chair, you know, we all, there were times when we could have access to it, and times where we didn't have access to all the studies that had been submitted. So it was kind of an ongoing thing. A lot of it was about our internal discussion. And Chair Victorino worked very hard to try and bring kind of both sides together. And, you know, it, it, it didn't mesh that way.

And, and again from the business perspective it's because we continue to see sort of uniformly and that came out in the report the larger issue as being litter control and thought that that would be something that would easily be able to be worked on together. And we understand the other side had a different sentiment and really felt this was the most important thing to champion and so they've continued to do that.

But we didn't have these levels of expertise that you're getting today so I really commend you all for sitting together and sifting through a lot of data. And, and it's tough because as we go through the data, you know, again, it's not that if we came

out with conclusive evidence that for example polystyrene is, you know, has huge health concerns, you're not going see us up here championing huge health concerns.

We were taking all of this in and, and saying okay, you know, what, what are the things that we feel are most important to address and that's where we came up with litter control to address not only the polystyrene, but help address so much more. And recognizing that again polystyrene is moving with the ocean restaurant program.

COUNCILMEMBER SUGIMURA: Thank you.

CHAIR WHITE: Members, any other questions for Ms. Tumpap. Seeing none, thank you very much for your perspective.

MS. TUMPAP: Thank you very much.

CHAIR WHITE: Okay, Members, open up the floor for discussion. I guess before we do that we need to, well the Chair won't call up the bill just yet because once I call up the bill you're, you're limited to two chances to speak so I'll hold off on calling up the bill.

COUNCILMEMBER KING: Thank you, Chair.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: You know, just since we're hearing from people, I wonder if we could call up somebody else who was on the task force who has experience with the restaurant, working with the restaurants who are actually using the compostables and who haven't had a problem with that and get their perspective as well.

CHAIR WHITE: Any objections, Members.

MEMBERS VOICED NO OBJECTION.

COUNCILMEMBER KING: I believe Ms. Blickley is here, or was here.

COUNCILMEMBER COCHRAN: Oh, yeah, she's here in the back.

COUNCILMEMBER KING: Thank you, Chair. So, Ms. Blickley can you, I know you've been in touch, and you've been working with a lot of the restaurants who are moving forward with, you know, using compostables and, and understand the difference between the polystyrene foam containers and what they do in the environment. So, maybe you can give us a perspective of those who are using the, the alternatives and, you know, don't seem to have a hardship with it.

MS. LAUREN BLICKLEY:

Absolutely. So, so there are a couple things to note with this bill that, that we've really tried to repeat and to say that number one this is a pass-through cost and that that means that it isn't the hardship directly on the restaurants, it's just like what we're seeing with the plastic bag ban. For many, like Target now, like if you don't have your bag, you're charged to buy a bag or you have to buy a bag for a dollar or two. And they're appreciating that. There are some restaurants even now on Maui who say if you want takeout, I'm going to charge you 25 cents if you take a takeout container. So the whole idea that it is all the burden on these small mom and pop stores is again we, we've pointed out that it is that pass-through cost. So it's adding 10 cents to your or my plate lunch.

The other thing that I would like to point out is we did have some businesses, unfortunately the task force, we, we didn't find a lot of common ground. But I will say that Cheryl King was on the task force and she was one of our experts yesterday. I was on the task force, I authored the paper that two of the experts shared yesterday. So we did, they did, we did have access to that. But, again, reiterating that thousands of other restaurants have, have passed and, and done this.

And that on the task force we actually did have a couple of business including one of the individuals who helps with Whole Foods, we had Gretchen who works with World Centric and Styrophobia about the pricing. So, so this, this information was available and we did discuss it.

We have worked with the Ocean-Friendly Restaurants Program and we have educated like I said, Kaimana, the high schooler has educated many of our restaurants here. A number that have converted, I, as I was walking down Pinatas has just converted. So Tin Roof that was in here last time, I mean, that, that, that is a mom and pop store. Choice Health Bar, so we have a number of them that have converted and again it's been a bill that's passed in a hundred other places and we really do not feel that the burden is going to be placed on a restaurant so that they're going to go out of business.

And as you increase the demand for these alternative, these alternative products, you're going to continue to decrease the cost of them. And in many cases, if it happens to be that an alternative product is more expensive, because it is not always more expensive and I think that is a huge misconception. It is not, and we have the prices from VIP in 2014 and Sarah from Elle's office has VIP price lists now that show

that's not always more expensive. But if it is, it averages to be about 10 cents. I hope that helps.

COUNCILMEMBER KING: Thank you.

CHAIR WHITE: Any other questions for Ms. Blickley. Thank you, Ms. King. Thank you, Ms. Blickley.

Okay, Members, further discussion? If not, the, Clerk, will you please call up the bill.

COUNTY CLERK: Mr. Chair, proceeding with ordinances for second and final reading.

ORDINANCES

ORDINANCE NO._____
BILL NO.___127___(2016)

A BILL FOR AN ORDINANCE ESTABLISHING A NEW CHAPTER 20.26, MAUI COUNTY CODE RESTRICTING THE USE AND SALE OF POLYSTYRENE FOOD SERVICE CONTAINERS

CHAIR WHITE: Ms. Cochran.

COUNCILMEMBER COCHRAN: Yeah, Chair. Chair, I move to, well first of all I think was the, was there an amended version handed out to--

CHAIR WHITE: You need to, you need to make the motion first.

COUNCILMEMBER COCHRAN: Oh.

CHAIR WHITE: And then we can deal with any amendments.

COUNCILMEMBER COCHRAN:

OH, SO, CHAIR, SO MOVE, I MOVE TO PASS BILL 127 ON SECOND AND FINAL READING.

COUNCILMEMBER GUZMAN:

SECOND.

CHAIR WHITE: We have a motion from Ms. Cochran, and a second from Mr. Guzman.

Ms. Cochran.

