

OFFICE OF THE  
FIRST SELECTMAN

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Lynne A. Vanderslice  
*First Selectwoman*

Lori A. Bufano  
*Second Selectwoman*

Joshua S. Cole  
*Selectman*

Deborah A. McFadden  
*Selectwoman*

Ross H. Tartell  
*Selectman*

TOWN HALL  
238 Danbury Road  
Wilton, CT 06897

**BOARD OF SELECTMEN SPECIAL MEETING**  
**Tuesday February 11, 2020**  
**Meeting Room B, Town Hall**

**PRESENT:** First Selectwoman Lynne Vanderslice, Lori Bufano, Joshua Cole, Deborah McFadden (via phone), Ross Tartell

**GUESTS:** Steve Pierce (Director, Parks & Recreation), Chris Burney (DPW and Municipal and Schools Facilities Director), Frank Smeriglio (Assistant Director/Town Engineer DPW) Jennifer Fascitelli (Administrative Manager, DPW), Steve Pierce (Director Parks & Recreation), Anna Marie Bilella (Chair Parks & Rec Commission) Sarah Heath (Director Social Services), Deborah List (Co-Chair Social Services Commission) Sarah Taffel (HR and Administration Director), Karen Birck & Annalisa Stravato (Registrars), Michael Wrinn (Director Land Use), Michael Conklin, (Director Environmental), Tammy Thornton and members of Wilton Go Green, Members of the press and members of the public

**A. Call to Order**

Ms. Vanderslice called the meeting to order at 5:00pm

**B. Executive Session**

Ms. Vanderslice asked for a motion to go into Executive Session for an update on the Fire Chief search and to invite Fire Commission Chair Casey Healy and HR and Administration Director Sarah Taffel. Motion moved by Ms. Bufano seconded by Mr. Tartell and carried 5-0.

Out of Executive Session at 5:59pm.

**C. Discussion and/or Action**

**1. FY 2021 Budget Reviews and Discussion**

Ms. Vanderslice commented on the budget requests, including proposed change to the State Partnership Plan for employee medical benefits, which would allow both the town and employees to enjoy cost savings and cost avoidance. The town's share is estimated at \$600,000. She noted no decision can yet be made as the July, 2020 premium rates have not yet been released by the State and discussions with employee groups are in process.

The following budget presentations were made with questions asked and answered:

Sarah Heath, Director of Social Services reviewed the Social Services Department's FY2021 budget request.

Anne Kelly-Lenz, CFO reviewed the Finance Department's FY2021 budget request.

Michael Wrinn, Director Planning & Land Use Management reviewed the Land Use Departments' FY2021 budget requests. Within Land Use, Michael Conklin, Director of Environmental reviewed the FY2021 Environmental Affairs department budget request.

Chris Burney, Director Public Works, Facilities & Energy Management reviewed the DPW Department's FY2021 budget request.

Steve Pierce, Director Parks & Recreation reviewed the Department's FY2021 budget request.

Sarah Taffel, Director HR & Administration (HR, Town Clerk and Registrars) reviewed the Departments' FY2021 budget requests.

Ms. Vanderslice reviewed the Board of Selectmen, Town Counsel & Economic Development FY2021 budget requests.

Ms. Vanderslice noted that the next budget presentations will take place at the BoS meeting on February 18, 2020.

2. Ordinance Proposals – Wilton Go Green

Tammy Thornton, President of Wilton Go Green, requested the BoS consider proposed ordinances related to the banning or limiting the use of or discouraging the use of single-use carryout bags, styrofoam and single-use plastics. See attached presentation. A discussion was held. Wilton Go Green and the BoS agreed to solicit feedback from the impacted businesses.

D. Public Comment

None

E. Adjournment

There being no further business Ms. Vanderslice asked for a motion to adjourn at 8:34pm. Motion moved by Mr. Cole seconded by Ms. Bufano and carried 5-0.

Next Meeting – February 18, 2020



Jacqueline Rochester  
Recording Secretary  
Taken from Video



# Check-Out Bag, Polystyrene and Single-Use Plastics Ordinances

Presentation to Board of Selectman on Tuesday, February 11<sup>th</sup>, 2020



# LOCAL EFFORTS



Bag Man Scarecrow



Farmer's Markets, Chamber of Commerce Events

Wilton Go Green/Wilton Library present

**STRAWS** Documentary Screening and Panel Discussion  
Wednesday, January 9  
7 - 8 pm •  
Wilton Library

Shows, an award-winning documentary, illuminates the problems related to straws and other single-use plastic pollution that inundate our waterways and oceans. A brief panel discussion and Q&A session follows with Charlie Taney of the Norwalk River Valley Trail, Nina Quarantella of the North American Marine Environment Protection Association, Bridget Cervero and David Hudson of the Maritime Aquarium.

Bring the kids for the Family Day Event  
Saturday, January 12, from 2 to 3 pm

This is a family-friendly screening of the *Straws* documentary from 2 to 3:30 pm. Adults will stay for a brief panel discussion and Q & A with Charlie Taney of the Norwalk River Valley Trail, Nina Quarantella of the North American Marine Environment Protection Association (NAMERPA) and Louise Washer, President of the Norwalk River Watershed Association.

At 3:30 while the adults have their panel discussion, students in grades 2 through 4 are invited to an education program led by NAMERPA and Wilton Go Green. Students under 8 years must be accompanied by adults; children 4 and up must have adults remain in the building. Registration is required for all programs.

To register: [www.wiltonlibrary.org](http://www.wiltonlibrary.org) and click on "Events" or call the Circulation Desk at (203) 762-6334.

Wilton Library, 137 Old Ridgefield Road, Wilton, CT 06697 • [www.wiltonlibrary.org](http://www.wiltonlibrary.org) • 203.762.3950

Wilton Go Green/Wilton Library present

**bag it** Is Your Life Too Plastic? Film Screening and Discussion  
Wednesday, October 23  
7 - 8:30 pm •  
Wilton Library

Wilton Go Green and Wilton Library present a screening of the film: *bag it: Is Your Life Too Plastic?* as a part of their Green Speaker Series with special thanks to Planet New Canaan. This 2010 American documentary film exposes the effects of plastic bags and other plastic consumer merchandise and their impact on land ecosystems, the marine environment, and the human body.

A brief Q&A session will follow the film with Jeanine Behr Getz, Lynne Vanderslice, and others to be announced. Jeanine Behr Getz is the author of the award-winning book *Think Green!* Lynne Vanderslice is the First Selectwoman of Wilton whose administration has implemented a number of environmental initiatives. Please see the library's registration link for more details. Registration is recommended; there is no charge.

To register: [www.wiltonlibrary.org](http://www.wiltonlibrary.org) and click on "Events" or call the Circulation Desk at (203) 762-6334.

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Live Green/CT Southwestern Area Clean Cities Presents

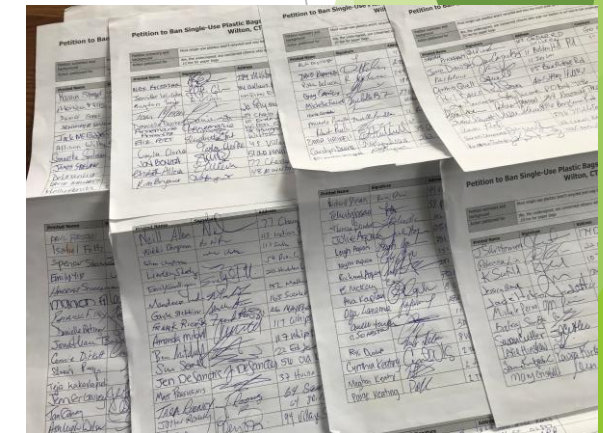
**ZERO WASTE FAIRE**  
& Sustainable Living Expo

SUNDAY, MARCH 29, 2020  
11AM - 4PM  
WILTON HIGH SCHOOL FIELD HOUSE

## ACTIVITIES FOR ALL AGES:

- Exhibitors
- Kids Activities
- Entertainment & Guest Speakers
- Tips for Sustainable Living
- How to Compost
- Zero Waste Schools Coalition
- Shop in our Zero Waste Store
- Zero Waste Product Demos
- The Truth About Single-Use Plastics
- Zero Waste lunch available for purchase
- Silent Auction
- AND MUCH MORE!!

