



MANAGING MATERIALS SUSTAINABLY

**“We cannot solve our problems with the same
thinking we used when we created them.”**

– Albert Einstein

SOLID WASTE HIERARCHY



WASTE CRISIS IN CONNECTICUT



MIRA, incinerator in Hartford will be closed July 2022



They burn about 1/3 of CT's Municipal Solid Waste (MSW)



It's proposed this trash to be hauled out-of-state at higher costs than municipalities are currently paying



Connecticut Coalition for Sustainable Materials Management (CCSMM), 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 **Pay-As-You-Throw** and **EPR** programs

CCSMM PRIORITIES



Pay-As-You-Throw (aka Unit-Based Pricing) treats trash like a utility, in that the generator pays for what they generate – removing the cost from municipal taxes to waste generators

EPR or Extended Producer Responsibility is a mandatory type of product stewardship initiated with legislation

- Requires producers take responsibility for its products- extends post-consumer management of that product and its packaging;
- Shifts financial and management responsibility, with government oversight, upstream to the manufacturer and away from the public sector;
- Could provides incentives to manufacturers to incorporate environmental considerations into the design of their products and packaging.

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

SOLUTIONS ... SO FAR



Public Act 21-58 – updates CT’s “bottle bill”

Meriden – “co-collection” pilot – bag of food scraps and bag of waste in one barrel/cart in Spring 2022

West Haven – piloting passive aeration composting; leaves and food scraps

Fairfield – one of a handful of towns collecting glass separate from other recyclables at town transfer station

Wilton – implementing zero waste initiatives in schools; reusable trays, food scrap collection, sharing tables

Public Act 22-27 – EPR program for gas cylinders with pressurized gas, helium or CO₂ (1lbs - 50lbs)

Guilford, Stonington, West Haven, Bethany, West Hartford, Madison, Middletown & more will be receiving DEEP grants to pilot collecting food scraps curbside and transfer station; co-collection, separate cart collection. Starting end of October 2022.

Rethink

Refuse

Reduce

Reuse

Recycle

A woman with short brown hair, wearing a maroon jacket over a white collared shirt, is smiling and assisting a young boy with Down syndrome. The boy, wearing a dark blue patterned shirt and jeans, is lying on his stomach on a large green exercise ball. He is smiling and reaching out with his right hand towards a green ring on the floor. The background is a brightly lit room with various toys and equipment, including a green ball hanging on the wall and a metal cart with toys in the foreground.

UN/RELEARN: & FORM NEW HABITS

Reuse Share Repair

- Buy durable
- Donate unused items
- Donate responsibly
- Organize community events – Tag sales, Free Days, start a swap shop, repair café/clinics, make mini-libraries, Buy-Nothing Facebook groups, Free-Cycle
- Expand public library offerings - tools, cookware, art



TOWN WIDE TAG SALE!

**SATURDAY, SEPT 17
9AM TO 2 PM**

**REGISTRATION DEADLINE TO BE ON TOWN WIDE MAP
MONDAY, SEPT 12**

Sellers \$10 | Buyers \$Free

Join us for our annual Town wide Tag Sale!
Provide the marketing & maps you simply pre-



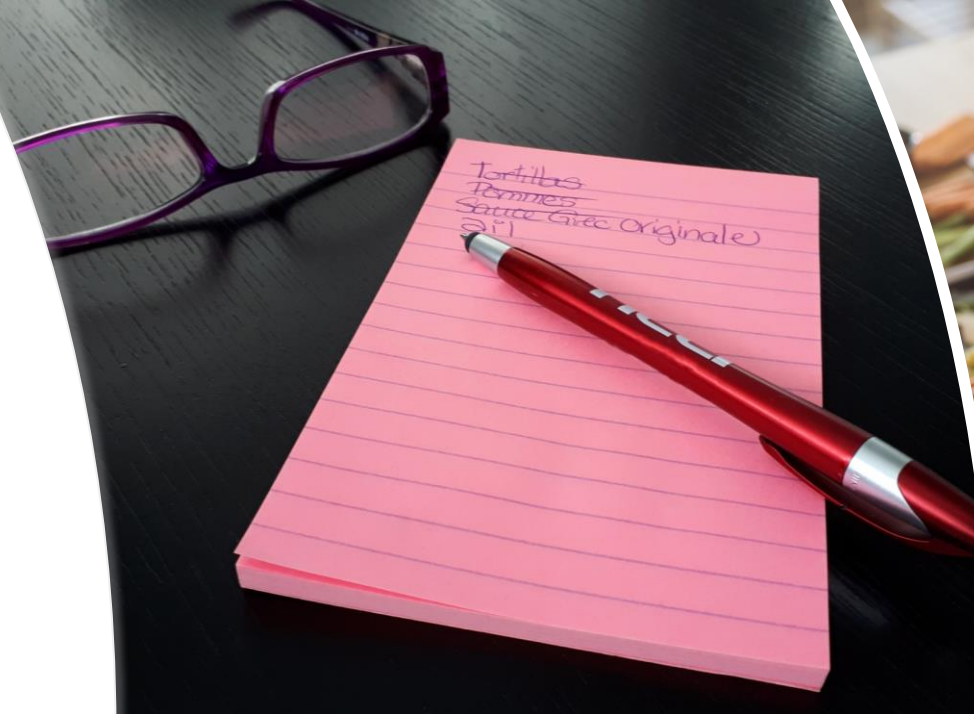
Reusable Washable

- Reusable mug
- Refillable water bottle
- Silicone & bees wax wrappers
- BYO Utensils; opt-out when order take-out
- Cloth napkins
- Cloth hand towels in the kitchen
- Refillable coffee pod
- Cloth coffee filter; coffee press; percolator
- Party Pack with extra reusable plates, cups, glasses and utensils



