

# *Committee Meeting*

of

SENATE ENVIRONMENT AND ENERGY COMMITTEE

ASSEMBLY ENVIRONMENT AND SOLID WASTE COMMITTEE

*"The Committees will meet to hear testimony from invited guests and the public on the issues of single-use plastics and plastic waste, and what steps the State can take to address these issues"*

**LOCATION:** Toms River Municipal Complex  
Toms River, New Jersey

**DATE:** August 23, 2018  
10:00 a.m.

## **MEMBERS OF COMMITTEES PRESENT:**

Senator Bob Smith, Chair

Senator Linda R. Greenstein, Vice Chair

Senator Christopher 'Kip' Bateman

Assemblywoman Nancy J. Pinkin, Chair

Assemblyman John F. McKeon

Assemblyman P. Christopher Tully

Assemblywoman Valerie Vainieri Huttle

Assemblyman Kevin J. Rooney

Assemblyman David W. Wolfe



## **ALSO PRESENT:**

Carrie Anne Calvo-Hahn

Judith L. Horowitz

Matthew H. Peterson

*Office of Legislative Services*

*Committee Aides*

Kevil Duhon

*Senate Majority*

Shannon Natale

*Assembly Majority*

*Committee Aides*

Rebecca Panitch

*Senate Republican*

Thea M. Sheridan

*Assembly Republican*

*Committee Aides*

*Meeting Recorded and Transcribed by*  
The Office of Legislative Services, Public Information Office,  
Hearing Unit, State House Annex, PO 068, Trenton, New Jersey



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*Chairman*

LINDA R. GREENSTEIN  
*Vice-Chairwoman*

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## New Jersey State Legislature

### SENATE ENVIRONMENT AND ENERGY COMMITTEE

STATE HOUSE ANNEX  
PO BOX 068  
TRENTON NJ 08625-0068

#### COMMITTEE NOTICE

TO: MEMBERS OF THE SENATE ENVIRONMENT AND ENERGY COMMITTEE  
FROM: SENATOR BOB SMITH, CHAIRMAN  
SUBJECT: COMMITTEE MEETING - AUGUST 23, 2018

*The public may address comments and questions to Judith L. Horowitz, Matthew H. Peterson, Committee Aides, or make bill status and scheduling inquiries to Pamela Crocrot, Secretary, at (609)847-3855, fax (609)292-0561, or e-mail: OLSAideSEN@njleg.org. Written and electronic comments, questions and testimony submitted to the committee by the public, as well as recordings and transcripts, if any, of oral testimony, are government records and will be available to the public upon request.*

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**The Senate Environment and Energy Committee and the Assembly Environment and Solid Waste Committee will meet jointly on Thursday, August 23, 2018 at 10:00 AM to 12:30 PM in the LMH Room, Toms River Municipal Complex, 33 Washington Street, Toms River, New Jersey.**

The committees will meet to hear testimony from invited guests and the public on the issues of single-use plastics and plastic waste, and what steps the State can take to address these issues.

Issued 8/16/18

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NANCY J. PINKIN  
Chair

JOHN F. McKEON  
LISA SWAIN  
KEVIN J. ROONEY  
DAVID W. WOLFE

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**New Jersey State Legislature**  
**ASSEMBLY ENVIRONMENT AND SOLID WASTE COMMITTEE**  
STATE HOUSE ANNEX  
PO BOX 068  
TRENTON NJ 08625-0068

**COMMITTEE NOTICE**

TO: MEMBERS OF THE ASSEMBLY ENVIRONMENT AND SOLID WASTE COMMITTEE

FROM: ASSEMBLYWOMAN NANCY J. PINKIN, CHAIR

SUBJECT: COMMITTEE MEETING - AUGUST 23, 2018

*The public may address comments and questions to Carrie Anne Calvo-Hahn, Committee Aide, or make bill status and scheduling inquiries to Christine L. Hamilton, Secretary, at (609)847-3855, fax (609)292-0561, or e-mail: OLSAideAEN@njleg.org. Written and electronic comments, questions and testimony submitted to the committee by the public, as well as recordings and transcripts, if any, of oral testimony, are government records and will be available to the public upon request.*

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pnf:1-101

**SENATOR BOB SMITH (Chair):** On behalf of Chairwoman Pinkin and myself, let me welcome you to the 33rd annual summer environmental hearing. It's not actually the 33rd; but it might be, like, 13th or so.

We come to the Shore every year; we make a point of coming to the Shore every year; because the Shore is so special, and there are so many issues in the environment that affect the Shore. And we want the people in the Shore communities to know that we, in the Legislature, love them and care about their issues as much as any other issue in the state.

Today we have a hearing on plastics; and our job is to listen. We have some of the smartest people in the State of New Jersey here. We have a panel of academics from the various universities in the state; we have a panel of environmentalists; we have a panel of people in the industry, who I won't call *industrialists*, but more from the business side; and then we have everybody else in the world.

We have, like, 500 slips of people who want to testify, which proves to Assemblywoman Pinkin and myself that this is a very important issue.

But it requires the admonition of Shakespeare: Brevity is the soul of wit. Don't tell me about your organization or about the 200 good things that you've done. Tell me, and Assemblywoman Pinkin, and all the members here about plastics. What are your issues, what do you think we in the State of New Jersey should be doing?

So be focused; be succinct. There is an absolute 10-minute limit, all right?

ASSEMBLYWOMAN NANCY J. PINKIN (Chair): Ten?

SENATOR BATEMAN: No, 5.

UNIDENTIFIED MEMBERS OF AUDIENCE: Five minutes!

SENATOR SMITH: All right, make it as close to five as possible. If you hit 10, you're going to be thrown out of the room.  
(laughter)

ASSEMBLYWOMAN PINKIN: Unless you're one of the panel experts.

SENATOR SMITH: Unless you're one of the panel experts. So we now have a set of rules.

We were starting at 10 a.m. and going to 12:30 p.m.; we're going to start at 10:15 a.m., approximately, and we'll go to 12:45 p.m. We want to do two-and-a-half hours. Everybody should know that we are being transcribed by our world-famous transcriber, who never misses a word; so be careful what you say. (laughter)

And the point of this is that we will share this information with the other members of the Legislature, and the Senate, and the Governor; so you're not just speaking to this panel, you're speaking to everybody in the Legislature. And we in the Legislature are really trying to figure out what we should be doing in plastics legislation.

So having made that brief introduction, let me introduce the members of the Senate side.

We have the greenest Republican in the State of New Jersey.  
(laughter).

SENATOR BATEMAN: Thank you, Bob.

SENATOR SMITH: Senator Kip Bateman over there.  
(applause)

SENATOR BATEMAN: Thank you, Senator.

SENATOR SMITH: And we'll have one of the greenest Democrats here very shortly, Linda Greenstein, who is in transit.

And I think that will be the Senate panel that's present today from the Senate Environment Committee.

Let me now turn this over to Chairwoman Pinkin, on the Assembly side, for any comments or to introduce her members.

ASSEMBLYWOMAN PINKIN: Well, welcome everybody today. It's so exciting to see so much enthusiasm about recycling and environmental issues. So whether it's good or bad, whether you are for or against, I think we all have a common ground -- that we want to preserve our great state and preserve our environment overall.

And when we talk about plastic bags, you know, I don't want to say too much, because I know you all have a lot more to say and you're more expert than we are. But there are 500 million plastic straws floating around; and 100 billion plastic bags floating around.

And how many people have seen the movie about plastic in the water, or any video about plastic in the water? (indicates) So, quite a few. If you haven't seen it, you should see it. And we, in this area -- we've been hurt by Hurricane Sandy; six years later, we're still trying to recover from that. And we-- Just today, on the news, on the way here, I heard about the waste washing up on our shores; and they say it's coming from New York, due to the stormwater. So that's another important issue that we're working on.

So the other thing that's been in the news this week is the red tide in Florida. The red tide in Florida is devastating that area, both for-- People can't go out without a mask on in that area.

So we've been taking these things so lightly, yet they're so critical. And we're going to get to a point where we can't take it back.

So we have, today -- again, on the Assembly side -- we're so happy to have people who are such environmental champions. We have Assemblyman McKeon, who is the former Chair, and a huge environmental champion; Assemblywoman Valerie Huttle, who has also been very environmental and working on so many issues; Assemblyman Wolfe, and Assemblyman Rooney.

So we think -- and we have, I believe, Assemblyperson Tully is coming to sub in for Assemblywoman Swain.

So with that, we'll go forward.

SENATOR SMITH: Just to make it official, perhaps our staff members can call an official role.

MR. PETERSON (Committee Aide): Sure.

On the Senate side, Chairman Smith.

SENATOR SMITH: Present.

MR. PETERSON: Senator Bateman.

SENATOR BATEMAN: Here.

MR. PETERSON: And Senator Greenstein will --

SENATOR SMITH: --join us.

MR. PETERSON: -- is en route.

SENATOR SMITH: Good.

MR. PETERSON: On the Assembly side, Chairwoman Pinkin.

ASSEMBLYWOMAN PINKIN: Present.

MR. PETERSON: Assemblyman McKeon.

ASSEMBLYMAN McKEON: Present.

MR. PETERSON: Assemblyman Rooney.

ASSEMBLYMAN ROONEY: Here.

MR. PETERSON: Assemblyman Wolfe.

ASSEMBLYMAN WOLFE: Here.

MR. PETERSON: And Assemblywoman Vainieri Huttle.

ASSEMBLYWOMAN VAINIERI HUTTLE: Here.

MR. PETERSON: And is Assemblyman Tully here yet?

SENATOR SMITH: On his way.

MR. PETERSON: On his way; okay.

SENATOR SMITH: Okay; our first panel -- some of the academic leaders in the State of New Jersey -- Dr. Gurin, Dr. Ravit, Dr. Cooper, and Dr. Chirik.

If you would all four come forward, we'd appreciate it.

Step up to the microphone.

Right; any place -- there's no different pricing. They all have the same-- (laughter)

All right; so, if we could, let's hear from Dr. Gurin, the Director of the Rutgers EcoComplex.

Doc.

S E R P I L G U R A N, Ph.D.: Thank you, Senator; thank you, Senators, thank you, Committee.

My name is Serpil Guran; I serve as the Director of Rutgers EcoComplex. And also my current research and teaching involves sustainability, and also changing our solid matters -- changing from linear waste management practices that manufacture, use, and dispose -- to a circular waste management approach, which returns waste materials back into the economy to promote sustainability, efficient resource management, and mitigation of climate change.

In 2016, all over the world, about 15 million tons of plastic waste was traded globally. In early 2018, China stopped receiving plastic waste from the United States, and all over the world, unless it was completely uncontaminated. This decision was most likely the result of single-stream recycling.

The reason I am just putting this important matter in front of you is because we have to understand the matters in detail. Because of the single-stream recycling, plastic waste receiving was stopped by China.

Currently, the European Union is the best recycling community in the world; they recycle, approximately, 30 percent of their plastic waste.

In the U.S., as opposed 30 percent, unfortunately, recycling rates go down -- between 9.5 to 12 percent post-consumer plastic waste is recycled.

Why are recycling rates so low? Because people voluntarily decide what to put in their bins.

So what happens if the plastics are not recycled? They certainly will leave the circular economy; and basically, manufacture it, use it, throw it away. The throw-away culture treats plastics as a disposable matter, rather than a valuable resource to be harnessed. We should

remember that it is not waste until it is wasted. We need a paradigm change to eliminate this problem.

Single-use plastics, as you mentioned -- there are a lot of statistics out there. I won't be repeating; it's in my statement. However, they may appear as commercially successful as serving the original purpose. However, when taking into account the associated environmental and related health impacts of these products, their commercial success comes into a very big question. The reality is that not all single-use plastic waste reaches landfills, or they are not recycled. Because these products are very lightweight and the dye used -- particularly in the bags -- is very problematic, and it makes them unattractive for recycling.

Single-use plastic waste also creates economic problems, in addition to visual problems, for tourism, fishing, and shipping industries. Other experts will mention, also, loss of biodiversity; toxic fumes, if burned; land pollution; and food chain contamination. Unfortunately, the costs of removing all single-use plastic waste accumulating in the environment is estimated as higher than the cost of preventing littering today.

The EcoComplex wanted to understand what is the current baseline; what's happening in New Jersey. And we assessed the amount of unrecycled plastics in municipal solid waste generated by various communities in New Jersey. The pilot study summarized that an average 18.8 percent of our municipal solid waste is unrecycled plastic waste. If a landfill receives 1,000 tons of municipal solid waste per day, that means that approximately 188 tons is plastic waste. This is just one landfill we could mention.

And when we went through -- when we assessed the plastic waste, mostly it was plastic -- single-use plastics, like bags, utensils, cups, plates, and other single-use plastics.

In another study, New Jersey -- it is mentioned that New Jersey generates 1 million tons of plastic waste; and 28 percent is incinerated and 58 percent goes into landfills.

If properly planned and enforced, plastic bans can be effectively-- Single-use plastic bans can effectively be used as a tool to reduce overuse and, consequently, reduce the wastage of plastics.

To meet the rising tide of plastic wastage, strong government leadership and intervention will be helpful, along with increased awareness and public participation. New Jersey should reduce its single-use plastic waste generation through policies, education, and outreach. Businesses can promote their businesses as *green business*, by not offering plastic bags and Styrofoam containers, to prosper their businesses.

New Jerseyans can be informed about environmentally safe plastic alternatives; and about the type of plastics that can be recycled and which ones cannot -- a source of major confusion for many. Public awareness will serve as a common denominator for the success. Also, it should be remembered that certain bioplastics are also plastics. They could be coming from renewables; however, they do not decompose right away.

In addition to reducing waste generation, residents, businesses, recyclers, and haulers should be encouraged to participate in source separation and reducing the contamination of plastic waste with other waste. Source separation of plastic waste will improve the quality of plastic waste sent for recycling and will create higher commercial value.

Uncontaminated plastic waste should be returned to the manufacturing sectors to be recycled and utilized, thus fostering a more sustainable Circular Waste Management and Resource Recovery Strategy.

Rutgers University is partnering with the American Institute of Chemical Engineers, and we are organizing a big symposium, December 5 to 7, at Rutgers-New Brunswick. The subject -- the title is "Innovative Approaches for Transforming Waste into Value-added Products." The symposium will focus on waste valorization, sustainability challenges, as well as opportunities for creating value-added products from waste streams abundant in our cities, oceans, and food supply chains.

Plastic waste reutilization will be one of the subject matters.

And also, I am chairing the conference.

Thank you.

SENATOR SMITH: Thank you, Doctor.

Our next speaker is Professor Keith Cooper, Professor in the Department of Biochemistry and Microbiology at Rutgers University; a member of the Rutgers Environmental and Occupational Health Sciences Institute; and Chairman of the New Jersey Drinking Water Quality Institute.

Professor Cooper.

**K E I T H R. C O O P E R, Ph.D.:** Thank you.

I appreciate the invitation to come and speak today.

I would like to say that I have worked at Rutgers, since 1981, as a toxicologist. And for people who are wondering what a toxicologist is, a *toxicologist* is someone who studies the adverse effects -- and sometimes the beneficial effects -- of compounds.

And I have worked on a number of different contaminants over the years, ranging from the MTBE chlorinated dioxins, the current PFAS situations, and phthalates and plastics.

One of the reasons why I really wanted to speak today is the fact that we have been -- I have been collaborating with Beth Ravit on looking at microplastics. And one of the things that we have -- as the Chairman said before -- most of the people have seen the videos where you have seen large masses in the oceans; you've seen the plastic bags. But you also have to remember that the plastics themselves will ultimately break down into smaller and smaller components. These particular components may be made up of either fibers -- which we wear in our clothing -- or even materials that come from your single-use materials.

And so the studies that we've been conducting -- looking at various types of microplastics and their amounts within both the Raritan and the Passaic Rivers -- have pointed up the fact that, in actual fact, these concentrations are very similar to what we actually see from microplastics in the oceans. And it's an area which has not been looked at very extensively.

It does impose situations where you run into toxic effects, not only on the aquatic organisms themselves, where you might actually have an effect on their ability to actually feed properly; when they filter these smaller microplastics out, it's sort of like you taking in plastics into your GI tract, but it can't be broken down. You have to remember that there are no natural known ways in which plastics will break down. Therefore, once you have them, they are there.

