



**THERE'S A NEW WAY
TO RECYCLE RIGHT**



Connecticut Department of Energy and Environmental Protection



Sherill Baldwin, Environmental Analyst, Sustainable Materials Management
Wilton Public Library, February 4, 2020

What is Recycling?



Made into
New Product
(Recycled)



Collection



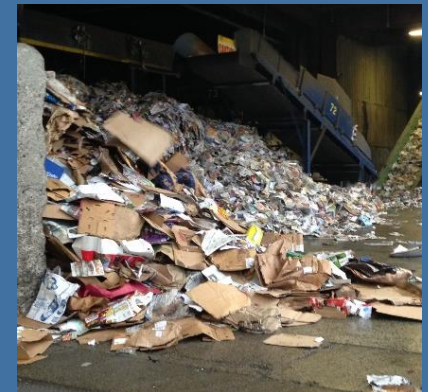
Cycle of
Recycling
(Reclamation)



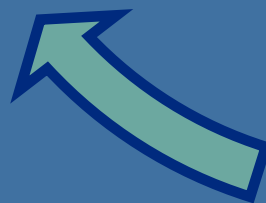
Sold to End-
Market
(Reclaimed)



Sorting/
Processing



Baled to
Specification



Collecting Materials for Recycling



Source
Separated

Dual
Stream

Single
Stream

Mixed Recycling (Single Stream) *versus dual stream or source separation*

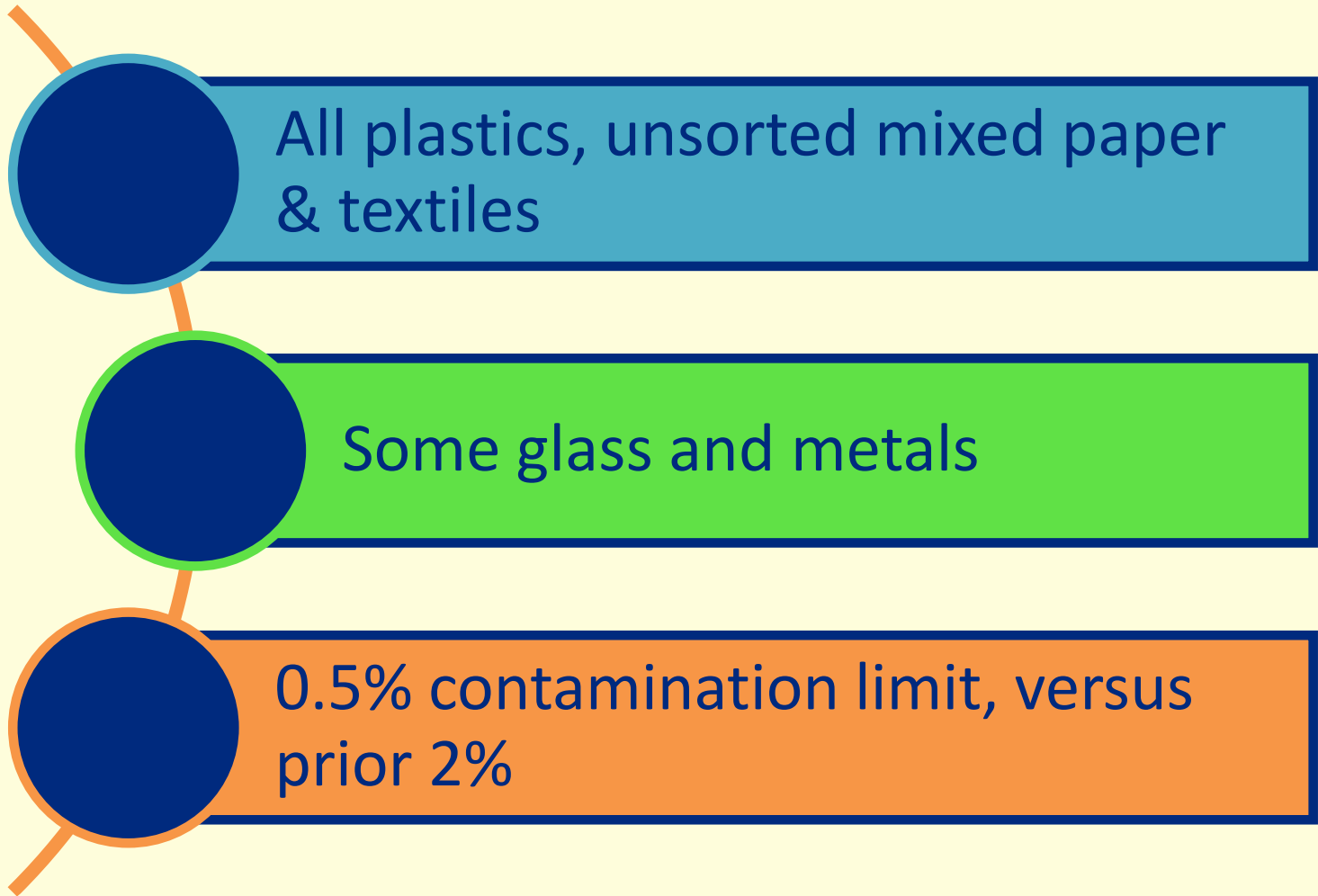
Typically requires
less space and
equipment for
collection and
storage

