APPENDIX

Summary of major comments to be delivered on September 27, 2018 Trenton NJ concerning Senate Bill No 2776.

My name is Dr. Keith Cooper. I am a Professor at Rutgers University in the Department of Biochemistry and Microbiology at SEBS and a member of the Environmental Occupational Health Science Institute as well as the current Chair of the N.J. Drinking Water Quality Institute.

My training is in Environmental and Comparative Toxicology, which deals with examining the effects of toxic compounds from aquatic organisms to humans.

My laboratory along with Dr. Beth Ravit and other environmental organizations have demonstrated the occurrence of microplastics in fresh and estuarine surface waters, and in sediments.

Plastics are an integral component of our society and as with any large production commodity, there needs to be accountability that covers the manufacturing of the product to its final environmental fate.

The utilization of alternative products that are less persistent, less toxic, and composed of biodegradable or natural substances can serve as alternatives to currently used plastic polymers and a means to reduce microplastics entering the environment.

There is a growing literature base on the fate and transport of both plastic materials and their breakdown products resulting in the formation of smaller and smaller components.

The reduction of the aesthetic impact and the impact on organisms in these receiving waters.

The Bill establishes a mechanism by which outreach and education of the public both as individual consumers and businesses as to the benefits of finding alternatives.

I am in support of the Bill because it establishes a Statewide approach that will begin to **Reduce** the volume of single use plastic and Styrofoam, stimulate the development of **Replacements** that have less environmental impacts and begin development of **Remediation** alternatives that have less of an environmental and human impact.

There is a need to reassess the Life Cycle Analysis that industry has developed for plastic based products to account for compounds and products that persist in the environment for decades and the total cost to society encorporated.

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For both single use and non-essential plastic products there is a need to examine the sources, movement through the environment, environmental persistence, effects on living organism, and management approaches to reduce plastic liter and microplastics from entering surface waters.

Although there is a very large literature on the different types of plastics and their associated components, there is much less information on how microplastics can serve as the delivery mechanisms for chemical compounds and microorganisms, both through direct exposure and movement into human food sources. The concern is not only about the plastics themselves, but also the compounds or microbes that adhere to the microplastics.

This Bill is the beginning of a process that can begin to reduce the plastic source input, as well as, generate dedicated funding that can be used to advance the research on plastic fate, transport, adverse effects and increase recycle capacity. New Jersey can join several other States which have enacted similar legislation to begin to address the issues dealing with single use and convenience driven plastic utilization.

The National Institute for Environmental Health Sciences has awarded us a grant to host a national meeting at Rutgers University on April 4th and 5th 2019. We will be inviting experts from across the country to discuss these very issues concerning plastics with representation from academia, government, industry and impacted stakeholders. One of the panels will discuss legislative and policy discussions, which I hope one or more of you or your staff representatives will participate.

Keith R. Cooper, Ph.D.
Professor
Dept. of Biochemistry and Microbiology
SEBS, Rutgers University
New Brunswick, N.J. 08901
Office: 848 932-5614
cooper@sebs.rutgers.edu

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Table 7

PLASTICS IN PRODUCTS IN MSW, 2012
(In thousands of tons, and percent of generation by resin)

Product Category		Generation (Thousand tons)	Recovery (Thousand tons)	Recovery (Percent of Gen.)	Discards (Thousand tons)
Durable Goods					
	PET	350			
	HDPE	1,230			
	PVC	220			
	LDPE/LLDPE	1,980			
	PP	3,920			
	PS	690			
	Other resins	3,070			
Total Plastics in Durable Goods		**11,460**	**770**	**6.7%**	**10,690**
Nondurable Goods‡					
Plastic Plates and Cups§					
	LDPE/LLDPE	20			20
	PLA	20			20
	PP	190			190
	PS	830			830
	Subtotal Plastic Plates and Cups	1,060	Neg.	Neg.	1,060
Trash Bags					
	HDPE	220			220
	LDPE/LLDPE	800			800
	Subtotal Trash Bags	1,020			1,020
All other nondurables*					
	PET	540			
	HDPE	520			
	PVC	230			
	LDPE/LLDPE	1,160			
	PLA	20			
	PP	1,200			
	PS	200			
	Other resins	560			
	Subtotal All Other Nondurables	4,430	130	2.9%	4,300
Total Plastics in Nondurable Goods, by resin					
	PET	540			
	HDPE	740			
	PVC	230			
	LDPE/LLDPE	1,980			
	PLA	40			
	PP	1,390			
	PS	1,030			
	Other resins	560			
Total Plastics in Nondurable Goods		**6,510**	**130**	**2.0%**	**6,380**
Plastic Containers & Packaging					
Bottles and Jars**					
	PET	2,790	860	30.8%	1,930
Natural Bottles†					
	HDPE	780	220	28.2%	560

‡ Nondurable goods other than containers and packaging.

9 Due to source data aggregation, PET cups are included in "Other Plastic Packaging".

* All other nondurables include plastics in disposable diapers, clothing, footwear, etc.

** Injection stretch blow molded PET containers as identified in *Report on Postconsumer PET Container Recycling Activity in 2012* . National Association for PET Container Resources. Recovery includes caps, lids, and other material collected with PET bottles and jars.

† White translucent homopolymer bottles as defined in the *2007 United States National Postconsumer Plastics Bottles Recycling Report* . American Chemistry Council and the Association of Postconsumer Plastic Recyclers.

Neg. = negligible, less than 5,000 tons

Table 7 (continued)