COUNCILMEMBER COCHRAN: Thank you very much. And getting back to the discussion portion at this point. I think via Ms. Thomson, Corporation Counsel, there was a amended version handed out to this body and just wanted to--

CHAIR WHITE: Do each of you have copies of--

COUNCILMEMBER COCHRAN: --ask, it has red Ramseyered version print on it. It says "Rev. 5/8/2017" at the top left corner of it in red. And so if, Chair I think at this point since it got just handed out--

CHAIR WHITE: Let's take a, let's take a quick recess--

COUNCILMEMBER COCHRAN: Okay.

CHAIR WHITE: --and make sure everyone's got the copies.

(THE MEETING WAS RECESSED BY THE CHAIR AT 2:34 P.M., AND WAS RECONVENED AT 2:35 P.M., WITH ALL MEMBERS PRESENT, EXCEPT FOR COUNCILMEMBER HOKAMA, EXCUSED.)

CHAIR WHITE: This meeting will come back to order.

Ms. Cochran.

COUNCILMEMBER COCHRAN: Chair, thank you very much. So Members, as you can see the changes are printed in red so it pops out at you, hopefully you had a chance to sift through this. And this was, I guess drafted in, in reference to some talk, I think with Mr. Saldana's discussion and the, I think Ms. Tumpap also mentioned that, that polyvinyl chloride, whatever definition in the polystyrene definition was a concern. So this is removing that and also the foam, I mean, rather than be so broad and general in addressing all things polystyrene, hone in and back down just to foam per se. And Chair, I believe you were bringing that point up over and over throughout our discussion here too. So that's where, why these amendments are here and so I'm just looking for feedback from the rest of the Members at this point on these and just to start that discussion.

CHAIR WHITE: Yeah, there is, Members, do you need any time to go through this?

COUNCILMEMBER COCHRAN: Or we can go page--

CHAIR WHITE: There is also another amendment on page four, an exclusion or exemption for "Prepared food packaged outside the County and sold or otherwise provided to the consumer in the same food service container in which it originally was packaged."

Pardon.

COUNCILMEMBER COCHRAN: Yeah, Chair, I think, the added item "G." is that it on page four, at the top the--

CHAIR WHITE: They added item "G." correct.

COUNCILMEMBER COCHRAN: --page.

CHAIR WHITE: And then the remainder of the changes are to add "foam" wherever polystyrene food container, food service containers, or actually wherever polystyrene is mentioned.

COUNCILMEMBER COCHRAN: Yes.

COUNCILMEMBER KING: Chair, I have a question.

CHAIR WHITE: Let's let Ms. Cochran, finish her presentation.

COUNCILMEMBER COCHRAN: Yeah, no, yes, right, and that's, I mean that's pretty much it, Chair, in reference to polystyrene and then inserting "foam", the word "foam" after all that, those words throughout the document. And then the other is the limiting the, the scope of this legislation to the jurisdiction of Maui County and to protect us from potential litigation as he, and the vast majority of municipalities have chosen to go this route which does seem quite prudent. In regards to the Interstate Commerce concerns that we have previously discussed also. And of course Ms. Thomson is here because she is very well, familiar and helped draft this whole version.

CHAIR WHITE: Yeah, I was just going to ask Ms. Thomson to comment, my understanding is that the current definition of polystyrene foam that you've suggested is close to or identical to the definition in, for San Francisco.

DEPUTY CORPORATION COUNSEL RICHELLE THOMSON: Yes, thank you, Chair.

CHAIR WHITE: And if you can share your thoughts with us on that.

DEPUTY CORPORATION COUNSEL THOMSON: Okay. The definition on the polystyrene foam is identical to San Francisco's with the exception of the last sentence which specifically calls out that for the purposes of this chapter "Polystyrene foam does not include clear of solid polystyrene which is called oriented polystyrene".

When we reviewed the ordinance and I, I think I agreed with some of the commentators and also the EPA and noted to Gary Saldana that there were some ambiguities in the, in the definition that we have in the current bill. And so decided to go with suggesting that we use San Francisco's definition, it's been tried and true, it's been, you know, law in that jurisdiction for about 11 years.

So, other, the other suggestion was based on also discussion throughout the last couple of days, and a review of other jurisdictions' polystyrene ban, ordinances and most of them, I would say the vast majority that we reviewed are limiting their ban to just those foods that are prepared and packaged within their jurisdictions, not brought in fully packaged.

CHAIR WHITE: Okay, thank you.

Ms. Cochran.

COUNCILMEMBER COCHRAN: Thank, thank you very much, Corporation Counsel. No, at this time Chair, I'd like to just open it up for discussion from the rest of the Members.

CHAIR WHITE: Alright, thank you. Members, other discussion?

I believe Ms. King asked first and then Mr. Guzman.

COUNCILMEMBER KING: Thank you, Chair.

I'm a little bit confused by the change on page four under "G." because I think what the testimony we heard was to add the words "prepared foods" to section "A." so that it focuses on a prohibition being about prepared foods, not exempting prepared foods packaged outside the County. So, the, the clarification that I heard, that I understood was that this would, this would still allow foods that are packaged outside of Hawaii and shipped in, or outside of Maui and shipped in to, to be, like, you know, the

Cup-of-Noodles was brought up. But that that's not called a prepared food because that's not ready to eat, you have to modify it before you can eat it. So, that was my understanding was that, that, but now it looks like we're exempting all prepared foods instead of focusing the prohibition on prepared, on containers for prepared foods. So that to me I'm, I'm a little confused because it almost feels like we're giving an advantage to anybody outside of Maui to be able to still use Styrofoam whereas if we make prepared foods in Maui, we can't use them.

DEPUTY CORPORATION COUNSEL THOMSON: Thank you, Chair. And thank you for the question. So if you look at the definition of "Prepared food" on, it's at the top of page three. "Prepared food means any food or beverage prepared for consumption using any cooking, packaging," which is important "or food preparation technique", and then it goes on to listing different food prep techniques. The way that we read that definition is that it's very broad, so it would include also, there are certain stores on Maui that package produce, and on polystyrene trays, and price it and then put it in their display cases. So, if you buy a peach that was on a polystyrene tray, you wouldn't really need to do anything to that peach to be able to eat it. But we would consider that to be a prepared food because it is packaged in polystyrene.