Typically lower
value
commodities
because of more
contamination

Higher
contamination
key factor leading
to China's
National Sword

China's National Sword Policy

Ban effective Jan. 1, 2018



We purchase items from many places
... we dispose/recycle in many ways

TRASH



RECYCLING
CART



BRUSH



TEXTILES



PLASTIC FILM



FOOD SCRAPS



BULKY WASTE



OSCAR

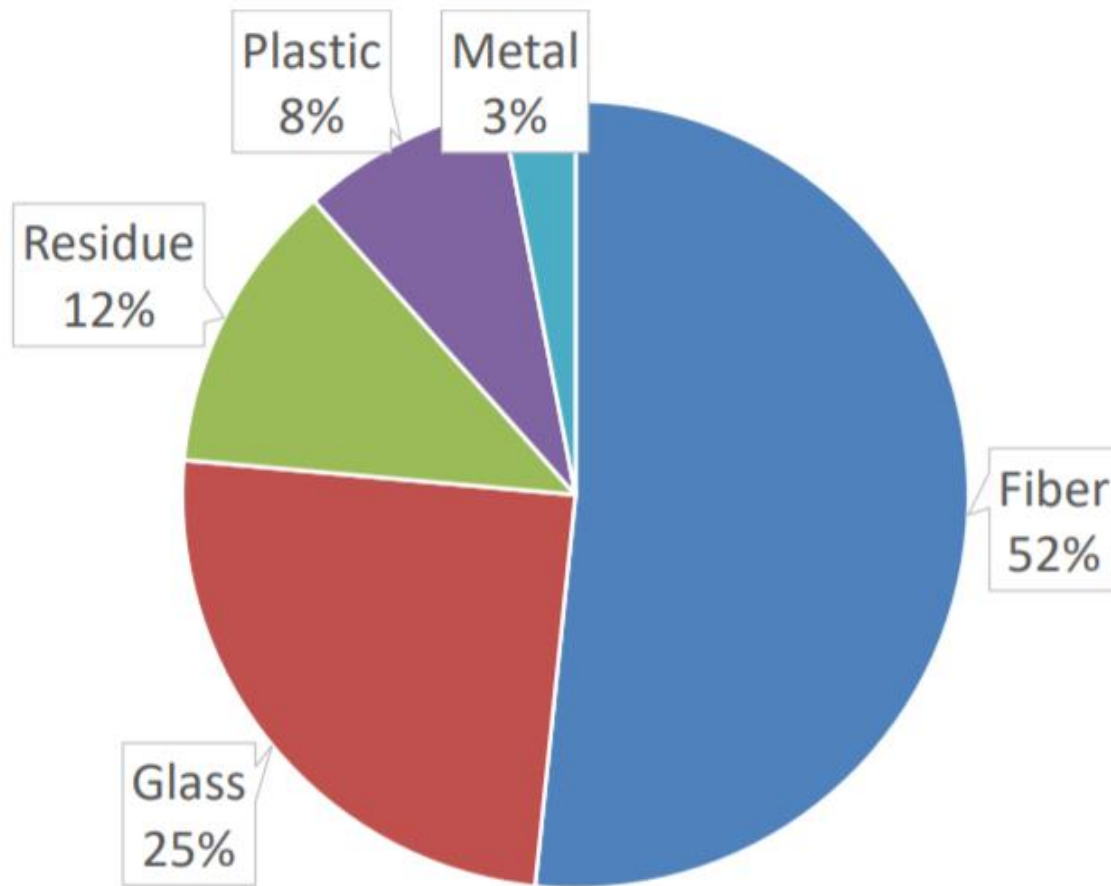


Photo by Howard Shapiro

- Biggest impact from China's National Sword
- Pre Sword, China purchased 55% of world's scrap paper

