
Committee Meeting

of

SENATE ENVIRONMENT AND ENERGY COMMITTEE

ASSEMBLY ENVIRONMENT AND SOLID WASTE COMMITTEE

"Testimony on the recycling and disposal of plastic bags and other floatables, and their impact on New Jersey water bodies and sea life. And testimony from Dr. Michael Kennish of Rutgers University on the health of Barnegat Bay"

LOCATION: Lavallette First Aid Building
Lavallette, New Jersey

DATE: August 13, 2012
10:00 a.m.

MEMBERS OF COMMITTEES PRESENT:

Senator Bob Smith, Chair
Senator Linda R. Greenstein, Vice Chair
Senator Jim Whelan
Senator Christopher "Kip" Bateman
Senator Jennifer Beck
Assemblywoman L. Grace Spencer, Chair
Assemblyman Matthew W. Milam
Assemblyman Ruben J. Ramos Jr.
Assemblywoman Holly T. Schepisi



ALSO PRESENT:

Michael Molimock
Carrie Anne Calvo-Hahn
Amy Denholtz
Office of Legislative Services
Committee Aides

Kevil Duhon
Senate Majority
Mishael Azam
Assembly Majority
Committee Aides

Brian Alpert
Senate Republican
Thea M. Sheridan
Assembly Republican
Committee Aides

Meeting Recorded and Transcribed by
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SENATOR BOB SMITH (Chair): Welcome to the two most interesting committees in the State Legislature: the Assembly Environment Committee and the Senate Environment Committee.

I'm pleased today to co-host this with Assemblywoman Grace Spencer, who is the Chair of the Assembly Environment Committee. I chair the Senate Environment; my name is Bob Smith. We have a number of Senate members present. I'm going to introduce my members, and Grace is going to introduce her members.

Seated to my left is Senator Linda Greenstein from Monroe County, Middlesex, Mercer; we have Senator Jim Whelan from Atlantic County, and the former Mayor of Atlantic City; we have Senator Kip Bateman from Somerset County.

Assemblywoman Spencer, if you would like to introduce your members.

ASSEMBLYWOMAN L. GRACE SPENCER (Chair):
Certainly.

Good morning, all. I'm Grace Spencer and I represent the 29th Legislative District, which is Newark.

Today I have two of my members with me. I have Assemblywoman Schepisi and Assemblyman Ruben Ramos. Assemblyman Ramos represents the Hudson County area, and Assemblywoman Schepisi has the Somerset--

ASSEMBLYWOMAN SCHEPISI: Bergen.

ASSEMBLYWOMAN SPENCER: -- Bergen-- Sorry, Bergen County area.

SENATOR SMITH: Great.

We have a hearing today which is in two parts. The first part is to elucidate what we've been studying for the last three-and-a-half years: namely, the Barnegat Bay, the environmental jewel of the State of New Jersey, the generator of \$3 billion of revenue every year, and tens of thousands of jobs -- as well as one of the most beautiful places in New Jersey.

We have been monitoring the health of the Bay. In past years we've passed legislation to put forward the most stringent fertilizer law in America -- one which other states are looking at as models. We passed legislation for soil restoration after construction. We passed legislation to prioritize the state's stormwater basins being fixed around the Bay.

That being said, it's now years later and we'd like to see whether the Bay is getting better or worse. And the reason we'd like to do that is that we think there are other solutions that are needed, namely stormwater utilities which would help fund the correction of the more than 2,000 stormwater basins that are failing around the Barnegat Bay; TMDLs - - which are Total Maximum Daily Loads -- which would give the DEP new tools to regulate the pollutants that are going into the Bay; and then thirdly, collecting a vig from developers who develop around the Bay and having them pay for a part of the cleanup of the Bay.

So the first portion is a report on the health of the Bay. And we're very lucky that Dr. Michael Kennish of Rutgers University has just completed a study concerning the health of the Bay. And there's nothing like an independent, nonpartisan, expert source to tell you what's really happening.

And Chairman Spencer, with your permission, I'll ask Dr. Kennish to come forward.

ASSEMBLYWOMAN SPENCER: Certainly.

SENATOR SMITH: All right, Dr. Kennish, would you come forward? Pull up a chair in front of one of the microphones.

And he's going to tell us about the health of the Bay.

The second part of the hearing is about plastic bags and floatables. But that will happen after Dr. Kennish's report.

Dr. Kennish, maybe you could tell Assemblywoman Spencer and me what you did by way of study, and what you found.

M I C H A E L J. K E N N I S H, Ph.D.: Well, first off, I'm a member of the faculty at Rutgers and an Institute of Marine and Coastal Sciences research professor; and also I am affiliated with Ecology and Evolution at Rutgers. I--

UNIDENTIFIED MEMBER OF AUDIENCE: His mike's not on. (referring to PA microphone)

UNIDENTIFIED MEMBER OF AUDIENCE: You can't hear a word.

DR. KENNISH: Can you hear me now?

I'm a faculty member at Rutgers and I've been involved for many years in the study of Barnegat Bay and Little Egg Harbor, as well as the coastal ocean and other waters of New Jersey, and also in other states.

The particular study that you're referring to, Senator Smith, is an ongoing study at-- And my involvement started around 2004 and has been ongoing, collaboratively, with the Department of Environmental Protection, U.S. EPA, and New England Interstate Water Pollution Control

Commission, and other collaborative members -- U.S. Geological Survey. And what I have been looking at over the past number of years is what is the effect of land use, changes in population growth, and how that is interactive with response in the Bay itself in terms of, essentially, cause and effect. What is going on in terms of loading of nutrients to the Bay from human activities, and how is the Bay responding to that?

The basic problem of Barnegat Bay-Little Egg Harbor, the main fundamental problem, is nutrient over-enrichment. That's over-enrichment of nitrogen and phosphorous -- particularly nitrogen. And it's been ongoing for many years. This is not something that started a couple of years. It has its roots as far back as, probably, the 1980s, and actually was first identified two decades ago in Barnegat Bay when it was-- My colleague, Dr. Seitzinger, identified it as a moderately eutrophic estuary, meaning that it was enriched in nitrogen in particular, but phosphorous also was a problem in the fall season.

And since that time it's actually worsened. Around the late 1990s it was bumped up in classification to a highly eutrophic estuary; reconfirmed in 2007; and the studies that we've gone through, and in the report that you're referring to, indicates that the condition has probably even worsened more since that time.

The problem is that the estuary is a lagoon; it's not an open, river-dominated estuary like Delaware Bay or Chesapeake Bay. Its surface area-to-volume ratio relative to the watershed area -- we're talking about a ratio of 1:6; that means that the Bay is small. It has a small surface area and it's very shallow. It's only about 4 feet deep as an average.

So the bottom of the estuary, the sediments can accumulate pollutants very easily and are stored there as a secondary source for reentry into the water column. So what happens is that because there's not much communication with the circulation in the Bay and exchange with the ocean, pollutants that come into the coastal lagoon tend to stay there. In the summertime the water residence time is around 70 days, 75 days, depending on where you are in the estuary. And so that gives the organisms plenty of time to assimilate the pollutants and they respond by algae, for example, growing excessively. It's the same thing if you're dealing with a greenhouse or working at home and you fertilize plants -- you see what happens immediately -- the same thing in your lawns. The same exact thing goes on in the Bay. Nutrient pollutants come into the Bay from stormwater systems, from general runoff of the watershed, and it stimulates the algae to grow excessively -- at excessive rates. At that point it accumulates; when they die, they accumulate on the bottom of the Bay. You have macroalgae that are assimilating; the nutrients-- As live organisms, they build up sheets of -- masses of tissue on top of seagrass. It blocks the sun to seagrass; and seagrass then will subsequently die as well, leaving essential habitat lost in the Bay.

So there's a chain reaction. What's going on in Barnegat Bay-Little Egg Harbor is essentially tantamount to what affects-- It's sort of like a human cancer, basically. It is a breakdown of the interrelationships of an estuary ecosystem from the bottom up. It destroys the interrelationships, the connection between plants and the higher organisms in the estuary, right up to fish.

To give you an example: The algae grow uncontrollably; it changes the foundation of the estuary, also the organisms that consume algae -- the phytoplankton. The water column in this kind of environment, with shifting types of pollutants coming in and the nutrients at that level, favors types of phytoplankton or microscopic plants that the shellfish consume. It changes those types from diatoms and dinoflagellates primarily to raphidophytes and picoplankton, which are very, very tiny phytoplankton which clog the filtering apparatus of shellfish. So it gives shellfish a problem right, as well, on the bottom of the estuary. What happens is they don't feed well, they don't grow well, they have higher mortality rates, and we are seeing really drastic changes in shellfish in the estuary as a result of this. We've lost-- The last study that was done, from 1985 to 2001, in Little Egg Harbor alone we lost 67 percent of our hard clams. And it has probably worsened since that time. There was another survey done; the results will be coming out soon. The DEP is doing another survey.

But the main point is that you have multiple things going on. You had changes in the bottom-up movement of energy -- energy flow in the ecosystem. It's a breakdown of connection between organisms. The algae are very devastating on important habitats, such as seagrass. You end up with also macro- and phytoplankton blooms, which are very devastating. When those-- There is so much mass -- plant mass in the system during the warmer months of the year, because of the excess of nutrients that it builds up large masses on the bottom of the estuary, and then bacteria react to that and they will consume oxygen. So you end up with what's called hypoxia, or areas of low-dissolved oxygen in the water.

We went through that last summer. I was called in myself by the emergency room at Monmouth Medical Center. One of the doctors there contacted me because they were getting serious calls from the Brick area from people who were having problems breathing, from hydrogen sulfite coming out of the Seawood Harbor area because of excess of macroalgae blooms. When I got out there it was-- Essentially, the water was grey or black. It was horrendous. It was an extensive area of real problems. And it took about two weeks or so for a response from the Ocean County Health Department to actually rake up the algae and get it out of there. But in the meantime it caused a lot of problems for human use of the system.

This is what can happen when you have a eutrophic system like this. In different areas of the estuary you don't know exactly where it's going to happen. And it can be really detrimental even to the shoreline communities.

But getting back to the ecology of the Bay, it is a situation where, when you have this kind of growth of plant material to that level, it destroys the habitat that's important for shellfish as well. And it can go right up the food chain to fin fish and mammals that will utilize the estuary. So we're in a situation where the diversity of the estuary is also impacted by the land use changes. We have -- about 45 percent of our shoreline in Barnegat Bay is now bulkheaded. And this is mostly in the northern part of the estuary where the largest number of people are located. That also is great habitat for sea nettles, because sea nettles have a double life stage. The bell shape that everyone is concerned about being stung with is the Medusa stage, but there's a polyp stage. And the polyp stage is the stage

that they, over winter, they actually attach to a hard surface. And in the northern part of the Bay -- now that bulkheading is so well established there, and even artificial plastic types of bulkheads -- you end up with a situation which has facilitated the life stages of the sea nettle. So it's a very-- It's become very prolific in the northern part of the estuary, which has created all sorts of problems in terms of human use, in swimming.

So it's essentially-- The northern Bay is essentially a very impaired portion -- segment of Barnegat Bay. It corresponds to the area that is most heavily developed; the largest number of people in Ocean County exist in that area. And so it should come as no surprise we're having all sorts of problems with the northern segment.

So if there's going to be resolution to the issue of dealing with eutrophication problems, it's going to have to be by targeting the area where the greatest source is, and that's in the northern system from-- I would say from actually Lacey northward, but certainly from Toms River all the way up to Bay Head -- that whole area is heavily impacted, degraded, impaired. And what we found in our study recently is that that actual impairment -- that degradation -- is extended now southward through the entire system all the way to Tuckerton. The mathematical, analytical approach we used indicates that between the 1990s and now, on a 0 to 100 basis, where 100 is an excellent environment, we've lost about 35 percent off of that score in the area of the central and southern part of the estuary.

So the degradation is moving southward and it's impacting, really, the entire estuary. This is not an isolated situation. It's a situation where it's getting worse and it's estuary-wide; it's what I consider to be -- and I've indicated this before -- an insidious ecological decline. That's

probably the best way I can state it: insidious ecological decline. It's continuing to decline. And last year the total amount-- If you go back and look at the amount of loading from the watershed, which is essentially Ocean County, that is the highest amount of surface nitrogen loading -- surface nutrient loading from the watershed -- was in 2011 relative to-- If you go back 21 years, we had the highest amount coming in last year. That was a wet year -- and so the amount of nutrients that come in from the Ocean County surface really depends a lot on how much precipitation is occurring. When you have high precipitation years there is more transit of the nutrients off the watershed into the Bay.

But that doesn't really-- Some folks are saying to me, "Well, it's a dry year -- let's hope for a dry year." But that doesn't really solve the problem because there are many more times the nutrient concentration in the sediments of the Bay, which store the nutrients and other pollutants-- And so what happens is that when there's a storm or a bioturbation by organisms, worms, and so on, the ammonium that's built up -- there's a lot of ammonium that's built up in the estuary. When you decompose-- When bacteria decompose algae -- and there's a lot of algae in the Bay -- one of the byproducts of that process is ammonium, which is a major inorganic nitrogen source for plants.

So the Bay is generating, secondarily, a lot of the pollutants itself. It's not that it would be doing that; it wouldn't be doing that but it has the source of this built into it. And so it recycles that ammonium back to the water column. So even if you're not really-- So you can be measuring water column nitrogen levels, for example, and coming up with very low scores, or what's coming in the creeks and so on, and it really

doesn't really matter -- you really have to be in the Bay and looking, and observing, and sampling the organisms as we have done. We've done a very intense, comprehensive sampling from 2004 until now -- very intense sampling in the seagrass beds and algae, and there are still some things we have to do.

But the point of the matter is that it's a very complex system, and it's clear that there is no question that the nitrogen and phosphorous coming from land use changes in the watershed -- the primary driver or stressor of change in the estuary-- The problem there is that the engineering controls were never put in place that would be commensurate with what was needed to control that input.

SENATOR SMITH: What do you mean by engineering controls?

DR. KENNISH: I'm talking about stormwater basins that were-- We have a total of 2,700 stormwater basins that were monitored or measured or identified by Rutgers in the Environmental Science Department; one of my colleagues has actually identified where these are. And really, we only have now the 10 being targeted for restoration. They were never really maintained. Stormwater basins essentially are like a bowl -- construction of a bowl around a developed area. And when it rains heavily or rains, it's designed to capture the stormwater into this bowl; and the bowl should be maintained with natural vegetation so that the nutrients will infiltrate into the ground, and the plants will pick it up and assimilate that so it won't go out into the waterways that affect the Bay.

SENATOR SMITH: Let me ask you the question: The scene in *The Christmas Carol* where Scrooge is talking to the ghost of Christmas

future. What happens if these shadows don't change? What happens if we don't take care of those 2,700 basins?

DR. KENNISH: Well, I don't know if you can do 2,700 basins. There are a lot of costs involved. I'm not an engineer for that stat. I do say one thing: I've gone through and calculated this, as late as this weekend. And we have only about a half of-- Less than a half of 1 percent of the basins are being targeted now for restoration. And it will take some time to restore those as well.

So really it's a demonstration project, basically; that's what I see it as.

SENATOR SMITH: What happens if we don't--

DR. KENNISH: And what happens--

SENATOR SMITH: --take care of this Bay? Where does it go?

DR. KENNISH: Well, I have-- Okay, I'm going to give you a model of it.

I have a colleague at the University of -- Florida State University who had a similar situation going on. He was 45 years into a study down there -- Perdido Bay and tributaries leading to Perdido Bay. It got so inflammatory down there with nutrient over-enrichment that there were sections of the system where it became *azoic* -- which means it had no life in it other than bacteria. And they actually had to restore-- They actually had-- In that case, they had a problem with point source pollution. We have a problem with non-point pollution, which is even more difficult to deal with. But they were able to do something with that. They went after pulp mill sources, and so on, and the pulp mill companies were willing

to help out. And they actually improved it, and the ecology began to restore and it was improved a great deal.

But it can get worse than it is, for certain. Because we're not really at zero points; I mean we're at a point where, in the northern segment, it's heavily degraded. It's been heavily degraded-- That's been heavily degraded since-- In all honesty, it started back in the 1990s in the northern segment; it was just never really identified. We're going back-- We hindcasted almost 75,000 observations of data of the last 20 years. We collected all the data we could get our hands on and analyzed it analytically using multivarious statistics and all sorts of difficult things. But I'm letting you know that this is not a simple thing and it's very comprehensive and detailed. And we think we have it really nailed down.