When they break down into the smaller components, it's normally done due to either photolysis, or a breakdown of physical

manipulation of the plastic itself. And if you think of your plastic chairs in your backyard that you leave out, over time those plastic chairs become brittle. They become brittle because of the fact that the plastic itself is actually also comprised of materials which are added to it to make that particular plastics pliable or less pliable. If you think back, you used to have, basically, water bottles which were very, very pliable. Now you have bottles which are -- they make a crackling noise. The reason is, is because the material which is in between the plastic fibers is being changed.

So you've heard about BPA -- bisphenol A. So some of the work that I've done has also looked at these additives; not only the plastics -- which there are many types of plastics -- but the additives are also potential toxins. And the fact that if you look at some of the phthalates which have been used in using these compounds, many of them have been shown to actually be what we call *endocrine disruptors*. And they are primarily reproductive endocrine disruptors. In other words, the compounds themselves will actually affect-- In the case of the phthalates, they actually feminize males. So you have this bulk material that you've got, but you also have, within the plastics, these additives which are also associated with it.

The other thing that I'd like to point out in the studies that we've been doing -- and Dr. Ravit will also speak to this -- is that these microplastics actually absorb materials which are within the water system itself. In other words, we've looked at the materials which are actually absorbing onto these small microplastics; and you can actually -- in the testimony I gave to you, you can actually see the different types of materials which are present. A lot of these are cosmetic additives, flavor and

fragrances, laboratory chemicals, and pharmaceuticals, as well as plasticizers and other components. The thing which is interesting -- this is scientifically interesting -- is the fact that you can actually use the contaminant fingerprint on the plastic to get an idea about what contaminants are coming into the rivers themselves.

So you can actually -- we're proposing that you could actually use it for almost a source tracking approach. Now that's good and bad, in the fact that you have these compounds associating with these, which then can become exposed to the organisms which will filter or eat them; and then it can move up through the food chain into the humans as well.

So, in actual fact, one of the things that I would like to state is the fact that I think your Committee and the State need to educate the public and commercial businesses on the direct and indirect adverse effects from single-use products. I think that in the case of plastic, this extended environmental lifespan that they have, and the massive accumulation both in landfills and in non-landfills, are a huge problem. There needs to be further development on green chemistry alternatives for current plastics; you need to-- In some way we've gone from plastics, that were developed from the 1950s to now, and we've forgotten the fact that we had -- used to have glass; we used to use silicon instead of plastic beads for adding into your cosmetics. There are alternatives which are there, which we've used previously, which we should look and go back to again and revisit those.

There needs to be a reduction in the amount of plastics used in packaging and shipping, leading to an overall source reduction. Again, this is a combination between government, industry, and manufacturers to

modify their process streams to reduce overall amounts going into what we call a *life cycle*, or the continuous use of these plastics.

Thank you.

SENATOR SMITH: Thank you, sir.

Professor Beth Ravit; Assistant Research Professor in the Department of Environmental Sciences at Rutgers University; Co-Director of the Rutgers Center for Urban Environmental Sustainability; and member of the NJDEP Science Advisory Board.

Dr. Ravit.

**B E T H R A V I T, Ph.D.:** Thank you, Senator Smith.

And thank you for inviting us to speak today.

My written testimony is written as an academic, and I will hand that to you.

But in thinking about the general nature of the hearing today, I thought it might be interesting to talk to you about the research that we've been conducting for the last three years with Rutgers students -- Dr. Cooper and I -- along with researchers from NOAH out at Sandy Hook, and the Environmental and Occupational Safety Sciences Health Institute at Rutgers, on microplastics.

We, as scientists, have known about the effects -- detrimental effects of plastics in the ocean for almost three decades. But we're now finding that plastic pollution is actually much closer to where we humans are living, potentially in our fresh drinking water sources.

So we have been working with New York/New Jersey Baykeeper over the last three summers, and we have been sampling -- not in the

marine environment, but in the freshwater systems of the Raritan and the Passaic rivers.

So when I do this talk, I usually start with a quote, that some of you might recognize, from an old movie. And that quote is, "Benjamin, are you listening? One word: plastics." (laughter) You have to be my age cohort to remember this movie.

ASSEMBLYMAN McKEON: There were only a few of us who smiled, right? (laughter)

DR. RAVIT: But the point is, in the span of, really, one human lifetime -- this is really recent -- plastics, polymers, these man-made substances, have really become an indispensable component of how we live our lives. But at the same time, this material is changing our planet's environment.

So the benefits of plastic and its infinite uses are growing exponentially; while the environmental ramifications of these relatively inert compounds are now being called into question. And this-- Actually, this is an image that I'll leave with you (indicates), from the *New York Times* this week. This is a disposable contact lens, that is either being washed down the sink or flushed down the toilet; and they end up in sewage treatment plants. And this picture is showing how they break into these smaller pieces, that Dr. Cooper was describing; and how other compounds are adhering to them -- other substances are adhering to them.

So this knowledge is beginning to reach the general educated public. The article I'm reading from now is from a Hackensack Riverkeeper *Tidelands* issue that came out this week.

So I think the good news is, is that people are beginning to understand the scope of where plastics maybe are going in our environment.

So our students have spent three summers collecting water samples from the Passaic and the Raritan rivers. We analyzed these samples looking for microplastics, which are plastics that are 5 millimeters in size or smaller; and that's about the size of a grain of rice or smaller.

And so we looked at the freshwater portions of the river, as well as some of the tidally influenced areas; so we were upstream as far as Berkeley Heights on the Passaic, and we were upstream as far as Bridgewater in the Raritan.

So we started this with a working hypothesis -- that we were going to see densities of microplastic steadily increase as we got near the bays. That's what we thought we would see, and that was based on the scientific literature. And another part of what we thought we were going to see was that we would see these microbeads added to personal care products, because there's been a lot of news about that. And actually New Jersey has banned those substances -- okay? -- as well as the Federal government.

So it turns out that where we saw the highest densities of microplastics were at the two farthest upstream locations -- Livingston and Bridgewater -- which we did not expect to see. And that was under dry weather conditions. When we had wet weather, we started seeing the microplastics building up in places like Lyndhurst, further down the Passaic, out near the bay.

So we were also wrong about the type of microplastics we were going to find. So we had 84 percent of what we saw -- and this is a function

of the size of our mesh that we were collecting the samples in -- 84 percent were fragments; they were pieces of bigger plastics that had broken off as these substances cracked and broke down, rather than get degraded.

And they came from line -- it could be fishing line; films, like wrappers; round pieces of Styrofoam particles; and all of these things often relate to single-use plastics.

So the plastic itself may only be part of the story, as Dr. Cooper mentioned. We found over 300 -- we identified over 300 organic compounds that were attached to these pieces of plastic. And they weren't the same at every location. So we saw patterns where certain places had a high accumulation of these organic compounds -- Elmwood Park was one place; we think it might be because it's above the Dundee Dam, so things might be collecting there in higher concentrations. But the two places where we saw the highest densities of any sampling area were Raritan Borough and Bound Brook. So these patterns are not consistent along the reach of the river.

So my conclusion from these studies is, it's critical that we begin to change the disposable piece of our lifestyles where we just use and toss plastics into the garbage, assuming they're going to eventually go away some place. With the microbeads, we've begun to address; but I believe the continued consumption of single-use plastics -- whether its bags, or straws, or bottled water -- is particularly damaging. And that a few minutes -- a few minutes of actual use is followed by an indeterminate lifespan out in the environment.

SENATOR SMITH: We appreciate you raising the flag.

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: And our last academic witness -- which is not to cast aspersions on anybody else in the room -- is Professor Paul Chirik. He is the Edwards S. Sanford Professor of Chemistry at Princeton University.

**P A U L J. C H I R I K, Ph.D.**: So thank you, Chairman Smith; and thank you, Chairman Pinkin, for allowing us to be here today.

And I'd like to join in thanking my Rutgers colleagues.

I'm going to give you a bit of a different perspective of this plastic issue that I think is often overlooked -- that it's an important environmental consequence.

So my background is -- I'm a synthetic chemist, and I work in the area of sustainable chemistry and what's called *catalysis*. And what catalysis is, is an area of science that allows you to take products, mostly out of the ground, and convert them into something more useful. And you do this with less energy and less waste; and so, inherently, this is a green chemistry phenomenon.

So I want to also remind everyone that I'm speaking on behalf of myself, and not on behalf of Princeton University as well. They appreciate it when I say that. (laughter)

So I want to give you-- And I think most of us agree that the environmental challenge associated with plastics is evident, it's clear; and I would rank it up there with the carbon dioxide problem as the two major environmental challenges that we are facing.

And so the perspective I want to give you is, why do we make these plastics, and where do they really come from? Well, most plastic that we use is derived from this molecule called *ethylene*; and where ethylene

comes from is the ground. It's a byproduct of fossil fuel development. So historically, that's been oil; but more recently, it's been natural gas. And so when you develop natural gas out of a gas field, you're going after a single carbon molecule called *methane*; that's the molecule that's natural gas in our house -- you turn on your stove; you heat your home with it.

In North America, our natural gas deposits are a little unusual. They have higher hydrocarbons; meaning, they have molecules, like ethane, that have two carbons in them; or propane, which has three carbons in them. You know propane from your grill, probably.

And so what the petrochemical industry does is, it has a choice. It has a choice -- it has to separate these molecules, because you want to sell someone methane as part of your natural gas. And then you have to deal with the ethane and the propane. Now, there are some uses in combusting ethane and propane; but by and large, what is done is, you take hydrogen off of those molecules, and ethane becomes ethylene and propane becomes propylene.

And then those molecules are the building block for polyethylene, polypropylene, polystyrene, polyvinylchloride; so all of these plastics come from these fundamental building blocks. And the key thing that I think you need to recognize is, this is waste from the hydrocarbon industry. So the building blocks that we're turning into plastic -- you have to consider, what else would you do with them if you didn't make plastic? Chances are, you'd burn it, unproductively, onsite, to carbon dioxide.

So I'm not going to weigh in on how to deal with the plastic issue. But one of the reasons why you see plastic usage going up is from natural gas development. So the way to think about this is, you have this

flood of this monomer coming out of the ground -- this little Lego building block -- and you have to do something with it. And, right now, the most effective -- economically and, probably, environmentally, at least from a carbon dioxide point of view -- is en chaining it to make the various plastics.

And so the last thing I want to say -- and this was touched on by my colleagues -- is all plastics aren't created equally. Meaning, they're derived from this fundamental building block, but, for example, the polyethylene that's found in plastic bags is relatively highly recycled, even though, overall, it's low. But when we chlorinate that ethylene and turn it into PVC, the recycled rate for that is zero.

So I think it's on us, the scientific community, and you guys, to educate the public about this; how to responsibly use plastic. And I think we have an incredible task before us in how do we get these plastics to be effectively used and, more importantly, these monomers to be effectively used.

And so one of the challenges that faces us, as the chemical community, and something you should think about, is why are there these numbers on the bottom of all your plastics? Why are there 1s, 2s-- Chemically, they're not very different. But the problem is, they're not miscible; so you have to separate them to recycle them. And I think a challenge for us, in the chemical community, is to figure out how to use these hydrocarbon building blocks more effectively and make plastics that will, potentially, have different uses; but then, ultimately blend together to make recycling easier so you don't have to do the separation.

So, hopefully, that's informative for you. And I am certainly happy to answer any questions when the time permits.

So thank you,

ASSEMBLYWOMAN PINKIN: Senator, can I just ask a question?

SENATOR SMITH: Sure; go ahead.

ASSEMBLYWOMAN PINKIN: Well, this sounds like, to me-- And we appreciate -- in New Jersey, we have such great universities. And we appreciate the resources that you've offered to us in setting this issue.

But this seems like the million-dollar question: If you're using that petroleum, for example, that's a choice. Is that the choice -- between clean environmental energy and using petroleum; which, then, you're having other byproducts?

DR. CHIRIK: I don't quite get your question.

ASSEMBLYWOMAN PINKIN: So if plastic is the byproduct of the original--

DR. CHIRIK: Of petroleum development; yes.

ASSEMBLYWOMAN PINKIN: Methol (sic), right?

DR. CHIRIK: Of methane.

ASSEMBLYWOMAN PINKIN: Methane; right? So then is the answer not to use a product that's creating that byproduct?

DR. CHIRIK: In principle, yes; but practically, no. There's no alternative for hydrocarbons, for example, as a transportable fuel to drive your car or to fly a jet aircraft.

So there are molecular reasons for that; and there is certainly outstanding research going on in the state and around the country on, for example, capturing carbon dioxide, and learning how to get it back to these hydrocarbons. But, right now, you absolutely rely on these hydrocarbons

for every minute of your life. And when I teach Introductory Chemistry, the first day I tell all the students, "Try to live your life for 24 hours without interacting with a hydrocarbon or a fossil fuel product." You can't; it's your clothes, it's your computer, it's your energy. And so we have-- I agree with you completely; in infinite time, that's where you want to be. But right now, in the here and now, we're so far away from that, technologically, that it's impractical.

ASSEMBLYWOMAN PINKIN: Thank you for that.

I think the purpose of the hearing is to get that global view.

DR. CHIRIK: And the other part of my research is -- and I certainly don't want to run this off the rails -- is that when you start to think about alternative energy, you have to think about the lifecycle assessment for that as well.

So there's mining associated with getting stuff for solar panels, that generates, actually, a larger carbon footprint -- things like that. So you have to completely think about where everything comes from and then, as we learned, where it ends up.

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: Which becomes a summary for environmental issues everywhere. (laughter)

ASSEMBLYWOMAN PINKIN: It really is.

DR. CHIRIK: Absolutely.

SENATOR SMITH: What's the least-damaging alternative; and is there a way we can make it better?

DR. CHIRIK: And one other thing-- I'm sorry.

SENATOR SMITH: Somebody would say the two major environmental issues facing the planet are the greenhouse effect and carbon dioxide, and plastics. That is a huge comment.

DR. CHIRIK: Yes; and they're related.

SENATOR SMITH: So one last comment.

DR. CHIRIK: The other thing I'd like to just point out is, there's a lot of interest in the chemical and material science community for plastics that are biodegradable. And I think that's an area of research that's interesting; but also should be proceeded with caution. Because what we learned about is-- The good news about these plastics is that when they end up in the environment, you know what you have. You have polyethylene, and you're going to have it for a thousand years. The goods news-- That's the good news. Chemically, we know what it is; we have physical problems-- When you have something that's biodegradable, I think of things like bisphenol A, that we heard about before. You can have these biodegradable plastics degrade, in all kinds of different ways, to thousands of compounds. And those compounds may be different if this is in a desert, in your backyard in New Jersey, or in the ocean. So you could be creating a huge environmental problem that you're unaware of by using biodegradables, because you don't know the lifecycle assessment with the byproducts that it's creating.

So some things sound great, but aren't necessarily, until they're properly tested.

ASSEMBLYWOMAN PINKIN: Well, good thing you're there to study it. (laughter)

SENATOR SMITH: We appreciate it.

ASSEMBLYMAN WOLFE: Mr. Chairman? I have a question.

SENATOR SMITH: Yes, sir.

ASSEMBLYMAN WOLFE: I just want to say, chemistry was never my best subject. (laughter)

DR. CHIRIK: You didn't have me. (laughter)

ASSEMBLYMAN WOLFE: However--

ASSEMBLYWOMAN PINKIN: Okay; you start September, right?

ASSEMBLYMAN McKEON: We couldn't get into Princeton, so-- (laughter)

DR. CHIRIK: Neither could I, so don't worry.

ASSEMBLY WOLFE: However, your written and your verbal testimony was very cogent and understandable to a neophyte. Thank you.

I just have a question for Professor Ravit.

When you talked about your study of the -- they were microbeads; you talked about the two streams that you looked at. Did you conclude why the concentration was greater at the source than downstream? I don't want to--

DR. RAVIT: So maybe I should characterize the streams a little bit, in answer to your question.

There were more organic compounds in the Passaic than in the Raritan. But the amount of total organic compounds was highest in the Raritan. And each of these locations had a different fingerprint pattern. So we think what's happening is these various tributaries -- that are feeding into these rivers and draining from all different sub watersheds -- could be

contributing to the type of plastic we see and to the compounds that are attached to the plastic. But that's a working hypothesis, going forward.

