



Rethinking Recycling

Adapting to the New Status Quo

May 28, 2019

Agenda

- Background – Richard Coupland
- Future of Recycling – David Biderman
- Perspective from Fort Collins – Caroline Mitchell
- Perspective from Mecklenburg County – Jeff Smithberger
- Q&A

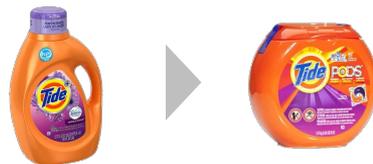
Pull Recycling Out Of The Trash

Update – May 2019

Richard Coupland – VP, Municipal Sales, Republic Services | May 28, 2019

Recap - Trends Strain Existing Model

Trends



2000

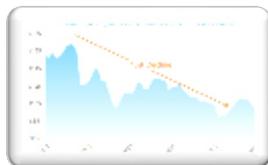
2015



48,000 plastic bottles = 1 ton¹



98,000 plastic bottles = 1 ton¹



Implications

Some material changing faster than capital investment cycles

18M tons in 2000 → ~2M in 2015

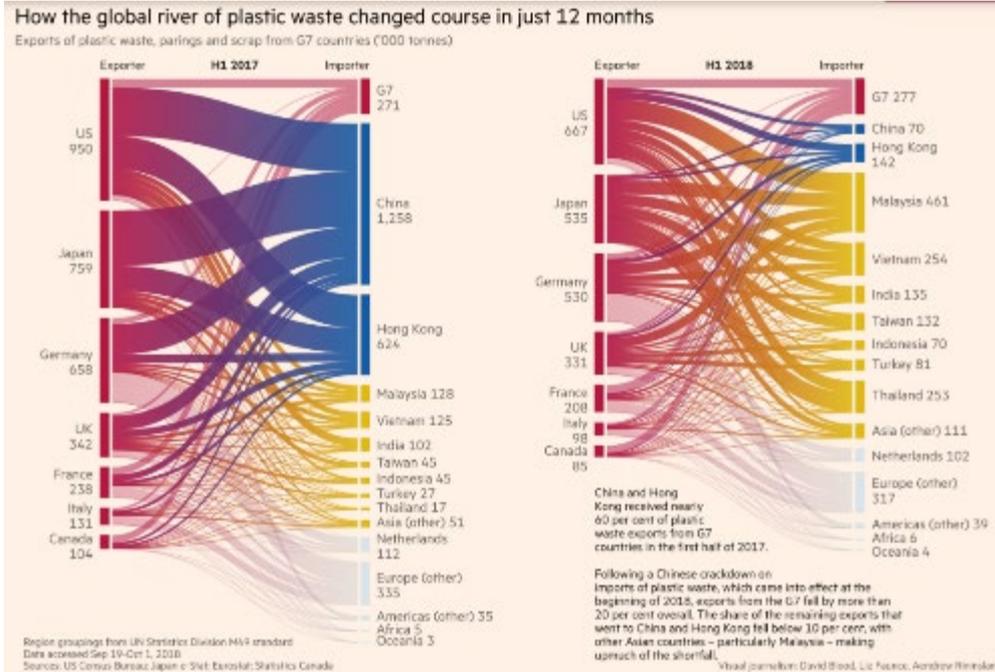
Some material has limited end markets
HDPE (Good) → off-spec PET (Limited)

