

#### Connecticut Department of Energy and Environmental Protection



Sherill Baldwin, Environmental Analyst, Sustainable Materials Management Living Wisely and Well, Branford, CT - November 3, 2021

#### What is Recycling?





Collection





Cycle of Recycling (Reclamation)



Sold to End-Market (Reclaimed)

Sorting/ Processing



Baled to Specification



#### **Collecting Materials for Recycling**



#### 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

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



**PLASTIC FILM** 

**FOOD SCRAPS** 

**BULKY WASTE** 

**OSCAR** 

#### Recycling End-Markets (where commodities are sold)

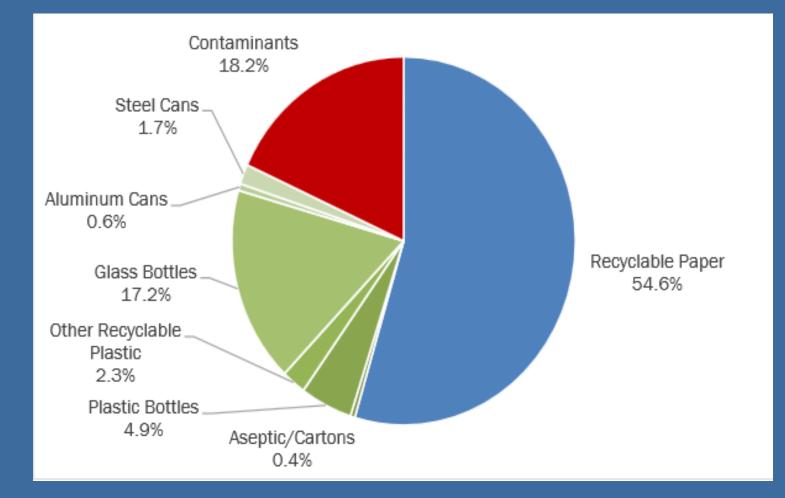




- Jan 1 2019, Chinese government's import ban on mixed paper went into effect.
- 2021, ban includes all waste paper, incl. corrugated boxes.
- China was not the major end market for America's recycled paper.

#### **Fiber**

#### Characterization of CT's Mixed Recycling (aka Single Stream) (2015)



#### CT Municipal Solid Waste Characterization Study, 2015

## Fiber

#### Completed

- Midwest paper Group (WI)
- Packaging Corporation of America (LA)
- Hood Container (LA)
- Copamex (Mexico)
- Pratt Industries (OH)
- International Paper (AL)
- Port Townsend (WA)
- Grupo Gondi (Mexico)
- Bio Pappel/McKinley Paper (WA)

#### 2021

- Nine Dragons Paper WI, WV, ME)
- Packaging Corporation of America (WA)
- Green Bay Packaging (WI)
- Global Win/Shanying; Phoenix Paper (KY)
- Total Recycle Fiber (VA)

#### 2022

- Empire Recycled Fiber (PA)
- CorrVentures (NY)
- Graphics Paper (MI)
- Saica Group (OH)
- Atlantic Packaging Products (Ontario)
- Cascades (VA)
- Crossroads paper (Utah)
- Kamine/Celadon (FL)
- Sonoco (SC, WI)
- Domtar (TN)

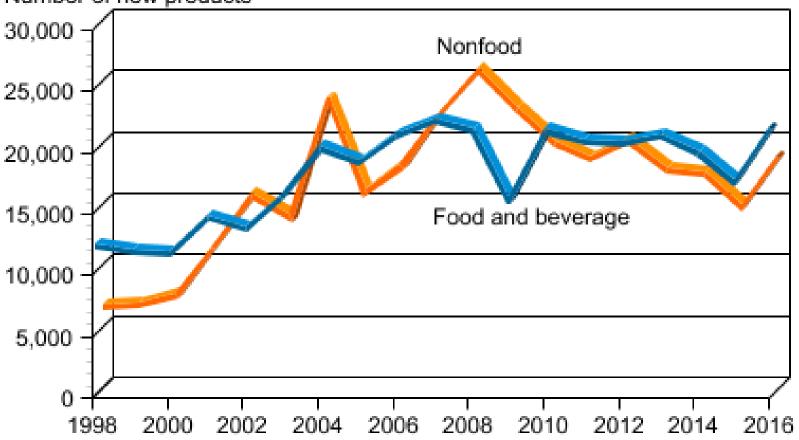
## Are we doing it wrong?