ASSEMBLYMAN WOLFE: Right; thank you.

ASSEMBLYWOMAN PINKIN: Thank you so much.

SENATOR SMITH: Thank you.

ASSEMBLYWOMAN PINKIN: So we want to move on to the environmental panel.

We're going to call up, as a group--

Thank you so much; we appreciate it. And if we have questions-- I don't know if you're staying, but that would be great if--

Okay; thank you.

So for the environmental panel -- not that everybody's not part of the environmental panel -- but Jeff Tittel from New Jersey Sierra Club; Cindy Zipf from Clean Ocean Action; John Weber from Surfrider Foundation; Amy Goldsmith, Clean Water Action; Britta Wenzel from Save Barnegat Bay; and Doug O'Malley from Environment New Jersey.

Jeff, please go ahead.

**J E F F T I T T E L:** Thank you.

And I think one of the very positive things about New Jersey -- just like with the Drinking Water Institute and other things -- is to have the science come first; and then I think the environmental advocates come second. Because I think our role is to turn that science -- that you think is very disturbing -- into action for government agencies and legislatures.

So I really think that what they said was what we've known. But I think to have them put that out in such concise ways shows you that

plastics have become an existential threat to our environment, whether it's the marine environment or inland.

One of the things that very much did disturb me -- when they talked about all the plastics in Bridgewater and in Raritan. It's above Central Jersey's major water supply intake. Just like on the Passaic, when you have 70 major sewer plants above Little Falls, which is Paterson's, and that area of New Jersey's water supply intake. So whether it's coming out of the sewer plants or coming from stormwater, it shows it's a pervasive problem.

But not just here; I mean, it's throughout the world. You know, a whale was found; and when it died and they did a necropsy, they found almost 18 pounds of plastic bags in the whale. It has an effect on tourism and the environment, as we'll hear later. But in Inner Harbor Baltimore, they have two skimmers, working full time, just skimming plastic off of the Inner Harbor so it just doesn't fill up with plastic; and not only pollute, but also destroy the tourist impacts there.

And so what we're seeing happening here, in New Jersey, and I think throughout the world, has been a grassroots movement to ban plastics and to go after the serious problems we face in the environment, and with human health, that is coming from plastics.

And so we're very glad to be here; and the six groups that are represented have been working on this issue together for a lot of years. I think for some of us it feels like ever since the movie *The Graduate* came out, quite frankly (laughter), about 40 years ago.

But what we're seeing happening in New Jersey, and nationally, is that in our state, more than 20 towns now have ordinances out there to

ban plastics. Lambertville, where I live, on Tuesday just introduced an ordinance dealing with the triple threat of plastic bags, where they're banning them; straws; and polystyrene. And it's a very-- And what we're seeing happening, because all of us -- and we'll hear from others -- are working in many different towns and working together -- we're all learning, and the towns are learning, from Hoboken, which was the first town to add polystyrene; to Lambertville, which added straws. And I think it's really critical.

But we also have been saying -- and one of the reasons I'm talking first is because we're involved, nationally and internationally as Sierra Club, on this issue. And we've seen, in areas of the country, where we put in fees first that ended up going to bans. One of the reasons is that when the fee first comes in, you get a drop; but then you get backsliding. Montgomery County, Maryland; Washington D.C. -- what's happening is, there's a 2 percent increase in the fees going up, every year, in the money they're taking in, because people are getting used to paying the fee. And so what we've seen happen -- even though there was a big drop in plastics in D.C. -- it's now only about a 30 percent reduction.

And the Anacostia River, which first was getting cleaner, got an *F level* for litter this year. So it's going backwards; versus, when we look at what's happening where we have bans-- Los Angeles County -- which has more people than New Jersey -- put a ban in; a 94 percent reduction in plastic bags uses. When Contra Costa County, which is San Jose, put in a ban, they saw an 89 percent decrease in plastic bags found in storm drains; and a more than 60 percent decrease in bags found in streams. So a ban

works much better. You don't have to worry about a hidden tax; you don't have to worry about that.

But the other part of it, too, is because of the work that's being done is that we also found that we just don't give away paper bags, or other bags; that when you institute a ban with a fee, like 10 cents on paper bags, it encourages people more to bring their own in. And of course you can pay the fee, if you get stuck, or you forget, or whatever. But we're seeing -- like when I was in California, and where I stayed in a condo, they actually had bags for us to go to the supermarket. I was just up in Massachusetts; and every town in western Massachusetts has banned plastic and banned straws.

And what we're seeing in Lambertville -- which I think is critical -- is that it's actually being done with the business community. The business community in Lambertville -- many of the restaurants are actually leading on this issue. We have seven restaurants that have worked together, plus even an ice cream store, that actually not only support this, but have been part of the ongoing dialogue in passing this ordinance in Lambertville. And we're going to be working with the businesses in the town to move it forward.

And what we're seeing happen internationally, I think, is also critical. The EU has dedicated that by the end of next year, an 80 percent reduction in plastic use. So we're seeing plastics bags being banned from France to South Africa; most of Australia's states have now banned plastics. And so it's really a worldwide movement, because everybody sees what a threat it is to this planet.

And again, it also -- even though, when you hear-- They say, "Well, the two biggest threats are climate change and plastics." They're

interrelated. It's the same forces; the same forces that are pushing Penn East pipeline are the same forces wanting to use that gas to make plastic bags; the same forces that are pushing the Mariner East pipeline -- that has had all these spills and everything else -- to bring liquid natural gas to Philadelphia, to turn into more plastic products. So they're actually working together.

So if you really want to deal with climate change, move us to a clean energy economy, and protect our oceans, streams, waterways, and drinking water, ban plastics. They're symbiotic together; and together, by going after the plastics and getting those reductions, we will not only help protect our marine health and the health of the people, but also help deal with greenhouse gases and climate change.

So thank you. (applause)

ASSEMBLYWOMAN PINKIN: Cindy.

C I N D Y Z I P F: Yes; yes, man. What he said. (laughter)

Thank you very much to the Committee -- both Committees, for being here today.

My name is Cindy Zipf; I'm Executive Director of Clean Ocean Action. I'm so excited that you've taken on this critically important issue that has been, really, plaguing our ocean for a long time; but now, as many have said, it's beginning to be more mainstream. It was on the front cover of the *National Geographic* magazine. I mean, really, the world is paying more attention to the issue.

And while there are some valuable uses for plastics, like in cars and in medicine, the vast majority of the plastics we're using today are not necessary. And we have other alternatives.

And we only need to look at what's happened, just recently, in the last couple of days, with these massive garbage wash-ups. I mean, we get a little rain, or maybe a lot of rain, and we flush out the pipes. And the streets in the metropolitan areas -- where, in our metropolitan area, 20 million people live -- and you have a massive garbage slick. And when you have predominantly westerly winds, like we have, poor ocean -- it goes right out into the ocean, where it becomes part of its nightmare.

But occasionally the winds shift and push it back up on our beaches; and we get a good chance to look at it and see that alarming amounts of trash that we're getting, and the kinds of trash that is out there. Most particularly concerning to people are the single-use syringes that are washing up.

But, you know, again, the tragic consequences I think are finally getting to people as well -- the whales, the turtles, the marine life. But the ones that we don't see are the microscopic ones -- the fish larvae and at the level. And it, too, is impacted by the microplastics that you heard about.

And so when you start impacting the very foundation of the food chain, we don't know what the ultimate consequences will be, but it's not going to be good.

So I echo a lot of what Jeff has talked about; and particularly the relationship to our use of fossil fuels. You know, this is a fossil fuel-connected nightmare. And the idea that we're going to start expanding our use of natural gas and, in fact become exporters of natural gas to Europe or to overseas in Asia -- that is a nightmare. That's quadrupling the impact that we've heard about, because we're releasing that ethylene that you

heard about, more and more. So it's not locking it up. We need to figure out a way to move away from that natural gas, and certainly not increase the use.

And the public health risks that you heard about from the professors here today, which were really important. There was a study, that came out, investigating the *utero* exposure to harmful chemicals and pregnant women in San Francisco that detected estrogenic compounds used in food-related plastic products, plastic pipes, and water bottles. These are serious public health risks that I don't think people really understand. Studies have also documented microplastics in seafood, sea salt, bottled water, and even honey. And just in the air it's floating around. A recent study estimated that about 114 plastic fibers fall on your plate at each meal.

And I can get you those studies, of course.

And there's more, yes.

So as you know, we've been doing the beach sweeps; and you all have my written testimony and a copy of the most recent *Beach Sweeps* report from 2017. I mean, over the years, since 1985, we've been tracking this waste. Our fabulous beach sweep volunteers -- many of them in here -- not only clean the beach, but they meticulously tally all the different items. And what we found, since 1990 to 1984 (*sic*), plastics have dramatically increased as a percentage of the overall trash; and that's not surprising.

But even if 1 percent of the 20 million people that live in the metropolitan area litters once a day, this can add up to millions of pieces of trash every week. And where does that go when it rains? Fortunately, some of it does wash up on our beaches, as I mentioned. But a lot of it goes out to sea, where it just breaks up into smaller and smaller pieces. You've heard

about the microplastic studies that are being done. Clean Ocean Action also did a study, from Sandy Hook to Cape May; all of our beach sweep locations; a water sample and a beach sand sample. And every single one of them has microplastics.

So the targets of the Bill that's been introduced -- we're grateful for that. S-2776 and A-4330 target that trident -- those tridents of bags, straws, and foam containers. Last year, in the cleanup, we collected over 9,000; and this is in just two days. Three hours in the spring, three hours in the fall; from Sandy Hook to Cape May -- from Sandy Hook to Perth Amboy, 9,000 bags -- food bags; straws, 31,000 -- and that's up 59 percent from the previous year.

Here are just a few. You were talking -- you heard about the accumulation of plastics -- of bringing in other toxins; kind of like a magnet of other toxins. That's why we ask people to wear gloves when they do cleanups, because those toxins build up on that plastic.

And then, finally, foam container pieces -- 928 containers; which sounds like a little bit, but because they break apart so easily -- 21,000 pieces of foam plastic. And we would encourage the Bill to consider adding cups, foam cups -- we collected over 3,400 of those -- because it's the same kind of material.

So we welcome that Bill; it's a good step in the right direction. But, you know, it does need some additions; like I said, some foam should be added. It should consist of a hybrid for the bags, as Jeff was talking about. We really need to take bold action, and we're a little bit behind the ball, quite frankly, nationally and at the state level. We were the first state in the country to ban -- the strongest law in the country against offshore oil

and gas development, because we were concerned about the impacts. California is embarrassed that New Jersey was first at it, and now they're trying to pass the New Jersey law in California.

So it's time for us to be more bold. I would encourage both these Committees to take on the idea of bringing all the scientists together, creating a task force to look into these issues. Find out what New Jersey could do to be at the leading edge of finding out solutions. And one of the keys among them would be -- where's the enforcement against litter laws in this state? You know, where's the enforcement on recycling? I mean, we all have litter laws, and we've all seen people littering. We need to get to some of those answers. And with China taking the action they have, it's even more critical. So I would encourage that.

And I'm just going to end up by making a plug for Governor Murphy to conditionally veto that fee bill that we have. We really need stronger action. That would have been a good step in the right direction 10 years ago, but we really need to have a phase-out of bags. And we know it's pending on his desk; and we would urge him to conditionally veto it, along the lines that many -- all these organizations have urged him to do.

Thank you.

SENATOR SMITH: Great.

ASSEMBLYWOMAN PINKIN: John.

**J O H N W E B E R:** Thank you.

John Weber from Surfrider Foundation.

I just realized my colleagues are better than me. They brought their notes on old fashioned paper, whereas I brought this laptop that is mostly plastic. So, sorry about that. (laughter)

MS. ZIPF: Recycled paper.

ASSEMBLYWOMAN PINKIN: You can eat the paper.

MR. WEBER: So to talk about bags first -- the Surfrider Foundation has lots and lots of experience with bag legislation. The law in the state of California, right now, is a hybrid; which we would advocate for here. It's a ban on plastic bags and it's a fee on paper bags. And that is the law of the land in California; it's working rather well.

I want to point out that I think people in New Jersey would prefer a ban to a fee. And my evidence for that is that before the State legislation that's on the Governor's desk right now -- before that started moving, we had four towns that had laws on the books. Since then, since May of this year, we have added Point Pleasant Beach, Monmouth Beach, Harvey Cedars, Belmar, Somers Point, Jersey City, Hoboken, Stafford Township, Bradley Beach -- the best beach town in New Jersey (laughter) -- Beach Haven, Stone Harbor, Avalon, Brigantine; and Jeff just mentioned Lambertville has had a first reading. I know for a fact Parsippany-Troy Hills is considering. I've seen news accounts that Newark is considering also.

So to me, this is the evidence that these towns are trying to get in -- they're trying to beat the clock before the Governor takes action, one way or the other. So that's a lot of towns. So that's on bags, I think; and I agree with people up here -- a hybrid: ban plastic, fee on paper. That is the best way to go, and it's proven to work.

On the subject of foam -- BPS foam, aka Styrofoam -- we have Washington D.C., we have Montgomery County, Maryland -- already have bans on foam food containers. The state of Maryland came very close to

banning foam food containers this year. They didn't get it done, but they're probably going to get it done next year. I can't think of any downside to that, other than you could go beyond foam. Regular old polystyrene is No. 6 plastic; and that's not recyclable, and just as bad for the environment if they turn it into foam or not. So you could consider going further and actually banning that. But banning foam food containers would be a good first step.

And then on the subject of straws -- yes, I feel like the whole world has changed in the last few -- six months, and everybody's on board with reducing or banning straws; which is great. I want to point out that Surfrider Foundation -- we have a program called *Ocean Friendly Restaurants*, and restaurants get registered as an *Ocean Friendly Restaurant* if they do things like they don't use plastic bags, they don't use Styrofoam. And our criteria was "straws upon request" And because pretty much every restaurant that we're working with, or that we get in the program, tells us that they're just not using plastic straw at all, we're moving that criteria from being "straws upon request" meets the criteria of the program, to "no plastic straws at all." And so banning straws would be, I think, rather popular.

I do think there should be an exception for people with disabilities; that's legit. A lot towns or cities that are looking to ban them now are hearing from the disability community; but that's an exception that could be made. And we're still going to have, I think, 99 percent fewer straws in the world, which would be really fantastic.

So I just wanted to touch on those three items -- bags, foam, and straws -- and leave it there.

And we hope that we get -- on bags, to reiterate, we hope we get a hybrid: ban the plastic bags and a fee on paper.

Thanks very much.

ASSEMBLYWOMAN PINKIN: Thank you.

Amy.

**A M Y G O L D S M I T H:** Hello; my name is Amy Goldsmith.

I'm the State Director of Clean Water Action. We're a national organization. We work on freshwater and ocean issues; although we leave most of the ocean to Clean Ocean Action.

I want to speak to some of the programs that we're actually doing on a national basis. We have a program called *ReThink Disposable*. It focuses on actually working with restaurants and businesses to reduce and eliminate the use of Styrofoam and plastics in the food service industry. And a lot of the legislation that's before you speaks to food trucks, restaurants; as well as stores and institutions, such as schools.

So I want to speak to a couple of things that have been happening around the country. And to go from -- this is a voluntary program -- to point out that the appetite to go all the way is there, as has been stated by others. But to give you some specific case studies -- and I will leave some materials with your staff to distribute to the rest of the Committee.

First off, there's a story that I have to tell from a boy who was 6 years old. He actually came to our conference, probably five years ago, at Brookdale Community College. He had single-handedly eliminated Styrofoam trays from his school in Neptune. And he did that for a number of reasons. One, is he cared about the fish and the turtles, and was very

eloquent about that. But also he spoke to the fact that there were children -- his fellow classmates -- who got free lunch and breakfast, in some cases. And all they ate on was Styrofoam trays. And he spoke about the fact that these kids were hungry and they would scrape the trays clean and eat Styrofoam at every meal.