Bring the following items to recycle for **FREE** at the Faire: Small household goods, furniture (no pianos) and appliances, electronics & hard drives, textiles (footwear, accessories, clothing, linen, stuffed animals), crayons, markers, corks, ink cartridges, mattresses, box springs and candle stubs. Bike collection (1 per family)



Resident signatures for Bag Ordinance





# Why...

- ▶ Protecting the health and well-being of our residents and the environment
- ▶ Closing loop holes
- ▶ Creating accountability and partnerships
- ▶ Waste Management costs are increasing
- ▶ Focusing on the top items that contaminate recycling commodities and Materials Recovery Facilities (MRF) highlight as an issue for the health of their workers and their business
- ▶ CT NEEDS to produce less waste - NIMBY



About 575,000 tons of ash from Connecticut trash-to-energy plants end up at this major landfill in Putnam. Here ash is loaded for transport to another part of the facility. (Mark Mirko)

## Plastic Bags & Other Film at CT MRFs



Connecticut Department of Energy and Environmental Protection

## Glass Recovered at CT MRFs



## Lost Value of Materials Recycled Due to Contamination

Average State MSW Statistics, FY 2014\*

In FY 2014, CT marketed 770,081 Tons of mixed recyclables\*

770,081 tons of mixed recyclables X 5.82 (cost of contamination)

CT is losing an estimated \$4,481,871 annually due to contamination



# Bag Ordinance



	Begins	Fee/Tax	Who Gets the \$	Acceptable Plastic Mils	Does NOT include:
<b>CT State Ordinance</b>	August 1, 2019 - phase out plastic bags less than 4 mil by 2021	10 cent tax on each single-use plastic bag	State of CT	Single-use Plastic bag = less than 4 mils	Plastic on meat, seafood, loose produce or unwrapped food, newspaper bag, laundry or dry cleaning bag
<b>Proposed Wilton Ordinance</b>	Effective September 2020 - Eliminate single-use plastic bags immediately	10 cent fee per paper bag*	Wilton Retailer	Durable plastic that is at least 12 mils thick	Plastic on meat, seafood, loose produce or unwrapped food, newspaper bag, laundry or dry cleaning bag**

\* Brown bags must be 1) 100% recyclable; 2) Contain a minimum of 40% post-consumer recycled content (except that an eight pound or smaller paper bag shall contain a minimum of 20% postconsumer recycled content); and 3) Conspicuously display the phrase "Reusable" and "Recyclable" on the outside of the bag and the percentage of post-consumer recycled content

\*\* Discussion with local dry cleaning businesses to move to reusable dry cleaning bags

**RETAIL ESTABLISHMENT** - Also includes clothing store, hardware store, hospital, pharmacy, liquor store, restaurant, delicatessen, convenience store, food truck, sidewalk vendor, farmers' market, flea market, and any other retail store or vendor.

# PAPER OR PLASTIC?

When asked this question at checkout, the correct answer is Neither.

**Bring Your Own!**

Comparing similar stores in areas with & without an ordinance, the ban-only ordinance **increased the use of paper bags** dramatically.

When considering litter and its impact on marine life and the food chain, from the environmentalist's view, PAPER is the LESSER of TWO EVILS.



## Paper Bags

- ▶ Requires 14 million trees to be cut down annually
- ▶ Requires thousands of gallons of water to create 1 ton of pulp
- ▶ Requires fossil fuels to transport
- ▶ Have twice the carbon footprint as plastic



## Plastic Bags

- ▶ Litter prone and clog storm drains
- ▶ Endanger wildlife
- ▶ Break down into microplastics that end up the food chain
- ▶ Are manufactured from fossil fuels
- ▶ Are detrimental to recycling systems, causing jam ups.
- ▶ Are NOT biodegradable and will last centuries in the environment





# Here's what our neighbors have done

## BAG ORDINANCES

Town	Passed	Effective	Paper Bag Fee / Plastic Bag MILS
Darien	June 2019	January 2020	10 cent / 12 mils
Guilford	June 2019	January 2020	10 cent / 12 mils
New Britain	February 2019	August 2019	10 cent / 12 mils
New Canaan	January 2019	May 2019	10 cent / 12 mils
Newtown	June 2019	October 2019	10 cent / 12 mils
Norwalk	January 2019	July 2019	10 cent / 12 mils
Stamford	October 2018	May 2019	10 cent / 12 mils
Weston	October 2018	January 2019	10 cent / 4 mils
Branford	June 2019	January 2020	10 cent / ALL
Madison	September 2019	January 2020	10 cent / ALL
Fairfield	May 2019	February 2020	No fee / 12 mils
Greenwich	March 2018	September 2019	No fee / 12 mils
Westport	October 2008	April 2009	No fee / 2.5 mils
Windham	April 2019	October 2019	No fee / 2.5 mils
Stonington	May 2019	November 2019	No Fee / 3 mils
Glastonbury	June 2019	January 2020	No fee / 6 mils
Hamden	February 2019	September 2019	No Fee / ALL
Mansfield	February 2019	September 2019	No Fee / ALL
Middletown	April 2019	October 2019	No Fee / ALL
Groton	January 2020	July 2020	No Fee/ALL
Washington	April 2019	October 2019	



Eliminate Polystyrene and  
Plastic Stirrers

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Straws UPON REQUEST ONLY



# Health Concerns with Polystyrene

- ▶ Polystyrene contains styrene and benzene, suspected carcinogens and neurotoxins that are hazardous to humans.
- ▶ When burned, polystyrene releases both carbon monoxide as well as 90 different hazardous chemicals.
- ▶ When heated, hazardous compounds may leach out of the container into the food or beverage about to be consumed.
- ▶ Even when disposed of properly, polystyrene foam can be blown from disposal sites. Lightweight and buoyant, polystyrene travels easily through gutters and storm drains, eventually reaching Long Island Sound and the ocean.
- ▶ Contaminated ash from incinerators buried in CT Landfill
- ▶ Not recyclable





# Single-Use Plastics: Stirrers and Straws

- ▶ *In the United States alone, over 500 million Plastic straws get discarded every single day.*
- ▶ Stirrers and straws are used for a few minutes and last for hundreds of years in our environment *only to degrade as microplastics that end up in our food chain.*
- ▶ Plastics end up in our waterways and out to the ocean
- ▶ They are not recyclable
- ▶ Contaminated ash from incinerators buried in CT Landfill
- ▶ There are safer and healthier alternatives
- ▶ Straws UPON REQUEST ONLY reduce the number of straws in our environment AND cost to businesses





# 2019 Legislative Session - Environment Committee

**2019 - SB229, AN ACT PROHIBITING THE USE OF STYROFOAM TRAYS IN CONNECTICUT SCHOOLS.** - did not pass House

[https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&which\\_year=2019&bill\\_num=229](https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&which_year=2019&bill_num=229)

**2019 - Sub.HS5384, AN ACT REQUIRING THE ELIMINATION OF SINGLE-USE STYROFOAM CONTAINERS.** - Passed House, did not pass Senate

[https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&which\\_year=2019&bill\\_num=5384](https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&which_year=2019&bill_num=5384)

**2019 - sHB 5385 AN ACT REQUIRING THE ELIMINATION OF SINGLE-USE PLASTIC STRAWS.** - did not pass House “put on hold”

<https://www.cga.ct.gov/2019/ba/pdf/2019HB-05385-R000552-BA.pdf>



# Other Towns with Ordinances

## PLASTICS AND/OR STYROFOAM ORDINANCE

Town	Passed	Effective	Ordinance
Hamden	February 2019	September 2019	Plastic Straw UPON REQUEST ONLY
Norwalk	September 2019	April 2020	Plastic Stirrer, Styrofoam Ban, Straws UPON REQUEST ONLY
Stonington	May 2019	November 2019	Plastic Straw UPON REQUEST ONLY
Westport	May 2019	November 2019	Single Use Plastics/Styrofoam
Groton	January 2020	July 2020	Plastic Stirrer, Styrofoam Ban, Straws UPON REQUEST ONLY