COUNCILMEMBER KING: So--

DEPUTY CORPORATION COUNSEL THOMSON: So I disagree with, and some of the, the comments that were made before. I think that that definition of "prepared food" is very broad.

COUNCILMEMBER KING: So, well with, I'm just trying to figure out what this, this is going to do because if prepared foods is, is still a prohibition within Maui County, other than the ones that are specifically exempted in, in 20.26.050 that calls out "raw or butchered meats, poultry, fish, or eggs unless provided for consumption without further food preparation" so, um and it specifically says sashimi and things like that. So if you, if you're making that in Maui County, you cannot use the polystyrene foam, correct.

DEPUTY CORPORATION COUNSEL THOMSON: Correct.

COUNCILMEMBER KING: Okay, but if you make it outside of Maui County, you bring it in, you can under this exemption.

DEPUTY CORPORATION COUNSEL THOMSON: Under the, under that exemption it would if the food is entirely prepared and packaged outside of Maui County, but brought in and sold by anyone in Maui County. That particular product wouldn't be, the ban wouldn't apply to that product.

COUNCILMEMBER KING: Alright, so you, that would be allowed.

DEPUTY CORPORATION COUNSEL THOMSON: Yes.

COUNCILMEMBER KING: The, the Styrofoam.

DEPUTY CORPORATION COUNSEL THOMSON: Right.

COUNCILMEMBER KING: Okay, under this, so that's what I'm, I'm not getting why we're giving an advantage to, you know, people who prepare foods outside of our jurisdiction. I thought we were trying to . . . you know--

CHAIR WHITE: That's been one of the, the conundrums that we've been dealing with and there's no easy--

Mr. Guzman.

COUNCILMEMBER GUZMAN: Yeah, thank you, Chair.

I, I believe I, I argued that the last time this bill was before the, this body and I believe that section "G." was actually stricken or it was amended.

CHAIR WHITE: Something similar--

COUNCILMEMBER GUZMAN: Yes, yes, so my argument was, you know, this, Ms. King's argument was very similar to my argument. So, yeah, we, that, that's the only issue that I have. The rest of the bill I think has been cleaned up very well to narrow it to the foam, polystyrene foam containers, and to be used, those containers to be used as food service type containers; therefore, not affecting some of the other products that are out there.

But, other than the disparity between products coming from outside this County and being allowed to be sold and serviced on, or food being sold within that type of material or container versus those foods that are prepared within the County and we're not allowing them the same equal footing.

There could be a definition of cleaning up the "prepared food" definition could be cleaned up or it could specify specifically what we're, you know, like dried foods, things that need to be heated, you know, that could be cleaned up and therefore possibly those type of Cup-of-Noodles soups products could then come in from outside as well as some of the products similar to that that are made within Maui

County be served in those type of containers as well. I think the only issue is just cleaning up "prepared food" definition and I think we can solve this. But I don't have the, to do this right now on the floor. Thank you.

CHAIR WHITE: Yeah, yeah, the Chair, I believe I was in full agreement with you during the last discussion on this. The Chair's concern at this point is that I really don't have a clear sense of what we're banning if we do that because I, I don't know what all comes in and now that we're adjusting it to foam, I'm, I'm more comfortable with not allowing, but I still don't have a, a reference as to what, what all we're banning. And so, maybe, maybe what we should do since there's no motion on the floor yet, maybe we should take this--

COUNCILMEMBER KING: I think there is a motion.

COUNCILMEMBER CRIVELLO: There is.

COUNCILMEMBER KING: There is a motion.

COUNCILMEMBER CRIVELLO: There is.

CHAIR WHITE: No, we have, we have the main motion, we don't have a motion on the amendment.

So, Ms. Cochran if you wouldn't mind, the Chair would entertain a motion that would make all the changes as noted on the "foam", with the exception of item "G.".

COUNCILMEMBER COCHRAN: Yes, Chair, that's not a problem.

CHAIR WHITE: Okay.

COUNCILMEMBER COCHRAN: Yeah, I'm very, very open and willing, cause I completely understand this was.

CHAIR WHITE: So if maybe, if you don't mind, craft the motion, or I.

COUNCILMEMBER COCHRAN: Yeah, so the amendment.

CHAIR, I MOVE TO AMEND MY AMENDMENT AND REMOVE ITEM "G." ON PAGE FOUR.

CHAIR WHITE: From the motion.

COUNCILMEMBER COCHRAN:

FROM THE MOTION.

COUNCILMEMBER KING:

SECOND.

CHAIR WHITE: Okay, we have a motion from Ms. Cochran, and a second from Ms. King. Any further discussion?

Ms. Cochran.

COUNCILMEMBER COCHRAN: No, no further discussion, Chair.

CHAIR WHITE: Ms. Sugimura, followed by Ms. Crivello.

COUNCILMEMBER SUGIMURA: I just want to be clear on that display, what things are considered, all the things that are on the left side of that table, that was put together that is foam, is what's going to be included in this, exclusively.

CHAIR WHITE: Mr. Saldana if you wouldn't mind coming down and holding up the items that are foam.

COUNCILMEMBER COCHRAN: Vanna, come on Vanna.

LEGISLATIVE ANAYLYST SALDANA: Mr. Chair, if you, pretty much so take away items like this, it's stuck together, move these over, move these over to the side. Then, then pretty much what you're looking at here, you can remove that too, pretty much what you're looking at here, this is questionable too, and it's no, no reflection on Zippy's but basically it's, this is, this is, the styrene extruded, and the styrene expanded products. So it's these Styrofoam products that, that will be included in the amendments that is now included in the ordinance.

CHAIR WHITE: Ms. Sugimura.

COUNCILMEMBER SUGIMURA: That's the, that's allowable, that's--

CHAIR WHITE: No that's, no--

COUNCILMEMBER SUGIMURA: --that's supposed to be the foam, that's the foam that we're talking about, sorry.