And so the health issue, and the fact that here's a 6-year-old kid who got it -- I think, as adults, we should be able to get it too. And not just wait for the scientists to tell us -- which they have so eloquently stated -- but here's a kid who actually took action and understood what the issue is.

And so I applaud the fact that you include institutions and cafeterias in the bill, because it is very important; the amount of waste produced is tremendous.

We have a case study here about a high school that switched to reusable baskets and other reusable products and plates. And they saved over \$6,000 a year and over 3,300 pounds of waste. And you know Styrofoam and plastics are very light. So even though you might think, "Oh, well, you know, 3,300 isn't a lot," it's *really* a lot because you're talking about really lightweight stuff. You're not talking about food waste.

You know, we do an event each year at the Dodge -- every other year at the Dodge Poetry Festival at NJPAC. There are 14,000 people who come to this event. We manage all the zero waste collection. There's probably 1.4 tons of waste collected. And we instituted a program last year, which we'll be doing this year, with the food truck vendors, providing them with baskets with paper liners so that we actually collect and rewash -- we did over 1,000 of those baskets two years ago; we plan to do that again this year. That was an avoidance of a lot of Styrofoam, a lot of wrapping,

plastic bags. We actually trained the food truck vendors to do it, and they did, and they were, like, "You should do this at every event." They were very hungry to do this. It saves them money; in fact, we have case studies where they saved \$2,000 to \$3,000 just on switching to baskets instead of Styrofoam containers. So I wanted to bring that up.

The other is that we have done voluntary straw efforts in restaurants. One restaurant was using 6,500 straws a month. When they instituted a straws-free December, just a few months ago, they ended up using 650 straws.

So another restaurant did something completely different; they just said, "We're not going to provide straws, except for people who have disabilities or special needs." And they just don't use straws; and they have, maybe, one box that they use occasionally. And it's not by request; they just don't offer them. And this is a bar; bars like straws, right? So he says, "What do people do with straws? Oh, they bend them over; you know, they get stuck up their nose (laughter). You know, they take them out, you know." We all know; we've had this experience with bar straws.

So the most important thing is -- ask first to eliminate altogether. We don't want to just go from plastic straws to paper straws, right? We want to just eliminate the things whenever we can do that.

So we have very specific case studies that show that people, on a voluntary basis, do it because it saves money, does good for the environment, makes their customers happier, makes them greener; and they get a sticker in their window. Businesses like that.

So--

ASSEMBLYWOMAN PINKIN: I'm sorry; we have to--

SENATOR SMITH: We have to move on.

MS. GOLDSMITH: Yes, I'm just going to say three things on the Bill that you have before you; that's what I'm going to end on.

One is that there should be no store size; you have store size limit. We acknowledge the issues of disabilities; we acknowledge the issue of the fee for all non-plastic bags should be 10 cents or more. The enforcement is great, because it's not in the Governor's bill on his desk right now. And you might need to clarify some of your definitions to make sure that we don't get bioplastics, and we make sure that we have sturdy, flat-bottomed reusable bags.

The last thing I want to say is -- whole countries have banned plastics: in the U.K., India, Bangladesh, Canada. New Jersey has always been a leader, as was stated earlier by Cindy; but we can do better than California, and we would love to do that. So let's do it.

ASSEMBLYWOMAN PINKIN: Okay, Doug.

**B R I T T A W E N Z E L:** My name is Britta Wenzel; I'm the Executive Director of Save Barnet Bay.

And I'll keep it short and sweet.

A saying that I use around the office -- and you have probably heard before -- is lead, follow, or get out of the way. (laughter)

Lead -- New Jersey should be leading the conversation about garbage, about plastics, about recyclables. We have in the past; we can do that again. What you are going to do, or what you are doing here today, and whatever legislation you pass, will be important to the entire country. So you are leading, and I thank you for that.

Follow -- locally, there's a lot going on. In Ocean County, Long Beach Township, Stafford Township, Point Pleasant Beach -- I brought some clips for you. The Mantoloking Yacht Club, the Township of Bricktown, local businesses -- everyone is stepping up to the plate to try to do the best they can do.

Get out of the way -- I urge the Governor to conditionally veto the bill that's on his desk. All of these local efforts have been done without a fee. The public doesn't want a fee; they want the change in the behavior, they want the plastics out of the environment.

We are very supportive of S-2776 and A-4330. We urge, again, that you lead, follow -- don't get in the way of the local efforts -- or just simply get out of the way.

Thank you. (applause)

**D O U G O' M A L L E Y:** Thank you; thank you, Britta.

And thank you to members of the Committee.

My name is Doug O'Malley; I'm the Director of Environment New Jersey.

I'll keep it brief, although I will say I'm honored to be on a panel -- a murderers' row of environmental advocates. (laughter) And in the hometown of Al Leiter, who wore both the Mets and Yankees uniform, as a Mets fan I'm happy to make that reference.

I am also honored to be joined by experts from our academic institutions.

And I wanted to start off my testimony by saying that this movement is really quite simple. We need to choose wildlife over waste; and we cannot continue to allow products that are used, sometimes as short

as 15 minutes, to remain in our environment and ecosystems for generations. And we have started to see, as Jeff said, an international movement to work to ban single-use plastics. The cover of *National Geographic* quite simply says, *Planet or Plastic?* Eighteen million pieces of plastics are in our oceans every year. And I'm happy to distribute this to members of the Committee.

And we've also seen work by journalists around the state, including Frank Kummer from the *Philadelphia Inquirer*, Memorial Day weekend. He had a piece referencing the work of the Marine Mammal Stranding Center in Brigantine, talking about a "foul tide." This is a seal (indicates) that was brought in to the Marine Mammal Stranding Center, that was on the cusp of dying because of plastic pollution.

So that, in many ways, is the face of what we're looking at in our ecosystems. Obviously the Legislature has taken up the plastic fee bill. We encourage a complete overhaul, or an outright veto by Governor Murphy; because honestly, the most effective way to reduce plastic use is to ban it.

I remember, in 1990 -- the 1990 Earth Day, there were 50 simple things that you could do to save the Earth. And one of them was to cut those little plastic soda ring containers. I did that growing up. Close to 30 years later, we can't just continue to educate; we need New Jersey to take a leadership role.

And I wanted to talk specifically about one aspect that's in front of this joint Committee, and that's the impact of polystyrene. Environment New Jersey canvassers have been going out around the state this summer, knocking on doors, talking to residents about the impacts of

polystyrene and the need to ban polystyrene. I want to thank members of this Committee -- and specifically the State Senate -- for working to pass a bill to ban polystyrene at educational institutions. This legislature needs to go farther; and we gathered more than 10,000 petitions from residents across this state -- that I'm welcome to share with the Committee -- urging the Legislature to act on this issue.

And the reason to act on this issue is threefold: It's obviously the impact on our ecosystems, the impact on public health, and the impact -- the economic impacts as well.

So in terms of the ecosystem impacts -- we heard a reference through Cindy and the work of Clean Ocean Action. In 2014 alone, Clean Ocean Action picked up more than 25,000 pieces of polystyrene on the Jersey Shore. And this is not just what you *can* see; it's what you *can't* see. Because in the New Jersey/New York harbor, there's 165 million pieces of plastic; 40 percent of them are polystyrene. And that's literally toxic fish food, because these tiny levels of particles absorb DDT, pesticides, oil, PCBs, and then they're ingested up the food chain, whether it be cormorants or other large birds. And that's obviously a huge impact on our ecosystem.

But this is more than just our animals in the ocean; this is also us. Because one of the key components of polystyrenes is styrene, which is a possible human health carcinogen, as studied by EPA. And this is critical to know that there's not just -- there's a direct link between polystyrene and styrene, going from food and then going into human bodies. It's an EPA study that I'm happy to share with the Committee.

And then finally, in research going back close to 30 years, styrene is showing up in human breast milk. So this is a human health risk.

And then, finally, on the economic considerations, we'll hear testimony later from the New Jersey Association of Recyclers -- it's very difficult to recycle polystyrene. And there are cost-effective solutions out there. And so this is why we're recommending that these Committees and the New Jersey Legislature move forward with a full ban on polystyrene, as well as other plastic takeout containers; to move forward with a full ban on plastic bags, as well as plastic straws.

And I'll just end by referencing that our sister organization, a generation ago, as well as many of the groups at this table worked to institute a bottle ban here in New Jersey. That effort, ultimately, did fail; I know there are members, including Assemblywoman Huttle, who has worked to bring this issue back. That has worked in other states, and we should use the lessons of that effort on this current battle.

Thank you so much. (applause)

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: So after all that passion, Assemblywoman Pinkin and I have just received word from the Governor's Office that the Governor will veto the bag bill. (cheers and applause)

What we think that means is that the Governor will be very sympathetic to the ban.

MR. WEBER: Does that mean he didn't wait to hear from us, at this hearing? (laughter)

ASSEMBLYWOMAN PINKIN: He called, he called--

MR. TITTEL: I think he heard us.

MS. ZIPF: I think he heard us.

ASSEMBLYMAN McKEON: Breaking news: He called Valerie yesterday.

ASSEMBLYWOMAN VAINIERI HUTTLE: He just called.  
(laughter)

ASSEMBLYMAN McKEON: She was just letting you go on.

MS. GOLDSMITH: And it wasn't because of the good work that you tried to do to advance the issue. So I just want to also recognize--

SENATOR SMITH: No. Listen, the great thing about the Bill is that it stimulated the conversation.

MR. TITTEL: Yes.

SENATOR SMITH: We're two years ahead of where we would have been--

MR. TITTEL: Absolutely.

MS. ZIPF: It got it going.

SENATOR SMITH: --because of that Bill. That really helped to move public policy. It's a great thing.

And Chairwoman Pinkin would like to change the order a little bit here, because we've had some very patiently waiting young ladies.

Thank you very much for your comments.

ALL: Thank you.

ASSEMBLYWOMAN PINKIN: So we want to call up the Teaneck Girl Scout Troop 60019. (applause)

Eliza Silletto -- and I think you have a few other people with you?

SENATOR SMITH: Just before our Scouts begin,  
Assemblywoman Huttle.

ASSEMBLYWOMAN VAINIERI HUTTLE: Thank you,  
Chairman, and Chair people, Chairpersons, Chairwoman.

I would like to personally welcome the Girl Scouts from Teaneck.

They were very instrumental when I met with them, probably -- was it maybe -- it was about two years ago when you started the project about banning plastic bags. And I will tell you that when you have young people engaged and participate in the process, that speaks volumes.

And so when I met with them, they gave me information. They started doing it in Teaneck, and the Mayor of Teaneck was waiting actually to get direction from the State. But at this point, I believe that I'd like for everyone to hear from the Girl Scouts. But really, they deserve a round of applause, because they have been with this (applause) -- they have been with this for quite some time.

So thank you, and welcome.

**E L I Z A S I L L E T T O:** Hello.

My name is Eliza Silletto, and I am here speaking on behalf of--

SENATOR SMITH: A little bit louder.

MS. SILLETTO: Oh, sorry.

Hi; my name is Eliza Silletto, and I am here speaking on behalf of Teaneck Girl Scout Troop 60019.

I would like to thank you all for the opportunity to speak on this matter.

We are here because we have been hard at work educating people about this issue for over five years, and would like to show our support for a statewide plastic bag ban.

By starting as a Bronze Award Project and moving beyond that, myself and my troop have been working to raise awareness in our town and county about the dangers of single-use plastic bags. We can say with absolute certainty that almost all of the residents we have spoken to about this issue have responded with overwhelming support for action against plastic bags. Once you have a full understanding of the scope of the problems created by these bags, from their creation throughout their never-ending lifespan -- as they never biodegrade -- using them is indefensible.

With us today is the Plastic Bag Monster--

ASSEMBLYWOMAN PINKIN: Why don't you stand up for a second; can you?

ASSEMBLYMAN McKEON: I thought that was an intern in your office, Nancy. (laughter)

ASSEMBLYWOMAN PINKIN: Next year.

MS. SILLETTTO: --a costume we made out of approximately 500 plastic bags we found in our town; specifically, in our parking lots, storm drains, and creeks. Again, these are 500 bags, the same number of single-use bags the average consumer uses in a single year.

Personally, we think this is a conservative estimate; but nevertheless she is a great way to illustrate how much plastic waste is generated by each person every year.

The Plastic Bag Monster has been really helpful in showing our community that every bag really counts and makes an impact.

If we hadn't picked up these bags to make into this costume, all of them would have ended up in landfills or in our waterways.

My troop and myself have been speaking to residents about this issue, starting in 2013, and it is remarkable how many people care and want to see change. We were motivated by the support of the residents in our town to begin lobbying our town council to pass a plastic bag ordinance, whether that is a ban or a tax. This lead to our first presentation to our town council in 2015, with Teaneck finally, in 2017, becoming the second town in the State of New Jersey to pass a plastic bag ordinance, placing a 5-cent fee on single-use plastic bags. Since then, we have been so excited to see more than a dozen towns in New Jersey have passed similar ordinances, mostly bans.

It has been so obvious to us that not just in New Jersey, but worldwide, people are becoming aware of the serious problem of plastic waste and want to do something about it. From the perspective of someone who is going to be voting in a few short years, myself and my fellow troop mates are really proud to see that New Jersey could be the first state on the East Coast to start becoming more responsible about plastic waste.

I can tell you that Girl Scouts across northern New Jersey strongly support taking action about plastic waste; and single-use plastic bags are the easiest place to start because the switch really is that easy: bring your own reusable bag.

Thank you all for your time.

SENATOR SMITH: Let's hear it for the Teaneck Girl Scouts  
(cheers and applause)

Thank you, ladies.

Next, we're going to have a business-industry panel.

Let me invite Dennis Hart from the Chemical Council of New Jersey; Keith Christman, American Chemistry Council; Mike Egenton, New Jersey State Chamber of Commerce; Christine Buteas, New Jersey BIA; Mary Ellen Peppard and Rocco D'Antonio, from the Food Council; Sal Risalvato, from the Jersey Gasoline-Convenience-Automotive Association; and Jaimin Shah, Asian American Retailers Association.

It's okay if you want to add a chair or two on each side; not a problem.

Okay; so why don't we start with Dennis.

**D E N N I S   H A R T:** Thank you to the Committee, to Chairwoman Pinkin, Chairman Smith. Thank you for giving me the opportunity to speak today.

My name is Dennis Hart with the Chemistry Council of New Jersey, representing the chemical and pharmaceutical manufacturing in New Jersey. It employs over 55,000 people directly, and a lot more people indirectly, in New Jersey.

I want to thank you. This is a very important issue facing the state, facing our citizens. And I think it was very important that you started out with the academic panel from Rutgers, because they put a lot of interesting things on the table about needing to understand what types of plastics we're talking about; the uses; what are the alternatives; are the alternatives worse for the environment than the actual products that we're using right now?

I was talking to someone yesterday who ran for Congress in New Jersey a number of years ago, during the time period where there was

an effort to ban disposable diapers. And he and his wife would not buy disposable diapers during the campaign, which became an issue in their home. And over time it was shown that disposable diapers are not worse for the environment than cloth diapers. So I think it takes a long time to look at these issues.

And I want to say I have someone here from the American Chemistry Council; I'm going to turn it over to him.

But I think as we look at this, some of the things I think about are -- when was the last time you saw an anti-littering ad or a recycling ad? They used to be on television all the time. Now that -- we have more than just television now; we have the Internet, we have iPhones, and everything else. But I think we've gotten away from that, because the real issue we're talking about is littering. We're talking about littering; we're talking about not recycling. Most of these products are recyclable. When you go to the supermarket, supermarkets accept bags back to the supermarkets. Dry cleaners accept the bags there, but very few people -- they either don't know it, or they know it, and they don't use it.

And the term *single-use plastics* I have a bit of an objection with. As an Ocean County resident, one thing Ocean County is known for is being the senior citizen capital of New Jersey, probably. And if you go into any senior's home in this county you will find a large cache of supermarket bags that get used for a whole number of purposes. As someone taking care of adult parents, I really don't know how to handle some of the issues of dealing with adult parents without having plastic bags around.

So of course we could go out and buy regular plastic bags, but a lot of senior citizens can't afford that.