Reduce Food Waste

- Make a list *before* you food shop
- Create a menu for a few days or a week in advance
- Eat your leftovers
- Rotate food in your refrigerator – older foods up front
- Freeze items before they go bad
- Mark what/dates for refrigerator and freezer
- Learn to compost or participate in community composting initiative



**Label and
Date Foods**

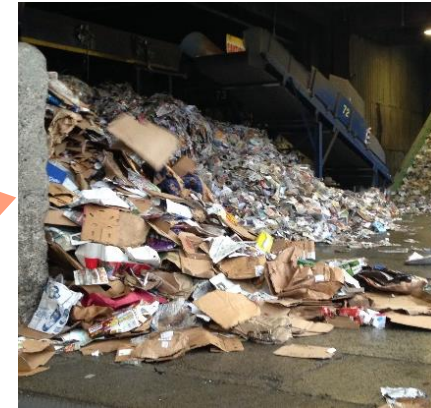
Purchase to Reduce or Recycle

- Review What's IN, What's OUT list to ensure you're not "Wish Cycling"
 - Just because you "Wish" it could be recycled, does not make it true
- Purchase items with less packaging
- Encourage your town to install RecycleCT Wizard on town webpage
- Download the RecycleCT Wizard App on your phone
- Follow RecycleCT on Facebook, Twitter and/or Instagram

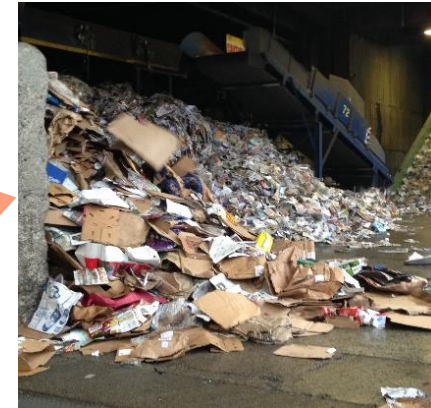




What is Recycling?



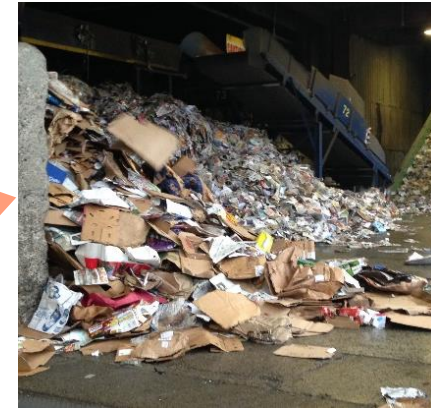
What is Recycling?



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What is Recycling?



HOW DO WE RECYCLE?