CHAIR WHITE: --that's the foam that will be restricted from use.

COUNCILMEMBER SUGIMURA: Restricted, I'm sorry.

CHAIR WHITE: One polystyrene that will be restricted.

COUNCILMEMBER SUGIMURA: So sushi container is, is okay.

CHAIR WHITE: The, the silver sushi container is, is, is the hard version of the polystyrene. Pardon?

COUNCILMEMBER SUGIMURA: And it's not--

CHAIR WHITE: No, it's not foam.

COUNCILMEMBER SUGIMURA: And we're not too sure about Zippy's, the Zippy's container, or is that, is that being allowed.

CHAIR WHITE: I believe the Zippy's containers are foam. Well, okay, the, it brings up another definitional challenge because that--

COUNCILMEMBER KING: Chair.

COUNCILMEMBER SUGIMURA: How do we determine what is and what is not foam, sorry. From the looks of it, I mean, you know, we're not experts but--

CHAIR WHITE: Yeah, if it can, if it can be ripped, it's foam.

LEGISLATIVE ANAYLYST SALDANA: It probably, it, I think it could be ripped.

CHAIR WHITE: Go, try it.

LEGISLATIVE ANAYLYST SALDANA: Yeah, you want me to try it.

CHAIR WHITE: Yeah, so that is, that is foam.

COUNCILMEMBER KING: That is foam.

COUNCIL SERVICES DIRECTOR SANDY BAZ: Mr. Chair.

LEGISLATIVE ANAYLYST SALDANA: It would, I, you know this one is a, is a good guess and we, we talked about whether or not this would be included. So, that is, that's the, something I guess we just need to do more research on.

CHAIR WHITE: Okay, so basically it's, it's the white polystyrene is generally foam unless it's the hard, I don't know of any, I don't see any white hard styrene.

But you know, Members, I have to, I have to admit when we started going through these meetings, my vision of what we were talking about was all the white stuff. I had no idea that the, that the clear stuff, and the black stuff, and the colored stuff, solo cups, I had no idea those were polystyrene.

COUNCILMEMBER COCHRAN: And Chair.

CHAIR WHITE: Wait.

COUNCILMEMBER SUGIMURA: So I have a, I have a--

CHAIR WHITE: Ms. Sugimura has the floor, followed by Ms. Crivello, and I'll come back to you.

COUNCILMEMBER SUGIMURA: So I have a kind of related question, sometimes we do things it has unintended consequences--

CHAIR WHITE: We do that all the time.

COUNCILMEMBER COCHRAN: No.

COUNCILMEMBER SUGIMURA: --I wonder how this kind of thing affects institutions like schools, you know. I, things, organizations like that that may have a lot of foam polystyrene, I'm not sure, and I would hate for us to implement something for Maui County and all of a sudden we find out we can't feed our children because of, you know, some glitch in it. So, I'm wondering what the unintended consequences of us, are doing. I mean even the discussion that came up earlier about possibly affecting PVC pipes, that was just blown me away cause, you know, we support agriculture.

CHAIR WHITE: None of us know where that came from.

COUNCILMEMBER SUGIMURA: Okay, so I hope somebody in the future doesn't look at this and go oh, okay, now we can exclude--

CHAIR WHITE: Under the, this proposal removes the polyvinyl chloride.

COUNCILMEMBER COCHRAN: Right.

CHAIR WHITE: Or the vinyl chloride reference.

COUNCILMEMBER COCHRAN: Right.

CHAIR WHITE: In fact, why don't you do ahead and read the, read the definition as it's been proposed.

DEPUTY CORPORATION COUNSEL THOMSON: So the, the definition as proposed by the amendment is "Polystyrene foam means blown polystyrene and expanded and extruded foams that are thermoplastic petrochemical materials utilizing a styrene monomer and processed by techniques including fusion of polymer spheres which is expandable bead polystyrene, injection molding, foam molding, and extrusion-blown molding. Those types are extruded foam polystyrene." That definition up until that point is identical to San Francisco's. What we've added is "Polystyrene foam does not include clear or solid polystyrene (oriented polystyrene)."

I believe that, that inclusion, that last sentence being included clarifies that we're just targeting the foam products and we're not targeting clear of solid products.

CHAIR WHITE: Thank you. Ms. Sugimura, did you have any further questions?

Ms. Crivello.

COUNCILMEMBER CRIVELLO: Thank you. I have just some, couple questions. When does this go into effect, what sort of time table do we have for businesses to deal with their existing inventory. And is there something that, I would say, some sort of space time, for them to--

CHAIR WHITE: As it stands right now, the effective date of this ordinance is July 1, 2018. So there, I think it was decided to give them 18 months from the initial planned passage, so it may be appropriate at the right time to extend it a little bit further than July 1 of 2018 to give everybody time. I, I think that's appropriate.

COUNCILMEMBER CRIVELLO: I would hope so because you got to take into consideration businesses that have their supply and inventory.

And, the other question I have, it is for Corp. Counsel is, what is the difference between expanded and extruded foams to solid polystyrene. When I, when I--

CHAIR WHITE: Go for it.

COUNCILMEMBER CRIVELLO: --when I read the word solid, I'm thinking that's also expanded.

DEPUTY CORPORATION COUNSEL THOMSON: Thank you for that. That's, that is the million dollar question and that was one of the, one of the reasons that we were suggesting that you brought in all of those experts to really give you an idea about what these products are so you'd be clear on what you were banning and what you weren't banning.

COUNCILMEMBER CRIVELLO: I, I'm sorry, but we really didn't deal with the products themselves. We, we dealt with more of the scientific and the environmental impact. What, to me what was missing was so we can identify, or know what we're, I don't have a problem with, with this, except I don't know what, what it is. We didn't deal with the products itself. As far as my understanding, and you may have it, someone else may have that understanding, but I'm sorry I don't really understand all the different products that has come before us. That's not to say I don't support this, how it is amended. It's just like it says, unintended consequences, yeah. And, and you haven't defined for me, all you said was the million dollar question, so.