Material Light-weighting skews current success metrics

Water Bottles → Almost 2x transactions

Commodity markets have steadily declined
OCC down 40% → Mixed Paper down 95%

Post China – Shift in Commodity Markets

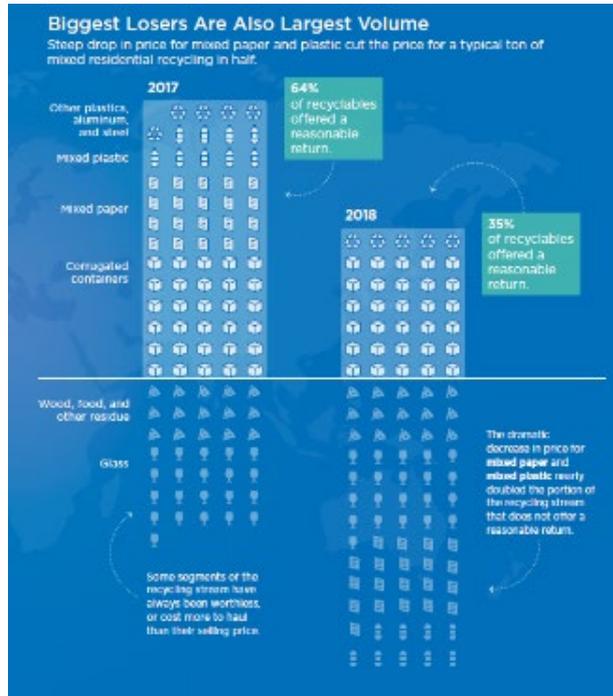


Source: Financial Times, Oct 24, 2018

- China consumed a majority of Commodities globally
- Alternate markets are saturated; Some countries unprepared for influx

Supply and demand economics kick in as commodities flood alternate markets world wide

Post China – Dramatic Shift in Values



- Normal supply and demand theories in play
- Excess material results in low/negative value for most commodities (Mixed Paper and Mixed Plastics)
- Only 35% of processed commodities have current positive value (Metals and OCC)

Source: NLC Report, 2018

Recycling Processors move the material, but average values are down 50%+ from recent years

Recycling Costs: Then and Now

THEN

	Household cost artificially low to foster adoption	Costs lower due to inbound material being cleaner and heavier	Commodity values strong, due to Supply & Demand and cleaner material	Low contamination averages, attributed to focus on basics and no diversion mandates					
Industry Avg	\$2.00/Mo	\$60/Ton	\$200/Ton	\$25/Ton					
Net Position	(\$3.00/Mo)	+	(\$1.50/Mo)	+	\$4.60/Mo	+	(\$0.10/Mo)	=	\$0.00

COLLECTION



PROCESSING



COMMODITY



RESIDUAL



NOW

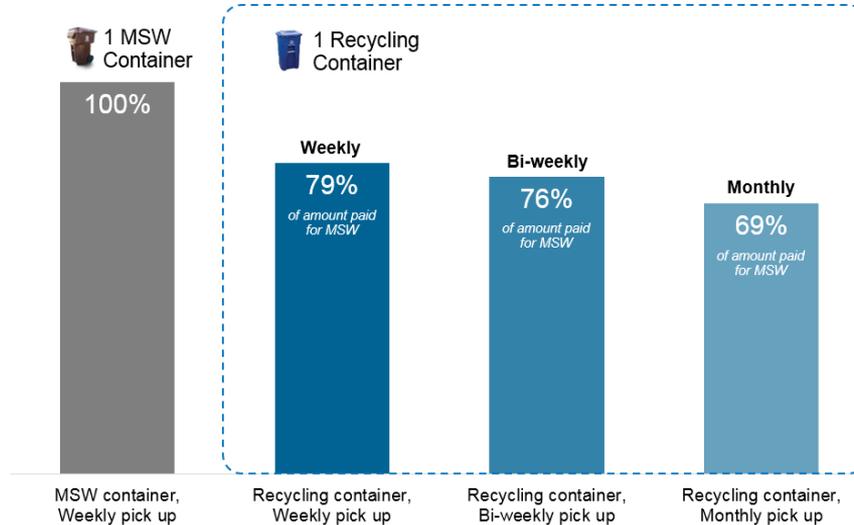
	Still artificially low but with higher costs to run Collection service	Dramatically higher costs from labor, technology and equipment, along with lighter material	Average values down significantly, further impacted by China Sword	Contamination average up to 30%, requiring more transport and disposal					
Industry Avg	\$3.00/Mo	\$100/Ton	\$100/Ton	\$50/Ton					
Net Position	(\$4.00/Mo)	+	(\$2.50/Mo)	+	\$1.50/Mo	+	(\$0.50/Mo)	=	(\$5.50)

Residential Willingness to Pay for Recycling



Residential respondents are willing to pay an estimated 79% of what they pay for MSW for a recycling container picked up weekly, and almost the same for bi-weekly.