PLASTICS IN PRODUCTS IN MSW, 2012

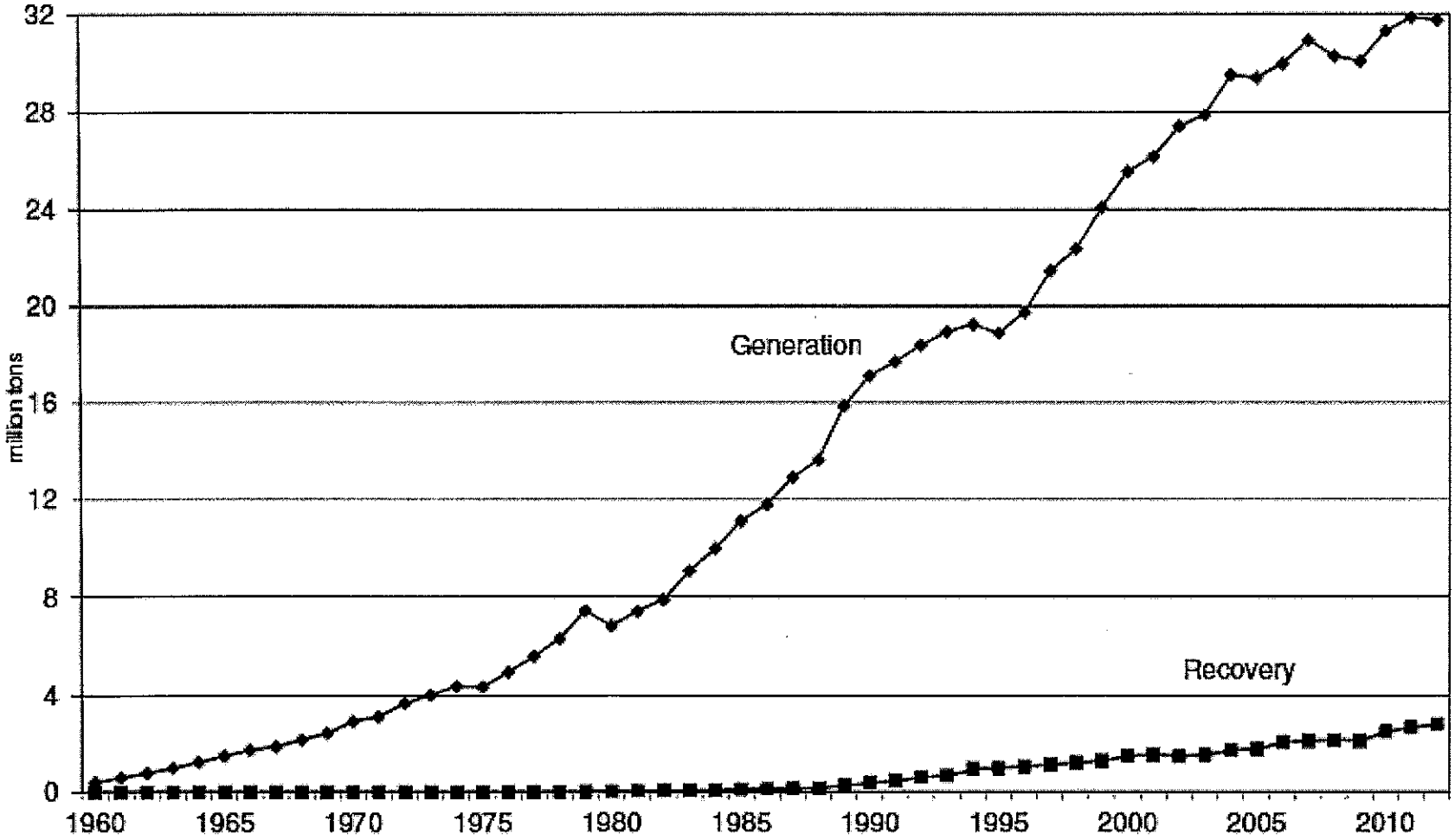
(In thousands of tons, and percent of generation by resin)

Product Category	Generation (Thousand tons)	Recovery (Thousand tons)	Recovery (Percent of Gen.)	Discards (Thousand tons)
Plastic Containers & Packaging, cont.				
Other plastic containers				
HDPE	1,410	290	20.6%	1,120
PVC	40	Neg.		40
LDPE/LLDPE	40	Neg.		40
PP	280	20	7.1%	260
PS	80	Neg.		80
Subtotal Other Containers	**1,850**	**310**	**16.8%**	**1,540**
Bags, sacks, & wraps				
HDPE	700	50	7.1%	650
PVC	50			50
LDPE/LLDPE	2,280	390	17.1%	1,890
PP	640			640
PS	140			140
Subtotal Bags, Sacks, & Wraps	**3,810**	**440**	**11.5%**	**3,370**
Other Plastics Packaging‡				
PET	840	20	2.4%	820
HDPE	670	10	1.5%	660
PVC	330	Neg.		330
LDPE/LLDPE	1,070	Neg.		1,070
PLA	10	Neg.		10
PP	960	20	2.1%	940
PS	300	20	6.7%	280
Other resins	370	Neg.		370
Subtotal Other Packaging	**4,550**	**70**	**1.5%**	**4,480**
Total Plastics in Containers & Packaging, by resin				
PET	3,630	880	24.2%	2,750
HDPE	3,560	570	16.0%	2,990
PVC	420	Neg.		420
LDPE/LLDPE	3,390	390	11.5%	3,000
PLA	10	Neg.		10
PP	1,880	40	2.1%	1,840
PS	520	20	3.8%	500
Other resins	370	Neg.		370
Total Plastics in Cont. & Packaging	**13,780**	**1,900**	**13.8%**	**11,880**
Total Plastics in MSW, by resin				
PET	4,520	880	19.5%	3,640
HDPE	5,530	570	10.3%	4,960
PVC	870	Neg.		870
LDPE/LLDPE	7,350	390	5.3%	6,960
PLA	50	Neg.		50
PP	7,190	40	0.6%	7,150
PS	2,240	20	0.9%	2,220
Other resins	4,000	900	22.5%	3,100
Total Plastics in MSW	**31,750**	**2,800**	**8.8%**	**28,950**

HDPE = High density polyethylene
LDPE = Low density polyethylene
LLDPE = Linear low density polyethylene
PET = Polyethylene terephthalate
PP = Polypropylene
PLA = Polylactide
PS = Polystyrene
PVC = Polyvinyl chloride

‡ Other plastic packaging includes coatings, closures, lids, PET cups, caps, clamshells, egg cartons, produce baskets, trays, shapes, loose fill, etc.
PP caps and lids recovered with PET bottles and jars are included in the recovery estimate for PET bottles and jars.
Other resins include commingled/undefined plastic packaging recovery.
Some detail of recovery by resin omitted due to lack of data.

Figure 9. Plastics generation and recovery, 1960 to 2012



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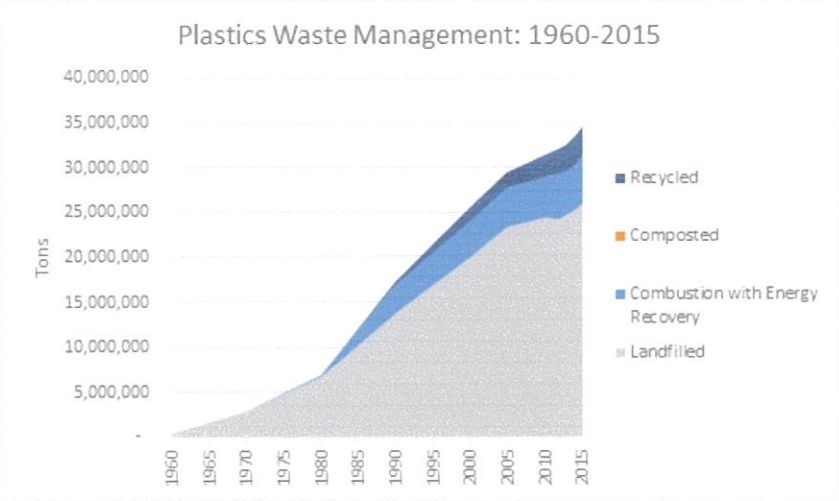
Management Pathway	1960	1970	1980	1990	2000	2005	2010	2014
Combustion with Energy Recovery	-	-	140	2,980	4,120	4,330	4,530	5,010
Landfilled	390	2,900	6,670	13,780	19,950	23,270	24,370	25,190

Sources: American Chemistry Council and the National Association for PET Container Resources.