CHAIR WHITE: One of the, we had two options, we can either have Mr. Saldana come down again, or we could ask Mr. Yamada to provide us with, okay.

Please come to the microphone. No, don't speak until you get the microphone, we're--

MS. GRETCHEN LOSANO:

Okay, my name is Gretchen Losano and I work for World Centric, I am a sales rep among a lot of other things that I do, but I work with these products all of the time and if I could actually go grab that one that was just ripped too, I can tell you guys about the product and I can tell you exactly what will be exempt and what will be included in this ban.

CHAIR WHITE: We'll bring that to you.

MS. LOSANO: So, this is polystyrene, but this is not the polystyrene foam. And this bill only includes polystyrene foam. So this is exempt. This is also polystyrene, but this is not polystyrene foam. This will also be exempt, because this is the hard plastic. So this is exempt, this Zippy's thing, this is exempt, this is exempt, this is also exempt

because it's all the hard plastic. The only thing, you, you can rip this, but it's still, it's still a foam. Do you want to see it, I can pass this down so you can tell?

CHAIR WHITE: Well I think the question also was what, what is expanded and what is extruded.

MS. LOSANO: Expanded and extruded is the same thing. I mean it's all blown, it's all expanded from the beads themselves, so it's, you can, if you put your nail in the, I mean you can, you can chew it, you can--

COUNCILMEMBER CRIVELLO: Yeah, so, it also says solid.

MS. LOSANO: This is the solid.

COUNCILMEMBER CRIVELLO: Okay, thank you.

MS. LOSANO: And, and this is exempt. So this is the solids, it does look a little confusing cause it's a little grainy, but this is, this is one that is exempt.

COUNCILMEMBER CRIVELLO: Okay.

MS. LOSANO: So it's hard.

CHAIR WHITE: Yeah, I know people frequently reuse those.

MS. LOSANO: Oh, yeah, yeah. Yeah, I mean I wouldn't use it in the microwave but you can if you want. But, anyway, so is, are there any questions about any of the other products up there too?

CHAIR WHITE: Ms. Crivello, you have the floor.

COUNCILMEMBER CRIVELLO: I'm, I'm good, I appreciate you--

MS. LOSANO: Okay, you're welcome. I'm sorry.

COUNCILMEMBER CRIVELLO: --doing your demonstration.

MS. LOSANO: Sorry--

CHAIR WHITE: Ms. Sugimura.

COUNCILMEMBER CRIVELLO: I'm not done, I still have another.

CHAIR WHITE: Oh, I'm sorry. You have the floor.

COUNCILMEMBER CRIVELLO: Thank you. So if I understand it right, just so I can get clear on what we're voting on is, item "G." on page four has been removed as part of the--

CHAIR WHITE: As part of this motion.

COUNCILMEMBER CRIVELLO: As part of this motion it's deleted. Okay.

CHAIR WHITE: Okay, any further questions.

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: So I wonder since we have Dexter Yamada here, and I wonder if he could also give us a similar explanation.

CHAIR WHITE: Any objections, Members.

MEMBERS VOICED NO OBJECTION.

CHAIR WHITE: Okay, Mr. Yamada.

MR. DEXTER YAMADA, KYD, INC.:

Councilmembers, I'm Dexter Yamada and I'm with KYD, Inc. so I'm not sure what kind of questions.

CHAIR WHITE: I, I think the question was if you could explain the difference, or if there is a difference between expanded and extruded.

MR. YAMADA: Well I think she explained it pretty much, it's both blown, you know, into a expanded or blown into a use by air. And, it's, it's, the rigid is rigid, it's hard. And, expanded is just blown with air into the resin type and 90 to 95 percent of that is air. So, you know, in terms of sustainability, I, I can't see what they're talking about, you know, carbon footprint and all that. You know, you just, you just using more material on the other side. But anyway, that's to answer your question on the expanded and, and the, you know regular type polystyrene. It's injected with air.

CHAIR WHITE: Okay, thank you.

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Thank you.

CHAIR WHITE: Further questions. Any other questions for Mr. Yamada.

COUNCILMEMBER CRIVELLO: So he--

CHAIR WHITE: Ms. Crivello.

COUNCILMEMBER CRIVELLO: Thank you. So you define expanded and extruded. How does that differ from solid?

MR. YAMADA: I think the expanded and extruded is basically the process is a little different. The hard, rigid plastic is not injected with air and so it's, it's solid material.

COUNCILMEMBER CRIVELLO: Okay.

MR. YAMADA: Okay.

COUNCILMEMBER CRIVELLO: Thank you for that explanation.

CHAIR WHITE: Any other questions, Members.

Thank you very much, Mr. Yamada.

MR. YAMADA: Thank you.

CHAIR WHITE: Any further discussion on the amendment that's on the floor.

Mr. Guzman.

COUNCILMEMBER GUZMAN: Oh, thank you, Chair.

Yeah, I would support the amendment on the floor and, and given the fact that it is something that we need to be moving towards, the, a paradigm shift in looking at and protecting our environment, especially the oceans. And if what the, the study that we've heard today on the floor about it, the foam type styrene affecting certain marine life, is very concerning to me.

And, you know, my kids never grew up in an era that had plastic bags. So, when you talk about plastic bags attached to the fences, they have no clue what you're talking about. And that's the type of future I'd like to see.

You look at the example of California. I think they've got it right. They initially banned foam styrene, and then they later on created an industry of recycling the non-foam type styrene. And then, they took that and were, they allowed outside states to import those or export those into their state thereby having the sources of other products feed into the recycling business.

And I think that's what we need to start thinking about. If we can get rid of the foam right now, but the non-foam styrene, we need to look into the future, how can we now with these solids type styrenes find a way to recycle them and show the next generation that we're doing something.

So I, I would support this, this narrow legislation, it's a first beginning, it's a first start of something that can later on in generations to come, the next generation not even know what Styrofoam shell is. You know, so that's quite amazing, I think we could be very instrumental in our future in terms of our environment. So, thank you. Thank you, Chair.