Fibers

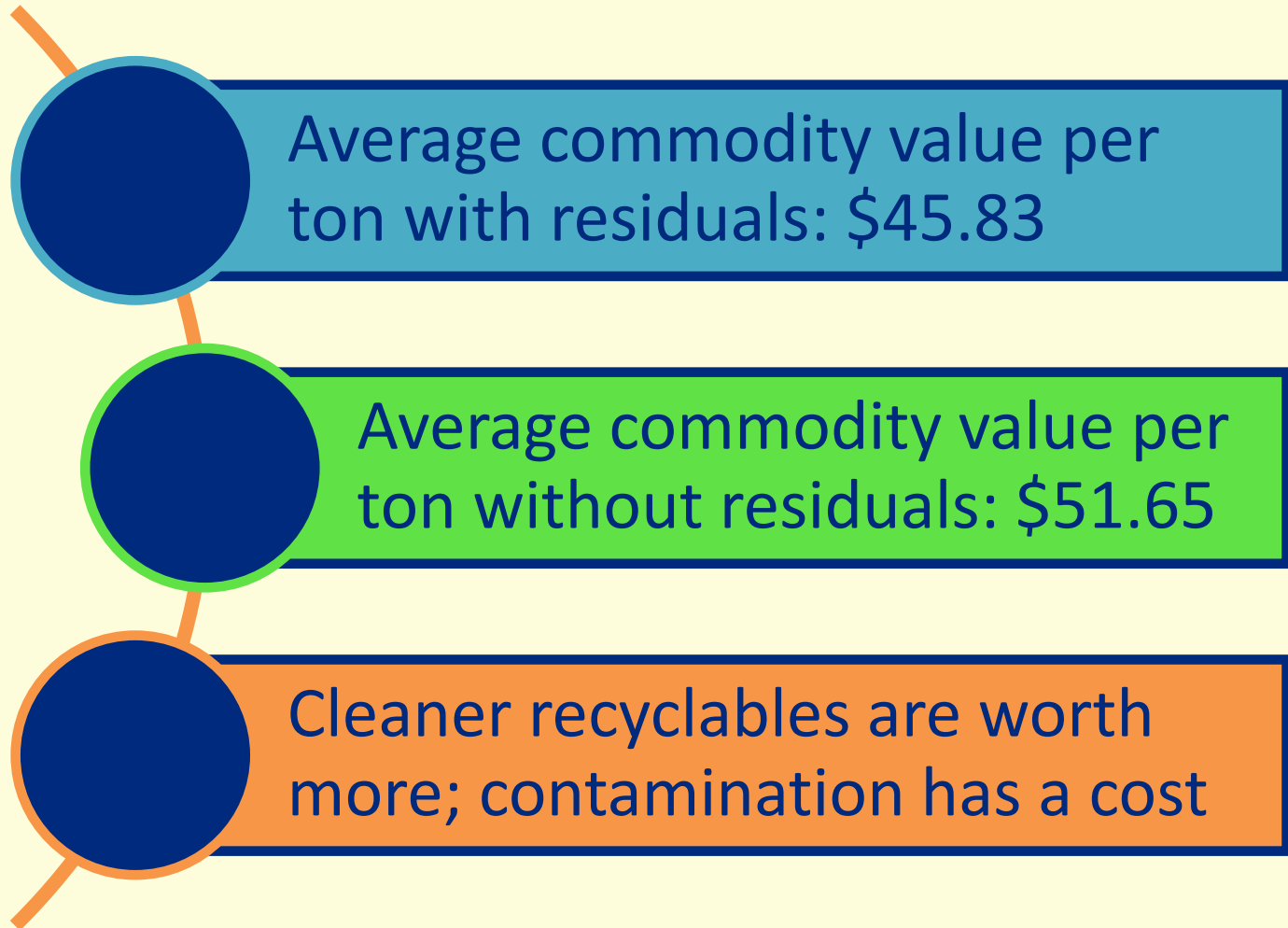
Average Outbound Ton



[Source: Northeast Recycling Council \(2019\)](#)