A dash in the table means that data is not available.



LAST UPDATED ON JULY 19, 2018

Information provided by Noemi de la Puente, NJ Environmental Lobby, NJEnvLobby@gmail.com

Table 8. Plastics in Products In MSW, 2015

(In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods					
PET	500				
HDPE	1,480				
PVC	200				
LDPE/LLDPE	1,940				
PP	4,250				
PS	760				
Other resins	3,370				
Total Plastics in Durable Goods	**12,500**	**830**	**6.6%**	**1,490**	**10,180**
Nondurable Goods‡					
Plastic Plates and Cups§					
LDPE/LLDPE	20				
PLA	20				
PP	160				
PS	850				
Subtotal Plastic Plates and Cups	1,050	Neg.	Neg.	210	840
Trash Bags					
HDPE	220				
LDPE/LLDPE	910				
Subtotal Trash Bags	1,130			220	910
All other nondurables*					
PET	680				
HDPE	560				
PVC	270				
LDPE/LLDPE	1,290				
PLA	30				
PP	1,490				
PS	200				
Other resins	620				
Subtotal All Other Nondurables	**5,140**	**160**	**3.1%**	**970**	**4,010**
Total Plastics in Nondurable Goods, by resin					
PET	680				
HDPE	780				
PVC	270				
LDPE/LLDPE	2,220				
PLA	50				
PP	1,650				
PS	1,050				
Other resins	620				
Total Plastics in Nondurable Goods	**7,320**	**160**	**2.2%**	**1,400**	**5,760**

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Table 8. Plastics in Products In MSW, 2015

(In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Plastic Containers & Packaging					
Bottles and Jars**					
PET	2,980	890	29.9%	410	1,680
Natural Bottles†					
HDPE	760	230	30.3%	100	430
Other plastic containers					
HDPE	1,540	340	22.1%		
PVC	20	Neg.			
LDPE/LLDPE	40	Neg.			
PP	250	20	8.0%		
PS	90	Neg.			
Subtotal Other Containers	**1,940**	**360**	**18.6%**	**310**	**1,270**
Bags, sacks, & wraps					
HDPE	730	40	5.5%		
PVC	60				
LDPE/LLDPE	2,610	490	18.8%		
PP	590				
PS	140				
Subtotal Bags, Sacks, & Wraps	**4,130**	**530**	**12.8%**	**710**	**2,890**
Other Plastics Packaging‡					
PET	940	50	5.3%		
HDPE	750	10	1.3%		
PVC	340	Neg.			
LDPE/LLDPE	1,120	Neg.			
PLA	10	Neg.			
PP	990	50	5.1%		
PS	330	30	9.1%		
Other resins	390	Neg.			
Subtotal Other Packaging	**4,870**	**140**	**2.9%**	**930**	**3,800**
Total Plastics in Containers & Packaging, by resin					
PET	3,920	940	24.0%		
HDPE	3,780	620	16.4%		
PVC	420	Neg.			
LDPE/LLDPE	3,770	490	13.0%		
PLA	10	Neg.			
PP	1,830	70	3.8%		
PS	560	30	5.4%		
Other resins	390	Neg.			
Total Plastics in Containers & Packaging	**14,680**	**2,150**	**14.6%**	**2,460**	**10,070**

Table 8. Plastics in Products In MSW, 2015

(In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Total Plastics in MSW, by resin					
PET	5,100	940	18.4%		
HDPE	6,040	620	10.3%		
PVC	890	Neg.			
LDPE/LLDPE	7,930	490	6.2%		
PLA	60	Neg.			
PP	7,730	70	0.9%		
PS	2,370	30	1.3%		
Other resins	4,380	990	22.6%		
Total Plastics in MSW	**34,500**	**3,140**	**9.1%**	**5,350**	**26,010**

‡ Nondurable goods other than containers and packaging.

§ Due to source data aggregation, PET cups are included in "Other Plastic Packaging".

* All other nondurables include plastics in disposable diapers, clothing, footwear, etc.

** Injection stretch blow molded PET containers as identified in *Report on Postconsumer PET Container Recycling Activity in 2014.* National Association for PET Container Resources. Recycling includes caps, lids and other material collected with PET bottles and jars.

† White translucent homopolymer bottles as defined in the *2014 United States National Postconsumer Plastics Bottles Recycling Report.* American Chemistry Council and the Association of Postconsumer Plastic Recyclers.

Neg. = negligible, less than 5,000 tons

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PVC = Polyvinyl chloride

‡ Other plastic packaging includes coatings, closures, lids, PET cups, caps, clamshells, egg cartons, produce baskets, trays, shapes, loose fill, etc.

PP caps and lids recycled with PET bottles and jars are included in the recycling estimate for PET bottles and jars.

Other resins include commingled/undefined plastic packaging recycling.

Some detail of recycling by resin omitted due to lack of data.

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Mr. Chairman, members of the committee, thank you for allowing us to address you this morning on this very important issue. My name is Dennis Hart, Executive Director of the Chemistry Council of New Jersey. Respecting your time I am going to give a brief statement and then turn it over to Margaret Gorman of the American Chemistry Council.

The banning of polystyrene food containers will have a dramatic negative impact on New Jersey businesses. For the most part, the public and businesses are not aware that this is even under consideration. The food service industry and restaurants are a marginal business where small changes in costs can mean the difference between profitability or going out of business. The reason that polystyrene products are used is because of their performance in keeping food hot or cold, easy to handle and less costly than the alternatives. Not only are paper cups and cardboard food containers 2 to 10 times more expensive they do not give the customers the quality of food they demand. Along with this, there needs to be an evaluation of the total environmental impact of the alternative products, from additional handling and transportation costs and impacts to the need for more tree based paper products. If you just look outside of this building and walk the mile between here and the DEP building you will see that there are very few food establishments left in Trenton and the ones that are left focus more on take-out business than eating in the restaurant. The banning of polystyrene use will only accelerate the decline in the local food service take-out and delivery business since customers will simply order more food from across the river in Pennsylvania which will be less expensive and arrive hot.