Amount Residential Respondents are Willing to Pay for Recycling Compared to Amount Paid for MSW



n=2,434; Margin of error +/- 2% at 95% confidence
Average willingness to pay derived from series of conjoint questioning
Source: Cicero Group, Recycling W2P Study, Oct-2018

Cicero

Based on third-party research, residents are willing to pay a fair price for recycling.

Key Topics Going Forward

- Evaluate Program Recyclables that offer best benefit to planet
- Consider better metrics to track success
- Increase Public Education, leading to lower contamination and better commodity values
- Update the Business Model – Two services provided in a recycling program should stand on their own (City should keep commodity value)

The path to creating a durable recycling program requires multi-faceted approach



REPUBLIC
SERVICES

We'll handle it from here.™

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A National Perspective on the Future of Recycling in the United States

David Biderman | May 28, 2019

SWANA's Mission

SWANA is an organization of professionals committed to advancing from solid waste management to resource management through their shared emphasis on education, advocacy and research



SWANA[®]

SOLID WASTE ASSOCIATION
of North America

Challenges and Opportunities

The past two years have identified weaknesses in America's recycling programs, and local governments and their private sector partners are working to address these challenges.

These challenges also create opportunities for improvements throughout the recycling supply chain through education, changes in product design and operations, collaboration, and compromise.

Myths vs Facts

Misinformation abounds

- *Recycling is collapsing*
- *China has stopped taking materials*
- *Contamination is 25%*
- *Recycling isn't worth it*
- *No one knows what to do*

MYTH

Recycling in the United States is collapsing.

FACT

In thousands of communities nationwide, curbside recycling is collected on a regular basis. Every day, thousands of bales of paper, plastic, and metal are generated at recycling facilities and sent to domestic and foreign buyers. Only a limited number of communities have suspended curbside collection of recyclables or are sending them to landfills or waste-to-energy facilities.

MYTH

China has stopped accepting any recyclables or scrap from the United States.

FACT

Although China has imposed import bans on certain recycled paper and plastic, the U.S. continues to export a lot of recyclables and scrap to China. In 2018, China imported more than 8 million tons of paper from the United States.

MYTH

The contamination rate for recyclables in the United States is 25%.

FACT

Contamination rates vary widely by community. According to data reviewed by SWANA, contamination rates typically range from 15-25%. Contamination is a problem and local governments that have educated residents about how to recycle right have seen reductions in contamination rates.

MYTH

Recycling isn't worth the effort anymore.

FACT

The market for materials may vary, but recycling always has major benefits. These include preserving landfill space, reducing greenhouse gas emissions, saving energy, reducing water use, protecting natural resources, creating new products and supporting tens of thousands of local jobs. Recycling is an essential public service that citizens expect and are willing to pay for.

MYTH

No one knows how to fix the challenges facing recycling.

FACT

Though it's not simple, solutions are being implemented. Public education and enforcement of local rules motivate people to recycle right. Recycling facilities are updating equipment and adding new technologies to keep up with changing material streams. New domestic facilities are opening and existing ones are expanding, providing more demand for recyclables.

Myths vs Facts

- Curbside recycling continues to be collected
- China imported 8 million tons of paper in 2019
- Contamination ranges from 15 – 25%
- Recycling has major benefits
- Solutions are being implemented



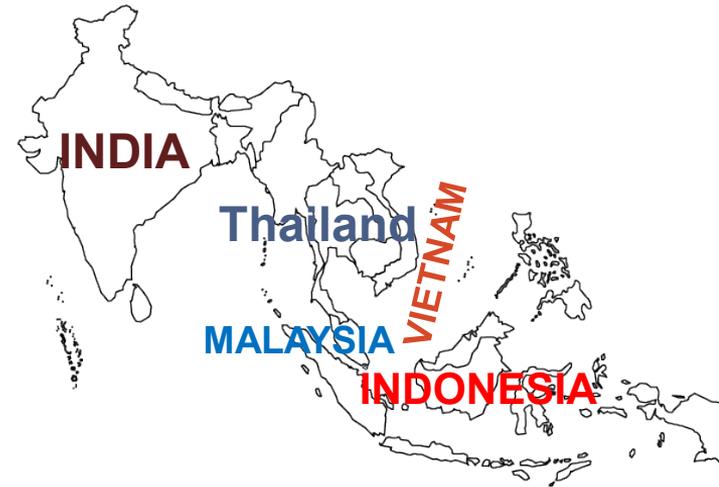
www.SWANA.org/recycle

New Asian Markets

Other countries in Asia are receiving lots more paper/plastic from U.S. and other countries in wake of China's actions