#### 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



Number of new products

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





#### 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.

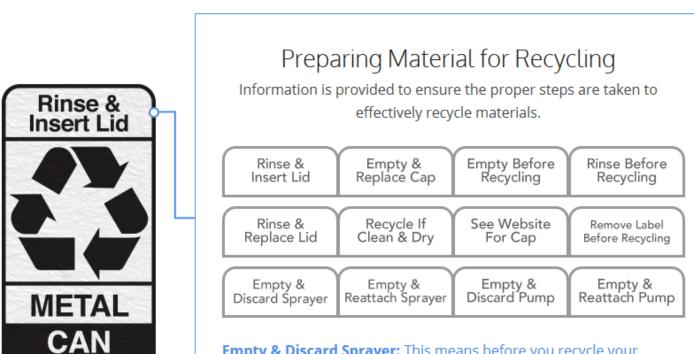


#### A Smarter Label System

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.



**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

- Corrugated Cardboard
- Boxboard
- Newspaper
- Magazines
- White & Colored Office Paper (residences and businesses)
- 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 <u>CGS Section 22a-226e</u>)

**Recycling Laws and Regulations** 



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## **Other Programs: Bottle Bill**

•Law passed in 1978 and went into effect 1/1/1980. Primary initial purpose of this program was to help reduce litter. In 2009, CT program expanded to include water containers. Also in 2009, unclaimed deposits (escheats) were directed to the state's General Fund (instead of remaining with the distributors). •In 2021, Public Act 21-58 passed, significantly modifying CT's program.



## **Other Programs: Bottle Bill**

- Beverage containers:
  - 1980: beer, soft drinks, carbonated mineral water (5c)
  - 2009: water (5c)
  - 2021: hard seltzer, hard cider, plant water, juice, juice drink, tea, coffee, kombucha, plant infused drink, sports drink or energy drink (*effective 1/1/23*)
    - Increased deposit to 10c (*effective 1/1/24*)
  - 2021: 5c surcharge applied to sale of miniatures or mini liquor bottles (<= 50 ml) containing spirits or liquor (*effective 10/1/21*)



## **Other Programs** (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



Rethink Refuse Reduce Reuse Recycle

## Personal Changes: Purchasing



- Think before you hit "buy" with easy online shopping
- Do you need it or want it?
- Can you buy it locally?
- Can you buy it used?
- Can you repair the one you already have?
- Could you borrow it from a neighbor or friend?
- Does your library offer this to borrow?

## Personal Changes: Food



- Make a list before shopping
- Create a menu for a few days or week at a time
- Freeze items before they go bad
- Rotate food in your refrigerator
- Mark items what and dates for frig and freezer
- Learn to compost
- Join the "Clean Plate" club
  use smaller plates

## Personal Changes: Reuse



•Donate unused items you no longer want or need

#### •Donate responsibly

- Clothing, sports equipment, medical supplies, art supplies, pet needs
- •Repair the items you have
- •Organize a community events –
  - Tag sales, SWAP events, Free Days, start a swap shop
  - Repair clinics
  - Mini-libraries community book reuse
  - Tool lending library, cookware, paintings

### Waste Crises in Connecticut

- MIRA, incinerator in Hartford will be closing June 2022
- They burn about 1/3 of CT's Municipal Solid Waste (MSW)
- If trash is hauled out-of-state, the price of trash disposal is likely to increase.
- Connecticut Coalition for Sustainable Materials Management, formed August 2020

## **CCSMM** Priorities

- Reduce amount of waste that is generated
- Expand reuse opportunities
- Increase food scrap collection programs
- Improve recycling programs
  - Reduce contamination
  - Reduce municipal costs for disposal
- Implement new approaches including Unit-Based Pricing and EPR programs



CT Coalition for Sustainable Materials Management

https://portal.ct.gov/DEEP-CCSMM

## **CCSMM** Priorities

#### Menu of Options, Dec. 2020

An exhaustive list of potential legislative, department and municipal actions identified and discussed in the CCSMM process.