Asian Bistro  
Blue Star Bazaar  
Boston Market  
Cactus Rose  
**Carluzzis**  
Craft 14^  
CT Coffee

**Diamond Deli\***  
**Dog Daze\***

Dunkin Donuts\*  
Happy Wok  
Jersey Mikes  
Little Pub^  
Marlys

**Bold** indicates still using some  
Styrofoam for takeout and/or  
prepared foods

Naked Greens  
Orem's\*  
**Outback Steakhouse\***  
Parlour^  
Pinocchio's  
Pokeworks  
Red Rooster

REN Dumpling and Noodle  
**Sandwich Shoppe\***

Scoops  
Sobol  
Starbucks  
**Stop n Shop\***  
Subway

\* Use Plastic Stirrers

Sweet Pierres  
Tom-e-toes  
True Value  
Tusk n Cup  
Uncle Leo's\*  
**Village Luncheonette**  
**Village Market**

Wheels  
Wilton Deli

Wilton Hardware  
Wilton Pizza  
Zio's

^Switched to paper straws



# Resources and Support to Businesses

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- ▶ Request for Time Extension Option
  - ▶ Allows businesses to work through their supply if not complete by the time ordinance goes into effect
- ▶ Wilton Go Green Resources
  - ▶ Skip the Straw Business Page - With more updates
  - ▶ BYOWilton Page
  - ▶ Support Staff Training
  - ▶ Collecting reusable bags at Zero Waste Faire to support community members in need



# Who Oversees the Ordinances

## OPTIONS:

- ▶ Code Enforcement Officer, Conservation Department, Health Department
- ▶ See, Click, Fix - Anonymous reporting
- ▶ Wilton Go Green Board Members
- ▶ Town Residents

## Penalties

1. Upon the initial violation, written warning notice that a violation has occurred shall be issued. No penalty shall be imposed for the initial violation;
2. For the second violation, a penalty of one hundred fifty dollars (\$150.00); and
3. For the third and each subsequent violation, a penalty of two hundred fifty dollars (\$250.00).





# Other Towns

- ▶ Weston - Code Enforcement Officer
  - ▶ Written notice, \$100 per incident after
- ▶ New Canaan - Director of Health
  1. Upon the initial violation, written warning notice that a violation has occurred shall be issued. No penalty shall be imposed for the initial violation;
  2. For the second violation, a penalty of one hundred fifty dollars (\$150.00); and
  3. For the third and each subsequent violation, a penalty of two hundred fifty dollars (\$250.00).
- ▶ Darien - Environmental Compliance Officer
  - ▶ Written warning, then \$150 1st citation, \$250 2nd citation
- ▶ Westport - Conservation Department
  - ▶ Written warning, \$150 per incident after
- ▶ Fairfield - Appointed by Health Director
  - ▶ Same as New Canaan, Norwalk



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Wilton Go Green grew out of the Town's Energy Commission with the specific task of making Wilton the most sustainable Town in Connecticut.

We hope you will work with us to accomplish our goal.



# References

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- ▶ State of CT Bag Ordinance FAQs
  - ▶ <https://portal.ct.gov/-/media/DRS/Publications/OCG/OCG-9-BagFee.pdf?la=en>
- ▶ Full Presentation by Sherill Baldwin of CT DEEP on Wilton Go Green website
  - ▶ <https://wiltongogreen.org/green-speaker-series/>
- ▶ BYOCT
  - ▶ [www.byoct.org](http://www.byoct.org)
- ▶ Skip the Plastic Norwalk
  - ▶ [www.skiptheplasticnorwalk.org](http://www.skiptheplasticnorwalk.org)



# DRAFT

## USE OF CARRYOUT BAGS BY RETAIL ESTABLISHMENTS

### § \_\_\_\_-1. – Purpose.

The purpose of this article is to preserve and protect the environment in the Town of Wilton and encourage the use of Reusable Carryout Bags by reducing the use of Carryout Bags made of plastic and prohibiting the use of Carryout Bags made of non-recyclable paper.

### § \_\_\_\_-2. – Definitions.

As used in this article, the following terms shall have the meanings indicated:

#### **CARRYOUT BAG**

A bag of any material, commonly plastic or kraft paper, that is provided to a consumer at the point of sale to carry purchases out of the establishment. The term shall not include:

- A. Bags used by consumers inside a Retail Establishment to:
  - 1. Package bulk items, such as fruit, vegetables, nuts, grains, candy, or small hardware items;
  - 2. Contain or wrap frozen foods, meat, or fish, whether prepackaged or not; laundry or dry cleaning bags
  - 3. Contain or wrap flowers, potted plants, or other items where dampness may be a problem;
  - 4. Segregate food or merchandise that could damage or contaminate other food or merchandise when placed together in a bag; or
  - 5. Contain unwrapped prepared foods or bakery goods.
- B. Newspaper bags
- C. Bags sold in packages containing multiple bags intended for use as garbage, pet waste, or yard waste bags.
- D. Bags of any type that customers bring to a Retail Establishment for their own use.
- E. Bags provided by pharmacists to contain prescription drugs.

#### **RETAIL ESTABLISHMENT**

Any person, corporation, partnership, business, or other organization or group, however organized, that transfers merchandise, goods, or materials, including, without limitation, clothing, food, or personal items of any kind, directly to a consumer in exchange for payment. The term includes, by way of example and not limitation, any grocery store, grocery delivery service, department store,

# DRAFT

clothing store, hardware store, hospital, pharmacy, liquor store, restaurant, delicatessen, convenience store, food truck, sidewalk vendor, farmers' market, flea market, and any other retail store or vendor. The term shall not include the sale of goods at yard sales, tag sales, or other sales by residents at their home.

## **REUSABLE CARRYOUT BAG**

A bag with handles that is specifically designed and manufactured for multiple reuse that (1) is made of (a) cloth, fiber, or other machine washable fabric, or (b) durable plastic that is at least 12.0 mils (thousandths of an inch) thick, and (2) does not contain lead, cadmium, or any other toxic material, as defined by applicable state and federal standards and regulations for packaging or reusable bags.

### **§ \_\_\_\_-3. – Restrictions on Carryout Bags.**

- A. No Retail Establishment shall sell, provide, or distribute Carryout Bags made of plastic, other than Reusable Carryout Bags, in the Town of Wilton.
- B. No Retail Establishment shall sell, provide, or distribute Carryout Bags made of paper in the Town of Wilton, unless such bags:
  - 1. Are 100% recyclable;
  - 2. Contain a minimum of 40% post-consumer recycled content (except that an eight pound or smaller paper bag shall contain a minimum of 20% post-consumer recycled content); and
  - 3. Conspicuously display the phrase “Reusable” and “Recyclable” on the outside of the bag and the percentage of post-consumer recycled content.

### **§ \_\_\_\_-4. – Charges for Carryout Bags.**

- A. Any Retail Establishment that elects to provide Carryout Bags made of paper consistent with Section 3.B. of this article shall charge the consumer at the point of purchase \$.10 for each such bag.
- B. The charge imposed by a Retail Establishment as provided in Paragraph A of this Section shall be retained solely by the Retail Establishment.
- C. All Retail Establishments shall post signs at or near the point of purchase to notify consumers of the provisions of this article. Such signs shall be in both English and Spanish and shall read substantially as follows: “All paper carryout bags provided by this store to a consumer shall be subject to a fee of ten cents per bag. Carryout bags brought by consumers into this store to carry purchased goods from this store shall not be subject to a fee.”
- D. All Retail Establishments shall indicate on the consumer transaction receipt the number of Carryout Bags provided and the total amount of charge imposed. It

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shall be a violation of this article for a Retail Establishment to fail to separately itemize the charge upon a consumer's purchase of such bag.