So I really think, in these issues -- Amy Goldsmith talked about how the voluntary programs are working -- voluntary programs with restaurants, voluntary programs with supermarkets. They are working; and I think that's the message we need to focus on -- on recycling, reuse; a lot of these practices (*sic*) are reusable. On polystyrene -- we in the industry are working on a polystyrene recycling demonstration project we hope to set up with one of the county recycling programs.

So just to rush into ban things might seem good; but in the long-term, might not be best for the environment.

So I'm going to turn it over now to Keith. Keith Christman can introduce himself, and he's with the American Chemistry Council.

**K E I T H C H R I S T M A N:** Thank you for the opportunity to speak today.

My name is Keith Christman; I'm with the American Chemistry Council. I'm Managing Director of Plastic Markets at the American Chemistry Council. I oversee our Marine Debris Prevention programs, as well as our packaging team, automotive, and building and construction market teams.

In this role I also Chair our Global Action Team, working to reduce marine litter.

But we all agree, plastics and other waste don't belong in the environment. So that's an important part of the agreement that we all share. It's also important to recognize that chemistry and plastics are an important and growing part of our economy. Plastic materials manufacturers directly employ over 57,000 people in the United States.

These employees earned, on average, about \$93,000, about 44 percent higher than the wages for other industries.

In addition, the plastics industry, combined, employs about a million people nationwide.

Plastics also provide very important benefits to society and the environment. For example, plastics reduce the weight of our cars, reducing fuel use and reducing greenhouse gas emissions also.

Plastics also keep our food fresh and clean longer, reducing food waste. For example, 1.5 grams of plastic wrapping a cucumber will make it last 14 days instead of 3 days. Food waste is a huge problem in the United States and around the world. The EPA estimates that more food reaches landfills and incinerators than any other single material in our trash every day, constituting about 22 percent of the waste going into landfills.

Additionally, producing food uses 10 times more energy than making the packaging. So it's very important that we protect food and make it last longer, and plastics play a very important role there.

As mentioned also, we must look at the impacts of the alternatives. And using lifecycle assessment, as the Professor from Princeton mentioned, that is very important. When we look at the impacts of plastics versus alternatives, you'll find that the alternatives often produce impacts that are four times greater. The reality is -- I mean, we have all picked up alternative materials -- a glass, bottle, etc. They tend to use about four times more materials; thus, they tend to have about four times more impact on the environment, including greenhouse gas emissions and other impacts. So it's important to keep that in mind as you're considering policies.

Although plastics provide important benefits to society, plastics and other trash don't belong in our waterways and the environment. That's why we're actively engaged in very concrete actions to reduce marine litter and prevent marine debris.

The first step to ending plastic waste in the environment is understanding the sources. The primary cause of marine litter is the lack of municipal solid waste management in rapidly developing countries, particularly in Asia. Over half of the land-based plastic waste leaks from just five countries today: China, Indonesia, the Philippines, Thailand, and Vietnam. This was reported in a *Science* magazine study in 2015.

Another recent study by the World Bank confirms this root cause of the challenge we face. It looked at waste coming down rivers in Indonesia and found that about 53 percent of this waste was just organic waste from households. In addition, 13 percent was diapers, 29 percent was plastic -- a significant portion of that plastic was plastic bags that also had trash in it. So their lack of waste management has been identified as the principle cause of the marine debris problem we have around the world.

So while consumer plastics are a large fraction of the waste stream, holistic solutions are needed. It is also consistent with the McKinsey's analysis done for the Ocean Conservancy in the *Trash Free Seas Alliance*, which identified the need to immediately accelerate implementation of waste collection infrastructure, plug post-collection leakage, and improve processing of collected waste.

While this impulse to act is understandable, we must acknowledge that we will not fundamentally solve the problem at its source

through single-product restrictions. We must improve our waste management systems.

There are steps we can take here in the United States, and other places, including better systems to reduce and then manage the waste that we produce. And plastics makers are actively engaged in reducing marine litter globally. In 2011, we helped lead the development of a global action team and the Declaration of Plastics Associations for Solutions on Marine Litter. Since launching this Declaration, 75 plastics associations around the globe -- and it's important that countries around the globe are involved in this effort, as I mentioned -- 40 countries have signed this Declaration, and 355 projects have been put in place around the globe to reduce marine litter.

We are also taking important steps in the United States. The American Chemistry Council's Plastics Division announced three ambitious goals very recently, in May, around recycling and recovering plastic. Specifically, the Plastics Division set the following goals for capturing, recycling, and recovering plastics:

One hundred percent of plastic packaging is reused, recycled, or recovered by 2040 in the United States; and 100 percent of plastic packaging is recyclable or recoverable by 2030.

We are embracing the drive toward a circular economy for plastics, because it is consistent with our overarching commitment to sustainable materials management. In setting these goals our industry publicly affirmed our vision of the future we want for safe, sanitary plastic packaging and our intention to get there quickly.

Together with our value chain partners we intend to transition to increasingly circular systems for designing, manufacturing, recycling, and recovering our plastic packaging resources.

To achieve these goals, plastic resin producers plan to focus on six key areas: designing new products for greater efficiency, recycling and reuse; developing new technologies and systems for collecting, sorting, recycling, and recovering materials; making it easier for more consumers to participate in recycling and recovery programs; and expanding the types of plastics that are collected and repurposed; aligning products with key end markets; and expanding awareness that used plastics are a valuable resource awaiting their next use.

Reaching these goals will take collaboration between the plastics industry, government, and NGOs; and we look forward to working with you on how to get there. Some important opportunities include increasing the recycling of plastic wrap -- wraps around cases of soda and other things -- that can be brought back to the grocery stores along with plastic bags. And we have a program nationwide, that the U.S. EPA is a partner on, to bring that material back and promote it -- bringing it back to stores and getting it recycled.

So we look forward to working with the State on that and other efforts; and additionally, around polystyrene foam recycling.

Thank you.

ASSEMBLYWOMAN PINKIN: Thank you.

Mike.

MICHAEL A. EGENTON: Thank you, Madam Chair.

Michael Egenton, with the New Jersey State Chamber of Commerce.

So just a quick recap on where the State Chamber has been.

Several years ago, when Lisa Jackson was the head of our Department of Environmental Protection, we worked collaboratively together. And as many of you know, Lisa went on to work for President Obama at EPA; and she is now with Apple.

And we worked on a campaign called *Reinvigorating Recycling*, because one of the things that I picked up on was our Transit stations didn't have the proper receptacles there for folks to dispose of their bottles and plastic containers. So we did change that, and change that mindset.

Why I bring this up is, you know, we're the kind of organization -- with our network of local regional chambers of commerce -- that we can help in that process of educating the user and the consumer in getting that word out, particularly with our chambers along the Jersey Shore. They can partner with other groups.

The one thing -- a couple of quick points that I'd like to go over, now that we're going to be back at this issue again based on the Governor's action.

First and foremost, to work with all of you on several initiatives over the years that we have certain public policy positions on. Preemption is a big issue. We all worked on the paid sick leave issue, where we said we can't have this hodgepodge maze of different municipalities having their own rules of engagement. So I would ask you all to revisit that again to make sure that whatever the law of the land is, that we're all following the

same principles and guidelines for all 565 municipalities; that we don't have that maze going on.

Secondly, I don't have to remind you all we had a tough budget. And my members stepped up and gave quite a bit, whether it was corporate business tax, millionaire's tax, or combined reporting. And we recognize the challenges that the State has. But I would also caution: Whatever fees are collected, you make sure that they go to their intended purpose -- for plastic bags. We've seen what happened with Clean Energy dollars getting shifted around; we've seen what happened with the Transportation Trust Fund and the Unemployment Insurance Fund. We had to constitutionally protect those dollars to make sure that they go to their intended purposes. So please don't let it just end up in General Treasury and it gets to be used for something else.

I would also say if you could allocate a portion to the business and vendor that's going to help with this initiative; and I'd also strongly suggest that you would allocate a portion to the Clean Communities program, because they're the folks at the front lines trying to help with this effort.

Obviously we need, again, to educate the user and consumer. And as I said, our local regional chambers, along with our friends in the food industry and retail can play a role in this.

And then, obviously, if there is a -- we would advocate a transition, as opposed to an immediate ban, much similar to what they did in Europe. That way it gives the users and the consumers the ability to change their habits, and recognizes that this can be done with all of us encouraging everyone's active participation and collaboration.

So I look forward to working with you all; just some suggestions from the State Chamber. And we'll be engaged as discussions ensue on new legislation.

Thank you, Madam Chair.

ASSEMBLYWOMAN PINKIN: Thank you.

Christine.

**C H R I S T I N E   B U T E A S:** Sure.

Thank you, Madam Chair.

Christine Buteas, Chief Government Affairs Officers for the New Jersey Business and Industry Association.

We represent over one million jobs in the State of New Jersey.

And I, again, echo a lot of what my colleagues have said up here. Our members want to share in making sure any issues are addressed to protect our environment. However, as has been discussed, there has been a lot of impact, over this last budget, on the business community. And we also want to be mindful of the impact on the supply chain, including what jobs might be impacted

We have to recognize that the plastics industry does employ tens of thousands of folks in the state. And this material is being used currently.

As Mike mentioned, it's really, for us, about what is the goal of this. What is the exact problem that we're trying to solve? And from that, public policy should then be determined. So we have to look at where this waste is coming from and how the business community can play in partnership with this. And as Mike alluded to, a lot of our businesses

have stepped up to the plate, are paying in to make sure that litter is cleaned up, etc.

So we also have to be mindful. If we're going to replace plastics, what are the alternatives, what are the impacts of those alternatives, and making sure that we're coming ahead to protect the environment.

But at the end of the day, I also have to echo the point that we're not hearing as much about the recycling campaign and the actual use of the material being discussed here today. So if there is a litter problem -- if we're assuming that -- then we need to make sure that society, once again, is recycling these materials, which have been acknowledged are recyclable. So are there enough trash bins for these materials to go in, and are our residents actually putting those products in those proper recycling bins?

So I think that there needs to be a lot more of a focus on that, moving forward. I remember when I was in school there was a huge effort to do the whole reduce, reuse, recycling campaign. We simply just don't hear about that as much anymore. So when we're developing public policy, I just want to ask you all -- and as BIA and the Chamber have been there through this before -- that we want to work with you. But just please keep in mind the impact on the business community; how we can also be a partner for you, and how it's really important to, again, have a statewide approach and not a Band-Aid or a municipality-by-municipality approach. It's so important for our business community that we have one policy that is effective across the entire state.

So again, on behalf of the business community, thank you for the opportunity to testify today.

ASSEMBLYWOMAN PINKIN: Thank you.

Mary Ellen.

MARY ELLEN PEPPARD: Thank you very much, Chairman.

Thank you for the opportunity  
to be here today.

Mary Ellen Peppard with the New Jersey Food Council.

I'm here with Rocco D'Antonio, our member expert on these issues. I'll turn it over to Rocco in a few minutes.

Thank you.

Again, we do appreciate the opportunity to be here today, and the dialogue we've had with many of you in the last couple of months.

First, I really want to thank Assemblywoman Huttle for her leadership on this issue. I think she's really brought this issue to the forefront. We really appreciate that.

I know the Chairs have also worked very hard on this issue the last couple of months, and other members of the Legislature. And we do appreciate the efforts to pass the bill and get the bill that was on the Governor's desk.

This was something-- I do want to make note that the Food Council and our members continue to be committed to the reduction of disposable bag use. When the bill got to the Governor's desk, there was so much excitement from our sister food retail state associations throughout the country. We got so many calls throughout the summer. It was something that was really viewed as a -- it could be a very effective, statewide impactful model that the rest of the country could follow. So we really do look forward to the continued conversations on these issues.

As was mentioned by some of our colleagues, one of the biggest, most critical, components for us of any piece of legislation going forward is, of course, the statewide preemption. I actually brought with me the stack of local ordinances that we currently have. We have 16 that are enacted, and another 10 that are pending. Every single week we see additional municipal ordinances being introduced, being given first reading, or being given final passage. And they are all different; some are bans, some are fees, some are hybrids. They all have different definitions of certain types of bags, compostable or recyclable. They have had different standards. It's extremely challenging.

Some of our members' companies operate in hundreds of municipalities throughout the state. So you can imagine it is extremely onerous, and burdensome, and confusing to try to implement this patchwork of local ordinances. It's also confusing for the consumers.

So, again, we would really just ask and stress that anything -- any dialogue going forward include a significant focus on a complete statewide preemption, complete statewide solution.

One of the issues that I'm going to let Rocco talk about in a few minutes -- he's our expert, as I mentioned -- we do think that missing from this conversation from the past couple of months was a comprehensive discussion on paper and different alternatives. Paper does have a significant carbon imprint (*sic*) as well. And I do think it's important to mention -- some of our colleagues did mention the fiscal challenges that businesses are facing. Our food retailers are facing these challenges as well. And so when you just ban plastic by itself, and there's no other focus or discussion on paper, that, of course, this necessitates our members having to switch to the

disposable paper bags in their stores. And in addition to the environmental impact, they're actually considerably more expensive than the plastic. So that's something.

We would also ask that you consider the food safety implications of-- Again if you're just going to focus on plastic, and banning plastic, and what that might mean for different types of foods -- hot foods, soups; when you're talking about, obviously, raw meat and things like that -- products that are maybe sized a little bit differently, like rotisserie chicken, that doesn't necessarily fit inside a small film bag. Not every product has -- it's not the same bag as needed for every single product. So we ask you to consider safety, hot foods, and food safety implications as this conversation goes forward.

And then before I turn it over to Rocco, I know part of this hearing was, obviously, not just bags, but other pieces of plastic. So I want to briefly mention some of the concerns that our members have been discussing about the proposal to ban the plastic straws and the polystyrene.

At this point, there are concerns about the lack of affordable alternatives, as well as concerns for taking away that consumer choice. They have heard from some of their customers that, in some cases, they would prefer to have a plastic straw; it's more durable. They would prefer to have a polystyrene container for certain beverages, like hot coffee and for certain hot foods. So we do ask you to take this into consideration, moving forward.

And of course, as I know this was in the Chair's Bill, any discussion of banning polystyrene in these types of products has to consider

the exemptions for the food safety -- for the raw meat, the chicken, etc. -- produce, etc.

I would, at this time, like to turn it over to Rocco, with your permission, Chairman. He is-- Like I said, he is our resident expert at the Food Council. He has spent 20-plus years working on issues -- bag issues and waste recycling.

Thank you.

ASSEMBLYWOMAN PINKIN: Thank you.

**R O C C O D' A N T O N I O:** Good morning, everyone, and thank you for the opportunity.

Before I get into some of the paper issues, I want to just comment on the complexity of various regulations around the state.

In my current business -- our food waste collection business -- we deal with several hundred customers in five states. When we started, we developed operations plans. We had plans for every different type of retailer, every different department, every type of process in the food industry. It was rather complicated; but our goal was to get as much out of the trash as possible and put it to beneficial use or composting.

What we learned is, the more complicated we made it, the less people participated. And we made a fundamental shift in our operations plan by streamlining everything we do: one plan, keep it simple, make it easy to understand. And what we found is -- after several years of beating our heads against the wall -- is the simpler we make it, the more uniform we make it, the more people participated and the more waste we got out of the waste stream and into composting.

So to Mary Ellen's point, I think it's extremely important to have a statewide solution where everybody plays by the same rules and there's no confusion amongst retailers and amongst consumers.

Addressing, specifically, the paper issue -- I think that any discussion on plastic has to address paper as well. Just trying to fix plastic and not addressing paper is going to create yet another problem with paper bags. So why is that? I think it's well documented that the paper-making process has a significant impact on the environment; air, water, energy, and waste. There are also substantial price increases that someone has to pay for ultimately. Paper bags cost three to four times more than plastic. And when you create a supply-and-demand imbalance -- which has happened across the country with various ordinances -- that price discrepancy goes up even higher. Ultimately, somebody has to pay for that.

There's also a huge logistical issue with paper. Paper weighs 8 to 10 times more than plastic, and it occupies 8 to 10 times more space than plastic does. That means 8 to 10 times more trucks, more warehousing space, and more distribution.

So when you're moving product from manufacturer, to warehouse, to retailer, to check-out, you have 8 to 10 times more space required; 8 to 10 times more trucks; 8 to 10 times more people; 8 to 10 times more costs that, ultimately, somebody has to pay for.