Way back in the late 1960s and early 1970s I was involved in one of the first recycling programs in the state. Our Boy Scout troop collected

newspapers, magazines and glass bottles and sold the materials and used the money for our troop events. You will remember how people didn't think recycling would ever work on a large scale basis but after investments by the state though the Clean Communities Program by DEP and the County recycling programs recycling has become a way of life. Along with this there was an investment in anti-littering programs and public service announcements. People will testify today that polystyrene is not recyclable or not practice. Well, I would argue that we follow what has worked in the past and set up programs to demonstrate whether or not it can work on a large scale basis. There are polystyrene recycling demonstration programs underway right now so before we take the draconian measure to outlaw all polystyrene products we owe it to the citizens of New Jersey to first find out it can work or not. This is how all new programs get tested and evaluated for potential for success.

Combined with the recycling program we need to address the real problem which is littering. The Clean Ocean Action annual Beach Sweep program for 2017 shows that out of 373,678 pieces of debris volunteers picked up 3,445 foam cups, less than 1% of the total amount and much less than other items such as bottle caps, beverage cans and tampon applicators but there is not an effort to ban them or the 1,553 paper cups collected. If this bill was already in effect there would have been 4,500 paper cups collected because the issue is littering.

Finally, the banning of polystyrene products in public schools and institutions will cause increases in costs to school systems and the state while they are struggling to contain or cuts costs and fund needed education programs. While many schools are not able to afford to correct the lead problems in their drinking water pipes they will be

required to spend money now to replace their food service products. If the schools are managing their trash disposal properly, which I am sure they are doing, then there is no way for their cafeteria trays or plates or cups to make their way into our waterways. This is an unnecessary cost out of place with the other significant priorities our schools and institutions are facing. For instance, in my own town of Brick we are faced with a $22 Million cut in school funding aid and struggling with how to deal with this loss of funding. If they are forced to spend substantially more money now to replace food service products it is not helpful.

I ask that we take our time to evaluate polystyrene recycling and management prior to taking this drastic action that will have so many negative impacts to New Jersey.

New Jersey Senate Environment Committee
September 27, 2018

Senate Committee Substitute for NJ S 2776 – *An Act concerning single-use carryout bags, polystyrene foam food service products and single-use straws, and supplementing Title 13 of the Revised Statutes*

The American Chemistry Council (ACC) and its members believe chemistry plays an integral role in solving our world's sustainability challenges. We are therefore committed to advancing safe, innovative, effective, and economically viable chemical products and technologies that are key to unlocking sustainability solutions.

In recent years, momentum has grown behind product bans including single-use plastic and polystyrene foam food service products, despite their functionality and the importance of plastics to society. Plastics help keep the foods we eat and serve our families safer and fresher than ever before. In addition to efficiency and functionality, the plastics industry strengthens our economy by employing nearly 1 million people nationwide. In New Jersey, the industry accounts for over 20,000 jobs.

Although plastics provide important benefits for modern life, plastics, polystyrene and other trash should not be littered and should not end up in our waterways. Several cities and states have proposed bans on safe products like polystyrene foam food service products as a way to solve the litter or waste problem. We know from experience that bans do not fix these issues, and merely substituting one type of food service product for another will not result in any environmental improvement. We also know that there is a fiscal impact on banning polystyrene and mandating the use of alternative products. Instead of a ban on certain plastic products and polystyrene, ACC supports real solutions to control litter, reduce waste, recycle materials, and conserve resources.

Efforts to Control Litter, Recycle Materials, Reduce Waste and Conserve Resources

ACC and its members have a long history of investing in and supporting recycling, and in recent years, ACC has ramped up engagement and leadership of national and international groups including:

- Leader of the **Wrap Recycling Action Program** (WRAP), an initiative aimed at doubling the recycling of polyethylene wraps, bags and film
- Co-Leader of **Operation Clean Sweep**, which helps makers, shippers and users of plastic pellets to contain and prevent them from entering the ocean and waterways
- Founding partner of **The Recycling Partnership**, a national recycling nonprofit dedicated to improving curbside recycling
- Founding partner and sponsor of **Keep America Beautiful "I Want to Be Recycled"** campaign to increase consumer awareness and participation in recycling

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- Supporter of **Closed Loop Ocean**, designed to fund waste infrastructure solutions in Southeast Asia

- Member of **Trash Free Seas** with the goal of advancing scientific rigor on marine debris, exploring solutions and increasing public understanding

In addition, ACC has sponsored numerous projects in the Northeast including Green Up Vermont, Save the Bay Clean Up Day and two year study on marine litter, and Northeast Recycling Council (NERC) conferences. Our membership increasingly embraces sustainability and recognizes consumers' desire to recycle, and we would welcome the opportunity to pursue waste management programs, recycling initiatives and marine debris clean ups in New Jersey.

Circular Economy Goals

ACC is committed to working with governments, customers and non-profits to improve recycling, recovering and reusing plastics. To that end, ACC announced ambitious "circular economy goals" in May 2018 that will move the industry toward a new vision of how it designs, manufactures, recycles, recovers and reuses plastics.

More specifically, ACC will focus on six areas to accomplish its goals: (1) designing new products for greater efficiency; (2) developing new technologies and systems for collecting, sorting, recycling and recovering materials; (3) making it easier for consumers to access and participate in recycling programs; (4) expanding the types of plastics collected and repurposed; (5) aligning products with end markets; and (6) expanding awareness that used plastics are valuable resources.

The goals align plastic resin manufacturers, packaging manufacturers, retailers and recyclers to move recycling and recovery forward more quickly and to work together.

Uses, Benefits and Costs: Polystyrene Foam Food Service Products vs. Alternatives

PS food service products are a safe, low cost, and efficient packaging products that have been used for over 50 years. Polystyrene has performance benefits that make it a preferred choice – from PS lids used on all hot beverage material (paper and plastic) to prevent burning from leaky seals, to PS foam cups and clamshells that utilize 98% air as insulation, keeping hot foods hot and cold liquids cold.

Polystyrene foodservice containers – both foam polystyrene (e.g., cups, clamshells, plates) and solid polystyrene (e.g. cups, lids) are anywhere from 2-3 less expensive than coated bleached paperboard items, and 2-4 times less expensive than compostable alternatives.