- E. No Retail Establishment shall rebate or otherwise reimburse a customer for any portion of the charge provided in Paragraph A of this Section.
- F. Nothing in this article shall prohibit a Retail Establishment from providing Reusable Carryout Bags for no or nominal cost or encouraging and providing incentives for the use of Reusable Carryout Bags, including credits or rebates for customers that bring their own Reusable Carryout Bags for the purpose of carrying purchases out of the Retail Establishment.
- G. Nothing in this article shall prohibit a consumer from using bags or containers of any type that they bring to a Retail Establishment or from carrying away goods that are not placed in bags.
- H. It shall be presumed that all Carryout Bags sold or used by a Retail Establishment are subject to the charge provided in Paragraph A of this Section until the contrary is established. The burden of proving that such Carryout Bags are not subject to the charge hereunder shall be upon the Retail Establishment so claiming.

## § \_\_\_\_-5. – **Exceptions.**

- A. The charge reflected in Section 4 of this article shall not apply to the extent it would violate the laws of the United States or the State of Connecticut.
- B. The charge reflected in Section 4 of this article shall not apply to the use of Carryout Bags to carry items purchased pursuant to the Supplemental Nutritional Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), or a similar governmental food assistance program.

## § \_\_\_\_-6. – **Enforcement and penalties for violation.**

- A. This article shall be enforced by the Code Enforcement Office or its designee.
- B. Upon determination that a violation has occurred, the Retail Establishment shall be liable for the following:
  - 1. Upon the initial violation, written warning notice that a violation has occurred shall be issued to the Retail Establishment. No penalty shall be imposed for the initial violation;
  - 2. For the second violation, a penalty of one hundred fifty dollars (\$150.00); and
  - 3. For the third and each subsequent violation, a penalty of two hundred fifty dollars (\$250.00).

# DRAFT

- C. No more than one penalty shall be imposed upon a Retail Establishment in one 24 hour period.
- D. Monies collected from fines will be used to enhance and promote other waste reduction and sustainability initiatives within the Town.

## § \_\_\_\_-7. – **Severability.**

If any section, clause, sentence or provision of this article shall be adjudged by a court of competent jurisdiction to be invalid or unenforceable, such adjudication shall not affect the validity or enforceability of any other provision hereof, and the applicability thereof to other persons or circumstances shall not be affected thereby.

## § \_\_\_\_-8. – **Effective date.**

This article shall become effective September 1, 2020 following its adoption by the Board of Selectman in order to allow Retail Establishments time to dispose of their existing inventory of Carryout Bags made of plastic and convert to alternative packaging materials compliant with this article.

# DRAFT

## USE AND SALE OF POLYSTYRENE PRODUCTS

### § \_\_\_\_ -1. – Purpose.

The purpose of this article is to preserve and protect the environment in the Town of Wilton by prohibiting the sale, provision, or distribution of Polystyrene products by Food Packagers and Retail Establishments.

### § \_\_\_\_ -2. – Definitions.

As used in this article, the following terms shall have the meanings indicated:

#### **FOOD PACKAGER**

Any person, corporation, partnership, business, or other organization or group, however organized, that places meat, eggs, bakery products, or other food in packaging materials for the purpose of retail sale of those products.

#### **PREPARED FOOD**

Means any food or beverage served or sold at a Retail Establishment, either for consumption on the premises or for takeout, that has been prepared at the Retail Establishment's location or elsewhere by cooking, chopping, slicing, mixing, brewing, freezing, squeezing, or other food preparation technique. The term includes leftovers from partially consumed Prepared Food.

#### **POLYSTYRENE**

Means and includes blown polystyrene and expanded and extruded foams (sometimes referred to as Styrofoam, a Dow Chemical Company trademarked form of polystyrene foam insulation) which are thermoplastic petrochemical materials utilizing a styrene monomer and processed by any number of techniques including, but not limited to, fusion of polymer spheres (expandable bead polystyrene), injection molding, foam molding, and extrusion-blow molding (extruded foam polystyrene).

#### **POLYSTYRENE FOOD SERVICE PRODUCT**

Means any product made in whole or in part of Polystyrene and used in the restaurant or food service industry for serving or transporting Prepared Food. The term includes, by way of example and not limitation, cups, bowls, lids, sleeves, utensils, plates, trays, hinged or lidded containers (clamshells), coolers, and egg cartons.

#### **POLYSTYRENE LOOSE FILL PACKAGING**

Commonly known as packing peanuts, means a void-filling packaging product made of Polystyrene that is used as packaging fill.



# DRAFT

## RETAIL ESTABLISHMENT

Any person, corporation, partnership, business, or other organization or group, however organized, that transfers merchandise, goods, or materials, including, without limitation, clothing, food, or personal items of any kind, directly to a consumer in exchange for payment. The term includes, by way of example and not limitation, any grocery store, grocery delivery service, department store, clothing store, hardware store, hospital, pharmacy, liquor store, restaurant, delicatessen, convenience store, caterer, food truck, sidewalk vendor, farmers' market, flea market, and any other retail store or vendor. The term shall not include the sale of goods at yard sales, tag sales, or other sales by residents at their home.

### § \_\_\_\_ -3. – Prohibitions

- A. No Retail Establishment located in the Town of Wilton shall serve, sell, distribute, or provide Prepared Food in or on a Polystyrene Food Service Product.
- B. No Food Packager located in the Town of Wilton shall package meat, eggs, bakery products, or other food in or on a Polystyrene Food Service Product.
- C. No Retail Establishment located in the Town of Wilton shall sell, offer for sale, distribute, or provide Polystyrene Food Service Products or Polystyrene Loose Fill Packaging.
- D. The Town of Wilton shall not use or provide Polystyrene Food Service Products or Polystyrene Loose Fill Packaging at any City facility or City-sponsored event.
- E. No Town of Wilton department or facility shall purchase or acquire Polystyrene Food Service Products or Polystyrene Loose Fill Packaging.
- F. All parties who contract with the Town of Wilton shall be prohibited from using Polystyrene Food Service Products or Polystyrene Loose Fill Packaging in City facilities or on City-funded projects within the City.

### § \_\_\_\_ -4. – Exceptions.

- A. The prohibition set forth in Section 3 of this article shall not apply to:
  - 1. Polystyrene Food Service Products used for prepackaged food that have been filled and sealed prior to receipt by the Retail Establishment;
  - 2. Polystyrene Food Service Products used to contain or store raw meat or seafood sold from a butcher case or similar retail appliance; or
  - 3. Polystyrene coolers and ice chests, provided that such Polystyrene is fully encased in another material.

# DRAFT

- B. The prohibitions set forth in Section 3 of this article shall not apply to the extent it would violate the laws of the United States or the State of Connecticut.

## § \_\_\_\_-5. – **Enforcement and penalties for violation.**

- A. This article shall be enforced by the Code Enforcement Office or its designee.
- B. Upon determination that a violation has occurred, the Food Packager or Retail Establishment, as the case may be, shall be liable for the following:
1. Upon the initial violation, written warning notice that a violation has occurred shall be issued. No penalty shall be imposed for the initial violation;
  2. For the second violation, a penalty of one hundred fifty dollars (\$150.00); and
  3. For the third and each subsequent violation, a penalty of two hundred fifty dollars (\$250.00).
- C. No more than one penalty shall be imposed upon a single Food Packager or Retail Establishment in one 24 hour period.
- D. Monies collected from fines will be used to enhance and promote other waste reduction and sustainability initiatives within the Town.

## § \_\_\_\_-6. – **Severability.**

If any section, clause, sentence or provision of this article shall be adjudged by a court of competent jurisdiction to be invalid or unenforceable, such adjudication shall not affect the validity or enforceability of any other provision hereof, and the applicability thereof to other persons or circumstances shall not be affected thereby.

## § \_\_\_\_-7. – **Effective date.**

This article shall become effective on September 1, 2020.