- Vietnam
- Thailand
- Malaysia
- India
- Indonesia

These nations are imposing restrictions as they are overrun by containers and plastic



Local Governments

Cities and counties are making a variety of changes in response to changing market conditions:

- Many are renegotiating contracts
- Some are narrowing their recycling programs
- A few are eliminating curbside recycling (boo!)
- Some are increasing cost of service (\$1-3/month)
- A handful have gone back to dual stream
- Most are focused on reducing contamination



Contamination

- Plastic bags & film
- Tangles
- Food waste
- Batteries
- Bowling balls!
- Diapers
- Propane Tanks
- Textiles



State Government

Several states have authorizing haulers and recyclers to dispose source-separated material at landfills or WTE on an interim, case-by-case basis.

- Oregon DEQ – 26 concurrences (15,000 tons)
- Mass DEP – 70 disposal waivers (2% of recycling)

State Government

State Legislatures

- NY – Single use plastic bag ban passed
- NY/Conn – proposed bottle bill expansions
- Florida – proposal requiring contracts to address contamination (vetoed by Governor b/c include prohibition on local straw bans)
- Washington – proposed list of core recyclables (not glass)
- 6 states have passed laws exempting chemical recycling from solid waste permitting laws

Advocacy

RECOVER Act

- \$500 million over 5 years to support collection/processing improvements, education & market development
- Money would be distributed as grants by EPA to states to “eligible entities”
- Coalition’s goal is to include in Infrastructure Bill



Cautiously Optimistic

Despite challenges, things are getting better.

- U.S. and Chinese companies are investing in domestic processing capacity – 19 new facilities
 - Most coming on-line late 2019 through 2021
- Brands setting new recycled content goals
- Renewed focus on contamination – with results!
 - D.C., San Antonio, Milpitas
- US EPA developing national recycling plan

EPA Action Plan

EPA is developing an action plan to address the challenges and opportunities associated with recycling.

- Education & Outreach
- Enhancing Materials Management Infrastructure
- Strengthening Secondary Materials Markets
- Enhancing Measurement