Fiscal impact of this bill on the state

This bill applies to all entities including those operated by or on behalf of any governmental entity in NJ, would result in use of alternatives or the elimination of polystyrene foam foodservice products in schools, nursing homes and hospitals, jails, state office cafeterias and other state entities. This would require an average cost increase of 87%.
In other words, for every $1 spent on polystyrene foam foodservice ware, the State of New Jersey will have to spend at least $1.87 on the alternative replacements (biodegradable,

compostable, coated paperboard), effectively doubling the costs to businesses and consumers. Independent price lists show the cost of paper and compostable product alternative to expanded polystyrene foam (cups, trays, and dinnerware) would range from 2-4 times more than expanded polystyrene foam. This would have an adverse impact on the state's limited budget – with no environmental benefit. (http://plasticfoodservicefacts.com/Pages/Fiscal-Economic-Impacts-of-a-Ban-on-Plastic-Foam-Foodservice-and-Drink-Containers-in-New-York-City.pdf)

Environmental Footprint

A full environmental picture is critical when comparing foodservice product options – and we respectfully request that when you evaluate polystyrene foam foodservice products you do so in comparison to substitute products. A product's end life is not the only consideration – the environmental footprint of any product includes all of its impacts, such as raw material use, resources used in manufacture, fuel use and emissions in transport and more.

A peer reviewed study finds that commonly used cups, plates, and sandwich containers made of polystyrene foam use significantly less energy and water than comparable paper-based or corn-based (polylactic: PLA) alternatives, primarily due to polystyrene foam's lower weight. A Life Cycle Inventory (LCA) study[1] conducted on foam polystyrene, paper-based, and PLA (corn-based) foodservice products showed PS foam containers have very low footprint compared to alternatives. Key findings from this study were:

- Energy use: Polystyrene foam products consume significantly less energy than the alternatives-half as much as wax-coated paperboard cups and one-third as much as PLA clamshells.
- A polystyrene hot beverage cup requires about 50% LESS energy to produce than a similar plastic-coated paperboard cup with a corrugated cup sleeve
- Water use: Polystyrene foam products use significantly less water than the alternatives-up to four times less than PLA clamshells.
- Solid waste: Polystyrene foam products create significantly less solid waste by weight than the alternatives-up to five times less than paperboard and PLA products.
- Greenhouse gases - A polystyrene foam cup creates significantly fewer greenhouse gas emissions than a similar coated paper-based cup with its corrugated sleeve. If paperboard products do not degrade after disposal, they store carbon and generate fewer greenhouse gas emissions than polystyrene foam foodservice produces; however, if paperboard product degrade to the maximum extent, they generate more greenhouse gas emissions than polystyrene foam products, so comparison of greenhouse gas emissions vary widely depending on assumptions about the degradation of paperboard products.
- Lower weight products – The study found that lower weight products with similar functionality – such as polystyrene foam products composed of more than 90% air generally produce smaller environmental burdens. A link to the release of the study: (http://www.americanchemistry.com/Media/PressReleasesTranscripts/ACC-news-releases/New-Study-Polystyrene-Foam-Cups-and-Plates-Use-Less-Energy.html) as well as to the full peer reviewed study is provided here - http://plasticfoodservicefacts.com/Life-Cycle-Inventory-Foodservice-Products.

[1] Life Cycle Inventory of Foam Polystyrene, Paper-Based, and PLA Foodservice Products, Franklin Associates, A Division of ERG, Feb 4, 2011

American Chemistry Council

Recycling Opportunities for Polystyrene: Sussex County, New Jersey

Recycling opportunities and funding streams are rapidly emerging as an alternative to polystyrene bans. Sussex County, for example, has a polystyrene recycling program that has successfully helped conserve landfill space, generate a revenue stream for the county, and reduce the carbon footprint.

In this award-winning program, Sussex County Municipal Utilities Authority (MUA) partnered with Foam Cycle, which manufactures densifiers, to provide a drop-off program for residents and businesses. After the polystyrene is densified to reduce its volume by 95% (saving space in landfills), the county then sells the densified polystyrene to a local manufacturer. Princeton Molding uses the recycled foam to make picture frames.

Reenee Casapulla, Recycling Coordinator for stated, "The Foam Cycle recycling system has provided a tool for managing a difficult material at the Sussex County MUA Landfill. Collection and processing of the EPS was seamlessly integrated into the daily operations. County residents and businesses are excited to finally have a location they can bring their foam to be recycled." In addition to meeting consumers' desire to recycle, the program creates local jobs and revenue for the county.

There are numerous types of recycling programs in localities across the country including Yonkers, New York and Madison County, NY.

Funding for Polystyrene Recycling Programs

In 2014, the Foam Recycling Coalition (FRC) was launched to support increased recycling of foodservice packaging made from foam polystyrene. In order to meet this objective, the FRC shares general information on foam recycling, provides technical resources and offers funding assistance to programs ready to start or strengthen post-consumer foam recycling. In addition to encouraging the recycling of foam foodservice packaging (i.e. cups, plates, bowls, clamshells and cafeteria trays), the efforts of the FRC also extend to other foam food packaging like egg cartons and meat trays. FRC has supported dozens of grant funded programs across the US and Canada since it launched in 2014. The grants, each valued up to $50,000, assist in equipment upgrades that add or expand recycling of post-consumer foam polystyrene.

The foodservice industry through its Foam Recycling Coalition's launched a new grant program this year to help fund infrastructure for the collection, processing and marketing of products made for polystyrene foam (www.fpi.org/recyclefoam). The grant program targets post-consumer polystyrene foam products such as foodservice packaging (i.e., cups, plates, bowls, clamshells, cafeteria trays); egg cartons; meat rays; and protective "transport" packaging.

Foam Recycling Grants

Since 2014, the FRC has provided almost a dozen grants to public and private recycling entities in the U.S. and Canada that manage residential curbside or drop-off recycling programs, enabling more than one million residents to recycle foam. The grants, each valued up to $50,000, assist in equipment upgrades that add or expand recycling of post-consumer foam polystyrene.

The 2019 foam recycling grant cycle opens June 1. Applicants may submit their applications and supporting documentation through July 31. The FRC grant award committee will review and rank the applications, notifying grant awards in September. More information is available at: https://www.recyclefoam.org/grants

The non-profit organization, Sustainable Jersey, also provides grants for schools, towns and communities to reduce waste, cut greenhouse gas emissions, and improve environmental equity. Since inception, over $4.2 million has been awarded to fund projects. More information is available at: http://www.sustainablejersey.com/grants-resources

SUMMARY

In summary, ACC through the Plastic Food Packaging Group and the Plastics Division has demonstrated its commitment to working with industry and government to find a sustainable solution to the litter problem and to improve our environment through recycling, reusing and recovering plastics including polystyrene.

Margaret Gorman
Senior Director, Northeast Region
American Chemistry Council
Margaret_gorman@americanchemistry.com

AMERICANS for TAX REFORM

722 12th Street N.W.

Fourth Floor

Washington, D.C.