CHAIR WHITE: Thank you, Mr. Guzman.

Members, other discussion?

Ms. Crivello.

COUNCILMEMBER CRIVELLO: I'd, I'd like to thank Ms. Cochran to, for the consideration to submit these amendments because then for me it's more specific than when I think about the environment. At least this is a start for us to look at the, the foam type of materials that have been full of debris in the ocean. Though I think a lot of the litter comes from, aside from the, in, in the, from the deep seas and maybe then too, that we can start the educational process of not littering the shorelines or what have you with the, the foams.

The other thing I, I think in all fairness to the businesses that stocks up in their inventory, I think 2018 if the maker of this bill would consider extending it, instead to 2019. I think in fairness to the, especially the off-island, I'm talking about like my island, they, because shipment hardly comes in, they stack it up and give them an opportunity to see how we're going to rid of it or you know, how, what it will take for them to deplete their inventory. And I'm sure that also fits into a lot of the businesses

on Maui and so, so, if that can be taken into consideration, to extend the, the effective date instead of us revisiting it again, in another few months, in 2018.

CHAIR WHITE: Ms. Cochran.

COUNCILMEMBER COCHRAN: Yeah, thank you.

AND THANK YOU, MS. CRIVELLO, YEAH, I MEAN I THINK WHAT I'D LIKE TO PERHAPS, MS. CRIVELLO, IF MAYBE DECEMBER 31, 2018, MAYBE GO ALL THE WAY TO THE END OF THE YEAR 2018. AND, IF THAT SEEMS AMENABLE TO YOU, THAT WOULD BE, I THINK SUFFICIENT TIME FOR EVERYONE TO GET ON BOARD AND DEPLETE WHAT SOURCE THEY MIGHT HAVE AT THAT TIME.

COUNCILMEMBER CRIVELLO: I, I can take that into consideration and appreciate it. And then if it, getting feedback.

CHAIR WHITE: Members, any objections to that adjustment.

MEMBERS VOICED NO OBJECTION.

CHAIR WHITE: Thank you. Thank you, Ms. Crivello.

Mr. Carroll.

COUNCILMEMBER CARROLL: Thank you, Chair. I think it is the right direction, I support the amendment on the floor as amended and I will support the main motion as amended. Thank you.

CHAIR WHITE: Thank you.

Mr. Atay.

COUNCILMEMBER ATAY: Chair, you know, I sat here the last couple of days and a lot of data. One of the most astounding data that came across to me is that 65,000 pounds of polystyrene foam is used every day, 65,000 pounds. And majority of it is used once and then it's opala, then it's trash. Not all of it finds its way to our landfill. And to also know that the lifetime of this foam is 500 years. Opala is opala.

And I look here and I say here we are, we honoring our voyaging canoe who has gone around the world on the philosophy and the concept of malama honua, take care of mother earth. And yet this is such a hard decision because of economics.

I look at this passing of this bill, this ordinance, this is just one of the many steps that we must do on the journey towards fulfilling the philosophy as decreed in our County Charter, page one, paragraph one, yeah, as decreed by the Hawaii State motto. The philosophy is "Ua Mau Ke Ea O Ka Aina I Ka Pono". "The Life of this land is perpetuated in righteousness." And with that we mandated to make tough decisions for our future generations.

This is one of the steps and decisions that must be done. Economics will come, people will adjust, just like when the first steps of the plastic bill, of the plastic bag bill. People adjusted, economics adjusted. So with that, I stand and, and I, I gladly support my colleagues amended motion to move this forward. Thank you.

CHAIR WHITE: Thank you, Mr. Atay.

Any further discussion?

Ms. Sugimura.

COUNCILMEMBER SUGIMURA: I, I appreciate the narrowing on, of the definition of this bill to foams. I do want to mention that I, I stand with many of the food trucks, or people who I have talked to who were really concerned about us trying to ban polystyrene in general, you know, just trying to get the definition of that.

But, one of the places that I do frequent is Stillwell's and I get may salads there and whatever and I was talking to Roy the other day and he goes you know government, we'll do whatever you want. And the thing that really sticks with me in this thought is that why are we, he says why are you always trying to pick on small businesses? Why doesn't government fix the problem, which is the greater thing, I think Member Hokama brought it up about being able to recycle and, and treat the recycle at the landfills or recycle and take care of it, you know, instead of it just being dumped into the recycling, you know, the central landfills or the landfills in general.

And I think that this effort is a good effort. It is a step only in that we as government, I think people will look towards us and say what are we going to do about the bigger problem and that's what I think it is.

I am concerned that, I'm not sure if we know at this point by sitting here what are the other unintended consequences that's going to come out of this and I wonder if someone here maybe Corp. Counsel can, I'm not sure Chair, if you would allow me to ask that question, what happens if we have unintended consequences that will be affected by this, by us not knowing today. You know just like that one phrase which, which was not significant anymore about PVC piping being included in this definition, which it's not anymore. But, things like that that may come up, how does this affect DOE, who's going to be the gage as to, you know the impact of this bill and I'm concerned about things like that.

CHAIR WHITE: Well I appreciate that concern, but at the same time, we have a, an effective date which is 18 months from now and so for the next 18 months if people look at this and feel that there's a burning issue that they need to bring back to this body, I think that's appropriate and they have plenty of time to, to share their concerns.

COUNCILMEMBER KING: Mr. Chair.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: Thank you, Chair. I've been testifying on this bill for I think about as long as this Council, or the previous Councils have been considering it. So I've looked at this from a lot of different angles. I don't think it, it's not aimed at small business, there are plenty of big businesses that will also bear the burden of this bill and have to, have to change some of their containers.

I think the bigger question is how much is it going to cost us not to do it. And what, what are we going to do to our environment if we don't take these kinds if steps.

We, the, you know, I was, I was so proud of this County when we became the first entity in the State to ban plastic bags and it's been incredibly successful despite all this, these same kinds of concerns that we've just heard just by people saying it was going to cost them more. I think stores are actually saving money because of the plastic bag ban, because they don't have to buy plastic bags for their customers anymore and people come in with reusable bags and then they can sell reusable bags to their customers.