WE DISPOSE/RECYCLE IN MANY WAYS

TRASH



MIXED
RECYCLABLES



BRUSH



TEXTILES



ELECTRONICS



PLASTIC FILM



FOOD SCRAPS



BULKY WASTE



PAINT



OSCAR

Modern Collection of Materials to Reduce Waste Disposal



**Mixed
Recycling
(single
stream
recycling)**

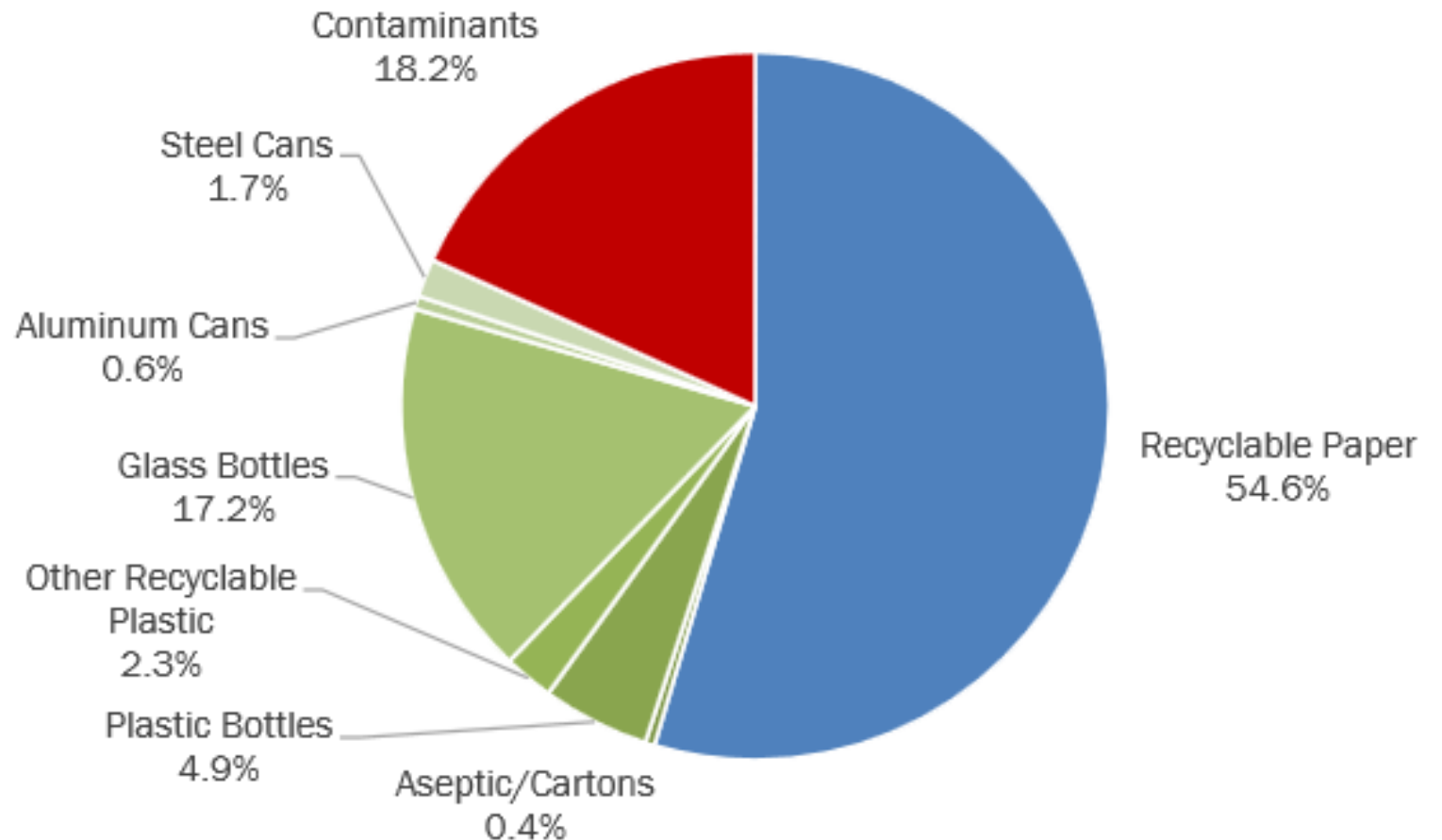


**Food Scraps
(Composting
or Anaerobic
Digestion)**



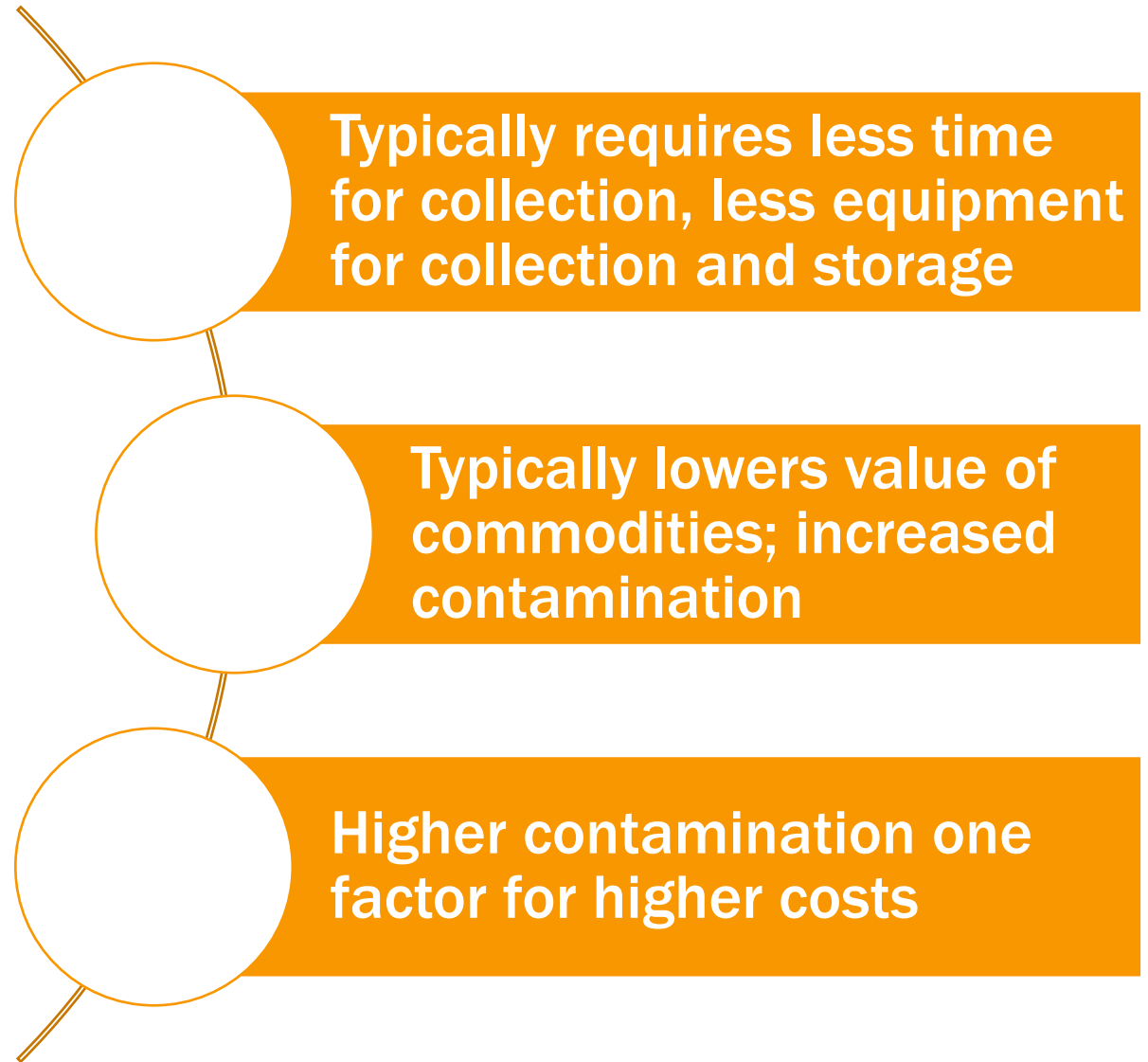
Trash

CONNECTICUT'S MIXED RECYCLABLES (SINGLE STREAM)