20005

T: (202)785-0266

F:(202)785-0261

www.atr.org

ATR Opposes Senate Bill 2776

Thank you Chairman Smith, and members of the Senate Committee on Environment and Energy for listening to my testimony, and the testimony of so many others who would be impacted by a ban on bags, straws, and styrofoam containers as outlined in Senate Bill 2776.

My name is Douglas Kellogg, I am State Projects Director for Americans for Tax Reform. ATR was founded in 1985 by Grover Norquist - at the request of President Reagan - to advocate for tax reform. Today, we continue to advocate for taxpayers, and work for policy that protects taxpayers, consumers, entrepreneurs, and fosters a vibrant economic climate that enables taxes to be few, low, and simple.

As someone who has been fortunate enough to live and work in this great state, and with family who have called New Jersey home, it is an honor to be here today.

Unfortunately, the legislation I am here to voice our strong opposition to would make New Jersey a more difficult place to live, work, and do business.

A first-in-the-nation ban on plastic bags, straws, and polystyrene containers, all in one go, is an overaggressive policy that will punish your residents and businesses, introduce a slew of unintended consequences, and still may fail to provide predicted environmental rewards.

A whopping 2 million people left the state between 2006 to 2014, and that is just one metric among many showing that people cannot build a future here. Departing residents have taken more $35 billion in income with them since 1992, IRS and Census Bureau data show.

New Jersey remains dead-last in business tax climate, on the Tax Foundation's index, behind New York and California. Your recent tax hikes are not helping. Neither is having the highest average property tax bill in the nation.

The last thing New Jersey needs is more burdens for businesses, and higher taxes to drive people out.

Despite recent month-to-month job figures improving, the state's labor force lost 34,000 workers from August 2017 to August 2018, and 61,000 workers since January 2015, according to data from the Department of Workforce and Labor Development, and analysis from Garden State Initiative.

An incredible 78% of revenue growth projected for next year will come from tax hikes.

All these numbers go to show the tax base is being jeopardized, and revenue is leaving. And the state cannot afford to make the problem worse by piling on bans on products that create jobs, and efficiency for New Jersey businesses.

The plastics industry employs 18,000 people in New Jersey. You have companies producing styrofoam, and even those recycling it that would be hurt by a ban. Those are families - and taxpayers - New Jersey needs.

Foam containers are relied upon by moderately priced restaurants with a high volume of take out orders. Banning them will drive up costs for these business-owners and reduce quality. Meanwhile, foam containers are convenient, reliable, FDA-approved, and safe.

Banning plastic bags means stores have to buy costlier bags and pass on costs to customers, or eat them. The transition will burden stores. Perhaps even worse, lower income folks, and seniors who may not be able to carry around reusable bags at work or in a car will end up paying more. They cannot afford that.

The straw ban is a moral panic driven by social-media-era virtue signaling and phony numbers crafted by a grade-schooler.

Beyond imposing new costs on businesses, unintended consequences of a straw ban will hurt people with certain disabilities who rely on straws.

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For what benefit?

An analysis by the Helmholtz Center for Environmental Research (UFZ) found 90% of plastic going into the sea comes from 10 rivers, eight in Asia and Africa. The legislation you are considering will not help this issue.

New Jersey is considering attacking these industries with a move more radical than your eastern neighbor New York, and while your western neighbor in Pennsylvania is fostering first-in-the-region infrastructure for natural gas and plastics that will create billions of dollars in value and new jobs.

We urge you to reject Senate Bill 2776 and Assembly Bill 4330 and instead focus on recycling and proper disposal of these materials, rather than a heavy-handed ban that will make New Jersey less attractive and competitive in the region - and further chase away jobs and taxpayers.

Thank you.

DART CONTAINER CORPORATION
www.dartcontainer.com
500 Hogsback Road • Mason, Michigan 48854 • (800) 248-5960

September 26, 2018

New Jersey Senate
Senate Environment and Energy Committee
State House
Trenton, NJ 08625-0099

Re: Testimony in Opposition to Senate Bill 2776 – "Prohibits use of plastic carry out bags, expanded polystyrene, and single use plastic straws".

Honorable Chairman Senator Smith and Committee Members:

Dart Container Corporation ("Dart") appreciates the opportunity to provide testimony regarding Senate Bill 2776 – a bill to prohibit the use of plastic carry out bags, expanded polystyrene, and single use plastic straws.

Dart respectfully opposes proposed New Jersey Senate Bill 2776 and requests a not favorable report for the following reasons.

Background

Dart is a global manufacturer of food service containers – including plastic and paper containers, and compostable and recyclable products. Dart manufactures products made from polystyrene (#6) in both foamed and rigid form – from a foam coffee cup to red Solo cups.

Dart has been and continues to be actively engaged in recycling and educating the public of the environmental attributes of polystyrene foam including the ability for it to be recycled.

In 1990, Dart began recycling post-consumer foam. Today, Dart offers to the public a variety of ways for recycling of foam. Dart facilities have public drop-off centers for foam at no charge to any resident consumer or government. Dart accepts all EPS – either made by Dart or any other manufacturer – including food service and shape molded block foam.

I. Ban Impact on New Jersey – Large and Small Businesses, Restaurants and Nonprofits

Banning EPS foam food containers will have a negative impact on New Jersey's businesses. Large to small taxing paying businesses. A disproportionate economic impact will fall on small family owned operations, which operate on the smallest margins; and, nonprofits that serve the most vulnerable in New Jersey–

church soup kitchens, homeless and abuse shelters. These entities operate at slim to no profit margin; and, cannot withstand additional costs that put their businesses and services at risk.

Operating a restaurant, especially a family owned and operated, is already challenging with high operating; labor; health; insurance; and, other unforeseen costs. Forcing small businesses to purchase more expensive alternatives to EPS (which, incidentally, have a higher carbon foot print and weigh more than EPS and thus take up more space in landfills) will drive up prices and operating costs. At twice the cost of EPS, paper alternatives may result in businesses laying off workers or worse, closing for good. This is not a productive way to support small, family owned businesses, which are the backbone of New Jersey.

Additionally, nonprofits provide a service to provide for the state's most vulnerable and needy. Hospitals, prisons/detention centers, Meals-on-Wheels, soup kitchens, charities and shelters use foam because it is economical and provides a medium that best suits the needs of safely and economically providing their services. Cost is imperative to continue these must needed services to New Jersey residents.

II. Increased Costs and Fiscal Impact to Residents and Taxpayers

If this statewide ban on expanded polystyrene were to pass - there are two significant new costs to New Jersey residents and taxpayers.

First, the added costs incurred by consumers. Consumers buying food and beverages served in more expensive foodservice containers is a cost that will be passed along or consumed by the business. A higher priced consumer product regardless.