And the problem is that-- The situation is that it's getting worse in the central-- It's moving in the central and southern sectors as well. It's really a situation, in my way of looking at it, you have to deal with it two ways: You have to deal with improved engineering, and someone has to get a handle on the development and the population growth. And I have, in the document I just sent out that you all have copies of -- you can see that we went from 107,000 people in 1960 to almost 600,000 people now in Ocean County. It's almost six times. And I went back to 1980; between 1980 and 2010 that population grew in that period of time more than 65 percent in Ocean County. And the problem is, is if you can handle that in a way of managing the most upgraded measures of engineering controls for that, maybe it could have offset some of that. But things were done and they weren't maintained. It's obvious they weren't maintained

because, you know, you have 2,700 stormwater basins and now they're going and retrofitting and trying to backfit to deal with that.

But I think-- Again, I'm looking at it as a scientist. And my observations indicate that the Bay's carrying capacity for nutrient enrichment was probably exceeded back in the 1980s. This is a 25-year or even longer situation that-- This Bay is a lagoon; it's not a big, large estuary where there is a lot of flushing, it's wide open like Delaware Bay. Actually, Delaware Bay gets more nutrients than Barnegat Bay but it's wide open. You don't have the kind of eutrophication going on. It's also deeper.

So this system can't handle the kind of conditions that are existing now in Ocean County and will not be able to maintain that unless you have -- you get some control somehow in the planning of population growth, and engineering, and land use. Population growth and land use -- I put those as the two biggest problems for the estuary. And it goes right back there-- Everything you see in the action plans, everything that you see that we've been talking about for years is all a subset of that. That is number one; that's the cause of all this stuff. And also we have atmospheric fallout, so it's not just New Jersey -- we do have a certain amount coming from the atmosphere that doesn't help either.

But the problem is that the land-use effects in the watershed -- the changing-- The removal of soil, the compaction of soil, the impervious cover -- we're now more than 10 percent impervious cover in Ocean County. By that I mean, once you go over 10 percent you have gone through a watershed threshold, which is environment degradation or water quality degradation. It's a statistical thing; we know that. When you're going on above 10 percent impervious cover -- I mean, it's the hardened

surface like roadways and houses and so on -- we're above 10 percent. And that's actually conservative. Because what happened was when you built out-- The way they built out homes and so on in the past is they compacted soil. And they have lawns, but you don't really know that a lot of that doesn't infiltrate, it's so hard. And we've had soil people go out and measure that.

So even though classifying that -- by looking aerially at the area of Ocean County -- that you're classifying that as not impervious, a lot of those surfaces are, for all practical purposes, impervious. And they're washing-- It rains, they put fertilizer on the lawns, and it washes out laterally rather than infiltrating. So even our land surface that appears to be not impervious is, in fact, impervious in practice. So it's more than, probably, about 10 percent that I'm talking about.

And the Bay-- By nature of its structure, people have to understand-- They are scratching their heads about this, but this is a lagoon. It is a little water body. And it can't handle that kind of input of nutrient -- that level of-- Again, you know, if you look at the population, at the time I'm talking about when this occurred, when this began to go past a tipping point of a problem, our population was about 370,000 people; we're now at 576,000-plus. And I don't know what-- I'm not a planner. I mean, I'm not a planner, so someone has to-- There is a component in the Governor's 10-point action plan -- the Special Area Management Plan -- which really needs to be targeted, quite honestly, because that's the only one of the 10 points that deals with what I'm talking about -- the planning. And I think they've only had one meeting since the action plan was actually set up. And, again, I don't understand what this is all about. All I know is

that that's not going to cut it for issues dealing with the source of the problem.

And the stormwater controls, the basins, are the second thing; and the TMDL is an absolutely critical element. Somebody has to get a grip on this and do the TMDL because--

SENATOR SMITH: Your comments are right on. You know what? I think you've stimulated a lot of interest from our members, so let me turn it over to Chairwoman Spencer so that she can get her members to ask questions, and then we'll try on the Senate side.

DR. KENNISH: Sure.

ASSEMBLYWOMAN SPENCER: Certainly.

Are there any questions?

Assemblywoman Schepisi.

ASSEMBLYWOMAN SCHEPISI: Other than with respect to the storm basins and the management of them, what other proactive steps -- other than just planning -- can we do to help alleviate this issue?

DR. KENNISH: Well, I mean, they've already put in place some very positive steps. And I want to-- I'm not here to criticize the Governor and DEP or EPA, and someone may have made a commitment to do something positive here with the 10-point plan and with the fertilizer bill; Senator Smith and Assemblyman Kean and the soil restoration bill -- these are really positive steps. And the problem is, from my perspective, we have to really ramp this up. We're nowhere near where we need to be to fix this. And I think people think that when they put this on paper -- you put this on paper as a plan, it all looks good. And it does look good, but you really have to do-- You're not going to cut it if you're going to do less than

1 percent -- less than a half of a percent of the stormwater basins are targeted for restoration. That's not going to make it when you have the maximum amount of nutrients or nitrogen coming in, in 2011, that we've seen in 21 years. So whatever's going on right now is obviously not working. So we have to do something to correct that.

And what needs to be done? Some of these again: controlling the sources of the pollution. There has to be controlling the source of the pollution -- the fertilizers, the soil restoration, everything that has to go in. I think that from here on in the idea is that they have things in hand about how you have to restore it from this point on. The problem is: Well, what about the damage that's been done from the land-use side for so many years? It's sort of like, so much damage that's been done and it's sitting there, and no one's really getting a handle on how to fix that.

You would really need to make some physical changes and take what's been done in terms of the altered land surface and do something that would intercept or-- The idea of a soil restoration was to do some of that; you know, make it so that when it rains the soil is able to accept it and it can infiltrate, and so on. But, obviously, there are so many other things going on with impervious surfaces and the way it's going-- Look, 60 percent of the-- I'll give you an example: More than 60 percent of the nutrients coming into Barnegat Bay are coming out of Toms River and the Metedeconk system -- those basins; more than 60 percent. So we know that this is where we have to target. We have to fix the northern part of the watershed. And I really don't see the changes that are coming, and at the rate that needs to be done in order to turn this around.

And you know, the Bay is an excellent-- It manifests things really well.

ASSEMBLYWOMAN SPENCER: And certainly this is one situation where we need to go back and change the past. Oftentimes, we hear the comment, "You can't change the past; you can only do better going forward." But this is one situation where we really need to go back and look at what was done in the past and make the changes that are necessary so that we do have a future.

Are there any other questions?

ASSEMBLYMAN RAMOS: I just want to follow up with the point you made about the land use.

In terms of going forward, is this something legislatively at the State level or municipal level -- because you have multiple municipalities along the Barnegat Bay--

DR. KENNISH: This is really a difficult thing.

ASSEMBLYMAN RAMOS: --and they all need to work together to try and alleviate the situation.

DR. KENNISH: Yes, this is something-- This is not my area of expertise, obviously. I'm here to report on the science, but it seems to me that this is a County issue, a local issue, and I'm not sure how much the State can really do what it can. I'm not an expert in this area. But all I can tell you is that's the solution to the problem, in that we really need to-- If you're going to-- As goes the land use and development and population growth in Ocean County, will go Barnegat Bay. And that's it. If you don't get a grip on population growth and the rate of land use change, it's going

to be like this and it's probably going to continue to decline. And you'll see it-- I think you'll actually see it in the resource end of it.

Rutgers is now doing a study on fin fish populations, and surveys this year -- this summer. And I'm very interested to see that. I've actually looked at the data that's been accrued by the power plant; because of the way it operates, it's a good sampler of fish on the intake screens. And the populations there-- Eleven out of 13 populations over a period of 20 years showed significant decline in abundance.

I've talked to fin fish fisherman -- recreational fisherman -- who have indicated to me that, point blank, they just say, "Mike, I'm telling you, it's much worse than it was." Now, that's anecdotal information. I'm interested in their actual surveys at Rutgers that will come through.

But this stuff is-- As I mentioned, it's a very-- It's one of the worst things you could do to an estuary because even if you do chemical pollution -- a toxic pollutant -- that's limited in area. But this is a system-- This is a danger because it's there to impact the entire estuary; it affects the entire ecosystem and it really breaks down the links between the biological organization of the estuary. So it's really like a cancer to an estuary and a system. And it affects the processes, too. It affects photosynthesis, it affects respiration, it affects bacterial activity, and it generates a lot of sulfide and toxic chemicals in the substrate in the sediments -- that's where we're going toward now at Rutgers. I'm going to be doing that: looking at the sulfide concentrations in the sediments in the estuary, because we think with all this going on that the sulfide buildup in the sediments is toxic to the seagrass as well as the animal populations -- that's another thing.

ASSEMBLYWOMAN SPENCER: Now, in addition to that, you made a comment, or reference to an area in Florida where people-- They were talking about the area basically being dead -- the area being black and just dead. It was actually here in Ocean County -- it took a couple of weeks for them to come and rake out the algae.

DR. KENNISH: (Indiscernible)

ASSEMBLYWOMAN SPENCER: (Indiscernible)

DR. KENNISH: Okay.

ASSEMBLYWOMAN SPENCER: Now, my question to you: The worst case scenario, going forward, 20 years from now, if nothing in an aggressive way is done to address these stormwater basins, are we looking at a dead bay?

DR. KENNISH: Well, I would say it's going to get worse. I don't know whether it would be dead; that's a--

ASSEMBLYWOMAN SPENCER: Is it very--

DR. KENNISH: I'm really putting me out there in terms of a crystal ball.

ASSEMBLYWOMAN SPENCER: It's a serious term to use, but--

DR. KENNISH: But it would certainly be getting-- It would continue on a pathway of its insidious decline. Instead of a rating of 47 percent, we'd be looking, probably, to dropping another 20 percent or something for the northern segment and-- Well, the northern segment, actually, is already lower than that, but the other segments would be-- You'd have this drop in the evaluation of the overall-- When we're talking about evaluation, it's not just one little thing; we're talking about 20

indicators; 85 variables or parameters. So we looked at, really, the entire gamut of things that we had to look at to really assess eutrophication the way it had to be done.

ASSEMBLYWOMAN SPENCER: Okay. Now--

DR. KENNISH: I wanted to mention one final thing, which is really important -- this is really important. The way the estuary is impaired, the way it's determined to be impaired is not accurate; it's flawed. The State-- And again, I don't want to come across that I'm attacking government agencies; I'm interested in doing what's right. That's all I'm interested in. And I'm letting you know that for a fact. I'm only interested in facts.

ASSEMBLYWOMAN SPENCER: So how should it be evaluated?

DR. KENNISH: Well, the way it's being done in terms of assessing impairment is done on one indicator: that's dissolved oxygen. For a coastal lagoon you cannot do that. A coastal lagoon-- You can have a situation where oxygen is high or low -- sometimes it can be relatively high but the thing is very well damaged, like Barnegat Bay.

ASSEMBLYWOMAN SPENCER: Now, in your report you indicated that there is no nutrient criterion that was established. Is this something that DEP should be doing? You know, where do we go to, or who do we go to as far as establishing that criteria? Because from what I'm hearing from you, that's something that should be considered in the evaluation of the overall--

DR. KENNISH: Well, yes, I think it's absolutely critical. Because if you don't do that then there-- Steps are not being done to move

towards having a criterion established. You have to first establish a nutrient-- Let's take nitrogen. You have to have a nitrogen level or standard that is the standard that would be -- that you would judge pollutants, where you can establish a TMDL against. That does not exist in New Jersey for estuaries. We do not have a nitrogen standard that you can then go and have a TMDL developed for. And we really have to go there.

Now, part of the study that we did was to generate databases that would be able to get to the area of nutrient loading criteria. Because we are looking at how much-- USGS did this; they were looking at how much nitrogen is coming as loading in from the watershed. And so we have databases that are available now that tell us something about what the magnitude of that loading is; and those databases can be used, hopefully, to develop a nutrient loading criteria -- a criterion, I guess -- and then from that point you can establish a standard. So that's where we were really hoping that that's what can be done from this study that's just been completed.

So that's a good question. I mean, it's a very, very important question because that's how we have to go. We have to do this, we have to do a TMDL for this system because if you're not-- By the time we get to the point of effecting change in land use, it's going to take time to make these changes, engineering-wise.

ASSEMBLYWOMAN SPENCER: Right.

DR. KENNISH: We really have to go to the chemical side and try and control that level. Because you don't want it to go above a certain level of nitrogen and then it's going to continue.

ASSEMBLYWOMAN SPENCER: Okay.

DR. KENNISH: I mentioned about the thresholds and so on -- the tipping point. I'm saying that the tipping point for this Bay was probably back in the 1980s, and I think the levels really-- We're talking about a loading that's coming in that's on the order -- 685,000; excuse me -- 985,600 pounds to almost 2 million pounds, depending on the year -- the flow year and so on. But if you go back into the mid-1980s when there were maybe a little less -- a little more than half of the number of people who are here now, you'd go backtrack on some of this load, you can see that the tipping point, or what triggers the problem is relatively low -- relative to what it is now. And I think it's like-- I think it's really a situation where-- My observation of seagrass and other organisms of when this thing begins to happen is really early in the season; I'm talking about when it starts is in June. It's already going downhill, soon after the shoots even come out of the sediment, for seagrass.

ASSEMBLYWOMAN SPENCER: Okay. Before we--

DR. KENNISH: So that indicates to me that we're above that threshold right away and that they're going to have to take that number and have a number of loading, for example, for this starting at-- Using a TMDL that would be starting at that 900,000-pound level as a maximum, or even lower, and then keep going down from there until you get to a point where the Bay comes back.

ASSEMBLYWOMAN SPENCER: And certainly I just want to announce, or recognize, Assemblyman Matt Milam, who is from Cape May County, who has joined us.

Matt, did you have any questions, or do you want to hold your questions until we've finished?

ASSEMBLYMAN MILAM: No, go ahead and finish. I'm going to just catch up real quick.

ASSEMBLYWOMAN SPENCER: Certainly.

ASSEMBLYMAN MILAM: And I apologize for my lateness.

ASSEMBLYWOMAN SPENCER: No problem.

And one last question from me: You indicated that there are 10 basins that are currently in a pilot program for restoration. Where are they situated? Are they in the northern part of the Bay or in the south?

DR. KENNISH: I think they're mostly in the northern part.

ASSEMBLYWOMAN SPENCER: Okay.

DR. KENNISH: There is clear evidence of that; people know what they have to do. It's just that I think that people are so frustrated. There's a real money-- Well, I hate to talk about money.

ASSEMBLYWOMAN SPENCER: We all understand the money problems.

DR. KENNISH: But it is an economic basis behind all of these things. This is really a difficult thing because there is so much-- So many resources have to go into this.

ASSEMBLYWOMAN SPENCER: Right.

DR. KENNISH: And it's also a painful thing for people in the County or local area to deal with, because you have to make changes in a lifestyle and also in, almost, a society of how you deal with it.

ASSEMBLYWOMAN SPENCER: And I'm sure it's a disruption of the community, and issues, and everything else. But I'm glad that you're able to bring us that information and certainly, as we move forward, there are things that we're going to continue to look at as far as

how to evaluate the effectiveness of these catch basins and they being restored or repaired or retrofitted. Because you indicated that there are 2,700 of them and 10-- Like you said, less than half of 1 percent of the 2,700? Certainly, we need to do more in order to preserve this Bay.

Assemblyman -- I'm sorry -- Senator Smith.

SENATOR SMITH: Thank you, Chair.

I had a couple of questions. But before I mention my questions, I want to recognize the presence of Senator Jennifer Beck from Monmouth County, and I'm sure she may have some questions, too.

But a couple of quick ones generated by your comments and the Assembly members' comments. The stormwater basin issue -- which is a big part of this problem -- the basic problem is having money and political will to deal with it -- to tackle it. One of the pieces of legislation that we passed last year -- which was vetoed -- was to establish stormwater utilities. Stormwater utilities are being used in 13 states in the United States of America to generate the money to repair or build stormwater basins. And they usually require that anybody who has a large, impervious surface -- like a shopping center, an office park -- that every year they contribute a vig -- some money -- to the stormwater utility so they can then repair or retrofit or build new basins.