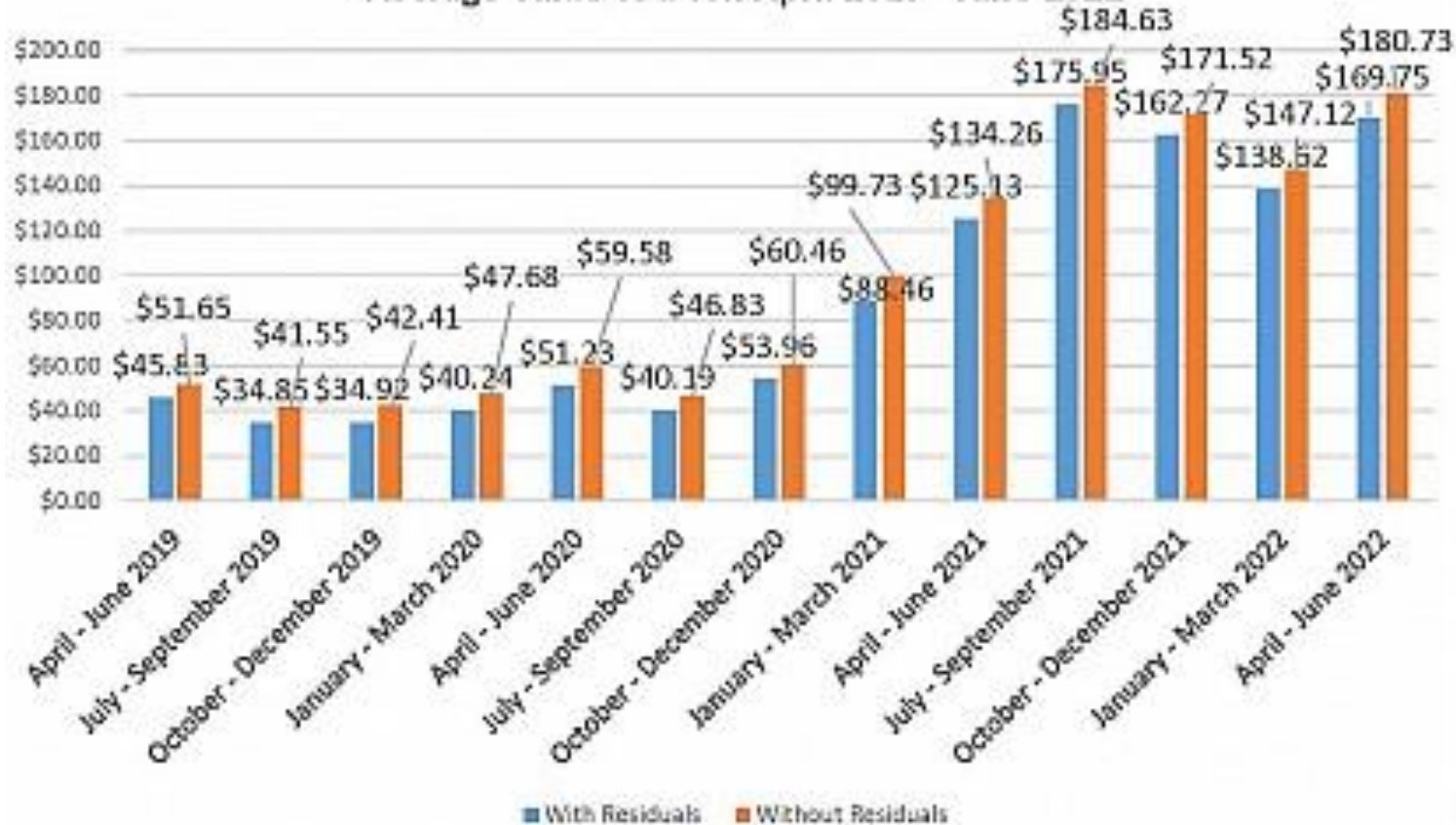
[CT Municipal Solid Waste
Characterization Study, 2015](#)

MIXED RECYCLING (SINGLE STREAM)