This menu is not an endorsement of specific policies or actions, but an extensive list of all of the options that municipal and state policymakers could consider to enhance sustainable materials management in Connecticut.

There is a wide variety of policies and programs that can be adopted to help reduce disposal tonnage, and provide environmental benefits and/or cost savings for Connecticut communities.

Each municipality has unique policy priorities and circumstances, and can embrace different solutions. In some cases, municipalities will find benefits from implementing solutions together, as regional groups, or on a statewide basis.

The key is that all of these actions— individual, regional, and state-level—can add up in the aggregate to a significant reduction in disposal of MSW, and real progress towards our shared goal of a more equitable, affordable, and sustainable waste system for Connecticut.

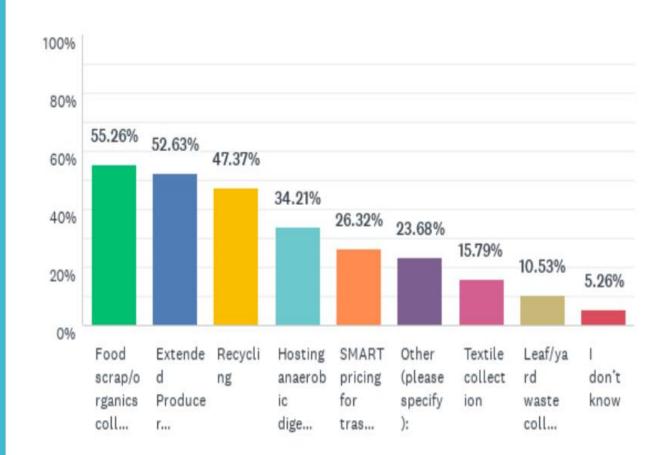


CT Coalition for Sustainable Materials Management

https://portal.ct.gov/-/media/DEEP/waste\_management\_an d\_disposal/CCSMM/CCSMM-Options-Menu-Dec-2020-v-2.pdf

## CCSMM Interest in Solutions

Responses to CCSMM Municipal Survey





# Learn about the new, universal list for recycling.



http://www.recyclect.com

## Harmonization across Connecticut

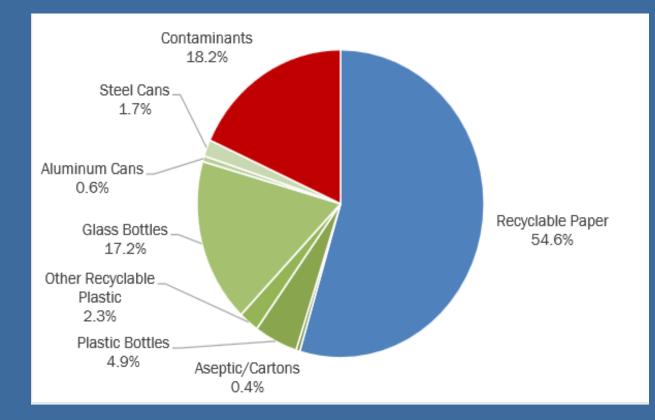
Met with Material Recovery Facility (MRF) Operators

- What is Detrimental?
  - Item, material or product that:
    - 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.