Thank you

David Biderman

Executive Director & CEO

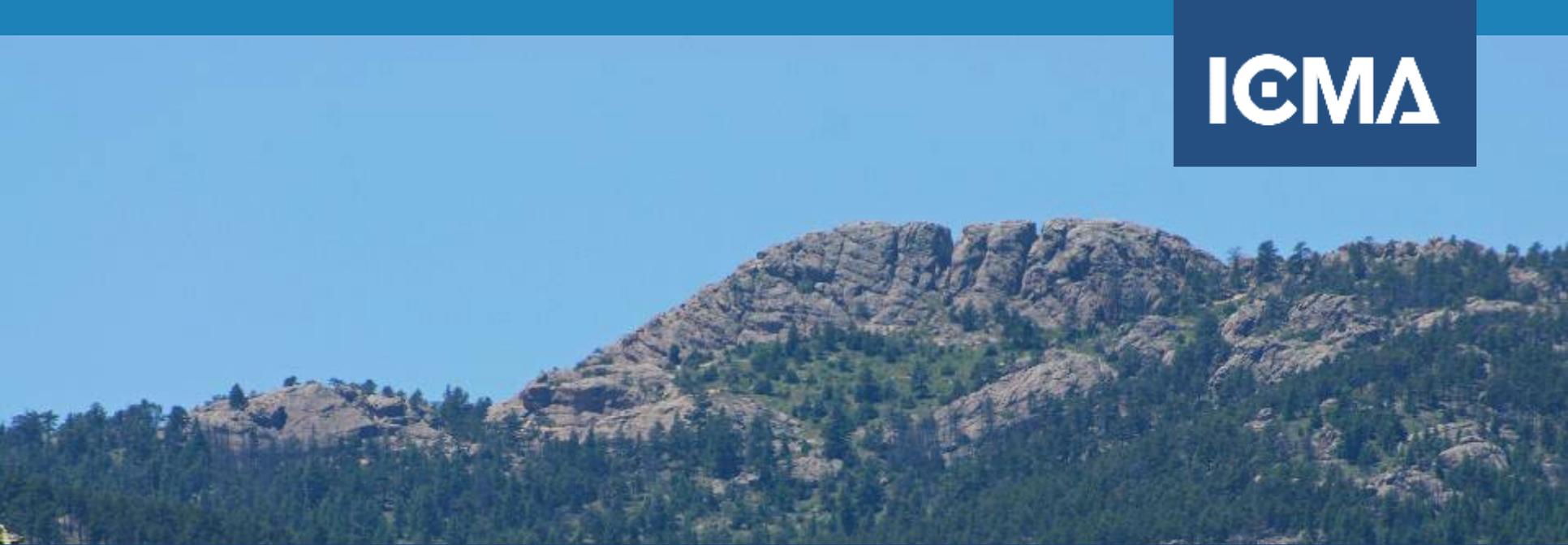
240-494-2254

dbiderman@swana.org Enhancing Measurement



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Perspective from Fort Collins

Responding to a changing recycling landscape

Caroline Mitchell | May 28, 2019

Fort Collins Overview

- 
- **170,000 residents**
 - College town (Colorado State University)
 - **Privatized collection system – open market for all sectors**
 - Three primary haulers operate in town
 - **City involved in policy, education, regulation (licenses trash haulers), data collection**

Fort Collins Policy

- Single family homes:
Pay-As-You-Throw ordinance
 - Bundles trash and recycling service
 - Trash bill based on size of trash bin
 - Optional yard trimmings service offered for separate fee



Fort Collins Policy

- Multi-family and commercial
 - Recycling with trash service coming at end of 2020
 - Recycling and trash not bundled
- All generators: landfill bans on cardboard and electronics



Changes seen since spring 2018

- Drastic increase in tip fees for recycling
 - \$20 / ton in Jan 2018 -- \$74 / ton in May 2019
 - For comparison, \$20 / ton landfill tip fees
- Increased focus on contamination – rejecting loads
 - Only a handful of trucks rejected, but has had impact throughout system
- Markets gone for low value plastics (a.k.a. 3-7s)

City of Fort Collins' Strategy

- 1) Focus on what should go in the bin
- 2) Increased focus on preventing contamination
- 3) Support haulers with education and on-site assistance
- 4) Take the long view
- 5) Encourage thoughtful purchasing

Focus on what should go in the bin

- Remove low-value plastics from guidelines poster
- Continue to focus plastic recycling education on shape (bottles and dairy / deli tubs)
- Create a separate white office paper bin at the recycling drop-off center

Focus on what should go in the bin

RECYCLE

ALL ITEMS MUST BE EMPTY AND DRY

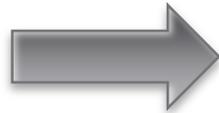
METAL CANS & GLASS

PLASTIC BOTTLES, TUBS, JUGS & JARS

CONTAINERS & CARTONS

PAPER & CARDBOARD

NO THANKS!



RECYCLE

ALL ITEMS MUST BE EMPTY AND DRY

METALS & GLASS

CARDBOARD & PAPER

PLASTIC BOTTLES, TUBS & PAPER CARTONS

KEEP OUT

CITY CURBSIDE RECYCLING

* Do not put in: tires, auto parts, household appliances, stoves, lawnmowers, paint cans, aerosols, propane tanks, oil, antifreeze, car batteries, and other hazardous materials.
 ** Do not put in: household appliances, stoves, lawnmowers, paint cans, aerosols, propane tanks, oil, antifreeze, car batteries, and other hazardous materials.
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Increased focus on preventing contamination