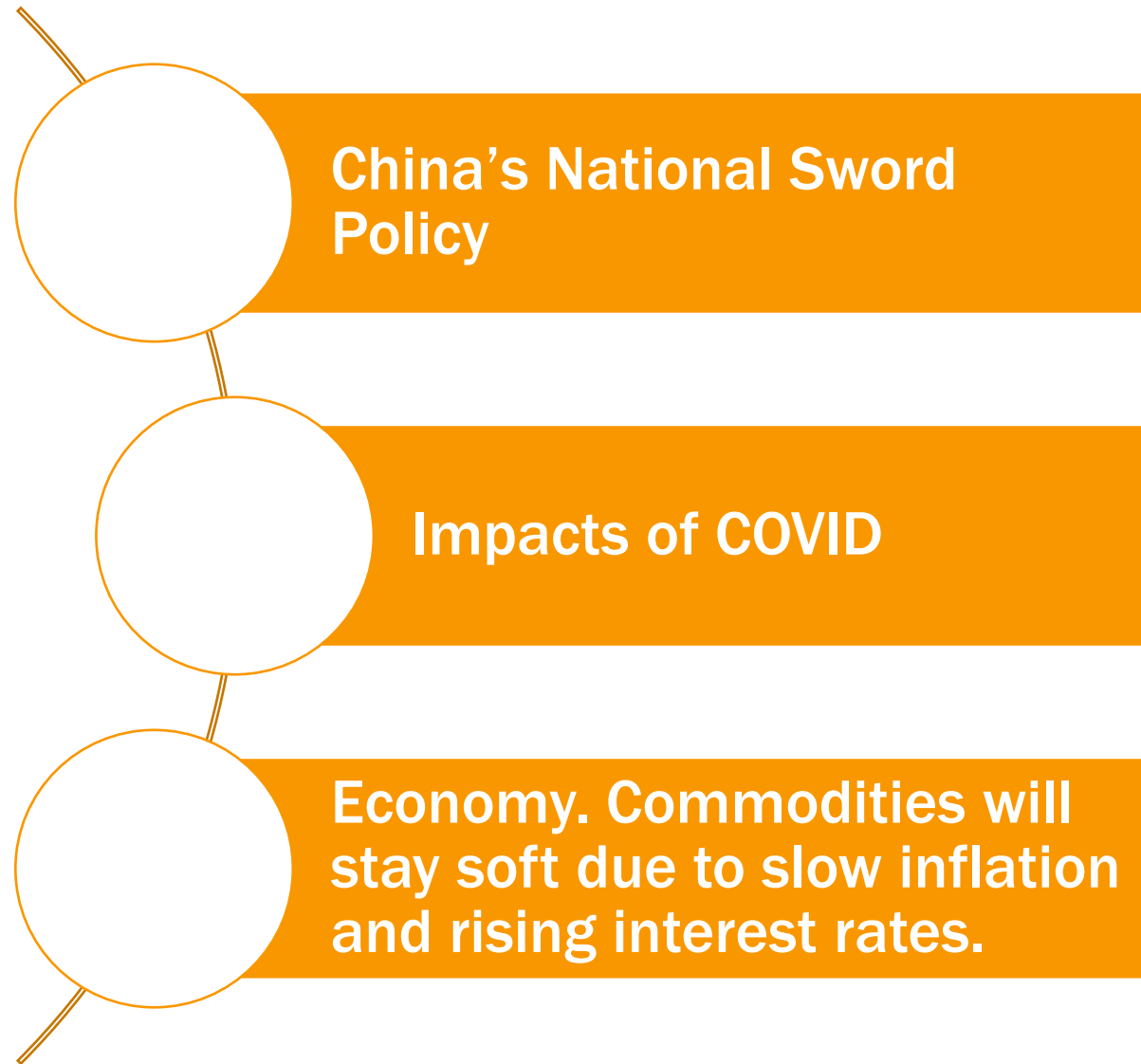
COST OF CONTAMINATION

Average Value of a Ton April 2019 - June 2022



- Blended value (April - June 2022)
Without Residuals: \$180.73
With Residuals: \$169.75
- Four of the states have beverage container deposit laws; fewer glass bottles, PET bottles and aluminum cans resulting in less revenue from those recyclables/for those MRFs.
- Data reflects a mix of single stream, dual stream and source separation to collect recyclables with single stream being the most common approach.

FLUCTUATING RECYCLING COSTS (MARKET CONDITIONS)



FIBER/ PAPER

OCC is \$77.50/ton (down \$37.50 from last month; down \$75 from Dec)

RMP is \$13.50/ton (down \$24 from last month; down \$66.50 from Dec)

Both remain substantially above 2020 low. RMP generally rises and falls at a discount to OCC



OCC = Old Corrugated Cardboard
RMP = Residential Mixed Paper

PLASTIC CONTAINERS

**Natural HDPE 41.5 c/lb (down 6 c
from last month; 18 c since Dec)**

**Colored HDPE 6.75 c/lb (down 2.75 c
from last month; 17.75 c since Dec)**

**PET 8.25 c/lb (up .75 c since last
month; down 10.25 c since Dec)**

**PP 9.5 c/lb (same as last month;
down 13c since Dec)**

HDPE = high density polyethylene (plastic resin)