Second, New Jersey and its municipalities must budget and pay for the extra end of life costs to dispose of these higher priced alternative products. Alternative products, weigh 2.5 times more by weight and volume; and, will only add to higher landfill tipping fees, costs and reduce available landfill space.

With each added cost to New Jersey businesses, mandating that they use a particular product that will not be composted or recycled (but indeed landfilled because the County does not maintain a County composting facility) just does not make sense.

Pertinent Foam Facts:

- Better product – better insulation for food which will eliminate waste.
- Life Cycle Analysis – less greenhouse gasses, less resources such as water to produce a foam cup. Less energy to produce
- Less products used – coffee or soda is served in one foam cup. Alternatives need a java jacket for hot items and napkins for sweating on cold applications.
- Foam makes up less than 1% by both weight and volume of our landfill waste. Paper cups end up in landfills more than foam.
- Alternatives are not disposed of properly which will add more solid waste to landfills. Paper cups are coated with plastic. Meaning the paper cup is no longer biodegradable. Compost products are thrown out in a garbage and end up in a landfill. They will not compost sitting in a landfill.

Again, this proposed New Jersey legislation ban of expanded polystyrene foodservice will not accomplish the goal of reducing solid waste within the State. Many people believe that a ban of foodservice foam will eliminate all foam within the State. However, this misses the mark.

The issue of packaging foam (not addressed here) is the majority of foam used in the stream of commerce is not addressed here. And packaging foam cannot be banned in commerce because of interstate commerce clause – i.e., Amazon, purchases from big box stores, such as appliances and computers.

III. Misinformation Regarding Health

According to Jack Snyder, executive director of the Styrene Information and Research Center (SIRC) – maintains there are no safety or health concerns regarding styrene in food service polystyrene products, and that this conclusion has been supported by the ***U.S. FDA for several decades***. This research has been conducted by world-recognized independent scientists, and published in respected peer-reviewed scientific journals.

Styrene is a chemical building block not only of polystyrene food containers, but also tires, insulation, carpet backing, boat hulls, and bathtubs.

For more than 70 years, styrene has been produced to create polymers to manufacture thousands of consumer products. Because it occurs naturally, and is a widely used manufacturing material, nearly everyone encounters very small amounts of styrene in some form every day.

All scientifically, peer reviewed polystyrene research and studies show that polystyrene packaging consumers use are not harmful. Studies further show that styrene does not stay in the body for long and is rapidly metabolized and excreted. The most current, extensive research also indicates that styrene is not a human carcinogen.

SIRC strongly believes the data on styrene show that styrene exposure to consumers from polystyrene products does not present a health effect concern.

IV. Recycling

EPS is currently being recycled in New Jersey. Sussex County currently recycles foam. And there are end markets in New Jersey for recovered EPS – Princeton Molding recycles recovered foam into secondary market products such as picture frames; and, Foam Pack in Springfield Township has a drop off recycling program for foam.

V. Conclusion

For these reasons, Dart respectfully requests you oppose this legislation; and, not institute a statewide polystyrene foodservice ban.

Such a ban will negatively impact New Jersey businesses – large, small and family run; result in higher costs to consumers; and cost New Jersey and its municipalities more in tax dollars to manage these alternative, higher weight and volume, products at the end of life disposal.

Sincerely,

Paul Poe
Manager, Government Affairs and the Environment
42 Bow Lake Estates Road
Strafford, NH 03884

Members of the committee, my name is Brian Hackett and I am the New Jersey state director for the Humane Society of the United States. I would like to testify in support of S. 2776, a bill that would prohibit the use of plastic carryout bags, expanded polystyrene, and single-use plastic straws. Many thanks to Senator Bob Smith for sponsoring this critical piece of legislation.

Single use plastics are detrimental to the environment and lead to ingestion, entanglement, and death of birds, marine mammals, sea turtles, and other wildlife. Plastics that wash into our oceans break down into microplastics and are pervasive throughout our ocean ecosystem. Animals feed plastics to their young, unknowingly starving them.

Items that are used once and thrown in the landfill and can take years (sometimes hundreds of years) to decompose. Our consumption of single use plastics such as plastic bags, plastic drink stirrers, and styrofoam is set to increase exponentially.

Statistics:

- 1 garbage truck of plastic is dumped into the ocean every minute (source: World Economic Forum)
- Scientists estimate that 90% of all seabirds alive today have ingested plastic during their life and marine litter harms over 600 species (source: CSIRO)
- A report from the Ellen MacArthur Foundation in partnership with the World Economic Forum predicts that by 2050 plastic in the ocean could weigh more than fish
- Plastics pollution has a direct and deadly effect on wildlife. Thousands of seabirds and sea turtles, seals and other marine mammals are killed each year after ingesting plastic or getting entangled in it. Endangered wildlife like Hawaiian monk seals and Pacific loggerhead sea turtles are among nearly 300 species that eat and get caught in plastic litter (source: Center for Biological Diversity)
- Straws and drink stirrers alone accounted for 2.6% of the trash picked up on beaches this year (source: LA Times)

The momentum is here and New Jersey would prove itself to be a leader in this space if this bill becomes law. The lethality of this product to wildlife, especially wildlife in our oceans, is becoming clear, so why are we set to produce more?

Most of us have seen the painful-to-watch video of a plastic straw getting extricated from a sea turtle's nose. The pain and suffering plastic materials inflict on these animals is immense and it is critical for us to directly address this problem. It is another form of human-caused mortality for whales, seals, turtles, along with entanglement and ship strikes and we are in a plastics crisis. We cannot ignore the mortality caused by single use plastics and the Humane Society of the United States supports a ban on the products outlined in the language of this bill.

Thank you for the opportunity to comment on this important bill.

218TH NEW JERSEY LEGISLATURE
SENATE ENVIRONMENT AND ENERGY COMMITTEE
HONS. BOB SMITH-CHAIR

TESTIMONY

SAL RISALVATO
Executive Director
New Jersey Gasoline-Convenience-Automotive Association

S-2776

OPPOSE

September 27, 2018

COMMITTEE ROOM 10
TOMS RIVER, NJ

29x

Testimony of Sal Risalvato

Chairman Smith, members of the Committee, my name is Sal Risalvato, Executive Director of the New Jersey Gasoline, Convenience Store, Automotive Association (NJGCA), here representing several hundred convenience stores across this state, almost all of whom are independent small businesses.

The issue of how we, as a society, deal with the prevalence of single-use plastics is one that is growing in importance and has been at the center of a lot of media attention in the last few months. Convenience stores make frequent use of these types of plastics because they are, as our name implies, *convenient*.