If we don't do that, the other alternative for Ocean County is for the leaders of Ocean County to decide that they want to spend more of their capital program on stormwater basins. Either way there is no free lunch. If we want to solve the problem -- or one of the major problems with the Barnegat Bay, we have to devote the resources necessary to do it. So last year we passed the stormwater utility bill and we have a stormwater

utility bill back in the hopper this year. And we're hoping with the information that people like yourself are presenting that the leaders of Ocean County will see that this could be a mechanism for them to solve their problem in Barnegat Bay. But if they're not going to do that, if they're going to continue to recommend that it not be signed by the Governor, then the flipside of that is that the leaders of Ocean County have to devote more of their capital improvement plan toward cleaning up these basins. Those are your choices. You have a binary choice if you want to start cleaning up this Bay. And the answer always is money. There is no free lunch when you need to solve these problems, all right?

You mentioned the data that you've accumulated. Are you at the point where there is enough data on the Barnegat Bay to declare portions of it, or all of it, as impaired? And that has a big legal significance for everybody in the audience.

DR. KENNISH: Well, the situation-- And I want to touch again on where I was mentioning about the problem of how you declare it impaired. It's declared on one criterion; that criterion is dissolved oxygen. And that is-- The way it's collected-- The way-- There are two problems with that. It's not valid, okay? It's not valid. The DO is collected, and graph samples are collected every quarter. That's every three months the water samples are collected at something like 45, 50 sites at stations around the Bay. You could collect dissolved oxygen water samples for DO measurements-- Even if you do it every month, every two weeks, or even every day, if you are only taking one measurement, the frequency is not enough.

The problem with DO is that it is so variable. Statistically, it is not valid to even have one measurement a day, because it is the variation due to light variation, temperature, respiration, and photosynthesis over a 24-hour period -- there is such a flux there that you would have to have at least three measurements a day and you would have to have someone taking the water sample in the dark between 2:00 and 5:00 a.m. every single day, plus two other times during the day. And that would have to be before 9:00 a.m., because that's the time when you would expect the most conservative measurement -- the lowest level. And that's what you have to do. That was never done; that was not done.

SENATOR SMITH: Let me accept the premise that DO is an inadequate measure, all right? Is there enough flexibility in Federal law and State law where, with the other evidence that you have, that there would still be enough information to declare that there is an impairment of the Bay?

DR. KENNISH: Well, certainly by the narrative standard. There is a narrative standard that is set. And if you read through that, and it is quoted in that document that I distributed today -- which clearly the Bay is in violation of that.

SENATOR SMITH: Okay.

DR. KENNISH: Absolutely, 100 percent, I would go in front of a court and tell you that -- that the Bay is way beyond that standard of impairment.

SENATOR SMITH: Okay.

DR. KENNISH: But the problem isn't that. The problem is, is it legally binding? That is the question. That gets back to the DO thing, and the DO thing has no -- in my opinion -- no sound--

SENATOR SMITH: We accept that.

DR. KENNISH: --scientific basis.

SENATOR SMITH: We accept that. You don't have to--

DR. KENNISH: I can get more into that.

SENATOR SMITH: No, we accept that. (laughter)

We can accept that DO doesn't work. But for the members of the audience, the reason that the declaration of impairment is so important is that that puts you in a position legally for our State Department of Environmental Protection to impose Total Maximum Daily Loads on any discharge source into the Bay. That gives them the legal authority to start constricting the pipes, to start reducing the pollution and the nutrients at the source.

Last year we passed a bill to require that it be done by a certain time period; it was conditionally vetoed for further study. We hope to pass that bill again this year. And again, we hope, through the efforts of you and people like yourself, we can get the leaders of Ocean County and our State government to agree to go forward with TMDLs so that we can again start to get a handle on future pollution. If we can get the future pollution under control, and get money and resources to take care of the past pollution--

DR. KENNISH: Yes, I think that's the way you have to go.

SENATOR SMITH: --we could get this Bay back.

DR. KENNISH: I think that's what we have to do.

SENATOR SMITH: Mother Nature does work--

DR. KENNISH: I think that's what you have to do.

SENATOR SMITH: --if you give her a chance.

DR. KENNISH: I think that the change-- The expectation for change and land use -- and it's going to be a delay. It's going to be--

SENATOR SMITH: It takes time.

DR. KENNISH: --behind the curve, no matter what you do. It's going to have to be dealing with the TMD-- I'm trying to get the current levels under control.

But I want to-- To the benefit of the EPA and so on -- DEP -- they are going in the right direction in terms of how they are measuring the DO. To use automated data loggers, which are constant recorders in a moored location, and they record-- You can program them to record even every 5 minutes if you want. It goes all-- It records all the time, 24 hours a day. And they're moving in that direction. You need that. If you want to do DO as your criterion, that's what you have to have. But you also need a lot more than they have right now. They only have five. They only have one in Little Egg Harbor, three in the center of the Bay, and two in northern bay.

And the reason why it was declared impaired, by the way, the reason why Barnegat Bay was declared impaired in the northern sector was because of those two data loggers which they put in a few years ago that showed the level of being low. It wasn't due to the hand sampling.

So you really need to have the data loggers recording all the time. And you're going to need to have, in my opinion, for statistical reasons, a minimum of 10 in each sector. Not where they are; there are five

in the entire Bay right now. They're going to need a minimum of 10 in each sector and going all the time.

SENATOR SMITH: Good.

Questions from Senators? Would anyone like--

Senator Bateman, I think you had your hand up.

SENATOR BATEMAN: Ladies before gentlemen.

SENATOR SMITH: Okay. Senator Greenstein. We're easy.

SENATOR LINDA R. GREENSTEIN (Vice Chair): Thank you very much for all the information.

Two questions: You mentioned Florida, but are there any other locations where the situation has gotten as bad as we see here in Barnegat Bay?

DR. KENNISH: Oh, yes. This is not just something endemic to New Jersey. The coastal lagoons-- As I mentioned, the problem with the lagoon -- the profile of the lagoon -- that's where we see the most damaged systems related to eutrophication. If you go in the mid-Atlantic area like inland Delaware coastal bays, Chincoteague Bay in Maryland, the northern part where they have chicken farms -- they have a different situation there. Chicken farms are the problem there. They have a real problem in eutrophication in that northern part just like Barnegat Bay. It looks just like Barnegat Bay, and the northern part is messed up just like Barnegat Bay.

And the lagoons-- The mid-Atlantic is an area where, more so than any other area of the country -- and it gets back to the level of population and altered land use and all of those things. So we have-- There

are studies done by NOAA that indicate that 70, 75 percent of the coastal lagoons in the country really have some level of eutrophication in them.

SENATOR GREENSTEIN: So it's fairly widespread?

DR. KENNISH: Although Barnegat Bay is one of the worst.

SENATOR GREENSTEIN: One of the worst.

DR. KENNISH: It's really up there in terms of-- It's up in the top -- certainly the top quartile or even higher.

SENATOR GREENSTEIN: Are any of those places using any methods that we can learn from? Because money, I'm sure, is a problem everywhere. Is there something going on in other places; are they doing it at a certain rate?

DR. KENNISH: Well, they do-- I mean, they set up-- In Maryland for example, they set up standards -- water quality standards like chlorophyll-a, and they set up standards that they had to meet. And so they are ahead. But they were ahead for some time because they were more aggressive in monitoring. They have many, many more data loggers that I just mentioned. They're very aggressive there. They had more resources put in. Maryland was ahead of us -- that's the best way I can say it. And so they are ahead of us, too, in terms of setting these kinds of standards that we just discussed, and they have to meet them. And, in fact, their seagrass beds were shown to improve over a period of time because of this. They actually had a much better foundation of data that was collected through the universities there, funded through the state. And so they had all the data in place so they could record what the benchmarks were. And they knew when things were getting better.

In New Jersey we did not do that well, unfortunately. We just did not do it well.

SENATOR GREENSTEIN: I realize money is a very subjective concept -- I mean, whether you say we're spending a lot or a little -- but based on what you know about how tight we are, at least right now in terms of funding for this sort of thing, do you have hope that we should be able to have enough funding to do what needs to be done? Are you hopeful?

DR. KENNISH: I'm hopeful, but I'm skeptical, I think; I guess that's the word. Because these times are very difficult, obviously. I'm a scientist and I really-- It puts me in a funny place to try to answer that.

SENATOR GREENSTEIN: I realize it's subjective.

DR. KENNISH: But I-- It's going to be really difficult, and I think when we're going to the route of the basin -- fixing the basins, and doing infrastructure and land use kinds of modifications, you're really looking at serious dollars there. So I really think you have to-- I think you have to do that. I'm not saying that, but you've really got to-- The TMDL route has to be, in my opinion, the number one thing to target; and maybe stormwater authorities and that whole area, to try to get a handle from the engineering side to get this under control. It's sort of like you have to jump on trying to get the symptoms under control, but at the same time someone has to-- The long-term solution to the Bay has to be looking at this business of population and land-use rate change. And someone has to get a grip on this or, long term, we're going to be sitting here every year talking about this.

SENATOR GREENSTEIN: Okay. Thank you.

SENATOR SMITH: Senator Bateman.

SENATOR BATEMAN: Thank you, Mr. Chairman.

Thank you very much. Very interesting.

Did your study look at what, if any impact, Oyster Creek has on the water quality?

DR. KENNISH: Well, this one was really targeting the eutrophication problem because it was specific to that. It was one of those things that was really the mandate and really needed to be done. Because that's the one that's probably the most -- has the farthest reaching effect, as affecting the entire ecosystem. That doesn't mean that the Oyster Creek power plant is not impacting, because it's been going since 1969 and you have a long history of impingement in thermal discharge effects of the power plant. And that is different from-- Let me just say something about that, and I hate to-- This is going to make it sound-- It may be difficult for some people-- That the power plant behaves as a predator. And I don't make this into some-- What it is, it really-- It crops or removes eggs and larvae of fish, and shellfish, and invertebrates. So its effect--- And also phytoplankton. But phytoplankton we have a less of a concern about, because phytoplankton regenerates itself. Its generation time -- in science we call it generation time -- is-- It regenerates so fast so you can impact that and it comes back very fast.

But when you're dealing with fish -- fish larvae that are -- blue fish larvae, and so on like that -- you can really cause an effect on your class strength in a central bay. And, unfortunately, it was never studied appropriately. And let me say that what happened was they would do impingement and entrainment studies -- that's where the power plant draws in water to cool condensers. And the volume of water goes through screens,

and it goes into the plant and the condensers -- right into the condensers that cool condensers. And there's such a pressure and temperature change that these organisms can't survive -- or not many of them survive. Some do, but most of them don't. And there are screens back there -- three-eighths-inch mesh screens -- that keep garbage out of the condensers. They trap fish in the adult stages on there. And that's nothing to sniff at either because there is a lot of that going on.

So you look at the numbers, we're talking like 10^{12} , 10^{13} of eggs and larvae being lost by this process. And the number of adults is significant for blue crabs and so on during the course of the year. That can possibly affect the adult population. So if you're-- It's sort of like taking a human population and removing eggs or infants away from the adult population. Eventually it could affect how many are adults at some point.

And so the problem was, though -- it's a science problem. They were mandated to take samples at the power plant for impingement and entrainment thermal effects. But really, thermal was thought to be the most important thing back 40 years ago, but that's not turned out to be the case. It's this other thing of losing eggs and larvae, as it turns out, is the most serious problem.

But when they were sampling for that, periodically, there were no real sampling surveys done in the Bay -- except going way back to, like 1975 to 1977 when they were required to do studies so that they could get an operating license -- I mean a long-term operating license. So they were mandated by EPA and so on to do that -- and the Clean Water Act. And that was the only time it was really done, when they took samples-- And that's what you have to do. If you want to look at power plant impact, you

have to sample at the power plant but also survey in the Bay, too. Then you can compare changes here with changes here. But since then that wasn't done. They've only periodically looked at mortality at the power plant, but not looked at what's going on in the Bay. So we don't really know what the communities are responding-- That was a long time ago -- 35 years ago. We don't know exactly what is-- And since fin fish surveys were not done in the Bay for, like, 40 years -- Kent Marcellus, I think, was the last one, way back in 1972, doing real detailed fish-- The southern Bay they've done some, through Ken Abel, but the situation is they-- Again, it's really a problem with the power plant in the sense that the data is not good in terms of comparing what that effect is on the communities of organisms in the Bay. But it's certainly an impact; that's certainly an impact of some nature -- some amount.

SENATOR BATEMAN: Thank you.

SENATOR SMITH: Senator Beck, do you have any questions?

SENATOR BECK: Not at the moment.

SENATOR SMITH: Okay.

SENATOR WHELAN: Mr. Chairman?

SENATOR SMITH: Yes, sir. Senator Whelan.

SENATOR WHELAN: I realize time moves on, and we want to get to the other part of the hearing.

SENATOR SMITH: No problem.

SENATOR WHELAN: So I'm going to-- And I really appreciate you being here and the work you're doing. We all do -- not just those of us in the Legislature, but the public as well.

But I'm going to try to boil this down, and ask you to be brief in your answer, because that's when it registers with me, anyway. If there were one, two, or three things we could do-- I think what I hear you saying is we need to control growth, we need to -- stormwater runoff mitigation-- Are they two -- the top two things that we should be doing? And is there another, or are there others?

DR. KENNISH: Well, the TMDL is clearly a very high priority.

You're correct, and those two are certainly important. There's also a fourth thing which goes beyond this group, I think, is there's an atmospheric component that has to do with just general burning of fossil fuels, automobile emissions. There are nutrients coming out of that. And, you know, about-- I'll give you an example: Maybe 20 percent -- 22 percent of the nitrogen that comes into the estuary comes from atmospheric fallout right on to the surface of the estuary. So it's not-- It is an important part, but by far the watershed is the largest problem with that.

The problem is the atmosphere dumps nutrients onto the surface of Ocean County, too, but the surface is transmitting that load very easily. So the only answer-- The answer to the atmospheric part is Federal controls or whatever -- I don't know what kind of State controls you have in terms of dealing with atmospheric emissions, and coal fire plants, and that kind of thing.

So that has to be looked at as well. But that's a problem that's going to face all the coastal waters. They are facing that problem now, I mean, with fossil fuels combustion -- whether it's an automobile or coal fire plant or oil fire plant. So some of it has to-- That's the other thing. That's

another point. But I think for us, the ones that you mentioned are absolutely the highest priority -- dealing with the source of it, the population growth, and development, and land use, and TMDL -- our control of setting a standard for nitrogen and phosphorous for the coastal areas. And also stormwater. I mean, there is no question. How else can you do it? I mean that's really, kind of like, where it has to go. If you don't have pulses-- It's clearly evident that if you look at the data, that the pulsation of nutrients coming into the estuary after a rainfall-- I mean, there's no question that there is this effect of alteration of the -- as a conduit for the input of nutrients to the estuary. So it's the altered land surfaces playing a big role there.

Again, it's the-- At 66 percent, you know, two-thirds of it is a watershed issue. Actually, it's more than that, because you have to throw in another 12 for groundwater coming from the county.

So you were talking about more than 75, 78 percent or so is really all about watershed.

SENATOR WHELAN: Thank you, Mr. Chairman. Thank you.

SENATOR SMITH: Thank you, Senator, thank you.

Dr. Kennish, I can't tell you how much Assemblywoman Spencer, the Assembly Environment Committee, and the Senate Committee appreciates your good work and the study that you've just completed. We hope to hear more from you in the future. We also hope that we can do more about trying to clean up the Barnegat Bay.

But thank you for time and participation today.

And with Chairwoman Spencer's permission, we're going to go on to the second topic for today, which is plastic bags, floatables, recycling plastic bags, banning plastic bags, regulating them one way or another, what the impact on sea life is, etc.

We have six witnesses who have signed up.

Chair Spencer, if you would like, call our first witness.

(applause)

ASSEMBLYWOMAN SPENCER: Certainly.

Remember, if you would like to offer any kind of testimony or information with regard to this issue, there is a form that you must fill out. Please fill it out and an aide will collect it. Okay?

First up we're going to have Jeff Tittel, from the Sierra Club.

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

ASSEMBLYWOMAN SPENCER: Thank you.

MR. TITTEL: It's one of the first times where I think I feel honored in following someone at a Committee hearing.