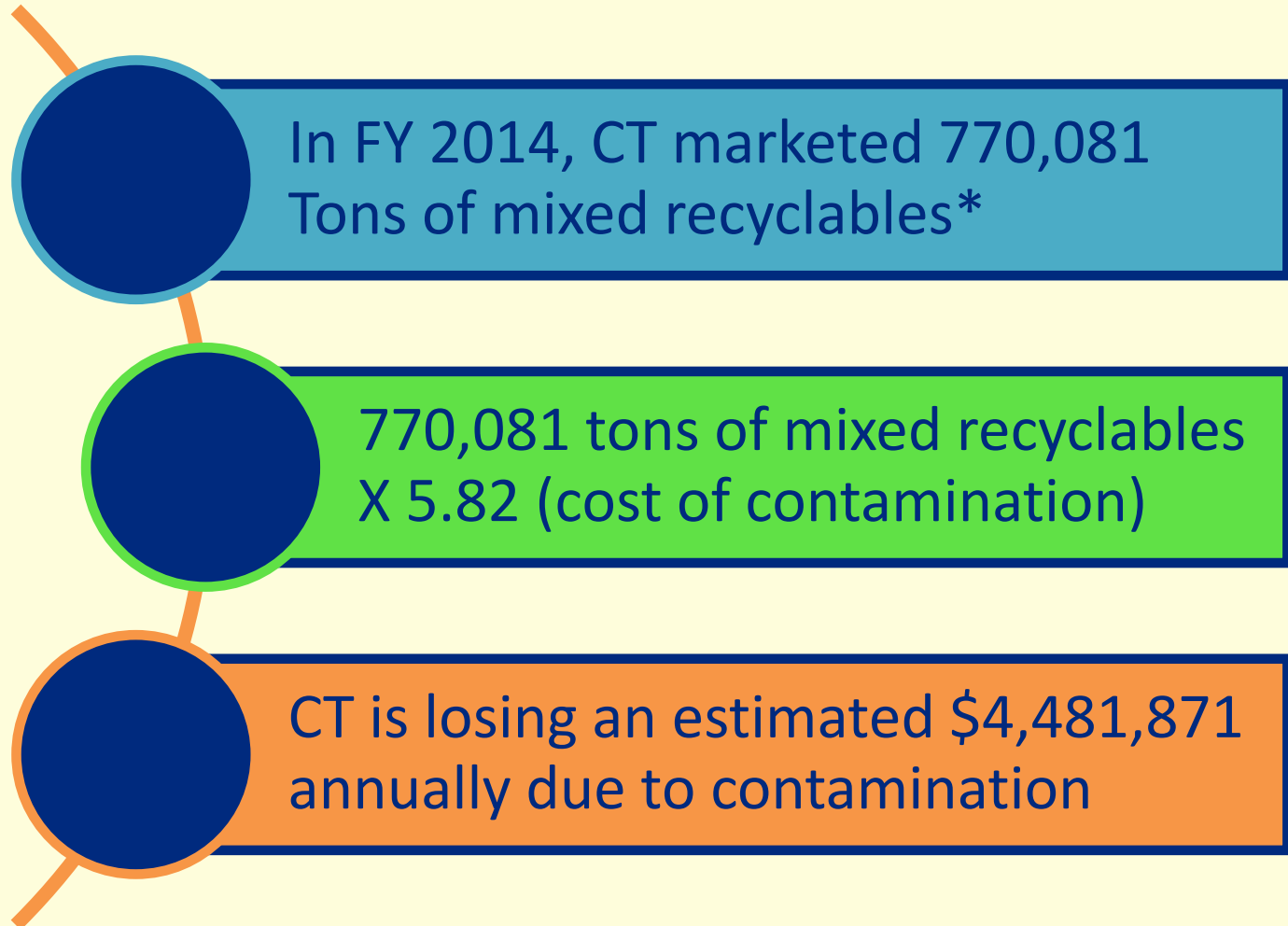
Value of Material Recovered

NERC Blended Commodities Value in Northeast survey,
(April – June 2019)



Lost Value of Materials Recycled Due to Contamination

Average State MSW Statistics, FY 2014*



Fiber

2019
<ul style="list-style-type: none">• Nine Dragons Paper (aka ND Paper), WV - RMP, OCC• International Paper, AL – OCC• Port Townsend, WA – OCC• Pratt, OH – OCC, RMP, double-lined kraft• Ecomelida, SC – cartons, aseptic, pulp

2020
<ul style="list-style-type: none">• Nine Dragons Paper, ME, WI – RMP, OCC• Marcal Paper, NJ• George Pacific Juno Tech, OR – containerboard

2021
<ul style="list-style-type: none">• CorrVentures, NY – OCC, RMP• Green Bay Packaging, WI – OCC, RMP• Cascades in VA – OCC, RMP• Phoenix Paper, KY – OCC, RMP

RMP – residential mixed paper
OCC – old corrugated containers
MRF – materials recovery facility

Plastic

2019
<ul style="list-style-type: none"> • Azek, OH – HDPE, LDPE • EFS, PA (expansion) – plastic film • EFS, Ontario (expansion) – mixed rigids and film • GDP International, SC (expansion) – LDPE, LLDPE, HDPE • Green Tech, SC - PET, HDPE, PP and ABS • Merlin, BC (expansion) – LDPE, PP, PS • Montezuma, GA – LDPE, HDPE, PC, Ag Plastics

2020
<ul style="list-style-type: none"> • Avangard, TX, NM, NV – LDPE film • CarbonLite, PA – PET • Ecomelida, SC – plastic film • FDS Mfg, CA (expansion) – PP, PE • Indorama/Loop, SC – PE bottles • MCM Plastic, LA (expansion) – post-industrial PVC production residue • Netafim, CA (expansion) – HDPE irrigation tubing • PreZero Polymers/ACI Plastics, CA – LDPE, LLDPE film from store drop-off • PreZero Polymers/ACI Plastics, SC (expansion) – #3-#7 containers • Roplast Industries, CA (expansion) – LDPE • rPlanet Earth, CA – PET

2021 & 2022
<ul style="list-style-type: none"> • Polywood, NC – HDPE, mixed plastics • PureCycle Tech, OH – PP • Sirmax, IN – PP, PET scrap

HDPE – high density polyethylene

ABS – acrylonitrile butadiene styrene

LLDEP – linear low-density polyethylene

LDPE – low density polyethylene

PS – polystyrene

PVS – poly vinyl chloride

PET– polyethylene terephthalate

PP – polypropylene

Glass

2019	2020	2021
	<ul style="list-style-type: none">• Urbanmining, CT – MRF glass• Glass bottle factory - cullet	