Of the several provisions of this bill, **by far the most disruptive to my membership would be the plastic straw ban**. I have even heard some advocates declare that a straw ban would be simpler than banning items like plastic bags and Styrofoam containers, but I disagree completely. There are alternatives available to fill the niches satisfied by those products (although they are more costly). But, at least for now, **there is not a true alternative to the plastic straw.**

There are straws made of paper, but these are completely lacking in durability for more than a few minutes. Restricting the usage of straws at restaurants makes sense, since the customer is going to be sitting peacefully at a table for the complete duration of their meal. But a customer at a convenience store who needs a straw is immediately getting in their car. The straw may sit in a large cup for an hour or more as the consumer drinks it, leaves it behind for a while, carries it around, etc. Paper straws are also about seven times more expensive than plastic ones, a cost which will of course slightly impact the consumer. There are also some single use plastic straws which at least claim to be biodegradable, but these would be banned under the current language of the bill as well. There are reusable straws made of metal or bamboo, but by definition a consumer needs to bring the straw with them in advance, and have previously cleaned it, which complicates the convenience aspect of our members' business model.

Just this week I discussed this bill with a member of our organization. He told me that he has been interested in offering paper straws as an option for his customers for several months, but simply cannot find them. Most distributors he has talked with do not offer them, and those that do are already being hit with such a huge surge in demand that they simply cannot provide them. I imagine this problem will only get worse if a state with 9 million residents decides to enact the nation's first statewide ban.

Starbucks, a massive corporation with the ability to leverage the buying power of 28,000 retail locations worldwide, has announced that they hope to eliminate straws at their locations in 2020 by replacing them with plastic lids customers can drink through. It should be noted however, that

30

a recent report calculated that the current straw and thin lid combination at Starbucks consists of 3.55 grams of plastic for a large cup, while the new straw-less lids have 4.11 grams, meaning a 15% increase in the amount of plastic used and immediately thrown away.[1] Some consumers may respond to the lack of a good straw by purchasing their soda in bottle form instead of from the fountain, which of course uses significantly more plastic.

Straws are not a threat to our parks and beaches when they are disposed of properly, as most consumers do. Why must we inconvenience the vast majority of the public when it is only a small portion who are actively littering?

It is the convenience aspect of our industry that also leads us to oppose a ban on plastic bags. Much of our customer base comes from consumers making spur of the minute decisions to stop in the store; they are not putting enough forethought into their trip to the convenience store that they could have planned to carry a reusable bag with them. Often they are not even purchasing enough goods to justify a bag and choose not to take one anyway.

Allowing convenience stores to continue to offer plastic bags—even with the fee being proposed for paper bags—would not significantly lessen the effect of a ban on bags in other circumstances. Our early research also indicates that the cost of a paper bag is not covered by the 5¢ that the retailer will be able to keep under this bill.

We would also prefer that the government not ban the use of polystyrene foam products, which is not only more cost effective than other alternatives but more effective at keeping food and drinks at the proper temperature.

Overall, it is better to start with carrots instead of sticks, and encourage the public to volunteer to cut back on the waste they generate. Perhaps in a few years, after there has been more cultural acceptance and better alternatives have been developed and become widespread and cheaper, at that point would a ban would make more sense and be more effective.

Even under one of the highest estimates of straw-usage, worldwide straw consumption only amounts to about 0.03% of total plastic pollution per year.[2] One environmentalist recently wrote "critics of the plastic straw movement point out that straws are small, and reducing the use of a larger product would be much more impactful. While that's true, single-use plastic straws are relatable products we have all used, and forgoing them is an easy behavior change for many who are new to the movement. Environmentalists know that the plastic straw movement isn't actually

[1] https://reason.com/blog/2018/07/12/starbucks-straw-ban-will-see-the-company
[2] https://www.bloomberg.com/view/articles/2018-06-07/plastic-straws-aren-t-the-problem

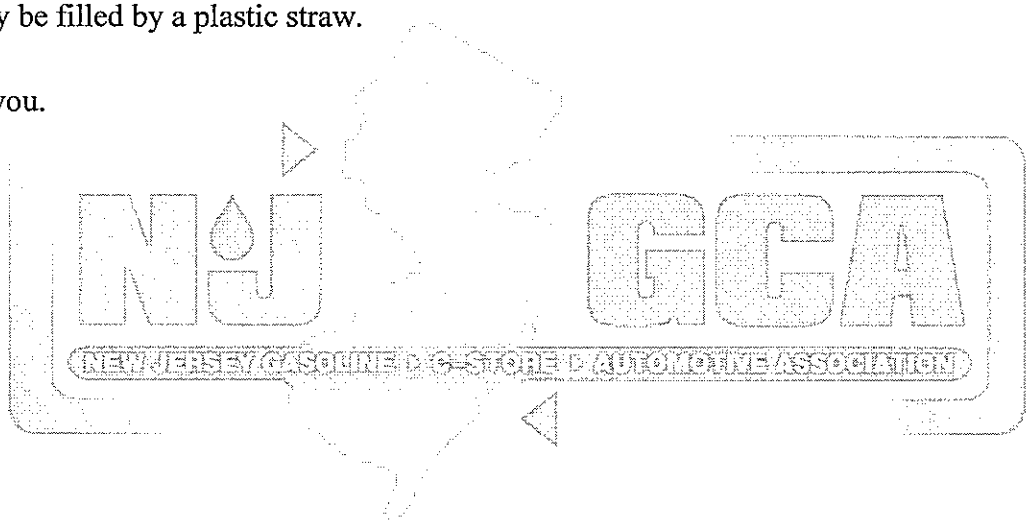
31x

about straws, but is rather a gateway to the larger effort to reduce unnecessary and harmful waste in our oceans."[3]

If the point of cutting back on plastic straw usage is to more easily convince people to be more aware of the pollution they generate in everyday life, then a government-enforced ban is actually the worst direction to take, because it completely takes the onus off the consumer and makes it so they never think about the issue again (unless it's to curse environmentalism after their paper straw disintegrates).

I ask that you remove the total ban on plastic straws from this bill. Instead, consider what California has just enacted, which is to ban straws from full-service restaurants unless the consumer requests one. This would be the most effective compromise, it would significantly reduce straw usage without impinging on the choices of the general public, who sometimes have a genuine need that can only be filled by a plastic straw.

Thank you.



[3] https://www.newsweek.com/problem-plastic-straw-ban-opinion-1054966

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ADDITIONAL APPENDIX MATERIALS
SUBMITTED TO THE

SENATE ENVIRONMENT AND ENERGY COMMITTEE

for the
September 27, 2018 Meeting

Submitted by Paul Poe, Manager, Government Affairs and the Environment, DART Container Corporation:

"Green Care: Putting Stewardship into Practice," *DART*. © 2015 Dart Container Corporation.

"Environmental Foam (No. 6) Facts," *DART*. © 2015 Dart Container Corporation.