I think Dr. Kennish has done such great work and has also -- and I will say this here at the Committee, because Mike is such a great person -- he's also been under a lot of pressure to not do the kind of work that he's been doing. And I think that he deserves more credit than anyone because he has stood up for science. And I think he proves the definition of science. And under the Greek, *sciencia* means true knowledge. And I think from his report you get to see a clearer path for not only folks like myself who are activists, but also people who are in leadership who can make that difference.

And I just want to mention that it's not just financial issues for the Bay, it's also political will. Because sometimes you have to say no or you have to say, "You have to do things better," and that's not always so easy.

I just wanted to say a couple of things.

SENATOR SMITH: Pull the microphone a little closer, Jeff.

MR. TITTEL: I'm sorry.

SENATOR SMITH: Is it the other one?

MR. TITTEL: I'll just lean forward and get my statement out.

I think that, quite frankly, this is an important issue too -- floatables. But unless we look at the Bay holistically and look at getting more fresh water into the Bay -- 65 million to 70 million gallons a day go out -- coast; and we're depleting our groundwater by overpumping our (indiscernible) and shipping it off the coast -- without that water coming in and cleaning the Bay and giving it cool, fresh water that it needs, especially in the summertime.

And one of the things I think -- the way you should look at the Bay in a little bit different way; it's not like a traditional bay -- like he calls a lagoon. Think of it more like a lake, because it has a relatively small watershed for its size, it's relatively shallow, and it's much more akin to a coastal version of a Lake Hopatcong than it really is to what we would normally think of a bay.

And the reason I say that is that when you really start looking at legislation moving forward, the Lake George Commission and some of the other types of models out there might be a way of doing it. Same thing if you're going to look at funding. Maybe you should also look at things

like boat rentals, and summer rentals, and other ways if -- such opposition of trying to get funding from the traditional source, which has been done in California and other places with the fees.

I also want to say that this Legislature has moved forward with many things to help the Bay that have gotten through, like the fertilizer bill; though there are some concerns on how it's being implemented right now, and the same thing with the soil compaction bill. But I think without a TMDL we're not going to save the Bay. Without dealing with land use we're not going to be able to--

And I just wanted to throw -- before I get into floatables -- one point out there. Under current rules under CAFRA, based on impervious covers that are allowed-- Under that rule, you could put another 400,000 people in the coastal areas of Ocean County; 100,000 in Lakewood alone. And that may be coming sooner than you realize.

We also, under the water quality planning rules -- the changes that have been made and the changes in the mapping -- at least 15,000 to 16,000 acres that are environmentally sensitive have been put back into sewer service. That is enough for another 300,000 to 400,000 people. So there are policies and decisions being made right now that could have long-term impacts to the Bay. And I think that's really what we have to think about -- that we don't deal with the Bay holistically and we don't deal with growth management limiting development in the wrong places; developing properly, cleaning up stormwater. We can deal with floatables all we want. We're just basically putting a BAND-AID on a bullet hole. And we've turned this Bay into the largest stormwater detention basin in the state. And even if we retrofit those basins, if we don't deal with floatables, they

will fill up -- even the ones that have been done. And I think that's one of the reasons why we have to look at it -- at this issue.

And every year there are millions of tons of cans, and bottles, and bags going into our waterways. We know that the State, through its program with the different counties -- with the county prisoners -- pick up about 6 million pounds. And that's probably less than 5 percent that ends up in there. And a lot of that ends up clogging up these storm drains, clogging up our detention basins and seepage pits so they don't function. Plastic, as it breaks down, will also coat -- almost like tar -- the sides of detention basins, retention basins, and seepage pits so that they don't function -- that water cannot perk back into the ground. And so that is one of the real reasons you have to deal with it. Just like the floatables, the plastic bottles in particular will fill up your detention basins, and your seepage pits, and your other controls that you're trying to do to deal with stormwater.

And so it really is two issues tied together. It's about recycling and it's about really clean water, and they're directly connected in many ways. The more plastic bags we keep making in New Jersey, and using, and dumping into our garbage, the more it fills up landfills. By the way -- the more it encourages fracking because most of the plastic for plastic bags comes from natural gas. So that's the first fracking waste hitting our waterways -- are really plastic bags.

The second is with bottles. And, again, we really do nothing with recycling. Recycling in New Jersey is actually lower now. Even though there's been some progress in the last year or two we're recycling at a much lower level today than we were back in 1992. And the reason is, back then,

when the price of garbage -- tipping fees -- were over \$100 a pound, towns were enforcing it. There was more money coming into the towns to do education. I know Senator Smith and this Committee have done a lot to help get money back for education into the towns. But something just as simple as enforcement-- I mean, I know people do not always recycle. A lot of people don't. If we do the same thing as we did with the electronic waste -- the garbage men see a lot of recyclables in a bag, don't pick it up. If they don't pick it up, people will get that message. You don't have to be Draconian. You don't have to go out there and cite them with tickets. They'll get used to it. If they see their garbage sitting at the curb -- instead of getting picked up because there are recyclables -- with a little note, maybe they will recycle better.

We think that we should be banning bags in New Jersey unless they're the kind that are biodegradable and break down. I think there is legislation -- and I know Senator Stack has a bill in and others -- and we've been trying to work on this for quite a while. But when you look at what's happening with the plastic bags in our oceans-- In the Pacific there is an island bigger than the state of Texas floating with plastic bags. And the impact when it gets into our waterways of killing marine mammals in particular -- getting into the stomachs of whales and causing them to basically starve to death -- I mean, those things really happen, and it's really a systemic problem. And we can do things about it.

I know Senator Smith and I have a disagreement, but we've always supported the Smart Container Act. And one of the reasons isn't just recycling. In the states that do have bottle bills, recycling levels are much higher. In Michigan it's about 97 percent; in New Jersey it's about

50 percent. But the other reason is really for stormwater and the litter factor. Most people, when they look at the water bottle that is sitting on your desk, they don't think it has any value. So they can throw it out of a car window. They don't really think about it. When you put a value on something, people are less likely to just throw it on the ground. And if they do throw it on the ground -- people see a value in something, they'll pick it up. And I think one of the reasons that we've always supported the Smart Container Act is because it takes something that most people consider trash, puts a value on it -- which means that people will do a better job in either recycling or using it. And even where we recycle bottles, a lot of our bottles end up in the trash anyway. There is no market in the United States for green bottles because they mostly come from Europe, and so they end up in landfills anyway. And so I think that is something you really need to take another look at. I know the litter fees in place, and the education programs are going forward. And if we really want to deal with the issue of floatables, I think the bottle bill works the best.

Just finally, I want to say that plastic bags really are that menace, and we really need to come up with a ban or just -- as we say in the legislation we prefer -- have them biodegradable. There are plastic bags that will break down. They're made usually out of corn. You're not using natural resources in that process. And so, again, recycling is important because you're filling up your places in your landfill with trash, which costs us a lot of money. Two, you're using a lot of natural resources to recreate-- Whether it's cans or bottles, it takes 10 times more energy to create a new aluminum can than to recycle an aluminum can and make it into a new

one. And so I think if you want to deal with climate change, coastal protection, and stormwater, I think more recycling is the way to go.

Thank you.

ASSEMBLYWOMAN SPENCER: Thank you.

SENATOR SMITH: Thank you for your comments. (applause)

Mary Ellen Peppard, Lorelei Mottese, and Rocco D'Antonio from the New Jersey Food Council. We have a panel.

The talking microphone is the big one. You might want to take that just out of its holder. Oh, it's still stuck.

ASSEMBLYWOMAN SPENCER: It's taped down.

SENATOR SMITH: It's taped to the floor. Just move your location. That's it.

Go ahead. Take it away.

MARY ELLEN PEPPARD: Thank you so much, Chairman Smith, Chairwoman Spencer, and members of the Committee.

I'm Mary Ellen Peppard with the New Jersey Food Council.

We do appreciate the opportunity to be here today to continue the dialogue on some of these issues.

You do have my written testimony. I don't want to repeat it; I just want to highlight some of the efforts of our members over the past couple of years.

The New Jersey Food Council has compiled an environmental playbook, or *Green Guidelines*, to serve as a resource for New Jersey food retailers. These are over 100 actions that the retailers can use to improve the environment and improve consumer awareness. And these Guidelines, which I have included in your packet today, also specifically address

recycling and plastic bag recycling. Our members fully support recycling programs. They have recycling programs. We advocate for consumer awareness and education, not mandates, to make these programs more effective. We are strongly opposed to bans. Many retailers currently offer the choices between disposable and reusable bags. So we feel that these bans would take away that choice, as well as it would add to the cost to the retailers and possibly to the consumers.

We did survey our members about the effect such a ban would have. And one of the examples that we found out was that one of our members who has stores throughout the country -- when such a ban was instituted in San Francisco, and they had to switch to paper bags, their cost increased by \$100,000 per store, and \$1 million per year. And this is something that we don't believe our members would be able to absorb -- this type of hit -- especially in this still-struggling economy.

We are also strongly opposed to taxes or fees. Not only would this be an economic hardship, but our members have also reported that this would result in a less efficient check-out process.

Again, before I turn it over to my members, with your permission, I just want to again stress that our members fully support recycling programs, and we would be more than happy to continue to work with all of you on some additional steps that we could take to promote recycling, promote consumer awareness.

Thank you.

ASSEMBLYWOMAN SPENCER: Thank you.

R O C C O D' A N T O N I O: Good morning.

I'm Rocco D'Antonio. I've been working in the food industry for over 20 years in the areas of packaging. In the past seven years I've been actively involved in recycling on both plastic bags and film, bottles and cans, and recently of food waste.

About seven years ago we set up a recycling program for bags and film for the supermarket industry, primarily the independent stores that didn't have the infrastructure to handle it on their own. It was a bag smart program. And the goal was to build it around three key areas: It had to be good for the environment, it had to be good for business, and it had to be good for the community. And what we developed was a program of both education and training, and recycling, and measurement to reduce the number of both paper and plastic bags, to increase the recycling efforts on plastic bags and film, and to increase the use of reusable bags.

Since we started this program, we've had double-digit growth every single year. We continue to see the same store recycling rates go up, both because of the efforts of the store itself -- and it's not just the grocery bags that are coming back, but there is a significant amount of plastic film that comes into a store for transportation of food and product. For example, I saw a case of water coming in here that had bundling film on it. So it's the grocery bags, it's bundling film for packaging, it's stretch wrap that comes into the stores, and everything that the consumer gets to bring back to the stores, as well, with all the recycling bins you see out front. So it's the grocery bags, it's bags from other stores, it's newspaper bags, it's dry cleaning film -- which I probably have more of than anything in my house. And all of these things combined have helped increase recycling more and more every year -- again, double-digit growth.

And the people we ship this plastic off to -- companies like Trex, which makes plastic lumber -- they've experienced significant growth. They won't give out numbers on exactly what they're doing because it's confidential, but they're saying it's in excess of 20 to 25 percent per account increase on bag and film recycling. So the trend to use less bags, recycle more plastic, and use reusable bags more and more continues to grow.

I think one of the most important things is that it continues to increase significantly. And I probably saw more of an increase in the past year or so than I ever have. In 20 years of doing this, and 7 years of recycling, everyone always kind of questions the economics of this. I think that these programs have been out there long enough -- the recycling part of it -- that it makes good sense for business to implement sustainable business practices. We've been setting up more and more recycling programs for even bottles and cans, and composting programs in the supermarket industry. I heard the gentleman from the Sierra Club talk about more recycling. We've been able to go into stores now and reduce their waste streams between 40 and 60 percent by expanding bag and film recycling, expanding single-stream recycling, implementing and expanding food waste recycling and donation programs. So we feel that this continued approach of education and training, addressing environmental concerns, addressing business concerns, and addressing community concerns -- in other words, getting community and shoppers' acceptance to participate in this -- is the way to continue heading in the right direction to address all of our needs.

We feel that we can continue to expand this even further and we can continue to generate a lot more money for education within the communities. Every one of the supermarkets that we work with that has

expanded their recycling efforts increases money going into the New Jersey Recycling Tonnage Grant Program. That money comes back to your communities, and it's used for education and training to expand recycling even further. And that has been very, very successful. So we would like to see this part continue and address all three issues of making sure that it's good for business, it's good for the environment, and it's good for the community as well.

ASSEMBLYWOMAN SPENCER: Rocco-- It's Rocco, correct?

MR. D'ANTONIO: Yes.

ASSEMBLYWOMAN SPENCER: What are some of the supermarkets that you are in partnership with as far as recycling is concerned?

MR. D'ANTONIO: We work with most of the ones from Central and South Jersey down. The chains and a lot of independent stores-- We really focus on the independents that don't have the infrastructure. So a lot of your mom and pop stores that normally couldn't do all this because they don't have transportation departments and warehousing. That's kind of where we step in.

ASSEMBLYWOMAN SPENCER: So when you say *mom and pop stores*-- What I'm trying to find out is, the volume that they're producing-- Are they large mom and pop-- Are they supermarkets that are run by mom and pops which are part of a larger corporation, say, like ShopRite, or are they independent supermarkets like the ones in my area like Extra and Kings -- not Kings -- but Extra and things like that?

MR. D'ANTONIO: Actually, it's a combination of both. You mentioned the ShopRites. They have their own program so there really is

no need for what we do for them. But a lot of the smaller ones-- And some of them-- When I say *smaller ones*, they may not have 100 stores. They may be a one-, two-, or three-store chain. They still generate significant amounts of plastic film just in receiving operations and customers bringing back their grocery bags, and their dry cleaning bags, and their newspaper bags. So the material is still fairly extensive.

ASSEMBLYWOMAN SPENCER: And do you have any stores like that in northern New Jersey that you're doing business with? Because in my area-- I live in Newark. Certainly there are things that-- I know, for myself, I take my bags back to ShopRite when I go, and I carry reusable bags in my car. But certainly, like you, I have an abundance of the plastic from the cleaners and other things that I've purchased. And I find myself in situations where I'm not sure where it goes other than out to the curb in the proper colored garbage can.

MR. D'ANTONIO: There's a lot of information on what can be accepted. On the plastic bag recycling websites it tells you all the different films that can be taken. You can check with the stores where you shop. They'll give you a good indication of what they can accept. I can tell you that most of the supermarkets today understand that it makes good business sense to recycle those materials. It's significantly cheaper than throwing it away. And in some cases, if they have enough volume, there could be an economic advantage to it when bailing it and selling it back into secondary markets. So I would say most of the areas where you may shop -- markets in your community -- will be able to take back plastic bags, plastic film, dry cleaning bags, the bundling film like was on that plastic water bottle case, newspaper bags, and other films.

ASSEMBLYWOMAN SPENCER: Okay. Thank you.

SENATOR WHELAN: Mr. Chairman and Madam Chairwoman, I want to apologize. I'm going to have to leave. I have a meeting in Trenton, and I wanted to hear as much testimony as I could on this. And I appreciate this opportunity to hear about the Barnegat Bay and also this issue. We've already heard from two sides here -- the first side -- do the plastic bag ban, which I think a lot of people-- You know, no one is in favor of plastic bags in the water. That's for sure. But then we hear the other side of -- you do that, and there is an incremental cost to consumers on their food bills. And if you go to, I assume, biodegradable bags, there is going to be an incremental cost to the cost of corn, and so on, and so forth. But I look forward to working with you and all of us on this issue as we go forward.

Again, my apologies to the members as well as the public.

SENATOR SMITH: Thank you, Senator Whelan.

ASSEMBLYWOMAN SPENCER: Thank you.

SENATOR SMITH: Yes, ma'am.

LORELEI MOTTESE: Good morning, Madam Chair, Mr. Chair, members of the Committees.

I'm Lorelei Mottese, Director of Wakefern Food Corporation. You know us as ShopRite. I have one of the visuals in front of me in terms of our outreach in terms of plastic bags. And I've also provided for all Committee members an example of the reusable bags that we give out.

As many of you know, Wakefern Food Corporation is the nation's largest retailer-owned supermarket cooperative. And by that I mean that ShopRites are independently owned, and they own Wakefern

who is the wholesaler and distributor. We operate in eight states, have 50,000 associates, and we have 30,000 associates here in New Jersey. We are the largest employer in the State of New Jersey.