#### Characterization of CT's Single Stream aka Mixed Recycling

#1 Contaminant
Found
= Plastic bags and
bagged material



CT Municipal Solid Waste Characterization Study, 2015

## Bagged Recyclables vs. Bag of Trash





## Top 5 Contaminants

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





# **NO PLASTIC BAGS IN THE CART** Recyclables

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

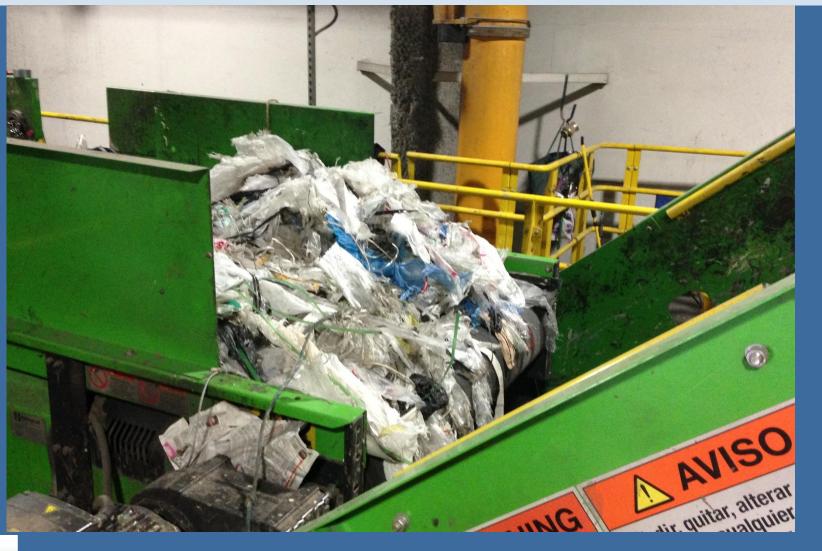
Return plastic bags to retailers.

## Plastic Bags & Other Film at CT MRFs





## Plastic Bags & Other Film at CT MRFs





## Let's Break Some Myths...

- IN: Pizza boxes (no food, no liners)
- OUT: No loose bottle caps
- OUT: No shredded paper
- OUT: No plastic bags, plastic wrap/film
- OUT: No expanded polystyrene (aka Styrofoam)
- OUT: Black plastic containers, black plastic nursery pots



**Connecticut Department of Energy and Environmental Protection** 

# 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<sup>™</sup>) products
- Insulating foam (packaging)



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## Why Does Quality Matter?





Collection



Cycle of Recycling (Reclamation)



Sold to End-Market (Reclaimed)

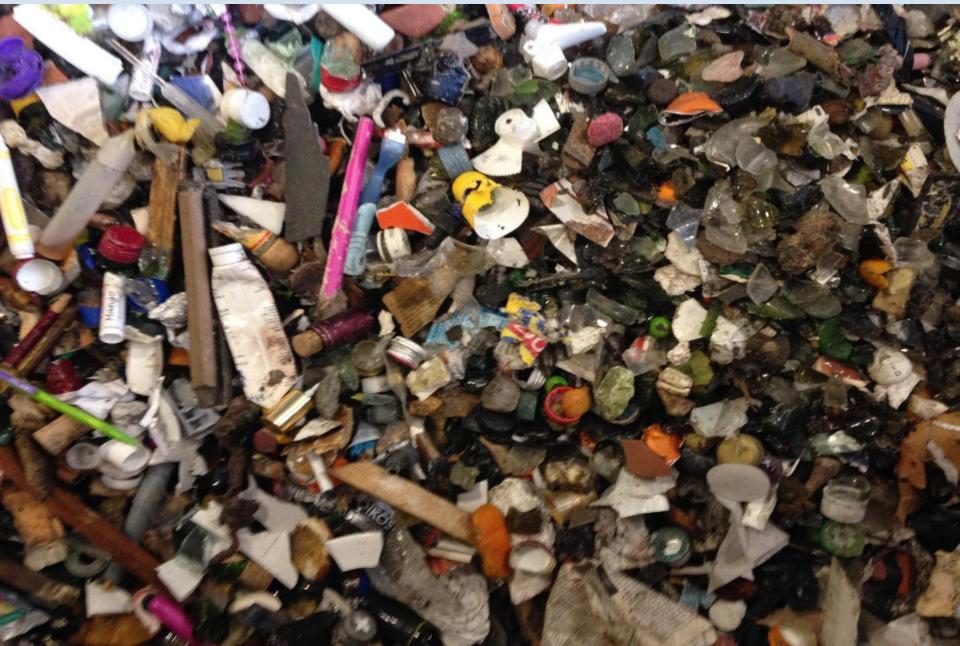
Sorting/ Processing



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# Glass Recovered at CT MRFs (2015)