And ultimately, when people do switch to paper, other than plastic, those paper bags go home. And we like to assume that there's no litter and that we recycle 100 percent. But unfortunately, that's not the case. If you look at our recycling rates in New Jersey, we're less than 50 percent. That means only half of what we bring home is going to go into

recycling. To make matters substantially worse, ever since China stopped taking our recyclables, the recyclable markets have really been in a very, very bad place. It's not healthy right now. On the commodity prices of mixed-paper recycling -- which is curbside recycling -- prices have dropped over 70 percent in less than 18 months. Less and less recycling is being done, the price is getting more expensive, and, unfortunately, more is going into the waste stream or going into the trash. That's becoming more expensive for the municipalities to handle this material.

So all those things combined create a huge problem; an impact on the environment, an impact on economics, costs that have to be incurred by retailers, consumers, and municipalities. So any discussion, any strategy on plastic needs to be accompanied by a well-thought-out and comprehensive paper strategy to limit its use as well.

Thank you.

ASSEMBLYWOMAN PINKIN: You want to ask a question?

ASSEMBLYMAN McKEON: Can I?

ASSEMBLYWOMAN PINKIN: Excuse me; before you move on.

Assemblyman McKeon.

ASSEMBLYMAN McKEON: Well, I just-- You know, I guess it's a question -- and Dennis was up earlier -- a) I wanted to ask, just so I could understand the process--

ASSEMBLYWOMAN PINKIN: Can I just--

I'm sorry; I just want to acknowledge that Senator Greenstein has joined us.

Sorry; go ahead. (laughter)

SENATOR GREENSTEIN: An hour ago.

SENATOR BATEMAN: A long time ago.

SENATOR GREENSTEIN: Say it was a long time ago.

(laughter)

ASSEMBLYWOMAN PINKIN: I know; I'm sorry, I'm sorry.

ASSEMBLYMAN McKEON: Hours ago. (laughter)

ASSEMBLYWOMAN PINKIN: Sorry; go ahead.

ASSEMBLYMAN McKEON: No, no; not at all.

In just general terms -- and Senator Smith and I, some years ago already, we had made certain that there was a certain sum that was earmarked toward Clean Communities. And thus we've seen recycling actually increase. So all of you saying, "I haven't seen a commercial forever," and us old people, "Give a hoot, don't pollute;" maybe so. But there's really great effort going on, locally, through the Clean Communities, as far as bringing the numbers up; in the last five years they've continued to increase.

The bad news is what you just suggested. The markets have tanked, and the tipping fees now -- it's cheaper to get rid of waste than it is recycle. So we're going to have a little bit of a riot on our hands, as it relates to the municipalities -- as opposed to saving money, losing it.

And secondly, the China thing is just huge. There are-- You can go out, and pictures -- I've talked to people before about it -- and just see mounds of recyclable materials that are now just being warehoused with no good answer. So from 30,000 feet, we really have to work that through.

But my question went to what Dennis said, because I really don't know this. What's the process for recycling the plastic bags? Which,

as much as this hearing has been amazing, is where I think, sooner than later, we're going to go, as far as making some decisions on regulations.

Whoever could best--

ASSEMBLYWOMAN PINKIN: Go ahead.

MR. HART: Sure.

Yes, I'd love to take that.

There are people -- retailers, grocers have, at the front of the store, bins to take back grocery store bags. But in addition to that, they can take back--

ASSEMBLYMAN McKEON: What do they do with them?

That's--

MR. HART: Yes; well, let me cover what else can go in there, because I think it's really important.

Only about 30 percent of that material is actually retail grocery bags; another 70 percent of it is wraps around cases of soda, dry cleaning bags, bread bags, wraps around toilet paper, paper towels, diapers. All that can go in that bin at the front of the grocery store.

So it gets taken back--

ASSEMBLYMAN McKEON: I'll trust you saying that; but that's not my experience, just looking at them.

MR. HART: Right; the signage--

ASSEMBLYMAN McKEON: It all seems to be--

ASSEMBLYWOMAN PINKIN: I put it in there, by the way.

MR. HART: The signage stinks on it. We have a program called *WRAP*, that helps with the signage -- that shows what can go back in those programs. The stores sell it to recycling companies. One of the better

companies -- or one of the companies that does this in the United States is called *TREX*. They take it back to their facility, grind it up, and put it with wood flour and make composite decking out of it. A lot of *TREX* composite decks in New Jersey, I'm sure, on the Shore. So that's an example of a product that's made with plastic bags and this other film that's brought back to the front of stores.

Recycling has grown dramatically; it's up over 50 percent since 2007. We're over 1.4 billion pounds of that material recycled every year in the United States; and we have a goal to double it by 2020. So a lot of work going on there; and as I mentioned, this partnership with the U.S. EPA called WRAP. A lot of communities are involved in it; states involved in it around the country. Connecticut is part of it. It has been shown to dramatically increase recycling of plastic bags and other film, and dramatically reduce the contamination in the material recovery facility. So it's very important, because it also helps drive up that increase in value of reduced contamination to a recovery facility, to improve the economics of recycling.

ASSEMBLYMAN McKEON: What's the percentage of that material that's actually recycled? I know in terms of bags, I think New Jersey alone uses 4 billion in any given year.

MR. HART: Yes; according to EPA -- you need to look at what's called -- an area called *bags, sacks, and wraps* in the U.S. EPA report. And in that category, polyethylene is over about 15 percent. And that's been growing dramatically as well. It grew from 5 percent around 2005, 2007, to around 15 percent today.

ASSEMBLYMAN McKEON: Thank you very much.

MR. HART: Maybe get the word out to consumers more about bringing those bags and other things back to the grocery store.

ASSEMBLYMAN McKEON: Thank you for indulging me; I appreciate it.

ASSEMBLYWOMAN PINKIN: Thank you.

Did you want to say something else?

Or we need to move on; are you-- Can we move on? I'm sorry.

**S A L R I S A L V A T O:** I think I'm the last one on this panel today.

Sal Risalvato; I'm the Executive Director of the New Jersey Gasoline, Convenience Store, and Automotive Association. And our concern here, obviously, is my convenience store members utilize these products a lot. They rely on them. And we, as an organization, and our members, recognize that there is an issue and a problem. We're not saying there's no problem; I know there are some people who do think that.

Personally, I happen to be grateful and thankful to the panel of environmental activists who were here earlier. I often read about them in the paper, and I get very, very angry when I hear about what gets picked up on the beach. And I actually thank them, because if they didn't do that, who would?

However, when I get angry, let me tell you who I don't get angry with. I don't get angry with the small business owner who distributes the bags or the straws. I certainly don't get angry with the people who make it, sell it, distribute it; the supermarkets or department stores that allow me to take my goods home in it.

I do get angry; and all of the solutions that we're talking about are not addressing-- We've touched on it a little bit here today; but if

people properly disposed of the products we're talking about-- If there were proper recycling. And I acknowledge, Assemblyman, that we do now have a mountain of recyclable products. However, we are finding more ways to use them. And that market -- the market is going to be what makes that work.

But if we were properly disposing and recycling, and we had been doing this all along, we would all be enjoying this day at the beach in Ocean County today; we wouldn't be here. This-- I have to congratulate you, because this issue is one of the seeds to be planted in the awareness part of this. I am personally a plastic bag recycling kook (laughter). I will freak out if you don't properly recycle a bag. I've been like that for years, before this was an issue, even amongst my members.

I can't honestly say people in my family or friends feel the same as I do. I would love to see the kind of campaigns that I saw as a younger person. And I know that many of you have to remember these as well. I'm not accusing you of being of the same age as myself; however, I do remember litter campaigns. Anybody remember *Phil D. Basket*, the cartoon character with the garbage can? Or the--

ASSEMBLYMAN McKEON: No one's that old up here; sorry.  
(laughter)

MR. RISALVATO: Well--

ASSEMBLYWOMAN PINKIN: We need to -- I'm sorry -- to move on.

MR. HART: That was back in the 1920s, by the way.

ASSEMBLYWOMAN PINKIN: But I would say that we have a great panel in front of us that can start an initiative on that campaign.

MR. RISALVATO: Well, I --

ASSEMBLYWOMAN PINKIN: We look forward to hearing your response to that.

MR. RISALVATO: I hope that we can; but there's no need to start that campaign if we're going to ban the products.

I heard earlier today-- And I really thank the Professor, because when he said -- when he talked about the touching of our lives with plastic, he's 100 percent correct. When somebody says, "New Jersey should be a leader," I agree. New Jersey should be a leader in showing how we can solve the problem with what is really the problem, and not take out the plastics that have so improved our lives.

So I'm just asking, can we get discussion and solution by dealing with and focusing on the real problem? And the real problem is the disposal and non-recycling; not the legitimate use and distribution of these products. That is what will not burden my members with small businesses that utilize these products.

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: Thank you for your comments; thank you for the panel's discussion.

I just want to point out to everybody that it's 12:12 p.m.; at 12:45 p.m., we have to stop. We have about 30 people who have signed up who want to speak. So I have to ask -- all you guys go away; thank you (laughter).

ASSEMBLYWOMAN PINKIN: Not forever; just--

SENATOR SMITH: Yes, not forever.

And by the way, if you don't get heard today, there's only going to be more hearings than you can possibly handle on this topic. On the Senate side, we're planning to put this bill up for discussion only--

ASSEMBLYWOMAN PINKIN: I'm sorry; excuse me.

Excuse me, people -- the recorders--

SENATOR SMITH: Guys and gals--

ASSEMBLYWOMAN PINKIN: Excuse me.

SENATOR SMITH: Hey (raps gavel); move out of the way, please.

So in the Senate side, we're going to have a discussion only at the end of September; and then in the October meeting, we're going to have the bill, I think, ready for prime time. So there's at least going to be multiple opportunities on the Senate side to speak; and I'm sure on the Assembly side -- This will be something that will be taken up.

ASSEMBLYWOMAN PINKIN: Yes.

SENATOR SMITH: So plenty of options. If you don't get heard today, don't feel bad.

And if you can focus your comments down to a minute or two, we can get-- In other words, go right to the point; we won't be offended by that. We'll try to get as many people as we can in.

So next, Tom Fote, JCPA; Jersey Coast--

**T H O M A S P. F O T E:** Anglers Association.

SENATOR SMITH: --Anglers Association.

MR. FOTE: I didn't bring my coffee cup up here to, basically, drink coffee out of. What I say is this is what we should be using (indicates).

I didn't need to go-- Dr. (Indiscernible) covered everything about *indicus disruptus* -- how it has affected the fish. So I'm not going there.

So I'm going to talk about what we should be doing.

Years ago, Christine Todd Whitman put together a task force on mercury, and I served on it for two years. We came up with some good solutions and some good projects; that's what we need to do now.

You know, we put containers like this (indicates); I saved how many paper cups, how many plastic lids? It holds the coffee; the coffee is still hot from four hours ago. That's what we should be doing. It's an education process.

The industry I basically volunteer my time in, the fishing industry, has to be a steward, because we count on fish. So when I sit on the Government Affairs of American Sport Fishing Association, which is the trade association, we talk about things that we need, to be better on the environment.

And I'll make one last point -- because I was really waiting for Jeff Tittel's sound bite for the day (laughter), so I was trying to think of what I could top him with. And I was sitting here, and I'm thinking, "Bag lady, bag man." Because it's gender different; we have different connotations. One's a criminal; one's a woman who carries bags around. But I think I should get buttons for me and my wife now saying *Bag Man* -- because I carry my bags into the store -- and *Bag Lady*, because that's what we're doing; so making it a positive connotation, instead of the bad connotation.

And we'll talk later on about *indicus disruptus* and everything else.

But thank you for the time.

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: Thank you, Tom. (applause)

ASSEMBLYWOMAN PINKIN: Okay, we just want to call up a few people together, if we can.

Frank Brill, from the Association of New Jersey Retailers; Danni Logue, from Jenkinson's Aquarium; Patty Cronheim, ReThink Energy New Jersey; and Nancy Griffeth, the Unitarian Universalists.

We can start with them.

Frank, you're up. Please start.

F R A N K B R I L L: Sure; thanks.

Frank Brill, representing the Association of New Jersey Recyclers.

I want to make three points, and I'm going to keep it tight.

I want to tell you a problem, a particular problem that the recycling industry and the recycling community is having as a result of plastic bags in the waste stream.

I want to explain our position on the bills that are out there floating around; although it's obviously in flux now. And I want to recommend the change that should be incorporated in any plastic bag bills going forward.

I want to start with the problem for recyclers; but I have to put it into context of what's going on nationally. You've already heard this; internationally, China has shut down imports. China is the largest importer

of recyclable materials -- metal, textiles, plastic, everything. And as of January 1, they've basically, to eliminate the problem with contamination in the loads, have shut their ports to the United States and everybody in the world. So that is the major problem for recyclers, right now.

But the plastic issue is also a real problem, and it's because when the recyclable materials are picked up -- the cans, and bottles, and glass -- it goes to a *MRF*, we call it, the *Materials Recycling Facility*. It goes on these big belts, and it's processed by a machine that separates the materials and puts them into separate categories and into separate bales. So you get plastic bales; you get a newspaper bale, and you got--

ASSEMBLYWOMAN PINKIN: Frank, you have one minute left; I'm sorry.

MR. BRILL: Oh, boy, you're really tough, but-- (laughter)  
All right; very good.

The plastic bags are gumming up the works. Every single day we have to stop and hire extra people to come in and pull all the bags off of these -- off the belts. It's costing-- Burlington County just did a survey; it's costing them about \$40,000 a year in manpower just to do this; \$30,000 is what Middlesex County came up with -- \$32,000, excuse me. It's a major problem. That's why we have to get plastics out of the waste stream one way or the other.

The second point -- where we are on the legislation. We would prefer a ban; we thought it would not be practical, and we were supporting the other -- the fee bill. We support a bill for obvious reasons. You get the plastic out, we don't have a problem with moving it and the rest of it.

ASSEMBLYWOMAN PINKIN: Okay, thank you. I'm sorry,  
we--

MR. BRILL: The third thing is-- Could I just add one more  
real quickie?

Any bills going forward I think we would recommend that you  
add-- Except for ban bills; it wouldn't be applicable here. But if anything  
other than a ban bill goes forward, we would recommend that you have, as  
part of that bill, a take-back requirement. That is, that any retail outlet--  
The Food Council is doing a great job; they're stepping up and getting out  
in front on this. They're taking them back.

ASSEMBLYWOMAN PINKIN: Okay.

MR. BRILL: But everybody should be required to do that,  
including the big box stores and small retailers as well. New York has a law  
that does this, and we'll give you the language later.

ASSEMBLYWOMAN PINKIN: Thank you.

MR. BRILL: Thank you.

ASSEMBLYWOMAN PINKIN: I'm sorry; Danni from--

**D A N N I   L O G U E:** Thank you.

I'll make it brief, because you've heard everything that I was  
going to say anyway. And I said, "Okay, well, it's already there; so I'll just --  
I'm going to share just a couple of little anecdotes, if you don't mind.

SENATOR SMITH: And you are?

MS. LOGUE: I am Danni Logue from Jenkinson's Aquarium in  
Point Pleasant beach.

SENATOR SMITH: Okay.

MS. LOGUE: I am an environmental educator; and I have to tell you, at this point, the kids are educating us. So if you don't think that it's happening, and you don't think that the word is out there -- the reduce-reuse-recycle or the campaigns that they were speaking of earlier -- this isn't a litter problem; it's a plastic problem, and the kids are telling us.

When we talk to them about Ace, our camp sea turtle, they're telling us the story about how sea turtles eat plastic bags, as opposed to jellyfish. They're the ones who are going to our bottle dispenser and they're using the reusable bottles. As your Girl Scouts just indicated to you, this is also a passion for them; so kids who are in our Junior Keepers or the camps this summer, they're talking to us. They're the ones who are educating us. So even though I thought I was educating them, they're turning it around and they're educating us.

I also wanted to add that they are leading by example. They're using reusable bags, they're using reusable bottles.