And I would like to talk about what New Jersey -- what Wakefern does in New Jersey. Rocco alluded to the fact that we have our own program. And our environmental efforts are multifaceted. One of them -- and an important component -- is that we have a recycling plant in Elizabeth, New Jersey, that works 16 hours a day, 16 (*sic*) days a week, and we recycle a multitude of different types of items. We have, in 2011, recycled almost 120,000 tons of cardboard, 3,000 tons of plastic, 800 tons of newspaper, 400 tons of office paper, 80 tons of metal, 2,000 tons of wax corrugated cardboard. And this recycling program is being continually expanded. Most recently, in 2006, we started recycling the white pill bottles that go into our pharmacies to fill prescriptions. We also recycle floral containers, wooden crates and the banding that goes on those, and just started an extensive change-out of light bulbs in all of our stores.

In terms of our work regarding plastic bags and our plastic bag effort, in 1992 ShopRite implemented a bag-reuse program. It was one of the first of it's kind in the northeast. Customers can reuse their plastic, paper, or reusable bags, and we will rebate them anywhere from \$0.02 for your plastic or paper bag, or \$0.05 for your reusable bag. Again, that's since 1992, so we've really been ahead of the curve on this.

Additionally, we provide plastic bag bins in all of our stores. So our customers are using fewer plastic bags and more of the reusable bags. In 2007, customers purchased 200,000 of the reusable bags. Now, two years later, in 2009, sales reached \$1.7 million, and that's climbing.

We are not supportive of plastic bag bans, and we believe that educating our customers about recycling opportunities is the best way to reduce bag use and to change behaviors. Our efforts to reduce bags are working, and that's evident by what we're seeing in terms of folks bringing their bags back and purchasing bags. And we believe that this is better for our environment.

Our focus on environmental stewardship really doesn't stop with plastic bags. Today, the concept of environmental responsibility has evolved to be a more comprehensive and prospective to include the concept of sustainability. You've heard that word used. We take it very, very seriously. We continue to embrace sustainable business practices to minimize the impact on the environment from our operations, and to continue to adopt policies to support the health and safety of our associates at ShopRite, and to increase the quality of life in all of the communities that we operate in. In 2008, Wakefern actually formed an Environmental Affairs Department. It's staffed by personnel who are experts in sustainability. And our goal is to reduce energy and water consumption, waste reduction, and also to provide education to our consumers and to the public. We know that achieving sustainable operations is an ongoing process and needs continual improvement. And sustainable efforts ultimately reduce the costs and illustrate that we are a responsible corporation by helping the communities that we serve.

Wakefern ShopRite is also proud to sponsor some excellent, environmentally responsible organizations who I believe are here today. In New Jersey we sponsor the Conserve Wildlife Foundation of New Jersey, the New Jersey Clean Communities Council, and the Clean Ocean Action.

In fact, two times a year Wakefern and ShopRite associates participate in the Clean Ocean Action Beach Sweeps and clean up various areas on the Jersey Shore. We have sponsored the Beach Sweeps since their inception. And on average there are 50 Wakefern and also ShopRite associates who voluntarily work during those Beach Sweeps to clean up our beaches. We also conduct a ShopRite Earth Day Challenge. The annual event challenges volunteers to beautify their communities by cleaning up litter from local parks and beaches, and planting flowers. In 2011, approximately 4,000 volunteers, all wearing gloves -- and you have an example of those in your bag -- and using trash bags donated by ShopRite, gathered up -- cleaned up, rather, 35 communities in 13 facilities, with 70,000 (*sic*) associates participating -- I'm sorry, 70 associates participating.

We believe that all retailers should be responsible for improving the environment, particularly as it relates to plastic bags. We also believe that if they offered the same types of programs as those we have undertaken at Wakefern and ShopRite, there would be a significant reduction of plastic carry-out bags and a steady progression toward environmental protection and sustainability.

In conclusion, we'd like to ask that you please consider promoting recycling and reusable shopping bag programs instead of legislative fees and bans. We are committed to working with both Committees to find a better way to efficiently address this issue.

Thank you very much, and we appreciate working with you.
(applause)

ASSEMBLYWOMAN SPENCER: Thank you.

Next up, John Weber.

Oh, I'm sorry. Hold on. Don't move too quickly.

Senator Greenstein.

SENATOR GREENSTEIN: Thank you very much.

I have two questions. Obviously ShopRite is doing a great job with this. Do you know if any other chains are -- any of the major chains, let's say -- and how extensive this type of program is to recycle the bags?

MS. MOTTESE: I will not speak for other chains because they are our competitors, and I don't want to give them any credit. (laughter) But, yes, there are chains -- there are major chains who have sustainable efforts. I just don't have an answer to exactly what those are.

SENATOR GREENSTEIN: Okay. And the other thing is, when the bags are returned to the store, there is a process where they're essentially-- They're not reused, right? They're processed.

MS. MOTTESE: No. In our case -- and, again, I can't speak for any of the other supermarkets -- we have a recycling center. So all of the plastic is transported back to our recycling center in Elizabeth. Then those bails are sent out to market to be recycled, similar to what Rocco indicated, to make products like Trex does with park benches, decking, and those types of things.

SENATOR GREENSTEIN: Okay. Thank you.

ASSEMBLYWOMAN SPENCER: Any other questions from the Senators?

Senator Beck.

SENATOR BECK: I just thought maybe the Food Council could address the Senator's earlier question.

SENATOR GREENSTEIN: I think she was about to.

MS. PEPPARD: Sorry, the one microphone--
Thank you very much.

I did want to say that, yes, our members -- all of our members have recycling programs. They are very extensive. They have a lot of initiatives. In addition to recycling, they have a lot of green initiatives. Many of them do offer the choice, as I mentioned earlier, between disposable and reusable bags. They have training, they have educational forums. There are a lot of different initiatives. And this is growing every year -- that our members have for recycling and other green efforts. And there is some information in your packets about this as well -- just a few examples.

I would also just like to point out that a few years ago -- some of you may remember Commissioner Jackson, when she was with the DEP -- her efforts toward promoting recycling. And she chose to do this over bans, or fees, or anything of that sort. So we think there is a history in this State of that type of support. And, again, our members do have very extensive initiatives, and we'd be happy to provide more information to any of you about that if you're interested in a particular -- in maybe part of your districts, for example. We could do that.

SENATOR GREENSTEIN: I'd just like to say one thing. I'm wondering-- I think a lot of people would recycle, and it's extremely easy to drop them in the supermarket. I'm wondering if people are using them for trash as trash bags when they're throwing out their trash. Because obviously a lot of these are ending up in the ocean, in the water. So they are being put there for some reason. And that would seem to be one reason. Maybe they're being used for that. I mean, I'm surmising.

MR. D'ANTONIO: Well, I think bags do get reused for trash, as trash liners more than anything. And those ultimately go out with the rest of the household trash. But I can tell you that the norm is to reuse and/or recycle. People use them for their cat litter, for example; use for household trash. But the large majority of it -- because you can add your dry cleaning bags, your newspaper bags, and all the other bundling films -- goes back to primarily the supermarkets, which gets processed, like you said, and end up becoming a bag again, or plastic lumber, or any number of products. The market for recycled plastic resin is very, very strong mainly because the price of resin is very strong. So it's more cost-effective to bring back recycled material and reprocess it than it is to go buy new material. It's about a third of the cost.

SENATOR GREENSTEIN: Thank you.

ASSEMBLYWOMAN SPENCER: Any other questions?

Assemblyman Milam.

ASSEMBLYMAN MILAM: A very simple question: Why? Why do we have plastic bags? I remember growing up with the paper. I'm just kind of like in my mind, "Why did we ever get to plastic bags?" You guys apparently do a great job on the recycling efforts. It sounds like you spend thousands of dollars a year in your companies and corporations having these programs. But I'm just kind of like wondering on the paper versus plastic thing. Is it that much-- Is there going to be a time when we're going to have way too much plastic and not enough industry, things to make? I mean, I don't know if you can answer me. But it's just kind of in my mind, "I remember paper bags were kind of easy." I mean, I know-- And then we get into trees and other resources of paper bags. But we

never-- Your companies probably didn't have to have recycling, say, departments when we had paper bags. I'm aging all of us in the room. But I just kind of remember the simple paper bag.

MR. D'ANTONIO: Well, the reason for the plastic bag coming into the grocery industry -- and actually all retail industry -- is a function of cost and efficiency. Plastic bags are substantially cheaper than paper bags, number one. It's not even close.

ASSEMBLYMAN MILAM: Bag for bag?

MR. D'ANTONIO: Penny-and-a-half to \$0.05.

ASSEMBLYMAN MILAM: Okay.

MR. D'ANTONIO: That's number one.

Number two, they're a lot more convenient for the consumers. They have handles; a lot easier to carry.

Three, they are much more efficient at the supermarket checkout. That's a highly engineered system of moving people and product through a very high-volume retail environment. That whole system is ergonomically designed to fill very quickly, remove the bag, and get the customer out of the store as quickly as possible. Plastic bag racks are speed racks. They're designed with what's called an *easy-open* feature, which means when you open one and pull it off, the second one opens automatically. It's all about efficiency and economics. If you switch back to paper, not only do you have the impact of the cost of the paper bag, but you have the efficiencies you lose in speed, and packing, and efficiencies. Labor goes up, engineering designs have to take place. All of those impact everything, not too mention the fact that your warehousing and distribution costs significantly go up. A case of plastic bags is about -- occupies about a

half of one cubic foot of space. It weighs about 15 pounds. One thousand paper bags occupy five cubic feet of space, or 10 times the amount of space, and weighs about 100 pounds, or 7.5 to 8 times more, which means a lot more space in the warehouse, a lot more space on the truck. All these new stores are designed with limited storage space which means a lot more trips to deliver this product. You now have a lot of people moving very, very heavy product from the back to the front of the stores more frequently. So, again, the plastic bag has been so successful because it does a great job. It's very, very efficient; it's very cost-effective. And now the goal is to minimize the use by transferring reusable bags in and recycling more and more. And those trends continue.

ASSEMBLYMAN MILAM: What do the recycle bags cost -- the reusable. What did I say, recycle? The reusable.

MR. D'ANTONIO: I've seen them anywhere from promotional, next to nothing, to \$0.99 and anywhere in between. They're literally all over the place.

ASSEMBLYMAN MILAM: Is that what they are?

MR. D'ANTONIO: A lot of stores do run promotions on them.

ASSEMBLYMAN MILAM: I saw somewhere in the testimony someone gave out 30,000 of them in a year. Is that-- I don't know which store that was.

MS. PEPPARD: There are promotional efforts. Some of our members do distribute these bags for free to communities to encourage their use.

ASSEMBLYMAN MILAM: Are more programs going to continue it that way to give these bags out to everybody? Obviously, that's

the promotion side, right -- I mean, if you want them to use them. Plus, they give \$0.05 back off your bill. If you use six of them, there's \$0.30 off -- things like that, right? There is still that that goes on.

MS. PEPPARD: That's correct. A lot of our members -- as Lorelei mentioned with her company as well -- they have rebates for bags -- for bringing your bags in and reusing them.

MR. D'ANTONIO: It's advantageous for them to use as many as possible. Obviously, the fewer paper and plastic bags you buy the more cost-effective it is, the fewer you're touching in your warehouse, on your trucks, in the back of your store. So it's very good for business. Sustainable business practices actually lower operating costs today. You couldn't say that 10 years ago. Today I think that the verdict is in, that stores that implement these types of practices that we're talking about today are going to lower their operating cost, they're going to address the environmental issues, they're going to address the economic issues, and they're going to address the community issues by getting their consumers to buy into the program and participate. Again, I've seen more of this happening in the past year than I ever have. And that's because people have come to understand that it just makes good business sense to do this now.

ASSEMBLYMAN MILAM: Is there a focus--

I have one more. I know I said I was done.

ASSEMBLYWOMAN SPENCER: No problem.

ASSEMBLYMAN MILAM: Is there a focus of some day you will never, ever offer paper in your stores? Because right now I even see paper going in plastic -- like people are taking their time and everyone has to-- But is there like some -- maybe in the future -- no more paper ever, so

you're going to be totally focused on plastic? So then we have to, obviously, have more industrial uses for this -- all this recycled plastic we're going to have. It's happened with glass. We started recycling glass. We just don't have enough uses for the glass now. We're putting it in asphalt to kind of break up highways and things like that. But I think something might happen like that. But is there something in your future that says no more paper?

MS. MOTTESE: What our goal actually is to do is to continue to educate our consumers on the importance of using the reusable bags. That's really where we'd like to go.

ASSEMBLYMAN MILAM: That's where it has to happen. You answered it. Thank you.

ASSEMBLYWOMAN SPENCER: Thank you.

Any more questions? (no response)

Thank you. (applause)

John Weber, from Surfrider.

J O H N W E B E R: Thank you, Madam Chairwoman, Mr. Chairman, Assembly members, Senators.

I am John Weber. I work for the Surfrider Foundation. If you haven't heard of us, we're a coastal environmental group. That plastic bag monster that was in the back of the room before couldn't stay. He said something about -- wanted to go take a dip in Barnegat Bay, run down the street, lie around the beach, climb some trees. He is a wild and free spirit, so the plastic bag monster isn't going to join me here.

I'm really glad that you're taking up the subject of plastic bags, and not just in general but at this hearing. I love it when you come to the shore. I don't get to Trenton, so I'm really happy you all are here.

Before I say anything else, I'm going to congratulate the plastics industry, specifically the American Chemistry Council, because they have made a product that will last forever. That is an unbelievable feat. They've made a product that will last forever. And some things-- It's a great material for some products. But something that you use for five minutes or less and then throw away is not something that we should be using a material that lasts forever to make those products. That just doesn't make sense.

Our oceans are filling up with plastics. If you want some of the latest information on that, I want you to go to 5gyres.org. It's not exactly an island in the middle of the Pacific Ocean. And, indeed, all the world's oceans -- like Jeff said -- there is just a swirling of currents, and there is a concentration of plastics. Think of it as like a thin miso soup of plastic -- particles of all different sizes in those center areas of our oceans.

You're probably not going to find whole plastic bags there, but we do find plastic bags, for example, in beach cleanups. We find them, like I said, in our streets, in our trees, all over the sides of roads. The reason you're not finding whole plastic bags in these gyres in the middle of the ocean is because while they don't biodegrade, they do photodegrade, which means sunlight breaks them down into smaller and smaller pieces. Those pieces that are ever increasingly smaller and smaller are still plastic. That's really important.

Organisms that up until a couple of decades ago -- whenever they ran into a little piece of something in the ocean it was probably food -- microscopic organisms are taking in these pieces of plastic. They're ingesting them; they think they're food. It's going up the food chain, in short. You catch fish in the middle of the Pacific Ocean, you open their guts, there's pieces of plastic in it. That's a fact. We, of course, sit at the top of that food chain, so that's a concern. Again, this is all plastics, not just plastic bags.

But it does get worse, because plastic is made from petroleum. On a molecular level it repels water and it attracts-- Like attracts like, so it attracts things that are made from petroleum or oil-based chemicals. And a lot of our pesticides -- those are oil-based chemicals. A lot of the nasty chemicals used in your car, on your shelf, whatever -- those are also based from petroleum. So these tiny, microscopic pieces of plastic attract those chemicals. And there have been cases where we pull them out of the middle of the ocean, and these tiny, little pieces of plastic have concentrations of these chemicals that are thousands of times higher than the ambient seawater around them. So, again, it's going up the food chain and they're concentrated with toxins. This is a bad combination.

Now, no one is saying that we should eliminate all plastics. That would be impossible. It would be counterproductive, of course. But single-use plastics are a different story, and this is what I ask you to take up. This is where we should look -- the free, single-use plastic checkout bag is a great place to start. It should be the low-hanging fruit. Again, there is just no reason to make something that you use for five minutes or less out of a material that is going to last forever. It just doesn't make sense.

I do want to emphasize that recycling is not the answer here. You cannot turn a plastic bag back into another plastic bag. It's not the answer. It's not even recycling. Like an aluminum can -- you can turn that into another aluminum can. It's true recycling. A glass bottle -- same thing. That is true recycling. You've closed a loop there. At best, plastic bags are downcycled, meaning all those bags get turned into something else like plastic lumber. That, in turn then, cannot be recycled. So you've given it another life, but then ultimately it is going into the landfill.

Furthermore, the rate that these plastic bags get recycled is so abysmally low it's laughable. Estimates are for anywhere between 1.5 and 9 percent -- those plastic bags get recycled. You have to realize we're talking about the most ubiquitous consumer product in the world. One hundred billion of them are used here in the U.S. alone each year. That bag monster represented a few hundred bags. Each person in the United States makes that every single year. There are 300 million of us in the United States. So it's clearly a huge problem.