# DRAFT

## USE OF SINGLE-USE PLASTIC STRAWS AND STIRRERS BY FOOD OR BEVERAGE ESTABLISHMENTS

### § \_\_\_\_ -1. – Purpose.

The purpose of this article is to preserve and protect the environment in the Town of Wilton by prohibiting the sale, provision, or distribution of Single-Use Plastic Stirrers and reducing the use of Single-Use Plastic Straws by Food or Beverage Establishments.

### § \_\_\_\_ -2. – Definitions.

As used in this article, the following terms shall have the meanings indicated:

#### **FOOD OR BEVERAGE ESTABLISHMENT**

Any establishment where food or beverages of any kind are provided directly to a consumer, whether such food or beverages are provided free of charge or sold and whether consumption occurs on or off the premises. The term includes, by way of example and not limitation, any restaurant, bar, liquor store, delicatessen, coffee shop, movie theater, convenience store, food truck, take-out restaurant, delivery service, or caterer. The term shall not include hospitals, nursing homes, long-term care facilities, or other medical or dental facilities.

#### **SINGLE-USE**

A product that is intended to be only used one time in its same form.

#### **SINGLE-USE PLASTIC STRAW**

A Single-Use tube made predominantly of plastic derived from either petroleum or a biologically based polymer, such as corn or other plant sources, used to transfer a beverage from a container to the mouth of the person drinking the beverage. “Single-Use Plastic Straw” does not include a straw made from non-plastic materials, including, but not limited to, paper, metal, pasta, sugar cane, wood, or bamboo.

#### **SINGLE-USE PLASTIC STIRRER**

A Single-Use device, implement, or utensil made predominantly of plastic derived from either petroleum or a biologically based polymer, such as corn or other plant sources, designed solely for the purpose of mixing liquids intended for internal human consumption. “Single-Use Plastic Stirrer” does not include a stirrer made

# DRAFT

from non-plastic materials, including, but not limited to, paper, metal, pasta, sugar cane, wood, or bamboo.

## § \_\_\_\_-3. – **Prohibition on Straws and Stirrers.**

- A. No Food or Beverage Establishment in the Town of Wilton shall sell, provide, or distribute a Single-Use Plastic Stirrer.
- B. No Food or Beverage Establishment in the Town of Wilton shall sell, provide, or distribute a Single-Use Plastic Straw UNLESS requested by the consumer.

## § \_\_\_\_-4. – **Accommodation for Persons with Disabilities or Medical Conditions.**

Notwithstanding any other provision of this Article, and in recognition that a straw is an adaptive utensil that may provide basic accommodation for persons with disabilities or medical conditions to eat or drink, Food or Beverage Establishments in the Town of Wilton must provide a Single-Use Plastic Straw upon request to any consumer who requires the use of same due to a disability or medical condition.

## § \_\_\_\_-5. – **Exceptions.**

- A. The prohibitions set forth in Section 3 of this article shall not apply to:
  - 1. The sale, provision, or distribution of beverages packaged and sealed prior to receipt by the Food or Beverage Establishment; and
  - 2. The sale of Single-Use Plastic Straws or Single-Use Plastic Stirrers in multi-straw or multi-stirrer packages, as the case may be, that are sealed prior to receipt by the Food or Beverage Establishment.
- B. The prohibition set forth in Section 3 of this article shall not apply to the extent it would violate the laws of the United States or the State of Connecticut.

## § \_\_\_\_-6. – **Enforcement and penalties for violation.**

- A. This article shall be enforced by the Code Enforcement Office or its designee.
- B. Upon determination that a violation has occurred, the Food or Beverage Establishment shall be liable for the following:
  - 1. Upon the initial violation, written warning notice that a violation has occurred shall be issued to the Food or Beverage Establishment. No penalty shall be imposed for the initial violation;
  - 2. For the second violation, a penalty of one hundred fifty dollars (\$150.00); and

# DRAFT

3. For the third and each subsequent violation, a penalty of two hundred fifty dollars (\$250.00).
- C. No more than one penalty shall be imposed upon a Food or Beverage Establishment in one 24 hour period.
- D. Monies collected from fines will be used to enhance and promote other waste reduction and sustainability initiatives within the Town.

## § \_\_\_\_-7. – **Severability.**

If any section, clause, sentence or provision of this article shall be adjudged by a court of competent jurisdiction to be invalid or unenforceable, such adjudication shall not affect the validity or enforceability of any other provision hereof, and the applicability thereof to other persons or circumstances shall not be affected thereby.

## § \_\_\_\_-8. – **Effective date.**

This article shall become effective September 1, 2020.





## Plastic is a global health crisis hiding in plain sight.

**D**espite being one of the most pervasive materials on the planet, plastic and its impact on human health remain poorly understood. Yet exposure to plastic is expanding into new areas of the environment and food chain as existing plastic products fragment into smaller particles and concentrate toxic chemicals. As plastic production increases, this exposure will only grow.

To date, research into the human health impacts of plastic have focused narrowly on specific moments in the plastic lifecycle, often on single products, processes, or exposure pathways. This approach fails to recognize that significant, complex, and intersecting human health impacts occur at every stage of the plastic lifecycle: from wellhead to refinery, from store shelves to human bodies, and from waste management to ongoing impacts as air, water, and soil pollution.

Together, the lifecycle impacts of plastic paint a clear and troubling picture: plastic threatens human health on a global scale. Reducing those threats will demand stopping and reversing the growth in plastics production, use, and disposal worldwide.

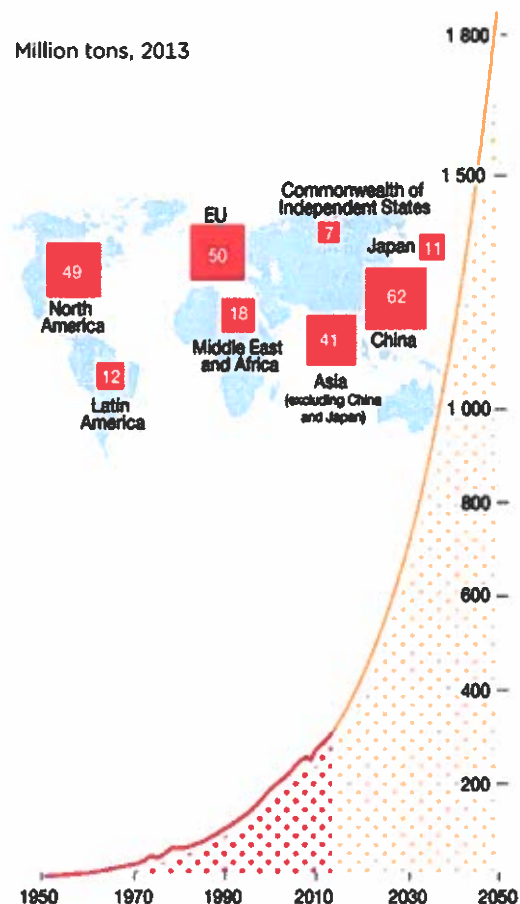
### KEY FINDINGS

**Plastic requires a lifecycle approach.** The narrow approaches to assessing and addressing plastic impacts to date are inadequate and inappropriate. Making informed decisions that address plastic risks demands a full lifecycle approach to understand the full scope of its toxic impacts on human health. It is also required to ensure that yet more and increasingly complex environmental problems are not created in the attempt to address this one.

**At every stage of its lifecycle, plastic poses distinct risks to human health,** arising from both exposure to plastic particles themselves and associated chemicals. The majority of people worldwide are exposed at multiple stages of this lifecycle.

FIGURE 1

### Global Plastic Production and Future Trends



Source: Ryan, A Brief History of Marine Litter Research, in M. Bergmann, L. Gutow, M. Klages (Eds.), *Marine Anthropogenic Litter*, Berlin Springer, 2015; Plastics Europe

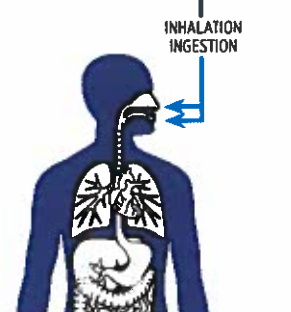
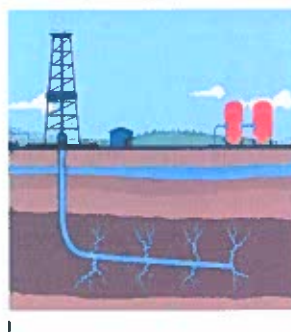
FIGURE 2

## Plastic & Health: The Hidden Costs of a Plastic Planet

Humans are exposed to a large variety of toxic chemicals and microplastics through inhalation, ingestion, and direct skin contact, all along the plastic lifecycle.