As animal keepers, I can say we use positive reinforcement. Using plastic bags and straws is a learned behavior. When we were all growing up, we didn't have plastic bags and we didn't use straws. And now it's just a common occurrence when you go to a restaurant or a store, you get a straw in your drink. And now I have taken the choice of saying, "Please don't give me a straw," and then I end up with a little sword in my lemon-something, you know? (laughter)

I actually got into an argument with a woman at Boscov's one day because I brought my own bag. And she insisted that I had to use a plastic bag, and took five plastic bags and threw them in the trash and said, "There, I just saved five jobs." And I get that; but when we partner with

Clean Ocean Action, and we pick up the pounds of trash on the beach every year, I said, “Well, I just saved a sea turtle.” That kind of thinking just blows my mind.

ASSEMBLYWOMAN PINKIN: Thank you.

MS. LOGUE: And finally, I’m just going to share -- one more thing; sorry -- there are 22 public aquariums right now that have eliminated straws and shopping bags from their programs. And they’ll be tackling plastic water bottles in the very near future.

I was doing a rainforest program the one day--

ASSEMBLYWOMAN PINKIN: I’m sorry, we have to move on.

MS. LOGUE: Rainforest program -- and a child asked a teacher, “Can I throw this away?” And she responded to him, “Where is *away*?”

So I just put that to you, as I shut down (laughter).

Thank you very much for the opportunity.

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: Thank you.

ASSEMBLYWOMAN PINKIN: Patty.

**P A T T Y C R O N H E I M:** Hi; I’m going to be super brief.

My name is Patty Cronheim; I’m with ReThink Energy New Jersey.

And we’ve heard a lot today from the industry about how all we really need to do is recycle more and we need to reuse more. And while those are very important factors, that is not the cause. And the cause of this, really, is our addiction to plastic and fossil fuels.

So these two are incredibly linked. So in order just to give this little New Jersey perspective, in New Jersey we're -- the agreed-upon figure is 4.5 billion bags a year that New Jersey uses. So that represents about 2.5 billion cubic feet of fracked gas; that's about 117,000 tons of CO<sub>2</sub> emissions; and that's about 170 million gallons of water used to make those bags.

So if we can get off of our addiction of plastic bags as a state, we will be addressing the cause; we will be lowering the risk to our health, improving our health; we will be decreasing emissions, improving our air quality, safeguarding our water, and, ultimately, we will also be fighting climate change, which is what this Committee and these joint Committees have been working so hard to do, and thank you for doing that. (applause)

ASSEMBLYWOMAN PINKIN: Thank you.

All right; next, we have Nancy Griffeth, from the Unitarian Society.

**N A N C Y G R I F F E T H:** Hi; yes, I'm Nancy Griffeth, Unitarian Universalist FaithAction.

Our statement was actually prepared by Ray Nichols.

ASSEMBLYWOMAN PINKIN: Are you testifying together?

MS. GRIFFETH: Yes.

ASSEMBLYWOMAN PINKIN: Okay.

MS. GRIFFETH: Well, actually, I'd like to give my time to him. He has prepared our statement, and I'd like to let him--

ASSEMBLYWOMAN PINKIN: Quickly.

MS. GRIFFETH: --have the time.

ASSEMBLYWOMAN PINKIN: Sorry.

Thank you.

**R A Y N I C H O L S:** Thank you very much.

I appreciate this opportunity to speak to the Joint Committee.

My name is Ray Nichols; I grew up in Bloomfield, New Jersey. My parents had lived through both the Great Depression and World War II; they brought me up to enjoy frugal comfort. They preached, "Waste not, want not." They warned me to be wary of people and advertisers who wanted to sell me things I did not need.

One reason I am here today is because I adopted those values as my own and have shared them with my children.

Secondly, I'm here as a member of the Unitarian Universalist FaithAction of New Jersey organization. As Unitarian Universalists, my faith calls me to engage in the democratic process. Among our principles is the respect for the interdependent web of all existence. In other words, there's a moral imperative to care for the environment that nurtures us and all life.

Regarding the specific legislation that has been discussed today, like many other environmental organizations we have appealed to the Governor to conditionally veto S-2600 and A-3267, which was rushed through the Legislature in late June. We realize that that bill was really intended to generate a new stream of income for retailers and businesses; and supposedly, also the State, without appearing to raise taxes. A simultaneous attempt to regulate the distribution of carryout bags was simply a ruse to make it appear environmentally beneficial.

A far superior piece of legislation is represented by S-2776 and A-4330. This bill is a reasonable first step to reducing the amount of non-

biodegradable plastics in the environment. Just as importantly, since most plastics are derived from natural gas and petroleum, reducing the demand for materials made from plastics will result in the generation of less greenhouse gases, especially if it is coupled with a more sustainable policy about using hydrocarbons; thus we would reduce the rate of climate change.

Today I ask you to consider three words that are especially relevant to the subject of today's hearing: *reduce, reuse, and recycle*.

ASSEMBLYWOMAN PINKIN: Super.

MR. NICHOLS: Consider what they mean, in terms of creating a more sustainable behavior for New Jersey's residents--

ASSEMBLYWOMAN PINKIN: I'm sorry, we have to -- you just have to summarize really quick.

MR. NICHOLS: --and for its visitors and for future generations.

ASSEMBLYWOMAN PINKIN: Sorry, we just have to summarize really quick; we have to move on.

MR. NICHOLS: In summary, recycling-- If we reduce the amount of stuff we buy, we create less waste. If we reuse the stuff we buy, it won't become waste. Only when we are told we should recycle -- and I say *should* -- do we have problems with waste generation. Recycling programs are only partially effective. Focus on reducing and reusing.

Thank you for your time.

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: Okay, our next panel will be Brick Wenzel, from the commercial fishing industry; Dr. Michael Kennish, Rutgers University; John Spodofora, Mayor of Stafford Township; Jennifer

Coffey, Association of Environmental Commissions; and Dr. Stan Hales, Barnegat Bay Partnership.

And again, plenty of opportunities to speak at a lot of hearings.

ASSEMBLYWOMAN PINKIN: Sir, you're up; please start.

**B R I C K W E N Z E L:** I can start?

SENATOR SMITH: Pull up a chair.

ASSEMBLYWOMAN PINKIN: Start.

MR. WENZEL: Hi; Brick Wenzel, Lavallette. I'm a commercial fisherman.

If it hasn't been said yet, welcome to Ocean County; three inlets in Ocean County, right? You have Manasquan, Barnegat, and Little Egg. We have two of the largest commercial fishing ports in the continental United States, in Barnegat and in Manasquan.

Plastic bags are a very important issue for us in the commercial fishing industry. When it blows out of the west -- when we get a west wind here, we have what we call *bag fish* showing up in our fishing nets. It's not uncommon for us to find a hundred plastic bags in a 600-foot piece of net when the winds are blowing out of the west. It is not a seasonal issue; it is a year-round issue. A lot of people think it's the tourists; it's not.

It also makes for a very dangerous environment. The commercial fishing industry is already the most hazardous occupation in the State of New Jersey. When you put plastic bags in water, and those plastic bags are on deck, personally I've slipped and fallen myself and I've had crew members-- So it is a very important issue for the commercial fishing industry.

And thank you, Senator, and the Committee, for taking up this issue; and know that the commercial fishing industry supports your progress in taking care of this extremely important issue.

ASSEMBLYWOMAN PINKIN: Thank you.

SENATOR SMITH: Thank you so much.

MR. WENZEL: Thank you.

SENATOR SMITH: Dr. Stan Hales, Barnegat Bay Partnership.

Dr. Hales, good to see you again.

L. STANTON HALES, Ph.D.: Good to see you.

Thank you for the opportunity to speak.

Before I start, I just want to thank Cindy for keeping trash at her core for more than two decades, right? (applause)

So, thank you, Cindy.

A lot of things have been said that are very good. I'd like to point out that, as part of our program, we participate in EPA's national *Trash-Free Waters* program. There are a lot of good resources; you're already engaged in many of those in working with the industry on your efforts to ban the bags.

I'd encourage you to look at the California law, which is the most comprehensive; and most of the data shows it's been the most successful to date. It doesn't completely ban all bags; but it does try to reduce all waste, and it does try to promote recycling. And I think those are messages you've already heard today. I'd encourage you to follow up on that.

And I'll end my remarks now.

SENATOR SMITH: Thank you.

DR. HALES: One indulgence.

SENATOR SMITH: Go.

DR. HALES: We're revising our 20-year master plan for the restoration and protection of the Barnegat Bay. We've had more than 35 organizational partners participate in that, including the Federal government, the State government, the local government, municipalities, and NGOs, as part of our steering committee, as Britta will say, of Barnegat Bay.

The Commissioner from DEP told me the other day it's a wonderful plan; but it needs funding support. I'm going to provide it to all of you, within the next month, so that you can think about it a little bit to help us protect the Bay. We think protecting the Barnegat Bay is basically addressing the tip of the iceberg for all of New Jersey's coastal watersheds.

And thank you, Chairwoman, for bringing up the situation in Florida. I want to remind everybody that New Jersey has had its own harmful algal blooms, and it should serve as a reminder of what we do if we don't take proactive steps to protect and restore the environment.

Thank you.

SENATOR SMITH: Thank you, Dr. Hales.

John Spodofora, Mayor of Stafford.

**M A Y O R J O H N R. S P O D O F O R A:** I'll tell you what; you got pretty close to pronouncing it right.

I've been the Mayor of Stafford Township; and I've been in elected office for 30-and-a-half years. And as you probably heard, we passed a plastic bags ordinance.

So I want to give you a different perspective. You've heard all the scientific and empirical data that tells you just how bad these plastics are to our oceans. I've been a surfer, scuba diver, and a fisherman since I was 12 years old, and that's 60 years. I've been out in the Bay, I've been out in the ocean. I've seen what's been happening. I've seen what's going on beneath the ocean's surface. I know what's going on.

We passed the ban. I started on first reading in February; we finally passed the ban in July. And that was because I reached out to the public, reached out to every one of the businesses in the town, and met with them. And we finally had an ordinance that works; it's a ban of plastic bags. Stores have been very cooperative. Target, for example, has come up and told us they are going to start giving anybody who comes into their stores a 5 cent credit for every recyclable canvas bag they bring in.

ASSEMBLYWOMAN PINKIN: That's great.

MAYOR SPODOFORA: And with them doing that-- I also want to mention -- there has been a lot of numbers thrown around. Remember that these little plastic bags only hold a small percent of what a paper bag or a canvas bag will hold. I had a canvas bag in the store the other day, and I checked it. It would have held four times as much as a plastic bag. So you use a four-to-one ratio.

Plastic bags are in our food stream. I mean, the plastics from plastic bags -- the nanoplastics, the microplastics -- are getting in our food stream and are affecting all of us.

I heard today about how the children are jumping in on this. The children have been great; the businesses have been great. My

community has been great responding to this. And I can tell you that we do need a single, comprehensive ordinance for the entire state.

There's a lot of talk about recycling. We're in Ocean County. And you heard gentleman who worked for a recycling facility. Ocean County does not have the ability to recycle plastic bags. They go into the system; they go into the recycling stream, and they clog up the machines. I have to shut down a machine four times a day, typically; send a crew in there with reciprocating saws and knives, and cut all the material out, take it out, bundle it, and they send it to a landfill. That's costing taxpayers a lot of money. Thirty percent of the recycling -- labor recycling costs in Ocean County are due strictly to plastic bags. It is a cost issue, as well as it is a health issue for us in Ocean County.

Thank you.

SENATOR SMITH: Thank you, Mayor.

ASSEMBLYWOMAN PINKIN: I'm sorry, Senator, but--

SENATOR SMITH: Sure

ASSEMBLYWOMAN PINKIN: --Valerie had a--

SENATOR SMITH: Go ahead; Assemblywoman.

ASSEMBLYWOMAN VAINIERI HUTTLE: Thank you, Chairman.

Just a quick question for the Mayor.

Are any of the stores charging for plastic bags, or--

MAYOR SPODOFORA: No, none of the stores are charging for plastic bags. The intent of the ordinance, originally, was to get away from the fee that was certainly in that bill on the Governor's desk.

I did give the leeway to the stores that, with a ban on plastic bags, if they want to charge 5 cents for a paper bag, they can do that; and that's just an interim process.

ASSEMBLYWOMAN VAINIERI HUTTLE: And the question goes then, what are they doing with the 5 cents? Did you make mention-- What do the stores do with the--

MAYOR SPODOFORA: They would keep the 5 cents.

ASSEMBLYWOMAN VAINIERI HUTTLE: They keep it.

MAYOR SPODOFORA: They would keep it.

ASSEMBLYWOMAN VAINIERI HUTTLE: The stores keep it.

MAYOR SPODOFORA: The stores would keep it.

ASSEMBLYWOMAN VAINIERI HUTTLE: Thank you.

MAYOR SPODOFORA: It doesn't go back to the State General Fund.

ASSEMBLYWOMAN VAINIERI HUTTLE: Thank you.

(laughter)

SENATOR SMITH: Thank you, Mayor.

Dr. Michael Kennish, from Rutgers University, who is frequently at this event.

**M I C H A E L J. K E N N I S H, Ph.D.:** I just wanted to get, briefly, into the science on this.

I, as you know, have been involved by working at the Shore for more than 40 years. My research takes me in the ocean, the bays, salt marshes. And every day I'm out there, I run into problems with all sorts of

garbage, especially plastics. It's every day I'm out there; in the salt marshes, now, is the problem.

And I just want to say that, worldwide, you're looking at 10 million metric tons of plastics that enter the ocean every day. And certainly, we have that problem in New Jersey as well. That's increasing at 7 percent per year. It's an intractable problem, the way I see it; and really, to get a handle on this, in New Jersey, we have a \$40 billion tourism industry along the Shoreline. I mean, that should be enough that everybody would be concerned about.

In my opinion, there needs to be at least a moratorium on the situation; or a ban -- an outright ban for the entire state. We can't worry about the entire world; we can't handle this. But New Jersey we can, if we take a serious look at handling the necessary controls on this. It's getting worse and worse.

And so I just wanted to add my points to that.

SENATOR SMITH: Thank you, Dr. Kennish.

JENNIFER COFFEY, Association of New Jersey Environmental Commissions, ANJEC.

**JENNIFER COFFEY:** Great; thank you so much for having this hearing today. I appreciate it.

ANJEC has been working for several years now to help municipalities across the State of New Jersey pass local ordinances to reduce our plastic pollution. Those ordinances have focused on plastic bags and intentional outdoor balloon releases.

Just last night I got a call from Monmouth Beach Environmental Commission, at about 9 p.m., who were very excited coming

out of a meeting -- talking about wanting to start a local bottle return program and concern about bottle recycling and overall plastic pollution. So there's really concern, across the state, from Jersey City to Atlantic City, about tackling this problem.

And that's because, in 2016, the World Economic Forum released a report, a pretty robust international study that looked at our single-use plastic pollution. And it showed that by 2050 -- so by the time my 9-year-old niece-- So think about the kids in your life. By 2050, by the time my 9-year-old niece is my age, the ocean will have more fish than plastic -- more plastic than fish in the ocean. Sorry; it's lunchtime. (laughter) More plastic than fish in the ocean by 2050. So by the time my niece is my age, I don't want her to live in a world like that.

The good news is that this is a very solvable problem. If we take action now, we can turn that tide of plastic pollution.

I sat here and I listened to a lot of the business and industry testify today; and I have to say that it's polar opposite to the businesses and industries that I've been working with. What I heard, today, testified to -- talked a lot about the plastic in Asia being the number one pollutant. A lot of that plastic in Asia is our plastic. So it's plastic from the U.S., its plastic from Europe.

When we talked about the volume of plastic that we use now, as compared to the volume of plastic that we used when plastic really showed to be a great benefit to our life and our society, it's overwhelming now. We're not talking about getting rid of plastic in hospitals or surgical rooms, the plastic that really helps the quality of our life. We're talking about the degradation of our food chain; we're talking about the

degradation of the basis of our economy here in New Jersey. So we have a big problem and it requires big action.

Quite frankly, the bill that was more recently passed and was sent to the Governor, and now we learned was vetoed, was not nearly--

What's that?

SENATOR SMITH: *Will* be vetoed--

MS. COFFEY: *Will* be vetoed.

SENATOR SMITH: --by early next week.