Just since legislation is what you do, I will talk about legislation real quickly. San Francisco is famously the first place to ban plastic bags, and they did -- this was 2007. It was a long time ago at this point. One of the things that happened -- and their ban wasn't comprehensive. I think it was big box. It wasn't like every kind of store, but it was pretty good.

One of the unintended consequences is that paper use went up, and that's not what the city of San Francisco wanted to happen. They, of course, wanted people to use the reusable bags. So, indeed, more paper bags have been used. And what we have all learned since then is, it's not this argument of paper versus plastic. That's not the question to ask.

Unfortunately it's what everybody asks. The argument is single-use versus something that can be used over and over again that has real value. So San Francisco has gone back, quite frankly, and they've expanded their ban to cover more plastic. And they've added a fee to paper bags to curtail their use because, again, paper bags -- there is an energy intensity to using paper bags. That's true. And that wasn't their intention. So they've gone back and put a fee on paper, and they've expanded their plastic bag ban.

Some time after the first ban in San Francisco, the plastics industry, the American Chemical Council -- who I'm sure is represented here today -- they got a law passed in California. I think it was one of those -- late in the Gray Davis, early in the Arnold administrations, they got an 11th hour law passed sort of under cover of darkness that -- it outlawed towns in California putting fees on plastic bags. Those fees were going to go to some kind of government program to clean something up. So they outlawed fees. So advocates like the Surfrider Foundation and many other environmental groups had nowhere else to turn except for bans. And at this point they're up to -- in California alone -- about 50 plastic bag bans across the state -- either bags or polystyrene foam plastic -- Styrofoam, as we would call it.

So what the latest trend right now is, is to ban plastic bags and put a fee on paper. But it's not a fee that the government keeps. They're making industry happy -- and this is a great thing I think -- they're letting the merchant keep the fee. It's a fantastic solution. You've given that retailer another source of revenue. If people really forgot their reusable bags, you're going to charge them for paper. They can't get plastic because they banned it in that town. There's a fee -- \$0.05, \$0.10, whatever. Fees

work, bans work. There are a few places that are just doing straight-up fees. Washington, D.C., famously, passed a fee, I think, in early 2010. The Surfrider Foundation was a part of that. And they thought it would take a year or more for bag use to go down, like, 50 percent. It actually went down over 60 percent within two weeks. It was a \$0.05 fee on both paper and plastic. They sort of got that right. It's not paper or plastic, it's single-use. So they put a \$0.05 fee on single-use bags. In the case of Washington, D.C., it goes into a fund to clean up the Anacostia River, which is one of the nastiest rivers in the country, and that's working really, really well.

Just furthermore, it's kind of obvious that the cost of plastic bags -- they get spread to every single shopper. If you bring your own bag or not, it doesn't -- the cost of that bag that they're giving out for free -- if it's paper or plastic -- it gets spread to everybody. Some people bring their own bags, some people say no. So they're sort of socializing the cost of the bags. We would like to see an ownership society where everybody owns one of those nice, reusable bags which, by the way-- I just got within about 10 feet of them. I'm sure they're plastic. That's a great use of plastic. I'm sure that's a #5, polypropylene bag. You could probably use it; if you treat it right, you could give it to your children. It's going to last a long time. That's a great use of plastic. It's nothing against plastic; it's against single-use plastic. So we'd like to see an ownership society where people own their own bags or maybe 10 of them so they can bring them when they go to the store.

You all have jobs. We all know your salaries because it's public information. You all just received a nice, reusable shopping bag. That's

great. I would love to see the same supermarket give them away in their stores that are in low-income areas. Just give them away.

SENATOR SMITH: This is probably a reportable event, by the way. (laughter)

MR. WEBER: Reportable; it probably is. Listen, the question came up -- they're usually \$0.99 in the stores. So report away the gift.

You could give away all the reusable bags you want. In the context of a system where everybody could get as many free bags at the supermarket as they want, there is only a certain segment of the population that's going to do that -- that's going to take the time to bring those things, and remember to bring them, and all that. So in the context of, "Well, I can always still get a free plastic bag," that's only going to do so much. That's why it really doesn't work. Where you ban plastic bags, or you put a fee and all of a sudden people are thinking dollars and sense -- "What am I--" then they're bringing their bag. They remember to bring their bag. It really does make sense.

I encourage all of you to go see a movie called "Bag It." I think it's on Netflix. It's a documentary about plastic bags. It's great, it's fun, it's funny, it has a lot of great information. I see the water bottles. You all need to see a movie called "Tapped," as well, about the water industry.

I just want to say one other thing because it gets back to the whole recycling thing. We're in Ocean County. I love Ocean County. Ocean County is great. They were actually one of the first counties to get a countywide recycling program going. But with respect to plastics, that bottle in front of you is recyclable in Ocean County because the neck is smaller than the rest of the bottle. That's their definition of plastic bottle.

Whereas, if any of you had a yogurt this morning, a yogurt container -- which is probably made of the same No. 1 or 2 plastic -- is not recyclable in Ocean County because the neck is not smaller than the rest of the yogurt container. So people in Ocean County may be trying to recycle those things. But for the last 20 years, Ocean County has been kicking those things like yogurt containers to the side because of this definition they have with respect to recycling. And they don't have a guaranteed market for it. Somebody who is in the recycling program could probably explain it. But it's just one of those little quirks to recycling. That's why we think recycling is not always the answer. The answer is to reduce the amount of waste that we're making. And heretofore, the best way that we've seen is bans or fees on bags, because they do work.

ASSEMBLYWOMAN SPENCER: I just have one comment. It's not that I disagree with you that bans and fees are the best way to get things done. I think education is the best way to get things done. And it certainly starts with children.

Your Foundation -- what exactly is the Surfrider Foundation? What exactly are they doing to bring that information to kids? And you talked about the supermarkets or the Food Council giving away plastic bags. Is Surfrider doing anything to bring these plastic bags to urban areas or to schools for the kids to take home to their parents? What proactive things are the Surfrider Foundation doing other than being instrumental in establishing bag bans and fees?

MR. WEBER: Sure. In Washington, D.C., we knew one of the arguments was going to be that-- Okay, a \$0.05 fee on plastic bags -- that's going to hurt lower-income people. It's a legitimate consideration. So one

of the things that our volunteers-- And I should mention that we're made up of volunteers. We have chapters in all the coastal states. They're volunteers. I am the one employee between here and Florida, and the rest of them are in southern California.

But in Washington, D.C., our members stood in front of supermarkets, grocery stores, convenience stores, whatever in urban areas, in lower-income areas and gave out reusable bags before the D.C. fee went into effect, just to show-- And, of course, it was part of a letter-writing campaign, and a postcard campaign, and everything. And, of course, a lot of people didn't want to do that, but Surfrider was very passionate about this issue. And the reality is that people in low-income areas deserve a clean environment just as much as anyone, and they are as interested in making that happen as much. And our efforts to help prove that-- The Anacostia River that goes through the lower-income parts of D.C. -- if you know D.C. And we were really concerned with getting this river cleaned up, because the Potomac gets all the attention. People know the Potomac. So that's one of the things we've done.

We're a grassroots environmental organization, just like Sierra Club, just like Save Barnegat Bay. It's not our job to go out and buy plastic bags and give them out to everybody in the world. If ShopRite is giving out plastic bags, great. We'd love to see them do like we have done. But that's essentially our role. The "Foundation" in our name is not because we give out money or anything like that.

And with respect to education, I hear you. Education is great. The reality is, we've been educating about this kind of stuff for how many years? Twenty years, 30 years. But, again, in the context of a system where

you can get a free bag whenever you go down to that store, education is only going to go so far, the give-away bags are only going to go so far. That's just the reality.

ASSEMBLYWOMAN SPENCER: Thank you.

SENATOR SMITH: Thank you, Mr. Weber.

And I commend everybody's reading-- I don't know if you saw it, but Carrie Anne Calvo-Hahn did a terrific analysis of plastic bags, marine health, and all the laws around the country dealing with this issue. It really is excellent. If you get a chance, you really want to take a look.

Thank you so much.

Ed Waters and Donna Dempsey, from the American Progressive Bag Alliance.

E D W A T E R S: Good morning, Mr. Chairman, Madam Chairwoman, members of the Joint Committee.

My name is Ed Waters, and I'm here today representing the American Progressive Bag Alliance. It is a trade association for the manufacturers of plastic bags. We are glad to be partners with the Food Council, the Retail Merchants, and other business organizations that are promoting plastic bag recycling. We agree that education of the consumer and promotion of plastic bag recycling programs is the way to go as opposed to banning or taxing plastic bags.

Sitting next to me is Donna Dempsey, from the APBA, and she can give you more information on their efforts.

D O N N A D E M P S E Y: Chairman Smith, Chairwoman Spencer, good morning.

My name is Donna Dempsey. And just to repeat, I'm with the American Progressive Bag Alliance, a not-for-profit trade association representing the U.S.'s largest plastic bag manufacturers who compromise (*sic*) about 85 percent of the market share of plastic bags -- plastic retail bags, carry-out bags, grocery bags, whatever you want to call them.

You do have a two-page information sheet that you've all received, but I just wanted to highlight a couple of things and then correct some misinformation that's been spoken today.

Plastic bags support 700 jobs in New Jersey, so that's 700 U.S. manufacturing jobs in New Jersey in about 16 facilities. They're 100 percent recyclable. They're made with natural gas, not oil as some of the speakers have said. And, again, employ -- 700 New Jersey jobs.

You will find that at the checkout counter -- and we are for choice. But what we try to do is to correct the misinformation that's out there, and try to educate people so when they're at the checkout counter they understand the ramifications of the choices they make. Plastic bags are the clear economic, environmental, and health choice at the checkout counter. I will just briefly cover that. If you have questions during my testimony or after I will be happy to address those.

Assemblyman, you had asked why plastic bags and paper. Rocco did answer -- did a very good job. But the big thing is not only the price. We're talking about paper bags leaving a much larger carbon footprint on the earth as far as the amount of space it takes in landfills, the amount of energy and water used to manufacture and recycle as compared to plastic bags, just to name a few. Again, we're for choice. If people want to buy the reusable bags--

And the bags I'm talking about, Chairwoman, are the bags that hang out at the checkout counter. I think there are a lot of things that people don't understand about them. One is, if people choose to use them, great. They need to be washed each and every time in very hot, soapy water because they do harbor very dangerous bacteria if not washed properly.

I think probably the most important things that people don't understand about this type of reusable bag is that it's made from a different type of plastic than a carryout bag from the grocery store. The carry out bag from the grocery store is made from high-density polyethylene. The plastic that makes the reusable bags that cost about \$0.99 -- is what I've seen in most stores -- are made from a different type of plastic that is dependent on foreign oil, that is imported at the rate about 500 million bags per year, and are not recyclable. I think there's a lot of information there that people don't understand. So we're for choice, but just understand the choices you're making, the ramifications you're making. Again, plastic bags are made from natural gas. Nine out of 10 Americans reuse their bags, mostly for lining their kitchen liners. I know I bring my lunch in them and my dirty dishes home for my husband to wash every single night, and lots of other uses. The plastic bag manufacturers are very strong advocates that their products are properly used and reused. So the word *single-use* is kind of not applicable here, because most people reuse them or recycle them. And we certainly want to make sure if they don't do that, that they're properly disposed of.

Let me just address very quickly -- bans and taxes do not work to help clean up plastic bag litter or do not help the environment. According to the U.S. EPA, plastic bag litter is .5 percent of the U.S. solid

waste stream. That's a half of 1 percent. So even if, for example, you have a tax on a bag and the usage goes down, it's not going to touch the .5 percent of litter. Bans-- I believe one of the gentlemen -- I forget if it's Surfrider or Sierra Club -- mentioned San Francisco as being a good example of a ban. Let's talk about really what happened there. They did ban plastic bags in favor of recyclable paper bags or compostable bags. What they did in their own litter audit was, before the ban -- like a waste characterization study. Plastic bags made up .6 percent -- so again, less than 1 percent -- of litter. One year after their ban, their own litter study showed that plastic bag litter was .64 percent. It didn't make a difference. There are examples in three coastal communities in North Carolina where they banned bags, and a couple years later they found more bags on the beach than before their bans.

I couldn't agree more with the Sierra Club. We are for increased recycling opportunities. I think you heard from Rocco, and Wakefern, and others of a great example of not only being able to capture the bags after they've been reused or -- pardon me, that they've been recycled, but it's an opportunity to collect other types of polyethylene film, which the grocery bags are made of, and take them out of the litter streams and the streets -- is the diaper wraps, the water bottle wraps, the paper towel wraps. All those-- At the front of the store they have bins where you put your plastic bags. A ShopRite has also recycling in the back end of the store. That's the pallet wrap, and the shrink wrap. Everything is wrapped in plastic. And they combine those together. And that's a much better way to address a miniscule amount of the litter. And it's also very cost-efficient for them, and they can make money off of that.

One gentleman mentioned -- and I do believe there is a bill sitting in New Jersey -- and I'm really glad he brought this up -- mandating biodegradable or compostable bags, which a lot of people kind of confuse. There is this thought that there is this magic dust which will make a plastic bag disappear. Well, biodegradable and compostable plastic bags are not only more expensive, they are harder to come by. They're not as readily -- to come by -- and they look like a plastic bag. But the most important part here -- especially in New Jersey where they have a very vibrant recycling program because of the New Jersey Food Council's members being so active and passionate about it -- if you put a biodegradable bag or a compostable bag into the recycling bin, it will contaminate the recycling stream. I represent one of the biggest -- pardon me, the world's largest plastic bag recycler in the world as far as Trex -- I think we've all heard of -- with the decking. It's a liability for them. They don't want their deck to biodegrade in six months. And the recyclers will stop. It will kill, in its footsteps, the recycling opportunities. They won't pick it up because it will contaminate that stream.

Again, I just wanted to point out some of the more significant and some of the information that I think is not out there, and to perhaps just turn around some of the misconceptions out there -- because there are a lot. One gentleman said plastic bags are made forever. Well, if they are recycled, they are. I think it's a great closed-loop recycling story that they're made back into bags, or decking, or playground furniture for kids. I think that's a great story. I think nine out of 10 people are reusing their bags. It has a second use. It's not single-use. It provides 30,600 jobs in the U.S. -- very robust recycling, green industry as well. And I couldn't agree

more with the Sierra Club that we should be increasing and educating people on recycling polyethylene film and bags.

And what I'd like to close with is just a couple of statistics from the Clean Ocean Action's Beach Sweeps 26th Annual Report from 2011. I found it very interesting. In 2011, plastic-- And in that, everything is clumped together. Plastics are kind of clumped together. So since we're here to talk about bags, I thought it was appropriate to pull out the plastic bags. In 2011, plastic -- this says plastic store shopping bags -- was 2.6 percent of the litter stream.

SENATOR SMITH: Was that 2.6?

MS. DEMPSEY: Yes, sir, 2.6 percent, which is a decrease of 10 percent from the year 2010.

When you take into consideration -- and I think this report started -- at least what I have -- in 2008-- The number of volunteers started out to be, like, 4,500. And in 2011, it went up to over 8,000. So if you correlate the number of plastic bags picked up at the beach cleanup, it's one bag per volunteer, which has not changed since 2008. Because obviously if you have more volunteers, you're going to get more litter.

And lastly -- actually two things. One is that this report -- again clumping all plastics together -- says that either a whole plastic bag, or if they break down into little bits, is toxic. Plastic bags come from polyethylene. There is nothing toxic in polyethylene. I do understand they're clumping it all together, but I thought that was worth mentioning.

And then lastly, this Beach Sweeps Annual Report encourages people to bring plastic bags to pick up their dog waste.

So that's kind of what I have to say. I'm very, very happy to answer any questions. We have great partners here in New Jersey. I work with communities throughout the United States. And I'm very happy to have this opportunity to perhaps clear up some misperceptions and talk to you. I really appreciate the time.

SENATOR SMITH: Thank you.

ASSEMBLYWOMAN SPENCER: Next up, Ed Camacho, from Lavallette, New Jersey.

UNIDENTIFIED MEMBER OF COMMITTEE: Question.

ASSEMBLYWOMAN SPENCER: Oh, I'm sorry.

ASSEMBLYWOMAN SCHEPISI: I'm sorry, I just had one quick question.