## **Glass Recovered at CT MRFs**

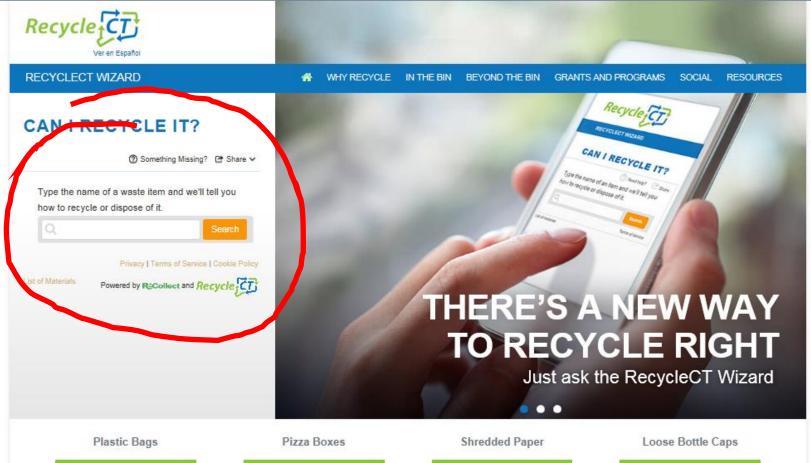


## Other items to keep OUT of recycling bin

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



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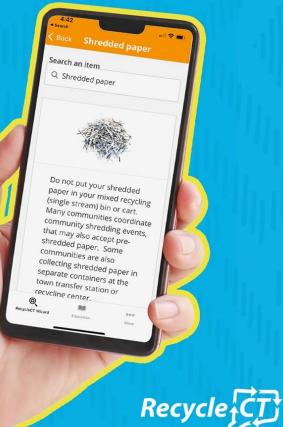






#### http://www.recyclect.com/

*Did you say yes? Sorry. It's a no for shredded paper.* 



# RecycleCT Wizard APP

Apple or Google Play

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

#### **RECYCLE RIGHT. EVERY TIME.**

Use this guide to learn What's IN and What's OUT of your bin.

What's N?

Follow these steps before placing acceptable items into your recycling bin. DO: empty, clean, rinse, and repeat for each item. | DON'T: shred, box, or bag items.







Bottles and jars

Newspapers & magazines, food and beverage cartons, mixed paper and flattened boxes

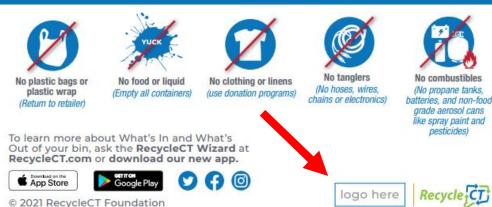


Food and beverage cans. aluminum foil and foil containers



Jugs, tubs and lids

#### What's OUT?



Flyer Bill Insert Postcard Tipcard Magnet Poster

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

# **Trash Talk** Videos



https://www.youtube.com/user/recyclect

#### **Facebook Videos**

www.facebook.com/ctrecycles/videos

at RecycleCT.com Recycle Compost In a Bag: Rotten Fun for



Home or Classroom 6 weeks ado - 239 Views 0 9

Carton Recycling! Including school resources. 7 weeks ago · 467 Views

22



Lids, caps and corks. 9 weeks ago - 399 Views 00 17



Is it Compostable? 10 weeks ago - 486 Views

Recyc

10



Reducing, Reusing and Recycling Textiles 8 weeks ago - 656 Views 00 11



Who's Responsible? Introduction to Product Stewardship. 11 weeks ago - 312 Views





Take-out and Curbside Pick-up Food Packaging 15 weeks ago - 878 Views





I Got My Package, Can I Recycle It? Part 2. 18 weeks ago - 570 Views C 6.



Scraps? Part 2

0 8

17 weeks ago - 394 Views

Can We Grow Vegetables From Food

How Can I Recycle My Electronics? 16 weeks ago - 176 Views





Tanglers are OUT! Learn how to keep essential recycling workers safe. 12 weeks ago - 447 Views

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# Acceptable VS.

Recyclable

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