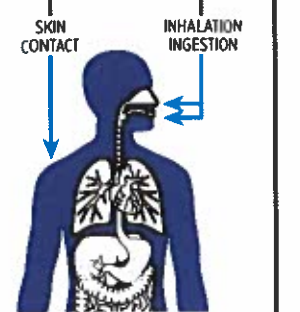
### DIRECT EXPOSURE

#### Extraction & Transport



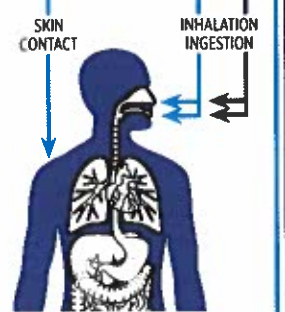
- **Emissions:** include Benzene, VOCs, and 170+ toxic chemicals in fracking fluid
- **Exposure:** inhalation and ingestion (air and water)
- **Health:** affects the immune system, sensory organs, liver, and kidney; impacts include cancers, neuro-, reproductive, and developmental toxicity

#### Refining & Manufacture



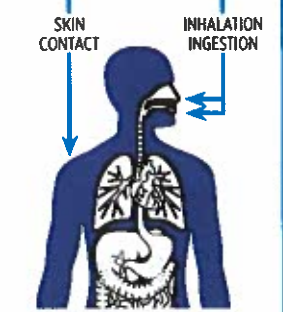
- **Emissions:** include Benzene, PAHs, and Styrene
- **Exposure:** inhalation, ingestion, skin contact (air, water, and soils)
- **Health:** impacts can include cancers, neuro-toxicity, reproductive toxicity, low birth weight, and eye and skin irritation

#### Consumer Use



- **Emissions:** include heavy metals, POPs, carcinogens, EDCs, and microplastics
- **Exposure:** inhalation, ingestion, and skin contact
- **Health:** affects renal, cardiovascular, gastrointestinal, neurological, reproductive, and respiratory systems; impacts include cancers, diabetes, and developmental toxicity

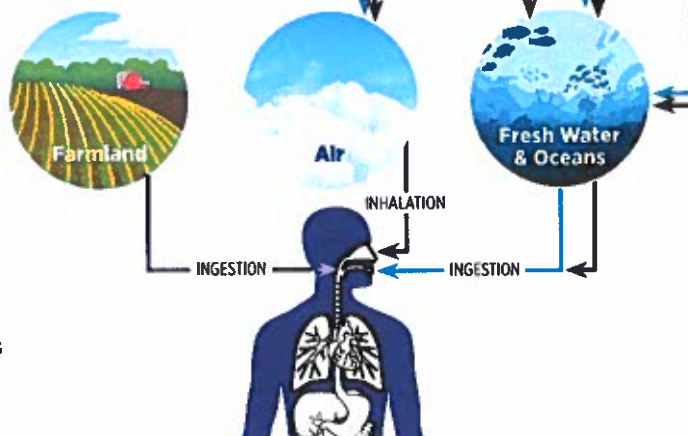
#### Waste Management



- **Emissions:** include heavy metals, dioxins and furans, PAHs, toxic recycling
- **Exposure:** ingestion and inhalation (air, ash, slag)
- **Health:** impacts include cancers, neurological damages, and damages to immune, reproductive, nervous, and endocrine system

### ENVIRONMENTAL EXPOSURE

- **Microplastics** (e.g. tire dust and textile fibers) and **toxic additives:** including POPs, EDCs, carcinogens, and heavy metals
- **Exposure:** inhalation and ingestion (air, water, and food chain)
- **Health:** affects cardiovascular, renal, gastrointestinal, neurological, reproductive, and respiratory systems; impacts include cancers, diabetes, neuro-, reproductive, and developmental toxicity



KEY: —> Microplastics —> Chemicals

Source: © CIEL/NonprofitDesign.com





### Extraction and Transport

99% of plastic comes from fossil fuels. The extraction of oil and gas, particularly hydraulic fracturing for natural gas, releases an array of toxic substances into the air and water, often in significant volumes. Over 170 fracking chemicals that are used to produce the main feedstocks for plastic have known human health impacts, including cancer, neurological, reproductive, and developmental toxicity, impairment of the immune system, and more. These toxins have direct and documented impacts on skin, eyes, and other sensory organs, the respiratory, nervous, and gastrointestinal systems, liver, and brain.



### Refining and Manufacture

Transforming fossil fuel into plastic resins and additives releases carcinogenic and other highly toxic substances into the air. Documented effects of exposure to these substances include impairment of the nervous system, reproductive and developmental problems, cancer, leukemia, and genetic impacts like low birth weight. Industry workers and communities neighboring refining facilities are at greatest risk and face both chronic and acute exposures during uncontrolled releases and emergencies.



### Consumer Products and Packaging

Use of plastic products leads to ingestion and/or inhalation of large amounts of both microplastic particles and hundreds of toxic substances with known or suspected carcinogenic, developmental, or endocrine-disrupting impacts.



### Waste Management

All plastic waste management technologies (including incineration, co-incineration, gasification, and pyrolysis) result in the release of toxic metals, such as lead and mercury, organic substances (dioxins and furans), acid gases, and other toxic substances to the air, water, and soils. All such technologies lead to direct and indirect exposure to toxic substances for workers and nearby communities, including through inhalation of contaminated air, direct contact with contaminated soil or water, and ingestion of foods that were grown in an environment polluted with these substances. Toxins from emissions, fly ash, and slag in a burn pile can travel long distances and deposit in soil and water, eventually entering human bodies after being accumulated in the tissues of plants and animals.



### Plastic in the Environment

Once plastic reaches the environment in the form of macro- or microplastics, it contaminates and accumulates in food chains through agricultural soils, terrestrial and aquatic food chains, and the water supply. This environmental plastic can easily leach toxic additives or concentrate toxins already in the environment, making them bioavailable again for direct or indirect human

Opposite: © iStockphoto/George Clerk



exposure. As plastic particles degrade, new surface areas are exposed, allowing continued leaching of additives from the core to the surface of the particle in the environment and the human body. Microplastics entering the human body via direct exposures through ingestion or inhalation can lead to an array of health impacts, including inflammation, genotoxicity, oxidative stress, apoptosis, and necrosis, which are linked to an array of negative health outcomes including cancer, cardiovascular diseases, inflammatory bowel disease, diabetes, rheumatoid arthritis, chronic inflammation, autoimmune conditions, neurodegenerative diseases, and stroke.

**Uncertainties and knowledge gaps undermine the full evaluation of both acute and long-term health risks at all stages of the plastic lifecycle**, and limit the ability of consumers, communities, and regulators to make informed choices.

- Lack of transparency of the chemicals in plastic and its production processes prevents a full assessment of its impacts, reduces the ability of regulators to develop adequate safeguards; consumers to make informed choices; and frontline communities to limit their exposure.
- Further research is urgently needed to: evaluate intersecting exposures, synergistic effects, and cumulative impacts of the mixtures of thousands of chemicals used in consumer goods; understand the potential transfer of microplastics and associated toxic chemicals to crops and animals; and understand the toxic impacts of microfibers and other plastic microparticles increasingly documented in human tissues.



Photo: © Nandakumar S. Haridas/Greenpeace. Inset: © Marco Garcia/Greenpeace

**Reducing toxic exposure to plastic will require a variety of solutions and options** because plastic has a complex lifecycle with a diverse universe of actors.