ASSEMBLYWOMAN SPENCER: Assemblywoman Schepisi.

ASSEMBLYWOMAN SCHEPISI: Thank you.

There seems to be two different lines of thought on recycling of plastic bags. The gentleman who just appeared from Surfrider indicated that plastic bags cannot be recycled. And, in fact, on what we got it said, "You can't turn a plastic bag back into another plastic bag. Plastic bags are not recycled. At best, plastic bags are downcycled and turned into other products that can't be recycled themselves." You indicated that there can be recycling. So I'm just trying to understand.

MS. DEMPSEY: Again, the polyethylene is 100 percent recyclable. They're made into decking, playground equipment, pipes, piers, and back into plastic bags, and we think that's a great closed-loop recycling way to keep them out of the waste stream, to keep them out of the waterways. And I would have to respectfully disagree. Most people reuse

their bags. But the ones that are recycled are recycled back into other products, and we think that's a really good story.

ASSEMBLYWOMAN SCHEPISI: Thank you.

ASSEMBLYWOMAN SPENCER: Any other questions?

Assemblyman Milam.

ASSEMBLYMAN MILAM: You had mentioned the 700 jobs.

MS. DEMPSEY: Yes, sir.

ASSEMBLYMAN MILAM: What are they? Is this manufacturing, making the bags?

MS. DEMPSEY: Plastic bag manufacturers.

ASSEMBLYMAN MILAM: And they are here in New Jersey?

MS. DEMPSEY: Yes, sir. There's about 16 facilities, 30,600 nationwide. And that's U.S. Commerce Department data.

ASSEMBLYMAN MILAM: And from whatever materials to make the bags, they make those bags here in New Jersey?

MS. DEMPSEY: Yes, sir.

ASSEMBLYMAN MILAM: Correct.

MS. DEMPSEY: Yes, sir.

ASSEMBLYMAN MILAM: All the bags-- I mean, I know there's a billion bags a year being used, whatever. Are they all made in the United States? Are we using plastic bags from China, Asia? I mean, is there such a stream of them as well coming into our country?

MS. DEMPSEY: The bags that I'm talking about -- that my members mostly make, and they do make other merchandise -- retail, other type, food kinds of bags -- we probably have 85 to 90 percent that are made in the U.S.

ASSEMBLYMAN MILAM: Are there bags coming from other countries? I mean, do you know-- I don't care about your members. Is there-- In the United States, do we have plastic bags being made in other countries coming here?

MS. DEMPSEY: The shopping bags coming out of grocery stores?

ASSEMBLYMAN MILAM: Yes.

MS. DEMPSEY: Probably about 10 percent or so that do come in.

ASSEMBLYMAN MILAM: Is there? Okay. Where is that available? Where did you get that number? Where did you pull the 10 percent from?

MS. DEMPSEY: Well, we know how many bags are used in the U.S. and how many bags our members produce. Now, obviously they give it to us because it's confidential, and we take that and compare it to the number of bags we know are being used in the United States.

ASSEMBLYMAN MILAM: That could be a concern, right?

MS. DEMPSEY: Pardon me?

ASSEMBLYMAN MILAM: That could be a concern -- from other countries, right? Because we know a lot of things from maybe China -- I know some water pipe that was shipped here years ago had arsenic. I mean, we don't know their process. Correct? I mean, I'm just having a conversation now that--

MS. DEMPSEY: I would agree with you, and that's a concern about the reusable bags that hang at the checkout counter. Most of them come from Asia, China. They are known-- And I think we're getting

tougher on that as they're being imported. They are known to carry higher levels of lead. They don't have as stringent process as we do here. So they are known to have higher levels of lead. And I do think it's a concern when they're imported. And I think a lot of people think that the grocery bags -- most of them come from China, and that's just not true.

ASSEMBLYMAN MILAM: You talked about washing reusables. Are you talking about the canvass ones or is that-- Because I'm looking at the samples that we have up here. I mean, that's a wipe-down thing. That's just being wiped down, obviously. But when you said washing, obviously that's not going in the washer.

MS. DEMPSEY: Well, it should. Unless you're going to wipe it down with Clorox or--

ASSEMBLYWOMAN SPENCER: I can testify that--

ASSEMBLYMAN MILAM: You wash them?

ASSEMBLYWOMAN SPENCER: --I've stuck them all in the washing machine without any problems.

ASSEMBLYMAN MILAM: Okay. Good.

MS. DEMPSEY: I think it has to be 140 degrees Fahrenheit.

ASSEMBLYMAN MILAM: Does it? Okay.

MS. DEMPSEY: I'm not a medical doctor. If you wiped it down with bleach-- I couldn't tell you.

ASSEMBLYMAN MILAM: I'm just educating myself.

MS. DEMPSEY: But sure, even a cloth bag harbors serious bacteria if it's not washed. I mean, imagine your eggs or your steak leaking, or something like that, and then you go ahead and put your potatoes or something like that--

ASSEMBLYMAN MILAM: Makes sense.

MS. DEMPSEY: So they should also be washed. Yes, sir. And it's an option. Just understand and make sure you're doing the healthy thing for your family.

ASSEMBLYWOMAN SPENCER: I forget where I was, but I was told, "Treat it like you would a chopping board. If you need to bleach it after you've used it, then you need to consider doing the same thing with the bag." And again, for me, at the end of the week, they all go in the washing machine, a little bit of bleach, a lot of hot water. Just don't dry them. (laughter)

ASSEMBLYMAN MILAM: So you hang them on a clothesline. Hang your bags on a clothesline.

ASSEMBLYWOMAN SPENCER: Any other questions? (no response)

SENATOR SMITH: Mr. Ed Camacho, from Lavallette, New Jersey.

Chairwoman Spencer and I agree that this is, like, some of the most interesting stuff ever. But at 1:00 we have to terminate. We have members who have to leave. So we're going to ask everybody to be as brief as they can to make their points. But at 1:00 we're going to have to-- But you will be invited to Trenton, because we're going to have further hearings.

Go ahead, Mr. Camacho.

E D C A M A C H O: I just have a question as a long-time resident of Barnegat Bay, having grown up here for the last 60 or more years. I have seen the degradation of the Bay, obviously, and the proliferation of sea nettles.

The question I have is, is there a feasible way-- It seems that some of the problem is that the northern part of the Bay does not flush. And the degradation moving to the south has been slower because the southern part of the Bay did have some flushing through Barnegat Inlet. Is there a feasible way of trying to flush the northern part of the Bay instead of all of this rigmarole that we're all talking about?

SENATOR SMITH: I certainly don't know the answer. But we will pass the idea on to the DEP and to the scientists to see if they have an idea. It's a good suggestion.

MR. CAMACHO: There are narrow parts of the island where they could cut through to the ocean and try to flush the Bay. I don't know if they've ever considered that approach. And that's the question I have.

SENATOR SMITH: We'll pass it on.

ASSEMBLYWOMAN SPENCER: Certainly.

Thank you, Mr. Camacho.

MR. CAMACHO: Thank you.

ASSEMBLYWOMAN SPENCER: Next up, Mr. Gregory Mayers.

G R E G O R Y M A Y E R S: M-A-Y-E-R-S?

ASSEMBLYWOMAN SPENCER: Yes.

MR. MAYERS: I'm not scheduled to give oral testimony.

ASSEMBLYWOMAN SPENCER: Oh, I'm sorry. "No need to testify." You are correct. Thank you.

Chris Len, from Hackensack Riverkeeper.

C H R I S L E N, E S Q.: Hello, everyone. Thanks for doing this today.

I'm Chris Len. I'm the Staff Attorney for Hackensack Riverkeeper and also for NY/NJ Baykeeper. And I was sent down today to enjoy Lavallette, but also to convey that our organizations do a lot of cleanups. Hackensack Riverkeeper alone does about 20 of them a year. And a large portion of what we get out of those cleanups are single-use plastic bags. And to us they're one of the bigger problems that face our watersheds.

It's not just from grocery stores. We're glad ShopRite does all the things that ShopRite does. But it just shows that the problem is not one that is being fixed by private solutions. So they have all of these recycling plans and they do all this outreach, and yet still, if you drive down the New Jersey Turnpike in the winter, it looks like some of the trees still have leaves because so many plastic bags are in them.

We have seen tangled sea birds. We've had problems with our boats because the plastic bags get in the water intakes and cause the engines to overheat. We object to the fact that they're petrochemically based. If they are from oil or from natural gas -- I'll stipulate, I don't know -- what I've seen in the Internet says that they take about 12 million barrels of oil a year to produce. Whether that takes a similar amount of natural gas-- It's not like natural gas is made of mother's milk. Natural gas has a host of environmental problems as well and also has a global warming footprint that we would certainly object to. Not to mention all the impacts from retrieving the natural gas from the ground.

So the U.S. consumes about 102 billion bags per year, which I understand -- according to the Clean Air Council -- that's about 1,500 plastic bags per year per family. One of the people earlier from -- I think it

was the grocery stores concerns -- was saying that the large majority of plastic bags are recycled. That struck me as sort of incredible. I don't think the large majority of anything is recycled. And doing a little research shows the Clean Air Council estimates that less than 1 percent are ever recycled. The American Chemistry Council -- obviously a little more optimistic about the recycling prospects -- says it's about 10 percent of plastic bags that are recycled. The idea that a large majority of plastic bags are recycled is extremely fanciful. And even if it were, given -- say you recycle 60 percent of the plastic bags, that still represents 40 billion plastic bags per year that end up going into landfills or worse, blowing out of someone's hand and ending up in a tree, or ending up in a river and then going into the ocean and choking a sea bird, or just making New Jersey look less beautiful than it would otherwise look.

My boss, Captain Bill, would be here today except he's out with a bunch of teenagers teaching them about their environmental resources that exist in North Jersey. And being careful with one's trash is something that he always talks about.

But if there is not a government solution to this, this problem will not get solved. Just merely increasing recycling rates will not solve this problem. Whether they end up in plastic decking or as new bags, the fact is that enough of them escape into the environment that year after year, cleanup after cleanup, what we're cleaning up is largely plastic bags.

So Bill lives in Secaucus and, last year, was involved in Secaucus banning Styrofoam, as I understand it, from takeout containers in town. I certainly know that Bill considers that a success, and I think that Secaucus considers it enough of a success that they are, this year,

considering banning plastic bags. And I think that it's great that towns can take a step-by-step, town-by-town approach to this.

But the fact of it is that every exchange that involves a plastic bag going into private hands pushes the cost of that transaction onto the people of New Jersey. You can say that that's the most economical way to do it, but that only is true if you're ignoring the cost of plastic bags in the wild damaging the environment, making our environment look less attractive, or injuring wildlife. It only counts if you ignore the savings you would generate by having a reusable bag that you could reuse enough times to make up the difference in cost.

I see a difference of -- I think it was quoted earlier -- about a penny for a plastic bag and about \$0.05 for a paper bag, and then about \$1 for a reusable bag. As far as I can tell that \$1 is for if I buy one in a grocery store. I haven't found a cost for what it costs for the grocery store to buy it. But if that difference in cost is made up over a few trips to the grocery store, then after that couple of months of depreciating the cost difference you end up with a more expensive thing -- just keep giving out free plastic bags to everybody.

So looking at the broader term aspects of the economic exchange, I think we're wasting tons of money doing it this way. It's really inefficient. And I think that anyone here who is a fan of economics will realize that when you have given away something for free that presents costs that are not involved in the economic exchange, that's always going to be inefficient and it's always going to add up to a cost later on that comes down to the government to figure out what to do about it.

That is why I'm so glad you're here today. Just encouraging recycling and just educating people is not going to be enough to solve the problem. Taking action, ideally, at a State level is the place to go. And we've certainly heard you do so.

Thank you very much. (applause)

SENATOR SMITH: Mike Egenton, from the New Jersey State Chamber of Commerce.

MICHAEL EGENTON: Thank you, Chairman, Madam Chair.

I won't read my testimony. I know it's getting late in the day. I will summarize.

I agree with you, Madam Chair. I think education is an important component in all of this. The example I would give is, a few years ago I was approached by some youngsters about what we could do to help recycling efforts in the state overall. I went to then DEP Commissioner Lisa Jackson and we started a campaign called Reinvigorating Recycling. We actually went to our local chambers of commerce and told them what they could do and how they could communicate with their merchants.

I thought it was quite successful. And I'm a big advocate and believer in utilizing the outreach, particularly when it comes to our young. Maybe there should be the curriculum within the schools to let the future workforce and those who will be taking over the jobs here in New Jersey know how important recycling efforts are.

One of the things we did, for instance, was we heard from some of our business members that took Transit that there was only one trash receptacle at the Transit stations. That was easily fixed. We now have

receptacles there to take plastic bottles and the like. So we're a big believer in that.

We think as the consumer-- Like it was said here, you can teach the consumer to use reusable canvas or cloth bags. I know my wife washes them too. She's a big believer in that. I know stores like Wawa ask -- I know the Wawa that I frequent asks me all the time, "Do you need a plastic bag?" Well, if I'm buying a pack of gum, or just a soda, or the newspaper I say no. Obviously if there are several items then you have to rethink your choice. Obviously bring those plastic bags in your car and bring them to your supermarkets. Reuse them-- I know a lot of people who say they use them for trash can liners, when they walk their dogs, and the like.

As far as businesses, as I said, many of our members offer their customers reusable cloth bags, sometimes with their logo which helps promote and advertise their place of business. Several businesses, as I said, train their employees to ask their customers whether they would like a plastic bag. Some of them offer financial incentives.

And of course, as I said, education is a critical component.

I know, Assemblyman Milam, a couple of years ago you worked very closely with the Ocean City Regional Chamber of Commerce, because they were asking, "What can we do? How can we reach out to our members?" So obviously the only way to curb littering is to change human behavior through education. By simply banning the use of plastic bags, we're failing to address human behavior. We believe the sound approach is to educate the public and support the issue -- support the use of reusable bags and recycling.

So thank you for giving us the opportunity to give our points.

(applause)

ASSEMBLYWOMAN SPENCER: Thank you.

Next up, Heather Saffert, from Clean Ocean Action.

TAVIA DANCH: I'm from Clean Ocean Action too. Is it okay if I sit down with Heather?

ASSEMBLYWOMAN SPENCER: Certainly.

HEATHER SAFFERT, Ph.D.: Tavia is just passing out our Beach Sweeps report. And we have a couple of pictures here showing beaches closed due to floatable wash-ups.

Tavia, if you want, begin.

MS. DANCH: Thank you very much for hearing us today.

My name is Tavia Danch, and I'm the Education Coordinator for Clean Ocean Action.

And for those who are not familiar with Clean Ocean Action, we are a regional, nonprofit that really works to protect and improve the waters off of the New York/New Jersey coast.

Today I'm here to talk specifically about our Beach Sweeps program. And I did hand out those reports in front of you. And I know that it has been mentioned and referred to earlier today.

So we started the Beach Sweeps program about -- this is our 27th year. And that report actually reflects the 26th year, 2011. And the program started in Sandy Hook with one site, 75 volunteers; and it has evolved over that 27 years into a statewide program including about 70 sites annually and attracting 8,000 volunteers. So the growth and success of the program is certainly an illustration of the public support for a clean ocean.

And it is also -- just to mention -- a solid platform, an educational platform for topics such as recycling, as well as the proper disposal of debris that accumulates on our beaches.

So to just kind of explain how the program works, every Beach Sweeper becomes a citizen scientist as they record each piece of debris collected on our tried-and-true Beach Sweeps cards. And all that information is then tallied and organized into the report that you do see in front of you. The information is also sent to the Ocean Conservancy, which hosts the International Coastal Cleanup. So the information is also used on a global level as well. And this information is very important because we use this information to really educate the public -- those who are not able to participate in the cleanup -- but educate about marine debris, the impacts, and the quantity as well as the types, and also used to advocate for pollution prevention initiatives and changes in ordinances that are really aimed to stop pollution at its source. So that's really what we're here to talk to you about today.

The global statistic right now is that between 60 and 80 percent of marine debris is plastic. And right here in New Jersey, because we have this volunteer program, we know that consistently over 80 percent of the debris that is collected year after year is plastic. So it is very important to mention, as John Weber mentioned, that there is definitely a difference between plastics and single-use disposable plastics. And really, Clean Ocean Action is against those single-use disposables because plastics can save people's lives and aren't always a bad thing.