Pet = polyethylene triethylate

PP = polypropylene

Source: Northeast Recycling Markets, Chaz Miller, 10/11/22

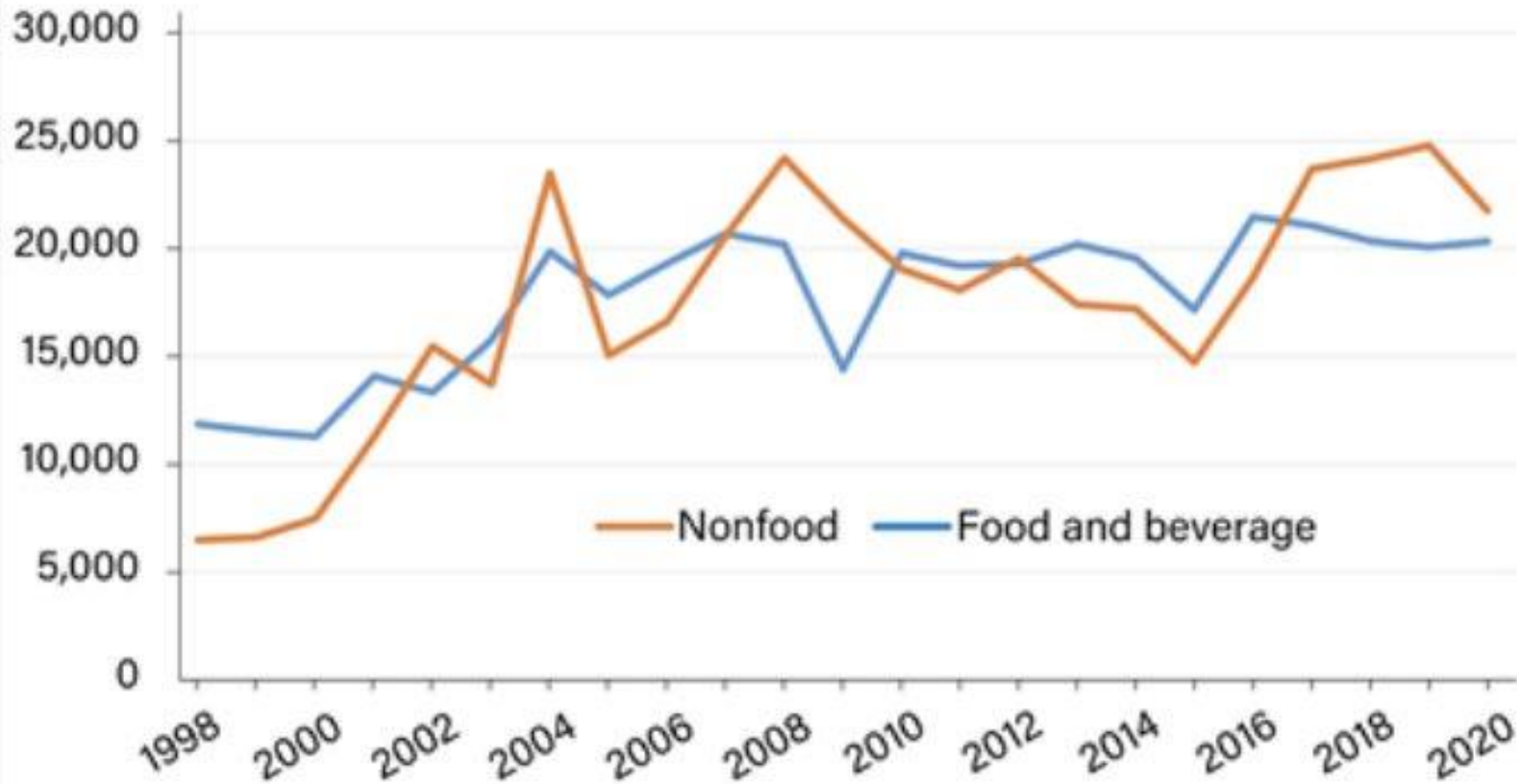


ARE WE DOING IT WRONG?



New product introductions of consumer packaged goods, 1998-2020

The number of new food and beverage products saw substantial decreases followed by proportional rebounds in 2010 and 2016, and had a relatively smooth decline between 2016 and 2019 before increasing slightly in 2020



Source: Prepared by USDA, Economic Research Service, using data from Mintel's Global New Product Database (Mintel GNPD).

Data as of May 2021.

RECYCLING ARROWS















Plastic Resin Codes

Causes confusion

Does not identify if a product is acceptable in a program; nor if it's recyclable or collected in any program nationally

In CT; use What's IN, What's OUT App or widget www.recyclect.com

Plastic Resin Identification Codes

 PETE	 HDPE	 PVC	 LDPE	 PP	 PS	 OTHER
Polyethylene Terephthalate	High-Density Polyethylene	Polyvinyl Chloride	Low-Density Polyethylene	Polypropylene	Polystyrene	Other
Common products: soda & water bottles; cups, jars, trays, clamshells	Common products: milk jugs, detergent & shampoo bottles, flower pots, grocery bags	Common products: cleaning supply jugs, pool liners, twine, sheeting, automotive product bottles, sheeting	Common products: bread bags, paper towels & tissue overwrap, squeeze bottles, trash bags, six-pack rings	Common products: yogurt tubs, cups, juice bottles, straws, hangers, sand & shipping bags	Common products: to-go containers & flatware, hot cups, razors, CD cases, shipping cushion, cartons, trays	Common types & products: polycarbonate, nylon, ABS, acrylic, PLA; bottles, safety glasses, CDs, headlight lenses
Recycled products: clothing, carpet, clamshells, soda & water bottles	Recycled products: detergent bottles, flower pots, crates, pipe, decking	Recycled products: pipe, wall siding, binders, carpet backing, flooring	Recycled products: trash bags, plastic lumber, furniture, shipping envelopes, compost bins	Recycled products: paint cans, speed bumps, auto parts, food containers, hangers, plant pots, razor handles	Recycled products: picture frames, crown molding, rulers, flower pots, hangers, toys, tape dispensers	Recycled products: electronic housings, auto parts,
						

RECYCLING, IT'S THE LAW

What year did CT have
legislation mandating that
certain materials be recycled?

A: 1975

B: 1989

C: 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
(from residences and businesses)

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CT'S BOTTLE BILL PROGRAM

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.