MRF – materials recovery facility

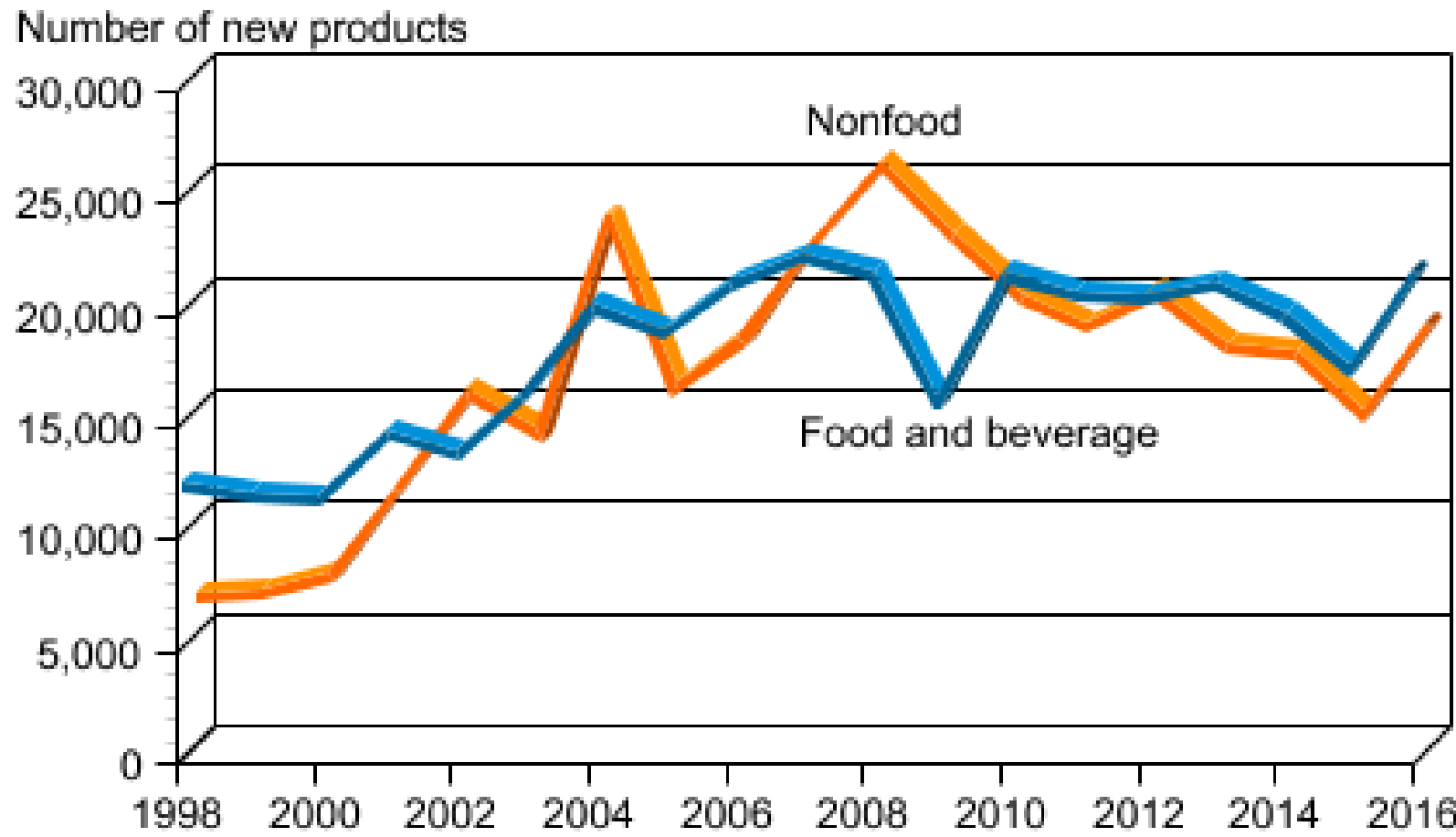
Are we doing it wrong?



Connecticut Department of Energy and Environmental Protection

New product introductions of consumer packaged goods, 1998-2016

After declining between 2007 and 2009, the number of new food and beverage products rebounded in 2010, dipped again between 2013 and 2015, then bounced back in 2016



Source: Calculated by ERS, USDA using data from Mintel's Global New Product Database (Mintel GNPD).

Plastic Packaging Strategy: WalMart

- By 2025 – 100% recyclable, reusable, or industrially compostable for its private brand
- By 2025 – 20% post-consumer recycled content (target) in private brand packaging
- By 2022 - label 100% of food and consumable private brands with How2Recycle label
- Work with suppliers to eliminate non-recyclable packaging material (PVC & PS) by 2025

EPA/WalMart: What is Recyclable?