So some important highlights that I would like to mention: In 2011, after looking at the data, we did find two things. We found that

plastic pieces actually increased. And we really think that the reason why they increased is because of the increase of single-use disposable plastics and the fact, as others have mentioned, that plastics do not biodegrade, they photodegrade. So they just keep on breaking up into these smaller and smaller pieces, becoming more and more invasive on the environment.

Also what has been mentioned is that plastics do attract and collect other toxic pollutants, petroleum-based chemicals which are then absorbed by the marine life that mistakenly eat these plastic pieces. And these plastics can then be transferred into our food chain, making it very dangerous to humans as well and a public health issue.

Also very tragic is that marine life can -- just as they mistake these plastics, they can also become entangled in these plastics. And this results in a very slow and painful death -- which can result in a very slow and painful death. And during the 2011 Beach Sweeps, we actually documented 20 animals that had been entangled and died, unfortunately; and three of those animals -- or three additional animals we were able to free because our volunteers were there on the beach cleaning up this debris.

So another very important thing that I would like to highlight is that we were able to document the decrease in smoking-related debris this year, which was very interesting to us. And we noticed cigarette filters, for the first time in Beach Sweeps history, actually declined and moved from being on the top three most collected pieces of debris to being the top five, which isn't that great, but it is a significant decrease. And so that made us look at the other smoking-related debris. And as you notice in our report, we do categorize things very meticulously. So we did notice also that packaging, lighters, and cigarette tips also decreased as well. So we would

really like to think that this information -- this data -- the decrease in smoking-related debris is directly related to the increase in smoking bans in public places. So it's really just an illustration -- or definitely worth a further, closer look into how these smoking -- or litter-related ordinances can really affect the amount of trash that we're finding on our beaches.

So I just would like to mention very importantly that Clean Ocean Action is really not in the business to collect people's garbage, and we really do picture a day when beaches are clean, that they do not need these cleanup events. And the way to do that is taking much more proactive measures. Beach cleanups are great because they are picking up the garbage once it gets to the beach, and cleaning it, and collecting it, removing it from harming things. But it has had the chance to move through our environment and impact our water quality, as well as wildlife and recreation. So really what we can do is put in place litter ordinances and enforcement that will really aim to stop pollution at its source, which we really think is the answer.

So with that, I'd like to turn it over to Heather, our Staff Scientist with Clean Ocean Action.

Thank you.

DR. SAFFERT: Thank you, Tavia.

Again, here is a picture of the debris. This is what happened a few years ago on Labor Day weekend. In June, something similar happened down at LBI, and it closed a number of beaches on Long Beach Island while residents and visitors were hoping to start the summer beach season.

The wash-up was attributed to the combined sewer overflows in New York City and the New Jersey metropolitan area, which discharge

(indiscernible) and raw sewage when it rains more than a 10th of an inch. These sorts of wash-ups used to be more common back in the '80s and '90s, and caused billions in lost revenue. Efforts since then have helped reduce the discharge of trash and sewage into our waters. However, sewage-related debris continues to be found on a regular basis on beaches on the northern bay shore out on Sandy Hook and some of the northern New Jersey beaches.

During the Beach Sweeps we find syringes, ear swabs, tampon applicators, and foam-like sewage cakes. All of these indicate raw sewage, especially when found together. This impacts tourism and the quality of life in New Jersey, not to mention wildlife and the ocean. More work continues to be needed as garbage continues to be found throughout the Beach Sweeps locations.

Programs such as the Floatable Action Plan, which identifies and removes debris slicks in the harbor during the summer months and provides for intergovernmental agency cooperation and coordination need to be supported and strengthened. As of 2011, this program had prevented about 423 million pounds of debris from going into the New York (indiscernible) area. This is substantial, but still so much debris ends up into our ocean waters and onto our beaches. We need to be doing more.

New Jersey has three 30 CSO permit holders with 254 outfalls. New Jersey does require that all CSO permittees do capture and remove solids and floatables. This requires continued maintenance. As of May 2010, 87 percent of the CSOs did have floatable controls. So we need to ensure that all CSOs have controls. New Jersey still lacks long-term control plans, though, for these CSOs, and continues to allow the discharge of raw

sewage, and some small items such as syringes can still escape through the netting used. New York City has begun to invest in green infrastructure which helps reduce the amount of stormwater that enters the CSOs that causes overflows. New Jersey needs to step up and begin making similar investments to reduce the discharge of sewage and floatables that go with it. There is knowledge in completed pilot projects in both New Jersey and New York that the State could learn from and build upon. Through green infrastructure and other mechanisms, stormwater could be reduced and we could reduce the amount of floatables.

The solution to decreasing wash-ups and floatables also is -- to echo what everyone else has said -- is to decrease the consumption of disposable plastics and ensure that plastics that are used are recycled. Towns need to be enforcing recycling, proper waste disposal, and litter laws. We have the laws on the books. We just need the funding and support for towns to actually enact these laws.

The Legislature can set up incentives and provide the financial support to municipalities. Through better stormwater infrastructure and management, we can reduce not only floatables, but also nutrient and pathogen problems that are associated with fecal waste from sewage and animal waste.

The Legislature can help reduce wash-ups from CSOs by providing more support for CSO abatement projects. And together we can find ways to reduce disposable plastic and its transport into the environment. The Legislature must take action to keep New Jersey clean, support our clean ocean economy, and to protect our waters and aquatic life.

Clean Ocean Action is taking action. Last Friday we launched Tour for the Shore. It's a 15-day adventure to establish the nation's first clean ocean zone and to clean up coastal waters in both New Jersey and New York. Sean Dixon, my colleague, is biking from Cape May to New York City -- to Montauk. And Margo Pellegrino is paddling the same journey. And we're joined by the public along the way. This hearing is actually going to be a stop along the route, and Sean should be arriving around 1:00.

SENATOR SMITH: Hopefully. (laughter)

And you were kind enough to drop off some flyers. If you would like to distribute them to the audience, you're more than welcome to. We appreciate your comments. (applause)

Barbara McConnell, New Jersey Clean Communities.

B A R B A R A M c C O N N E L L: Chairman Smith, Chairwoman Spencer, and members of the Joint Senate and Assembly Environment Committee, I am Barbara McConnell, and I'm Vice Chair of the Clean Communities Council and have been a member of that Board of Trustees for over 25 years.

It was 25 years ago that New Jersey was faced with a really serious solid waste dilemma. We were running out of landfill space, we were throwing away valuable materials, we had no comprehensive programs in place for recycling or for litter abatement. And we were entering into an electronic world that was going to generate a lot more waste. And while other states in the northeast were enacting legislation on a piecemeal basis such as New York's bottle bill -- they were just focusing on one or two materials that were in our waste stream and in our litter stream. And it was

New Jersey who said, "Wait a minute. If we just focus on bottles and cans, or just on certain plastic materials, we will not have addressed all of the major components of a successful and lasting recycling and litter abatement program."

As a result, 25 years ago New Jersey enacted the mandatory recycling program for the purpose of helping municipalities set up an infrastructure to develop markets for these materials that we were throwing away. And the second program that they enacted was the Clean Communities Program. And how that program works -- and all of you receive benefit from it in your municipalities -- the Legislature and industry came together as partners and said, "Let's identify what is in the litter stream and the recycling stream." And industry voluntarily said, "We will pay a small tax on both the manufacturing and the wholesale at the retail level on 15 litter-generating products." That law was enacted-- Those moneys go back to the municipalities to help them establish their program and, as I said, to set up an infrastructure and develop markets for those materials. Because even what comes out of the litter stream is mandatorily required to go into our recycling program. Those 15 litter-generating products, by the way -- one of them includes plastic bags. So we already have a fee on plastic bags and plastic materials. And it includes plastic, paper, food packaging, cigarettes, etc. It's a large list.

And perhaps the most significant component of the Clean Communities Program is its educational and enforcement requirement. The reason that is so important is because the Legislature envisioned, 25 years ago, that education and enforcement were very important because it could help change the attitudes and habits of generations to come.

In my opinion, these two programs are really some of the best public policy stories in New Jersey. It's a story of vision, and it's a story of courage, and it's a story and a belief that through these programs, everyone would have to do their part to help clean up New Jersey. It's a story that has begun to change the habits and raise the conscientiousness of our citizens, and a story that would bring both environmental and economic benefits to our towns, counties, and to our State. And it's a story that has forged phenomenal corporate sponsorships. Rather than going after industry for producing some of these products the consumers desire and want, it was a program designed to work in partnership to encourage industry to do all that they could to reduce, reuse, and recycle their materials and also to pay a fee on those materials that were ending up in our recycling stream. And it has been a phenomenal partnership.

Have these two programs eradicated litter? No. And are there still challenges within our mandatory recycling program? Yes, of course, there are. But you've heard a lot of negative things today. Let me tell you some positive things, positive outcomes of these two programs. Earlier this year, the Department of Environmental Protection reported to the Assembly Environment Committee some of the successes and challenges of our New Jersey recycling program. They reported that our recycling rates have climbed to 40 percent. Now, you heard Jeff Tittel criticize the fact that we were not recycling as much as we were in 1992, and there is a reason for that. And we don't have time to go into it. But Senator Smith and many of you know that the funding ran out for that program and so recycling rates dropped. If you see now that recycling rates have climbed to 40 percent, that's 20 percent higher than it was the prior year thanks in

large part to these two Committees who worked to reinstate the recycling enhancement committee and to provide funding back to our municipalities.

Many of our towns, and municipalities, and counties are recycling at a 50 percent rate. That is good. And DEP credits this to more single-stream recycling. And the e-waste law, sponsored by Senator Smith and supported by many of you -- where today, one year later, over 20,000 tons have been recycled at 520 sites. And the grant program funded through the \$3 tipping fee has sent \$19 million back to your towns and communities. And it has saved towns \$26 million in disposal costs and \$45 million has been realized as the result -- the sale of recycled materials.

Now, the Clean Communities Program -- if we could focus on that for just a minute -- has gone through several changes since its enactment in 1987. There were some flaws in the original legislation. And one of those flaws was that they decided to put a sunset provision in there so the Legislature could revisit the success of this program. Well, the sunset provision began to cause a lot of problems. The other thing was -- guess what -- the money intended to go back to these municipalities was taken and put in the general fund at one point, and so we lost funding. And towns and communities did not have the incentives nor the resources to continue the recycling program.

All that changed in 2003, again, when we removed the sunset provision from that legislation and, through an act of the Legislature, created a nonprofit organization to monitor and administer the Clean Communities Program -- and that is the Clean Communities Council, which I'm very pleased to serve as their Vice Chair.

Since that time, over 3,000 reports have been received from municipalities, 48,000 (*sic*) cleanups have been conducted, 373 (*sic*) volunteers today work with our organization, and over 700,000 tons of litter have been picked up and recycled, 90,000 miles of roadway have been cleared, 300,000 acres of land have been cleared, 150,000 citations presented for outstanding recycling efforts, and 24,000 presentations made to schools for the purpose of educating our children about why it's important to not litter and to recycle your materials.

So over the last eight years, the Clean Communities Council has established a remarkable network of municipal and county coordinators. This is a popular program, by the way, for our mayors, and for our townships, and for our counties. It's established a clearinghouse of information based on data collected, and augmented in 2006 with the creation of the best practices manual. Our organization developed a best practices manual on the best way to recycle and to mitigate litter. And we get calls from all over the country to get copies of that best practices manual. And by the way, I receive calls from legislators in other states saying, "Tell us about your Clean Communities Program. Tell us about your mandatory recycling program." So it's known nationwide as a successful -- two successful, comprehensive programs.

In 2011, we assumed responsibility for the State's Adopt a Beach program, a comprehensive, statewide, volunteer program organized by the Clean Communities Council to clean and maintain beaches, bays, rivers, and waterways through a network of municipalities, of counties, of community organizations, businesses, and individuals. We represent the State with Ocean Conservancy in Washington, D.C. -- although they didn't

mention us. Last year the Clean Communities hosted cleanups on International Coastal Cleanup Day, where over 3,000 volunteers picked up and categorized 53,000 pounds of litter. You've heard about that from Clean Ocean.

SENATOR SMITH: Barbara, let me interrupt for one second. There is no question that the Clean Communities Council has done magnificent stuff.

MS. McCONNELL: I'm done. (laughter)

SENATOR SMITH: But where are they on plastic bags?

MS. McCONNELL: We take a conservative approach. We do not support bans. We support a more--

SENATOR SMITH: Why?

MS. McCONNELL: Why? Because we think that industry is doing a great job of recycling. And we just take a more comprehensive approach to -- it's not a good idea to single out one particular product when we have these comprehensive, mandatory programs in place already. So our position is not to ban, not to tax, but to develop strong comprehensive programs.

SENATOR SMITH: Okay.

ASSEMBLYWOMAN SPENCER: Thank you.

MS. McCONNELL: Did I have anything really earth-shattering to tell you? (laughter)

SENATOR SMITH: That was the most earth-shattering, that last comment. (laughter)

MS. McCONNELL: Was it?

Thank you, Mr. Chairman and Chairwoman.

ASSEMBLYWOMAN SPENCER: Thank you.

Okay. Our last speaker is going to be Mike Pisauero, from NJEL.

But I want to acknowledge Ben Wurst from Conserve Wildlife Foundation, who indicated that this summer he collected trash from 112 active osprey nests. Thank you for your work. Thank you for your contribution.

Doug O'Malley, from Environment New Jersey; Sara Bluhm, from NJBIA; and Theodore Karras, on the Barnegat Bay. Thank you as well.

MICHAEL L. PISAURO JR.: Chairwoman, if there are some of the nonusual characters who want to testify, I would be more than glad to give up my spot.

ASSEMBLYWOMAN SPENCER: Certainly, if you don't mind. Thank you.

SENATOR SMITH: How about the fellow from the Barnegat Bay?

ASSEMBLYWOMAN SPENCER: Come forward, sir.

THEODORE KARRAS: Thank you.

ASSEMBLYWOMAN SPENCER: Mr. Theodore Karras.

MR. KARRAS: Theodore Karras.

ASSEMBLYWOMAN SPENCER: Thank you.

MR. KARRAS: I would like to bring an alternate point of view to the problem of Barnegat Bay. Barnegat Bay pollution has come down the rivers for the last 40 years. It stayed in Barnegat Bay. It didn't go out to the ocean. The pollution is there through an accumulation of 40 years.

We can cure all the river flow tomorrow, and the Bay is still going to stay polluted.

I advocate pumping out the Bay by one or another means. If we pump out the Bay, we get rid of the accumulation faster than we can stop the rivers from polluting it more. So we need to solve the problem of what's in the Bay. The water that comes down the rivers has no place to go but the Bay. The Bay being stagnant loses the river water through evaporation, so none of it goes out to the ocean. We have 40 years of accumulation in the Bay, and nobody is talking about getting rid of the accumulation, only getting rid of the additional flow.

SENATOR SMITH: Thank you for your idea.

MR. KARRAS: You can pump out the Bay through pumps. Take the pumps at the atomic energy plant. Those pumps pump water. They could purify the Bay in two or three years. There are ways to maybe make a reverse flow to the canal that goes through Point Pleasant, although I'm sure they won't be happy up there to receive all the debris we would ship. (laughter) We can put pumps in the middle of the Bay hooked up to pipes that pump out to the ocean, such as the sewers, as those pipes would do. And that would also get rid of water. It would take two, or three, or four years to rid the Bay of the accumulation. It will never leave if we just fool around with the river flow.

SENATOR SMITH: Thank you for your idea.

ASSEMBLYWOMAN SPENCER: Thank you.

MR. KARRAS: You're very welcome.

ASSEMBLYWOMAN SPENCER: And last, I failed to recognize some other individuals who had submitted requests to testify:

Tina Barreiro (phonetic spelling), from Save Barnegat Bay. She wanted to comment on the Kennish Report. Celia Rodrigues, Save Barnegat Bay Intern.

If you would like to submit any kind of testimony via writing, please do so to the Committee.

And also Helen Henderson, from the American Littoral Society, wished to speak on the Barnegat Bay as well.

Once again, thank you for participating. And if there are any other individuals who did not have an opportunity to speak, please feel free to submit any kind of comments to either Committee, because we would love to hear what you think.

SENATOR SMITH: Thank you so much for participating today. (applause)

ASSEMBLYWOMAN SPENCER: Thank you.

Adjourned.

(MEETING CONCLUDED)