- At every stage of the plastic lifecycle and across those stages, solutions should be guided by respect for human health and the right to a healthy environment. Despite remaining uncertainties, existing information about the severe health impacts of the plastic lifecycle justifies the application of a strong precautionary approach to the lifecycle of plastic and the overall reduction of plastic production and uses.
- Health impact assessments that focus solely on the plastic components of products while ignoring thousands of additives and their behavior at every stage of the plastic lifecycle are incomplete.
- Addressing plastic pollution requires adapting and adopting legal frameworks to ensure access to information regarding the petrochemical substances in products and processes, as well as increased independent research to fill existing and future knowledge gaps.
- Solutions must be built on transparency, participation, and the right to remedy. Transparency is required to identify the nature and breadth of exposure to toxic

material, as well to assess possible health and environmental impacts of technologies touted as “solutions,” such as incineration and plastic-to-fuel technologies. Solutions must integrate the right to meaningful participation in decision-making about plastic-related risks, and access to justice when harms arise.

- Measures that succeed at a local level or with respect to a single product stream are often undermined or offset by the emergence of new plastic, new additives, and new exposure pathways that are interwoven in supply chains that cross and recross borders, continents, and oceans. Until we confront the impacts of the full plastic lifecycle, the current piecemeal approach to addressing the plastic pollution crisis will not succeed.

The findings of this report are clear. Even with the limited data available, the health impacts of plastic throughout its lifecycle are overwhelming. Many actions and solutions are needed to confront this threat to human life and human rights. To be effective, they must ultimately reduce the production, use, and disposal of plastic and associated toxic chemicals.

This report was made possible through the generous support of the 11th Hour Foundation, Broad Reach Fund of the Maine Community Trust, Gallifrey Foundation, Heinrich Böll Stiftung, Leonardo DiCaprio Foundation, Marisla Foundation, Passport Foundation, Plastic Solutions Fund, Threshold Foundation, and Wallace Global Foundation.

The full report is available online at [www.ciel.org/plasticandhealth](http://www.ciel.org/plasticandhealth)







## BOX 6

## Sizing It Up

Plastic comes in many different sizes. From nano-particles to macroplastics, the health impacts and exposure pathways of plastic pollution vary. To date, no international definition of microplastics exists. Macroplastics are generally defined as plastic items larger than 5mm. Microplastics are generally recognized as synthetic organic polymer particles less than 5mm at their longest point. They exist in different shapes and can be spheres, fragments, granules, pellets, flakes, beads, filaments, or fibers. Microplastics can be detected in environmental sampling down to 1 micron in size, but few studies actually identify particles smaller than 50 microns. Nanoplastics are generally defined as 1-100nm.<sup>187</sup>

Macroplastics generally arrive in the marine environment as original consumer products. A recent compilation of the top twenty most common products found in six different international sets of shoreline data characterizes the types of plastic products reaching the environment. Seventy-five percent of the listed items are some type of food and beverage packaging (wrappers, bottles and bottle caps, straws, stirrers, lids, utensils, containers, cups, and plates), while the rest are smoking-related products (cigarette butts, packaging, and lighters) and an assortment of other products including bags, balloons, diapers, condoms, tampons, and six-pack holders.<sup>188</sup>

TABLE 3

Merged National Datasets: The Top 20 Products in Shoreline Data

Plastic Product	ICC	NOAA	MOT	Heal the Bay	COA	Project Aware	Total	Percent
Food Wrappers (candy, chips, etc.)	318,880.0	272.0	16,315.0	307.0	14,827.0	217.0	350,818.0	18.6
Bottle Caps (Plastic)	273,089.0	779.0	11,735.0	27,352.0	2,328.0	205.1	315,488.1	16.7
Beverage Bottles (Plastic)	206,993.0	122.0	7,809.0	6,297.0	5,508.0	289.0	227,018.0	12.0
Bags (Plastic)	157,702.0	39.0	6,970.0	5,249.0	7,871.0	313.0	178,144.0	9.4
Straws, Stirrers	125,635.0	172.0	4,645.0	4,026.0	8,102.0	165.0	142,745.0	7.5
Lids (Plastic)	75,921.0	186.9	409.0	5,829.5	15,347.0	57.9	97,751.2	5.1
Utensils	42,599.0	33.0	1,848.0	47,133.0	1,864.0	352.0	93,829.0	4.9
Cigarette Butts*	51,550.5	25.3	2,337.9	6,775.9	643.0	9.1	61,341.7	3.2
Take Out/Away Containers (Foam)	41,805.0	102.9	537.7	17,696.0	548.0	8.3	60,697.8	3.2
Take Out/Away Containers (Plastic)	49,973.0	123.0	37.0	5,624.0	1,021.7	9.9	56,788.6	3.0
Cups, Plates (Plastic)	48,559.0	14.6	732.6	1,862.2	1,766.0	9.6	52,943.9	2.8
Cigar Tips	41,211.0	47.0	328.0	6,243.0	2,351.0	16.0	50,196.0	2.6
Cups, Plates (Foam)	42,047.0	12.4	4,495.7	690.0	2,021.0	8.3	49,274.5	2.6
Tobacco Packaging/Wrapper	33,434.0	82.3	604.5	352.0	694.0	19.0	35,185.8	1.8
Balloons	23,492.0	19.0	1,442.0	5,263.0	480.3	13.0	30,709.3	1.6
Other Plastic Bottles	17,548.0	62.0	1,578.0	4,769.6	1,429.0	9.0	25,395.6	1.3
Cigarette Lighters	10,750.0	24.0	676.5	10,750.0	405.0	3.0	22,608.5	1.2
Personal Care Products (Condoms & Tampon Applicators)	11,555.0	37.4	827.5	2,213.2	1,875.1	14.0	16,522.2	0.8
6-Pack Holders	8,224.0	3.0	180.0	641.0	130.0	10.0	9,188.0	0.4
Diapers	3,938.0	12.5	276.8	2,150.6	82.0	7.0	6,466.9	0.3
<b>Total</b>	<b>1,584,905.5</b>	<b>2,169.3</b>	<b>63,785.2</b>	<b>161,223.9</b>	<b>69,293.0</b>	<b>1,735.1</b>	<b>1,883,112.0</b>	<b>100</b>

\* Counts of cigarette butts were divided by 20 to represent packs rather than individual cigarettes.





## FAQs: STYROFOAM™

Styrofoam™ cups and take-out containers were once used everywhere—but lately, more and more cities are banning the use of Styrofoam™ products at restaurants and stores. Why? Because Styrofoam™ is a public health hazard—it is bad for the environment and our health. For decades we have been creating Styrofoam™ waste in our communities. Polystyrene foam is littered more than any other waste product—despite it being only 1 percent of all waste, it makes up 10 to 40 percent of litter found in streams. Read on to learn why Styrofoam™ is harmful to our health and why we should be embracing the trend to ban it in our communities.

### Overview

Expanded polystyrene foam, commonly referred to as Styrofoam™, is a type of polystyrene (hard plastic) that is made of harmful chemicals. Polystyrene is used in the manufacture of a wide range of products, from disposable cups and containers to insulating material in housing.

Children are often more vulnerable to toxic chemicals and pollutants because of certain behaviors, such as crawling or putting things into their mouths. Their bodies are also still developing, so their ability to defend against or break down toxic chemicals is weaker. We should therefore minimize the use of products containing harmful chemicals—such as Styrofoam™—especially around children.

### What is polystyrene foam?

Polystyrene (PS) is a versatile, hard, plastic (identified by Recycling Code #6) that is manufactured when multiple molecules of styrene, a liquid plastic, are linked together. Styrofoam™ is the common term for a brand of expanded polystyrene (EPS) foam and it is used for thermal insulation (reduction of heat transfer) in objects such as disposable coffee cups, coolers, and packaging materials. Polystyrene is light weight, squeaky when rubbed, and is usually white

or light green. Packing peanuts are one example of a polystyrene foam that is commonly used as cushioning for transport of fragile objects.