CT BOTTLE BILL: CHANGES



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*)

MINIATURE LIQUOR BOTTLES

- Public Act 21-58: requires liquor wholesalers to assess a five-cent surcharge on miniature alcohol bottles to retailers—and in turn, consumers—collect the surcharges in a separate account, and send the collected surcharges back to the municipalities in which the transactions occurred.
- Miniature alcohol bottles (≤ 50 ml) containing spirits or liquor
- Effective 10/1/21 (previous stock exempted)
- The [Wine & Spirits Wholesalers of CT \(WSWC\)](#) are managing this program.
- WSWC made distributed first payment April 2022





CT EPR PROGRAMS

Extended Producer Responsibility; mandatory product stewardship programs

Electronics – managed by CT DEEP

Paint – managed by PaintCare

Mattresses – managed by the Mattress Recycling Council

Thermostats – managed by the Thermostat Recycling Co.

NEW: Gas Cylinder EPR law passed (PA 22-27)

OTHER PROGRAMS (NOT IN MIXED RECYCLING)

**Household Hazardous
Waste (HHW)**

Textiles

Food scraps

Eyeglasses

Large quantities of books

**Household items (dishes,
lamps)**

**Playscapes; 5-gallon
buckets; bulky rigid
plastics**

Plastic bags; plastic wrap

Shredded paper

RECYCLING EDUCATION

What goes in the bin, what
doesn't

One universal list for all
residents in Connecticut

RecycleCT Wizard

Online search tool

App



<http://www.recyclect.com>

ONE UNIVERSAL LIST IN CT: WHAT'S IN, WHAT'S OUT

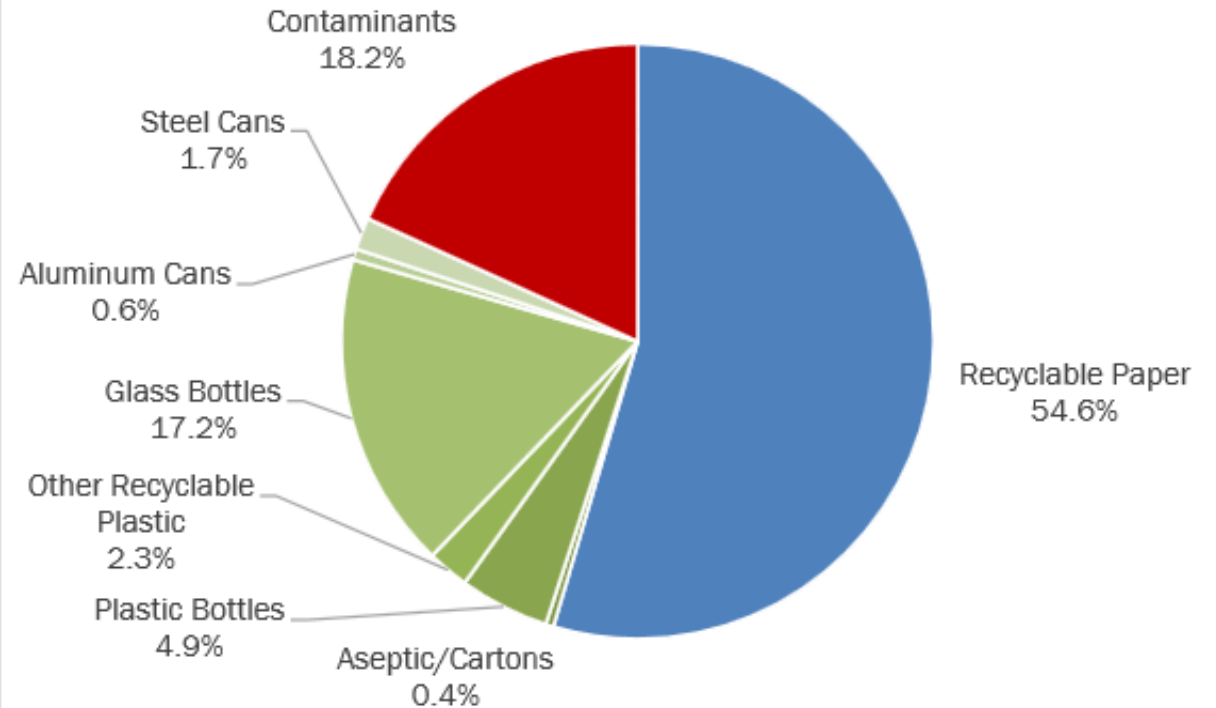
Met with Material Recovery Facility (MRF) Operators

- **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.

CHARACTERIZATION OF CT'S SINGLE STREAM AKA MIXED RECYCLING

**#1 Contaminant Found (aka
rejects)**

**= Plastic bags and bagged
material**



BAGGED RECYCLABLES VS. BAG OF TRASH



TOP 5 CONTAMINANTS



PLASTIC BAGS



SHREDDED PAPER



**BAGGED
RECYCLABLES OR
WASTE**



**TANGLERS (GARDEN
HOSES, HANGERS,
CLOTHES)**



BOTTLE CAPS

PLASTIC BAGS & OTHER FILM AT CT MRFs

WARNING
Any addition, deletion,
alteration or change
to any safety device can
be extremely hazardous
and can cause serious
injury or death.

AVISO
Añadir, quitar, alterar
o cambiar cualquier
dispositivo de seguridad
puede ser extremadamente
peligroso y puede causar
lesiones serias o la muerte.