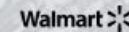
- 60% of consumers have access to program that collects
- Infrastructure for processing – to sort clean quality materials – must exist
- Currently – for plastic packaging – that includes the following resin types
 - PET (#1)
 - HDPE (#2)
 - LDPE (#4)
 - PP (#5)



how2recycle.info

A Cleaner World Starts With Us

How2Recycle is a standardized labeling system that clearly communicates recycling instructions to the public. It involves a coalition of forward thinking brands who want their packaging to be recycled and are empowering consumers through smart packaging labels.



A Smarter Label System

Variation in recycling programs, unclear labeling, and inaccurate recyclability claims make proper recycling a challenge. The How2Recycle label was created to provide consistent and transparent on-package recycling information to consumers in North America.



Clear. Consistent. Concise.

Recycling labels that make sense.



Preparing Material for Recycling

Information is provided to ensure the proper steps are taken to effectively recycle materials.

Rinse & Insert Lid	Empty & Replace Cap	Empty Before Recycling	Rinse Before Recycling
Rinse & Replace Lid	Recycle If Clean & Dry	See Website For Cap	Remove Label Before Recycling
Empty & Discard Sprayer	Empty & Reattach Sprayer	Empty & Discard Pump	Empty & Reattach Pump

Empty & Discard Sprayer: This means before you recycle your bottle, make sure you remove the sprayer. This usually means the sprayer contains metal parts.



Recycling... It's the Law!

Mandatory Recycling in CT:

- 1975
- 1989
- 2012



Items Designated (Mandated) for Recycling

- Glass & Metal Food & Beverage Containers
- Plastic Containers (PET or PETE #1)
- Plastic Containers (HDPE #2)
- Scrap Metal, including appliances
- Ni-Cd Rechargeable Batteries (from consumer products)
- Waste Oil (crankcase oil from internal combustion engines)
- Leaves (must be composted)
- Lead Acid Battery or Motor Vehicle Batteries
- Commercially Generated Source Separated Organic Materials (Only applies to those businesses compelled to do so per [CGS Section 22a-226e](#))
- Corrugated Cardboard
- Boxboard
- Newspaper
- Magazines
- White & Colored Office Paper (*residences and businesses*)

[Recycling Laws and Regulations](#)



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Other recyclables (not in mixed recycling bin)

- Electronics
- Paint
- Mattresses
- Thermostats
- HHW
- Textiles
- Food scraps
- Large quantities of books
- Eyeglasses
- Household items
- Playscapes; 5 gallon buckets; bulky rigid plastics
- Plastic bags; plastic wrap
- Shredded paper



Curbing Our Impact

- **ReThink** – what are we buying/using; do we need it? Can we buy it without packaging?
- **Refuse** – choose to stop purchasing certain products Ex. Do you need a straw? Do you need that “free” stuff?
- **Reduce** – purchase differently (bulk, repairable, durable)
- **Reuse/Repair** – durables, extending life of item
- **Recycle** – do your best to recycle what you can
 - Not recyclable? ReThink or be active citizen

Before DEEP updated Strategic Plan (CMMS)

- Municipal Solid Waste Characterization
 - Help us understand what types of items are still in the municipal waste stream
- Characterization of residential “Single Stream” recycling (aka residential mixed recycling)
 - Understand contamination rates, problem materials, how much paper vs. containers etc.



Top 5 Contaminants

1. Plastic Bags
2. Shredded Paper
3. Bagged recyclables or waste
4. Tangles (garden hoses, hangers, clothes)
5. Bottle caps



Harmonization across Connecticut

Met with Material Recovery Facility (MRF) Operators

- What is Detrimental?
 - Item, material or product that:
 1. could be harmful to employees or safety concern; and/or
 2. can shut down or harm equipment; and/or
 3. reduces the value of commodities.



What's **IN?**

What's **OUT?**

Learn about the new, universal
list for recycling.