That was one of the unintended benefits of that bill. The benefits of this bill are going to be a lot less money spent on cleaning up our oceans as a State. A much more attractive marine environment for our visitors and our local people.

And, I also want to say that I, I mean it's been a long time since I was on the Board of Education, but I spent a lot of time in a lot of schools. I never saw any Styrofoam in the kitchens, or us giving food out in Styrofoam in the schools. But if it does end, if there is that, if it has become that, to that point where we're using Styrofoam in the schools, I'm glad we're doing this because I think we need to stop doing that in the schools too and set an example.

We heard from children, students yesterday, who called in from Molokai with their studies and with the work that they had done exploring what we were doing to our environment with the Styrofoam. And it's their future. They're very concerned about their future. So I'm happy to support the future of our children, our children's children.

And, and I think it's frightening to think about the amount of, of Styrofoam that we're putting into our environment whether it ends up in the landfill, whether it ends up in the ocean, whether it ends up on the land, and every day. So if we can, if that's the consequence of doing this, is at some point we end that, 50 to 65,000 pounds, I think we can all be very proud that we took this first step today and focused on the foam.

But I also want to say that we, because we were the first entity to ban the plastic bag, the plastic bag and it spread throughout the State, that we're going to be able to affect not just Maui County, but I think this is going to have an influence on other counties. I know on the Big Island they're already looking at the styrene restrictions that we're looking at because I have a friend on that Council who asked me for a copy of this bill. So I want to, I'm going to support the amendment, I'm going to support the bill and I want to thank everybody who was on the Council previous to me who brought it to this point. I hope we can move ahead on it. Thank you.

CHAIR WHITE: Thank you.

Mr. Guzman.

COUNCILMEMBER GUZMAN: I just wanted to also address some of the, Ms. Sugimura's concerns as well. You know, this, this bill is not as you, we've mentioned on the floor, it's not the fix-all bill. We still need to look ahead and, and figure out how we're going to create a recyclability, a system and process. I think, but, the, the main, concern here, or main point is we've at least taken one component out of, out of play, which is the styrene foam.

And now looking forward, can we build the capacity that can recycle the hard, the hard styrene and the clear styrene. And we know it's possible. We know by scientific evidence that the Styrofoam cannot be recycled. But there's industries in California and across the mainland had, that have invented and continue to, to recycle, or at

least come up with that concept of being able to build the capacity to recycle these type of hard styrene and clear styrene. So this is to me it's just one component that we, we have to not deal with later on in, in reaching our goals of sustainability. So, thank you, Chair.

CHAIR WHITE: Thank you.

Members, the Chair's in full support of this amendment because I think it responsibly narrows for now the, the focus to Styrofoam, Styrofoam and polystyrene foam and to feel that we are able to at least take a small bite out of what is happening in our ocean environment, I think is well worth the challenge.

To look at, I was similarly impacted as Mr. Atay was by the 65,000 pounds of polystyrene that is being used on a daily basis. And it does become opala. And it's a, it's difficult to imagine that all of it, we're ever going to be able to get all of it to end up in the landfill.

I hate to say it but we have a lot of residents that don't malama the aina. They don't care. And they allow things to blow into the ocean, they allow things to blow into gullies, they allow things to blow all over the place where they don't belong. So I think this is a responsible step.

Having spent a lot of my youth in the ocean, it's hard for me to watch those pictures. At the same time as we're making this small step, I'm struck by the photographs of all the bottlecaps that are in the stomachs of albatross chicks. And it makes me feel like this, you know, I don't think we have the ability to, well maybe we have the ability to ask the State to add all kinds of containers to the recycling. Right now it's beverage containers, but why shouldn't it be the containers that have the plastic bottle caps that are found in all these birds. I'm, I'm astounded by that.

So I think this is a step in the right direction and I realize it's a challenge for some, but these are the kinds of decisions that we have to make. As you all know, making the right decision is not always an economically popular decision. But there are also things that we deal with on which we cannot place an appropriate price. And for me this is, this is one of those items. If we can do a small part to help solve what's going on in our oceans around us, and after seeing these pictures, it is a small part. We can say it's a small part, but when you think about the 65,000 pounds that's not small, that's big.

So it's with that perspective that I'm very comfortable with this. I think the businesses because they're all, they're not great alternatives in every case, but they're workable alternatives. And so I think the businesses will respect the decision, they'll be with

us, and, and it's our job to make decisions that are not necessarily popular, but I think we're doing the right thing.

So, Ms. Cochran.

COUNCILMEMBER COCHRAN: Lastly, Chair. Thank you, and thanks for everybody's manao on this. And in yours especially Chair, and so what is mind blowing is that staggering number, that 65,000 or so pounds. And as we heard from the experts on foam itself, a lot of it is air, so imagine lightweight air adding up to that kind of tonnage is just, that to me is mind blowing.

But also Chair, having you be supportive of this says a lot too because of your, the business that you have. I recall being there and the Green Flash was there too. And he, we saw the Styrofoam when we didn't eat all our food cause you provide such wonderful portions. So, this tells me that you are going to actually be a living example too.

CHAIR WHITE: Right.

COUNCILMEMBER COCHRAN: And make the changes appropriate according to this bill. So, I, I want to thank you very much for that and looking forward to passing this out. Thank you.

COUNCILMEMBER CRIVELLO: Chair.

CHAIR WHITE: Okay, remember this is not the bill itself, this is just the---

COUNCILMEMBER COCHRAN: No, no, I mean eventually.

CHAIR WHITE: --just the amendment.

Ms. Crivello.

COUNCILMEMBER CRIVELLO: So, clarification. We're going to vote on the amendment and then the bill itself is, is--

CHAIR WHITE: Unless there are other amendments.

COUNCILMEMBER CRIVELLO: Okay, I, I just want to say that I think, I do believe each and every one of us walk with the love for our environment. The, we, this is a beginning, this is not the only issue we have, we have disappearing beaches, we

have people building, vetting other items that causes the disappearance of beaches and it affects our marine life also. So it goes on and on.