PLASTIC BAGS & OTHER FILM AT CT MRFS

WARNING



AVISO

Añadir, quitar, alterar
o cambiar cualquier
dispositivo de seguridad
extremadamente caus

NO PLASTIC BAGS IN THE CART

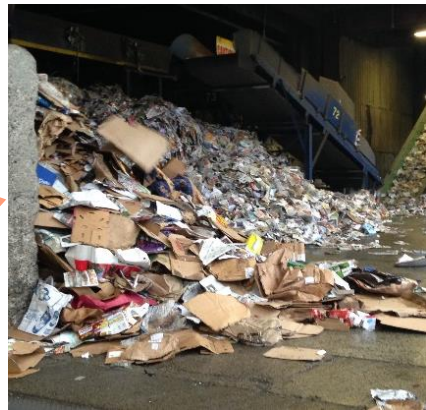
DO NOT BAG Recyclables

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

Return plastic bags to retailers.



Why Does Quality Matter?



LET'S BREAK SOME MYTHS...

IN: Pizza boxes (no food, no liners)

OUT: No loose bottle caps

OUT: No coffee pods

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

SOME THINGS ARE JUST TRASH (NO MORE WISHCYCLING)

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)



GLASS RECOVERED AT CT MRFS (2015)



Toothbrushes

Rx Bottles

Tampon
Applicator

Razor

Lip Balm

Toothpaste

Pens

Batteries

Bottle Caps

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

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.

[Privacy](#) | [Terms of Service](#) | [Cookie Policy](#)

[List of Materials](#)

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



Plastic Bags



Pizza Boxes



Shredded Paper



Loose Bottle Caps



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

RECYCLECT WIZARD APP

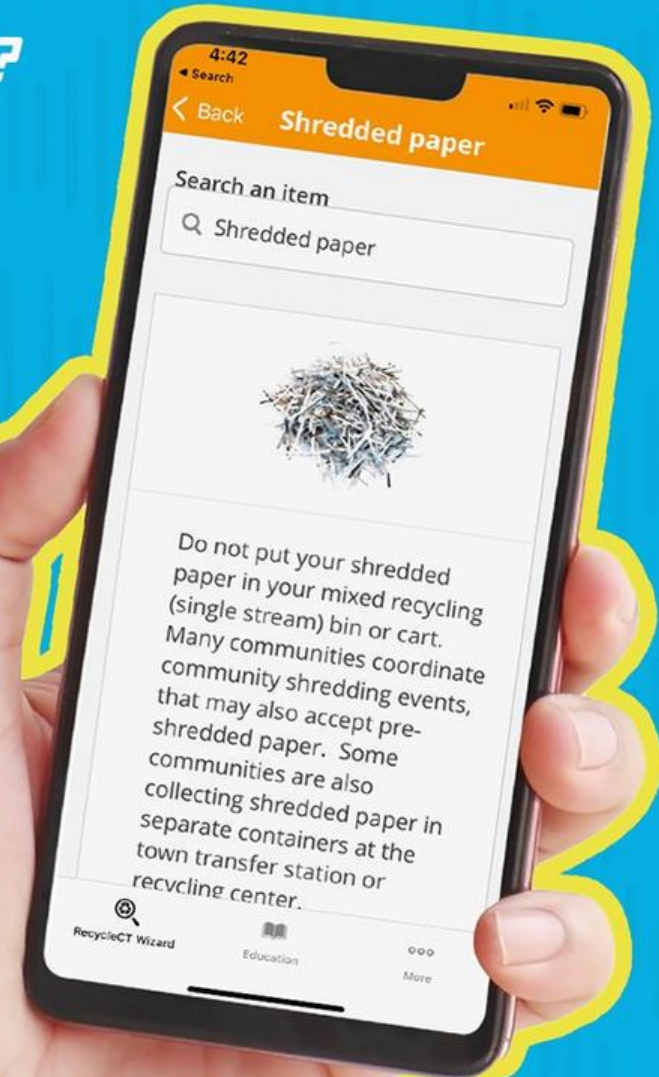
Apple

Or

GooglePlay

Did you say yes?

*Sorry. It's a no
for shredded
paper.*



RecycleCT

RECYCLE RIGHT. EVERY TIME.

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

What's IN?

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.



PAPER &
CARDBOARD



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



GLASS



Bottles and jars



METAL



Food and beverage cans,
aluminum foil and foil containers



PLASTIC



Jugs, tubs and lids

What's OUT?



No plastic bags or
plastic wrap
(Return to retailer)



No food or liquid
(Empty all containers)



No clothing or linens
(use donation programs)



No tangles
(No hoses, wires,
chains or electronics)



No combustibles
(No propane tanks,
batteries, and non-food
grade aerosol cans
like spray paint and
pesticides)

To learn more about What's In and What's Out of your bin, ask the RecycleCT Wizard at RecycleCT.com or download our new app.



logo here



MATERIALS FOR DOWNLOAD

Flyer

Bill Insert

Postcard

Tipcard

Magnet

**ASK YOURSELF BEFORE PUTTING IT IN THE BIN,
IS IT ACCEPTABLE IN THIS PROGRAM?**



The diagram consists of three rounded rectangular boxes arranged horizontally. Each box has a thick orange border and a light orange fill. The first box on the left contains the word 'Acceptable'. The middle box contains the text 'vs.'. The third box on the right contains the word 'Recyclable'.

Acceptable

vs.

Recyclable

QUIZ!