MS. COFFEY: Will be vetoed; I stand corrected -- is not nearly strong enough. It had several issues with it; it said that slightly thicker plastic bags were reusable bags. How many times have you taken a plastic bag and washed it out in the sink and then reused it? So that was a boon for the plastics industry, because it used more plastic.

Worse off, it prohibited municipalities-- So the municipalities we've been working with, and the municipalities sitting here today that we've heard from, have really worked hard to pass these ordinances. It prohibited them from taking any stronger action.

Given the economic quality of life and health issues that we're facing from plastic pollution, we require really robust action. And to echo one of the earlier speakers, we need to lead, follow, to get out of the way; and it's time for New Jersey to lead on this issue.

So thank you again for having us here.

ASSEMBLYWOMAN PINKIN: Thank you.

Okay, thank you so much.

SENATOR SMITH: Thank you. (applause)

ASSEMBLYWOMAN PINKIN: All right; we're going to call up a few other people.

We have Matt Seaholm, from American Progressive Bag Alliance; Ed Wengryn, from the New Jersey Farm Bureau; we have Sandra Meola from New Jersey Audubon; and Lana Smith, from Food and Water Watch.

I'll call up one more, Jennifer Borneas, from We Are Shore.

Please start; go ahead, please start.

S A N D R A M E O L A: Hi.

Thank you so much for the opportunity to testify.

My name is Sandra Meola, and I'm a Director in New Jersey's Audubon Government Relations Department

Before this role I had the pleasure of working with Dr. Cooper and Dr. Ravit -- who you heard from a little earlier today -- through my previous role at New York/New Jersey Baykeeper. I worked on publishing the first-ever scientific journal article documenting plastic pollution quantity and classification of all plastics in the New York/New Jersey Harbor Estuary.

You've heard how dangerous plastics are to wildlife and our environment. I'd like to address that, you know, now that we have Governor Murphy vetoing the bad fee bill, it's important, now more than ever, to pass -- to move forward and pass significantly strong plastic legislation banning bags.

In a state that uses at least 4.4 billion bags a year, there's no more time to waste. The gold standard of bag policy is a ban-fee hybrid, in which plastic bags are banned and a fee is imposed on all other bags. A fee

component is necessary so all bags are addressed, and to avoid legal claims related to straight bag bans with no minimum charge for other bags.

New Jersey Audubon recommends the Legislature considers a statewide plastic bag ban and a fee on all other bags.

Second, I'd like to touch on polystyrene foam for about a minute. Commonly known as *Styrofoam*, polystyrene foam is made from styrene, a petroleum-based chemical, and categorized by the World Health Organization as a "probable human carcinogen." According to New York/New Jersey Baykeeper's 2016 survey results, polystyrene foam was the most abundant type of plastic found in New Jersey waters. The plastics industry, as you heard, will insist that polystyrene foam can be recycled; but the truth is, it is not cost-effective, due to contamination issues and the materials light weight. There is only one recycling facility for polystyrene foam in New Jersey, and that's Foam Pack Industries in Springfield, and it only accepts clean foam.

Polystyrene foam bans have been successfully implemented throughout New York City public schools; Seattle; Baltimore; Monmouth Beach, New Jersey; and many others. Styrofoam has been replaced with comparable paper and reusable products, and New Jersey Audubon recommends a statewide ban of expanded polystyrene foam to protect wildlife and public health; and supports Bill A-4105, S-2603 that would ban the material from all public schools, universities, and food service establishments.

Thank you.

ASSEMBLYWOMAN PINKIN: Thank you.

Sir.

**M A T T H E W S E A H O L M:** Good afternoon.

My name is Matt Seaholm; I'm the Executive Director of the American Progressive Bag Alliance. I probably have a different perspective than most on this panel.

I represent the recyclers and manufacturers of plastic retail bags in the United States.

A couple of things; a lot has been said today. I won't take up too much of the time.

Our commitment to sustainability is at the core of everything we do. Obviously, we don't want to see any of our products disposed of improperly, whether it's thrown into the waste without being reused, whether it's littered, etc. Obviously, we're in agreement with that, and that's why we appreciate all that this Committee is doing to raise awareness on this issue; and we look forward to working with you.

A couple of things I did want to just raise awareness to, one of which is the New Jersey litter study that was done just a couple-- Well, it's been done this year, but just came out, I believe it was two weeks ago. The New Jersey Clean Communities Council, along with the Department -- the DEP, put this together. And there are a couple of things in here that I think are important to note, one of which is plastic retail bags. A lot has been discussed about that today. The study shows that branded plastic retail bags -- those coming from grocery stores -- make up 0.8 percent of your litter stream. So anything that you're going to do to address the concerns on that, I just wanted to raise awareness on that.

I wish I had more time.

A number of other components that I think are important -- that I'll be sharing in packet of information with you later this afternoon -- but there have been a couple of life cycle assessments done earlier this year, one of which was from the Environmental Protection Agency of Denmark. It highlights the total environmental impact of all of the options at the checkout. And in conclusion, the traditional thin-gauge plastic bags are the best option, based on carbon footprint, based on the cost to dispose; all of it. That's from Denmark; that's not coming from the industry.

The Recycling Authority of Quebec -- exact same results.

Denmark, actually, said that the cotton or the canvas typical reusable bags that you think of have to be reused 7,000 times to equal one reuse of a plastic retail bag. Quebec found that a paper bag has to be reused 43 times to equal the reuse of one single plastic bag.

So all of these things -- these aren't coming from the industry; these are coming from scientific studies. So I just want to raise awareness that any time that new regulations or taxes are being discussed, these are some of the things that should be talked about.

But I'll leave it there; I know we're short on time. I'm happy to follow up with anybody with questions. And like I said, more information to come.

SENATOR SMITH: Lena Smith, Food and Water Watch.

**L E N A S M I T H:** Yes; good afternoon.

Thank you for convening this hearing, and for the opportunity to speak.

I'll try and keep my brief comments focused primarily on what we think the State can do to lead nationally to address plastics pollution at the source of the problem.

Sorry; I should have introduced myself. I'm Lena; I'm from Food and Water Watch. We're a national advocacy organization. We champion healthy food, clean water, and a livable planet.

So what the State can do to lead nationally on the issue is, along with supporting a ban on plastics, we are calling for the State to implement a ban on fracking and fracking waste. We can't tackle plastics pollution without moving off fossil fuels and towards a 100 percent clean energy future.

I'd like to thank Senators Bateman, Greenstein, and Smith for leading on these issues; and Assembly members Vainieri Huttle, McKeon, and Pinkin for also leading on these issues.

The relationship between fracking and plastics is a symbiotic relationship. The plastics industry has reaped under-the-radar benefits from the environmentally destructive fracking boom. This fracking boom has produced an over-supply of cheap ethane in the past few years; and the surge has been a boon for the plastics industry, which relies on petrochemical manufacturing to turn ethane into plastics.

Beginning in 2012, the chemical companies started aggressively investing in petrochemical plants and export facilities focused on tapping the ethane glut. In 2012, an estimated 221 million barrels of oil, equivalent of natural gas and 99 million barrels of crude oil were used to produce plastic resins. The fracking boom and low-priced natural gas have spawned resurgence in plastics manufacturing and the pollution that comes from it.

So along with the plastics waste, New Jersey poses to be directly impacted by pollution from fracking waste that is produced during fracking. The drilling and fracking of a single well can produce millions of gallons of toxic wastewater and hundreds of tons of potentially radioactive solid waste.

So along with addressing New Jersey's plastic waste problem, this joint Committee can lead the country in addressing pollution from plastics by bringing up bills A-1328, A-1329, and S-678, to ban fracking and fracking waste in New Jersey.

Thank you.

SENATOR SMITH: Thank you for your comments.

Ed Wengryn, New Jersey Farm Bureau.

**E D W E N G R Y N:** Mr. Chairman, Madam Chairwoman, members of the Committee, thank you for hearing us today.

I'd just like to sort of echo the comments from the general business community -- Farm Bureau, farmers, farm markets use plastics and plastic bags; and a lot of the food safety issues that were raised by the Food Council.

We saw the Bill that was on the Governor's desk has an opportunity to educate the public and to encourage change and behavioral change. I think as we go forward, allowing time for that to happen -- to change people's attitudes, behaviors, and how they use plastics in their lives -- has to be considered in phasing in or incorporating the changes we're talking about in the bills that are going to be discussed over the next couple of months. We'll add more detail and comments on that going forward.

The other part we liked about the Bill that was on his desk was that it was addressing things statewide; and we think that's the way things

should be done. We appreciate the efforts of local municipalities in making the changes they've done, but a lot of that was done through outreach to the business community and the people who were going to be impacted by it. When you do something statewide, broad-based, you don't quite get that one-on-one education that local municipalities have been able to do to get buy-in from their business community. And we would like to make sure that as this goes forward statewide, that that buy-in and education can happen both ways; not just with the end consumers, but with the business community that will be impacted.

So thank you.

SENATOR SMITH: Thank you, Ed.

And our last witness is Jennifer Heaney Borenus from We Are Shore.

J E N N I F E R   H E A N E Y   B O R E N I U S : Hi; thank you Committee.

And I would like to thank all the environmental scientists and businesses that all represented themselves, and had their voices heard today. I think it's a very important process in our democratic way of being -- that we all are able to be heard.

I'm going to stand here and represent a native New Jerseyan, who has stood up and tried to get a grassroots effort -- bringing awareness to the plastics problem. And I fundamentally believe that the plastics problem is something that needs to be handled on an individual basis; it starts within our own home. I've started it within my own home, as a mother of four; and have started, within my own community, a single-use reduction effort, We Are Shore, in order to bring awareness to this.

Why I think the bag ban is important is because it's a visual impact. We see, when we shop in the community, people using these bags becoming less and less prevalent. That is something that's visually impactful; and children can see, adults can see, how their impact is being fundamentally made.

And as soon as you start with the bags, and as soon as you start with single-use items, then it trickles down to other things you do in your life. It's no longer acceptable for you to take something and use it for five minutes because the impact is going to be there for the rest of your lives.

So I have been working with all the environmental groups within my community, with the children, to get change to happen. And if we all do a little bit, just the teeniest bit, to make this impact -- like we've tried to do with this Bill, these new legislative actions the Governor can take for New Jersey to take a stand -- we each can start with our individual homes, our individual communities. It will go to the State; it will go to the country; and then the world will change. It's reached a tipping point; we know that. We need you to create strong legislation for our children. Because if we do not, there will be nothing for them to have in 50 years.

SENATOR SMITH: Thank you very much for your comments.

We had about 40 witnesses contribute to the hearing. There are another 10 slips that we're just not going to be able to get to.

But you are going to have plenty of opportunities, over the course of the fall, to weigh in on the plastics legislation.

Chairwoman Pinkin said it would be a really good idea to see if any members of the legislative panel wanted to say anything at this point.

Maybe we'll start on the Assembly side. Anybody want to say anything?

ASSEMBLYMAN ROONEY: Thank you, Chairman.

Sure; thank you, Chairman.

We heard a lot today about recycling, and the lack of initiative and focus on that.

There are a couple of bills that I would hope that the Legislature will pick up when we return to session. One of them, A-4349, would require the Department to develop a program, similar to the WRAP program in Connecticut, where municipal recycling centers would collect the recycled plastic bags and film, such as bread wrappers, paper towel and bathroom tissue wrappers. It would also encourage folks to reduce their overall use.

The new program, unlike many things we do in New Jersey, will have no additional cost to the State or local taxpayers. It uses the current recycling grant program to implement it, where the existing fund right now collects 3 percent of municipal tax.

So again, we've heard a lot today about reducing our use of plastic bags and banning plastic bags. But I would encourage us to look at recycling in addition to that, and how we do things on a daily basis.

So thank you.

SENATOR SMITH: Anyone else?

ASSEMBLYWOMAN VAINIERI HUTTLE: Thank you, Chairs, for having this important meeting.

I think it was very educational and informative. I think most of it we do know; it's just how to balance what we heard today. And I think a couple of the suggestions of maybe creating a task force might be helpful.

I'm happy to see that people from the Governor's Office were present, and hopefully we will get some direction from the Governor's Office on how we move forward.

I just want to mention, quickly, about the anticipated veto on the plastic bags that will occur probably on Monday. That Bill at least was out there. It opened up, I think, an important discussion and a dialogue which we needed to hear. I think, years ago, before we saw towns banning, that was very-- I think that was the Bill, and a piece of legislation that was very helpful, and balanced the businesses and the environment.

Today many of my colleagues looked at it as a tax; it was unfortunate that it came up during the budget process. I still am not comfortable with having stores recoup, if they are selling those plastic bags, that does go back to the stores. I think we need a mechanism that if there is going to be a fee, that it does goes back into the proper dedicated funds to help recycle the litter.

But with that being said, we have a lot on our plate to discuss and resolve. And I think it was important. And I want to thank the Chairs, again, for having this important environment meeting.

Thank you.

ASSEMBLYMAN McKEON: You know, just very briefly -- not that you need anybody to speak for you, Valerie; God knows -- but I think it's important to note, with the Governor's anticipated veto, that that Bill really only moved because there was a dollar piece attached to it. And it

was all about trying to cobble together enough millions to be able to put a colorable budget forward.

So the thoughtful consideration that you can expect out of, certainly, the two Chairmen of this Committee will continue. And it was just an unfortunate consequence of a budget process. So lest anybody think that we weren't going to be mindful of everybody's positions and come up with something -- as I'm certain that we will, by the early fall, that we can put on the Governor's desk.

I just note this: 4 billion bags a year, right? That just inherently should tell you that we really need to do something about curbing those. All the talk about recycling and all the other components are interesting, but 4 billion a year is many too many.

So I look forward to working with everybody collaboratively to make certain for the industry and for the retailers -- that there is consistency throughout the State of New Jersey. The sooner we move, the better, as it comes to that.

And I'm just hopeful that we'll all have the wisdom to come up with a good solution, because, really, failure is not an option.

So thank you very much to both Chairs.

SENATOR SMITH: Senators; Senator Bateman, anything you want to say?

SENATOR BATEMAN: Absolutely.

Thank you, Mr. Chairman, Madam Charwoman.

First of all, I thank you for this hearing, because I think, obviously, the topic is very relevant. And as I have said many times, the environment is not partisan, and we need to work together.

And I want to particularly thank everyone who came this morning -- because I thought it was very informative -- especially from the academia world, Rutgers and Princeton. I think you added a great deal of information to the topic and to the discussion, and I look forward to-- I know there are a number of bills pending right now, and I look forward to working with Chairman Smith, and Senator Greenstein, and other members of our Committee.

Because there's no question that everybody in this room shares a great deal of concern about our environment. And we need to do everything we can to leave a clean environment for our children and grandchildren. And we'll figure out the best way to get there, because I thought there were arguments from many, many different sectors today. And I'm glad to take that information back to Trenton; and I look forward to additional hearings, but really doing something meaningful that's going to make a difference.

So again, I thank everybody for coming out; and I thank the Chairs for scheduling this meeting because it's so very important.

SENATOR SMITH: Senator Greenstein.

SENATOR GREENSTEIN: Thank you, Chairman.

And I want to thank both of the Chairs for having this meeting; and everybody for their participation.

We certainly heard that the science is on the side of doing something about the problem. Recycling is nice, but it has to -- and it's important, but it has to take a backseat to dealing very head-on with the plastic bags problem.

I'm very pleased to be a co-prime sponsor on the Bill, and I'm sure there will be other -- lots of changes to the Bill as time goes on. But I think we have to deal with it head-on, and we cannot, sort of, come at this from the side anymore, as we've done for many years. The time is now; I think we have great support for it here, as well as out in the audience and around the state. And I look forward to seeing us move ahead on this very important issue.

Thank you.

SENATOR SMITH: Chairwoman Pinkin.

ASSEMBLYWOMAN PINKIN: I just want to thank all of our staff who put this together, and worked to come down here and work with all of you. And we'll talk about it further; I don't want to hold everybody up. But everybody is working together, and we're headed in a good direction. And I feel very positive and excited about that.

So thank you so much.

SENATOR SMITH: And on top of that, it is a blessing to be at the New Jersey Shore on a beautiful day. (laughter)

And on that note, meeting adjourned. (applause)

**(MEETING CONCLUDED)**