And there is no question, as, as long as I feel that we're talking about expanded polystyrene I, I can, come, come truthfully in supporting, makes sense bill. It's just basic fundamentals what we got to do and, and then perhaps we can all work together to build some sort of infrastructure to make us a true recyclable island community that will just about do away with everything that people decide instead of littering, just plain littering. Yeah, so I don't know how we going to address the automobile part that somebody, one of the presenters mentioned, but who knows what's next in store for us with our environment. So, thank you.

CHAIR WHITE: Thank you. Any further discussion, Members. All those in favor of this motion, please say "aye".

AYES: COUNCILMEMBERS ATAY, COCHRAN, CRIVELLO, GUZMAN, KING, SUGIMURA, VICE-CHAIR CARROLL, AND CHAIR WHITE.

CHAIR WHITE: Those opposed say "no".

NOES: NONE.

EXCUSED: COUNCILMEMBER HOKAMA.

CHAIR WHITE: Measure passes with eight "ayes" and one "excused", Mr. Hokama.

Back to Ms. Cochran.

COUNCILMEMBER COCHRAN: Yes, thank you. Main motion and I think we spoke a lot of our points. Oh--

CHAIR WHITE: Yeah, unless, unless you would like to propose the other motion that we, we took out so that we could have a separate discussion on that.

COUNCILMEMBER COCHRAN: The deletion of "G." That's, that was what we just voted on, correct.

CHAIR WHITE: No, we basically segregated the two so that we could take, take the, the foam issue and then deal with the other.

COUNCILMEMBER COCHRAN: Okay, oh, wait, the didn't, sorry, Mr. Clerk, can you bring us back to.

COUNTY CLERK: Mr. Chair, brief recess please.

CHAIR WHITE: Recess.

(THE MEETING WAS RECESSED BY THE CHAIR AT 3:26 P.M., AND WAS RECONVENED AT 3:38 P.M., WITH ALL MEMBERS PRESENT, EXCEPT FOR COUNCILMEMBER HOKAMA, EXCUSED.)

CHAIR WHITE: Okay, Members, we are back to main motion.

Are there any other amendments that anyone would like to recommend at this time?

Seeing none, all those in favor of the main motion, please signify by saying "aye".

AYES: COUNCILMEMBERS ATAY, COCHRAN, CRIVELLO, GUZMAN, KING, SUGIMURA, VICE-CHAIR CARROLL, AND CHAIR WHITE.

CHAIR WHITE: Those opposed say "no".

NOES: NONE.

EXCUSED: COUNCILMEMBER HOKAMA.

CHAIR WHITE: Measure passes with eight "ayes"; one "excused", Mr. Hokama.

I want to thank all of you who have been out in the gallery and who have come to support us, and especially I want to send out a big thank you to the presenters and to all the Members for your patience with this. And please don't expect me to do this again.

COUNCILMEMBER COCHRAN: Chair, okay, real quickly, thank you everybody for their support and I mean, the, you know, everyone and the aina and kai, thanks from all of us. I just want to say that the unintended consequence issue and what have you always can revisit. But, I guess you won't be there Chair, because you don't want to do this again, but anyways, I'm just--

CHAIR WHITE: I say that half-jokingly, it's just--

COUNCILMEMBER COCHRAN: No, I know.

CHAIR WHITE: --you know, as you know, Mr. Carroll has always said don't do Committee work in Council. And we've done a lot of Committee work over the last couple of days so.

COUNCILMEMBER KING: Chair, question.

CHAIR WHITE: Ms. King.

COUNCILMEMBER KING: So is this considered a substantive change, it does have to come back to Council.

CHAIR WHITE: Yes, it does, have to come back for a second--

COUNCILMEMBER KING: So you will be doing this again.

CHAIR WHITE: --no, not, this because I'll just be dealing with the final bill.

COUNCILMEMBER KING: Okay, okay, so we don't have to have the presentations.

CHAIR WHITE: Hold on, just, just a second.

You know what, let's take a quick recess.

(THE MEETING WAS RECESSED BY THE CHAIR AT 3:40 P.M., AND WAS RECONVENED AT 3:47 P.M., WITH ALL MEMBERS PRESENT, EXCEPT FOR COUNCILMEMBER HOKAMA, EXCUSED.)

CHAIR WHITE: This meeting will please come back to order.

Members, we have identified that the next, the soonest possible time that we can meet to provide final passage will be on the 18th. And you know the Planning Commission, Planning Committee meeting has been cancelled for that morning, and then we have HHT at 1:30. So the Chair is going to post for a meeting at 4:30 on the 18th, which would be immediately following the HHT meeting that day. Any concerns with that.

COUNCILMEMBER KING: Chair, I don't have any concerns, but when I was asked to cancel the meeting, it was for the luncheon, the senior luncheon, which is in West Maui, so, and then that goes from, I thought it, they said it was going till 1:30, or 1:00.

CHAIR WHITE: Generally, the Members usually leave in time to get back for HHT.

COUNCILMEMBER KING: Okay, but, so anyway I just--

CHAIR WHITE: At least the HHT Members will be here and the others can come at 4:30.

COUNCILMEMBER KING: Okay, because I am, I am planning to go to that since I had to cancel my meeting to do that, so for everybody else to do it. But, so I might be little late. Thank you.

CHAIR WHITE: Thank you. Anything else, Members.

COUNCILMEMBER COCHRAN: Sorry, Chair, what time did you say again on--

CHAIR WHITE: 4:30.

COUNCILMEMBER COCHRAN: 4:30.

CHAIR WHITE: Immediately, yeah immediately following the HHT meeting that day.

Okay, anything else staff. Okay, again thank you all very much and we are adjourned.

ADJOURNMENT

The special meeting of May 8, 2017, was adjourned by the Chair on May 9, 2017 at 3:49 p.m.

DENNIS A. MATEO, COUNTY CLERK
COUNTY OF MAUI, STATE OF HAWAII

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