### How do I know if something is made of polystyrene?

Materials made of PS are marked with Recycling Code #6. Styrofoam™ products such as cups or plates will be labeled or described as expanded polystyrene, polystyrene, foam, or #6EPS. Other polystyrene products include clear or solid, but flexible, plastic cups, lids, straws, and utensils.

### What are the potential health concerns associated with polystyrene foam?

Over fifty chemical byproducts are released during the manufacturing of polystyrene, contaminating the air, water and communities that live near these facilities. Polystyrene is made up of multiple units of styrene. Styrene is believed to be a carcinogen (cancer causing) by the Department of Health and Human Services and the International Agency for Research on Cancer. (<https://ntp.niehs.nih.gov/ntp/roc/content/profiles/styrene.pdf>) Exposure to styrene can cause irritation of the skin, eyes, the upper respiratory tract, and the gastrointestinal tract. Chronic exposure results in more severe effects including depression, headaches, fatigue, weakness, hearing loss, and disrupted kidney function.

The manufacturing of polystyrene requires the use of hydrocarbons such as styrene and benzene. These hydrocarbons are released into the air and react with nitrogen oxides to produce ground-level ozone, a hazardous air pollutant. Ground-level ozone can impair lung function and lead to respiratory illness.

The disposal of polystyrene is also hazardous. Polystyrene does not break down and is often burned to be disposed of. However, burning polystyrene releases styrene gas into the air and produces a

mix of toxicants that can impair the nervous system.

### Is polystyrene regulated?

Currently, all bans on polystyrene are at the city or county level. The following list includes a growing number of cities that have decided to ban polystyrene foam in foodservice products, including take-out containers, bowls, plates, trays, cups, and cutlery.

- New York, NY
- Takoma Park, MD
- Seattle, WA
- Washington DC
- Miami Beach, FL
- Freeport, ME
- Portland, ME
- Nantucket (City and county), MA
- Minneapolis, MN
- Portland, OR
- Baltimore, MD
- San Francisco, CA

### Why ban Styrofoam™?

Studies show that styrene, a likely carcinogen, can leach from Styrofoam™ cups and containers when heated. Never put hot food/drink into Styrofoam™ containers, and never microwave Styrofoam™ (or any other plastic) products!

Styrofoam™ not only poses a threat to human health, but can also be harmful to the environment. Foam is lightweight and is easily blown by wind or washed away by rain into water sources. It is also very brittle, and can break into small pieces that are easy for animals to eat. Animals that live on or near areas where Styrofoam™ is found in water sources or on the ground could be harmed if they consume the foam particles.

Polystyrene is slow to degrade, and if disposed of improperly, the foam can leach chemicals into the environment harming water sources.

Polystyrene manufacturing is an enormous creator of hazardous waste. Furthermore, polystyrene manufacturing greatly contributes to global warming. Expanded polystyrene is often made using hydrochlorofluorocarbons, compounds which deplete the ozone, which is needed to protect us from harmful ultraviolet rays.

### What are acceptable alternatives?

Instead of Styrofoam™, food can be served on compostable plates that are made of plant-based materials. Safer materials include recycled paper and bamboo products and reusable utensils made from corn or potato-based plastics. Store food or drink in glass containers rather than plastic jars and bottles.

Unfortunately, many brands of disposable dinnerware contain chemicals beyond styrene that can harm our health including BPA—a hormone disruptor, dioxins-linked to infertility, and phthalates-linked to breast cancer. If possible it is preferable to use reusable dinnerware.

Stainless steel, pyrex or ceramic reusable plates, bowls, and cups are another option. Child care facilities can use reusable glasses, plates and utensils made of stainless steel or safer plastics (see EHCC's Plastics Fact Sheet for more information on alternative plastics) for food and beverages.

For packing—biodegradable packing peanuts made out of corn or wheat can be used in place of Styrofoam™ packing peanuts. Additional alternative materials that are less harmful are plastic air bags, paper stuffing, and a Styrofoam™ substitute that is made of mushrooms. Visit <https://daily.jstor.org/company-uses-mushrooms-grows-plastic-alternatives/> for more information about the mushroom alternative.

### What types of products can I use for hot beverages and food?

Products made of paper, glass, stainless steel, and ceramic can keep food and beverages warm without leaching chemicals.

### Is Styrofoam™ recyclable?

Styrofoam™ is slow to degrade, but it is recyclable! However, white Styrofoam™ must be clean and recycling must be done at specialized facilities. Look for a PS recycling drop-off center in your community. Visit <https://www.dartcontainer.com/ca/environment/ps-foam-recycling/> for a map of recycling centers in

the US, and specifications. Recycling centers locations are also available by visiting [www.earth911.com](http://www.earth911.com) and searching “Styrofoam” or by going to [www.homeforfoam.com](http://www.homeforfoam.com).

### What should I do with Styrofoam™?

Styrofoam™ can be recycled by dropping off clean, unmarked pieces at a drop-off site. However, the best way to protect yourself and the environment would be to avoid its use in the first place. Choose not to purchase polystyrene products, or items that are packaged in polystyrene. And ask for alternative containers or bring your own leftover containers when eating out.

### Sources:

1. <https://www.osha.gov/SLTC/styrene/hazards.html>
2. <https://www.atsdr.cdc.gov/phs/phs.asp?id=419&tid=74>
3. <https://wmich.edu/mfe/mrc/greenmanufacturing/pdf/Polystyrene%20Recycling.pdf>
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10. <http://www.baltimoresun.com/news/opinion/oped/bs-ed-styrofoam-bill-20170216-story.html>
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**10** Over 100 million marine animals are killed each year due to plastic debris in the ocean. Currently, it is estimated that there are 100 million tons of plastic in oceans around the world.



**11** Plastic that ends up in the ocean breaks down over time and becomes tiny pieces known as microplastics. These microplastics enter the food chain, ushering toxins into the fatty tissues of fish and other animals, which go up the food chain and may then be eaten by humans.



**12** A recent study by Ghent University in Belgium found that people who regularly eat seafood ingest up to 11,000 tiny pieces of plastic each year. Another study by Plymouth University found that one-third of all fish caught in the U.K. contained microplastics.



*The seriousness of the plastic problem requires all of us, individuals, manufacturers, and corporations, to reduce our plastic uses, including the plastic packaging of food and consumer products.*

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# PLASTICS

## 12 reasons to reduce use



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*The amount of plastic produced from 2000-2010 exceeds the amount produced during the entire last century. Of the plastics produced, only 9% has been recycled.*

*Packaging accounts for 40% of plastic use, and the plastic packaging that comes in contact with food includes many "compounds of concern," meaning that they pose a high risk to human health. Those compounds include bisphenols, phthalates, nonpersistent pesticides, perfluoroalkyl chemicals (PFCs), and perchlorates.*

*Plastics do not biodegrade in our lifetime, but instead, those in our oceans break down into small particles and enter the food chain through fish, sea birds, and other marine life. These particles carry with them adhered chemicals and toxins, posing health impacts to both wildlife and humans.*

*As citizens, we must respond and call for the serious reduction of all our plastic uses—including a reduction in plastic packaging.*



**1** Americans discard about 33.6 million tons of plastic a year. Only 9.5% gets recycled, and 15% gets burned for energy. The discarded plastic ends up in our rivers, lakes, and oceans and goes into our landfills, where it can take up to 500 years to decompose.

**2** Packaging makes up 40 percent of all plastic usage. It is the single largest use of plastic.



**3** More than 40% of plastic produced is used only once.



**4** The working life of a single-use plastic bag is about 15 minutes.



**5** A study by the New York State Plastic Bag Task Force concluded that more than 100,000 single-use plastic bags end up in Long Island Sound every year.



**6** Of the 50 billion water bottles bought each year, 80% end up in a landfill, despite recycling programs and a five-cent redemption program in a few states.



**7** Every second of every day in the U.S., 1,500 plastic bottles are discarded. Americans send more than 38 billion water bottles to landfills every year, the equivalent of 912 million gallons of oil.



**8** 18 billion pounds of plastic end up in the ocean each year.



**9** It is estimated that by 2050 the ocean will contain more plastic by weight than fish.