<http://www.recyclect.com>



Some Changes

- **IN:** Pizza boxes (clean, no food) for all
- **IN:** Black plastic containers, nursery pots/planter pots
- **OUT:** No loose bottle caps
- **OUT:** No shredded paper
- **OUT:** No plastic bags, plastic wrap/film
- **OUT:** No expanded polystyrene (Styrofoam)



Some things are just trash

- Single-use coffee cups/lids
- Single-use straws
- Moldy/mildew textiles
- Used pens/pencils/toothbrushes
- Used/broken garden hoses
- Used/popped balloons
- Used polystyrene foam (Styrofoam™) products
- Insulating foam (packaging)



Why Does Quality Matter?



Made into
New Product
(Recycled)



Collection



Cycle of
Recycling
(Reclamation)



Sorting/
Processing



Baled to
Specification



Sold to End-
Market
(Reclaimed)



Plastic Bags & Other Film at CT MRFs



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Plastic Bags & Other Film at CT MRFs



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Bagged Recyclables vs. Bag of Trash



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NO PLASTIC BAGS IN THE CART

DO NOT BAG Recyclables

Collecting recyclables in a bag?
Empty the contents into the cart.

Return plastic bags to retailers. 

Glass Recovered at CT MRFs (2015)



Glass Recovered at CT MRFs



Toothbrushes

Rx Bottles

Tampon
Applicator

Razor

Lip Balm

Toothpaste

Pens

Batteries

Bottle Caps

Do NOT put batteries in curbside recycling bin

Fires in the Solid Waste System directly linked to LI Batteries



Recycling Truck Explosion
East Northhampton
Mar. 2017



Baler Chamber
Li-based battery contained explosion
Northern Calif
Feb. 2017



Other items to keep OUT of recycling bin

- No batteries
- No syringes
- No propane tanks
- No ammunition
- No lawnmower blades
- No knives or other utensils
- No diapers – baby/adult
- No tampon applicators





RECYCLECT WIZARD

WHY RECYCLE IN THE BIN BEYOND THE BIN GRANTS AND PROGRAMS SOCIAL RESOURCES

CAN I RECYCLE IT?

Something Missing? Share

Type the name of a waste item and we'll tell you how to recycle or dispose of it.

[Terms of Service](#)

[List of Materials](#) Powered by and



WHAT'S IN? WHAT'S OUT?

New, simple standards for residential curbside recycling

CAN I RECYCLE IT?

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Type the name of a waste item and we'll tell you
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Search

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Powered by [ReCollect](#) and [RecycleCT](#)



THERE'S A NEW WAY TO RECYCLE RIGHT

Just ask the RecycleCT Wizard

Plastic Bags



Pizza Boxes



Shredded Paper



Loose Bottle Caps



IN OR OUT

<http://www.recyclect.com/>

RECYCLING RESOURCES

To support Connecticut recycling efforts, RecycleCT has resources available to help educators, municipalities and recycling companies inform their communities on the state's universal, residential recycling guidelines.

The materials can be easily downloaded with specific collateral pieces having areas for organization name, address, phone number and website address customization.

PRINT

Brochure

Educate your customers with a convenient list of the correct items that can be recycled. Customizable area located on the back of the brochure. Size: 5" x 8"

Download English

Descargar español



Cover



Inside

Flyer

All the recycling information that your customers need on one sheet. Can easily be customized and printed from any printer. Limited customizable area located at the bottom of the flyer.

Size: 8.5" x 11"

Download English

Descargar español

Invoice Insert

This two-sided flyer is the perfect size to slip into an envelope with your company's invoice.

Size: 8.5" x 3.5"

Download English

Descargar español

 Descargar español



ONLINE

Online Web Banners

These web banners can be placed on a municipality website and linked to RecycleCT.com.



Size: 300 x 250 pixels

 Download English

 Descargar español



Size: 240 x 90 pixels

 Download English

 Descargar español

FOR SCHOOLS

Posters

These posters can be hung in local schools to get kids excited about recycling the right way from a young age.

Green Poster

Size: 22" x 28"

 Download English

 Descargar español



Orange Poster

Size: 22" x 28"

 Download English

 Descargar español



Blue Poster

Size: 22" x 28"

 Download English

 Descargar español



<http://www.recyclect.com/resources.html>



What's IN, What's OUT

For

RESIDENTS

(not businesses)



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Acceptable

vs.

Recyclable



CLEAN, NO FOOD



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