Expanded guidelines poster pg. 1

RECYCLE PLEASE RECYCLE RESPONSIBLY

METALS & GLASS

PLASTIC BOTTLES, TUBS, JUGS, JARS & PAPER CARTONS

CARDBOARD & PAPER

For more information on recycling, visit www.marylandrecycling.com

Expanded guidelines poster pg. 2

KEEP OUT OF CURBSIDE RECYCLING

BECAUSE THEY DAMAGE SORTING EQUIPMENT

BECAUSE THERE IS NO MARKET FOR THESE ITEMS

FOR SO MANY REASONS

For more information on how to properly prepare items for curbside recycling, visit www.marylandrecycling.com

Condensed guidelines poster

RECYCLE PLEASE RECYCLE RESPONSIBLY

METALS & GLASS

PLASTIC BOTTLES, TUBS & PAPER CARTONS

CARDBOARD & PAPER

KEEP OUT OF CURBSIDE RECYCLING

For more information on how to properly prepare items for curbside recycling, visit www.marylandrecycling.com

Support Haulers

- One-on-one assistance to businesses and apartment complexes
 - WRAP (Waste Reduction and Recycling Assistance Program)
- Provide educational materials for no charge
- Understand that rates are impacted

Take the long view

- While recycling economics are turbulent now, the environmental benefits of recycling remain
 - Moving away from recycling means moving toward landfilling, more resource extraction and more greenhouse gas emissions
- Investment in domestic recycling infrastructure and less contamination in recyclables are good for the recycling industry in the long run
- When discussing costs, it's important to remember there are many costs to landfilling beyond the tip fee
 - Often long-term pollution costs paid by taxpayers

Encourage thoughtful purchasing



Take the pledge...

...to **“Choose to Reuse”** use this one-of-a-kind repurposed bag to remind you to stock up on reusables and reject throw-aways!

These bags were repurposed through a collaboration of:

- Pine Print Shop
- ARC
- CO Chapter of the National Sewing Guild and CHAT
- City of Fort Collins

Choose to Reuse

<input checked="" type="checkbox"/> Water Bottle	<input checked="" type="checkbox"/> Napkins & Straws
<input checked="" type="checkbox"/> Coffee Mug	<input checked="" type="checkbox"/> Lunch Container
<input checked="" type="checkbox"/> Plate & Bowl	
<input checked="" type="checkbox"/> Fork & Spoon	

City of Fort Collins
Environmental Services



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Curbside Recycling in Mecklenburg County, NC

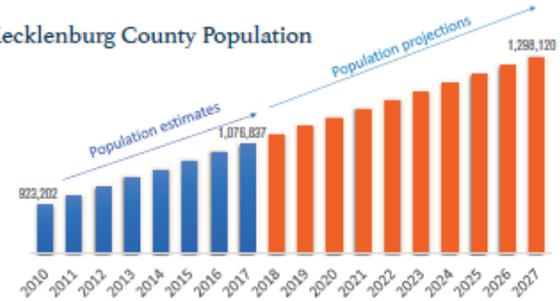
Jeff Smithberger, Director, Solid Waste Management May 28, 2019

Mecklenburg County, NC

General Information



Mecklenburg County Population



Sources: U.S. Census Bureau (to 2017) and NC Office of State Budget and Management (after 2017)

40th largest
population in
the nation
(2017)

2010-2017
population
net increase
of 153,635

2017-2027 population
projections adding
net increase of
221,283 residents

Mecklenburg County, NC

How We Recycle: Curbside

Mecklenburg County OWNS the Materials Recycling Facility (MRF);

- We contract out the operation to a 3rd Party.

Residential Curbside Recycling accounts for approximately 80,000 tons per year (not counting yard waste) – for just over a million residents.....

Oversight by an Appointed Waste Management Advisory Board

- Monthly meetings
- Engaged with the community
- They strongly advocate for environmental sustainability

Mecklenburg County, NC

What it Costs:

- Mecklenburg County uses a Residential Availability Fee – charged to all residential properties. It covers Recycling Processing, NOT Collection:
 - So we have a ZERO tip fee at our MRF for our regional partners.
 - Recycling processing costs are growing at rates double the CPI
 - Contamination costs Mecklenburg County over \$1.6M annually
 - Currently \$27.50 annually for all RESIDENTIAL properties; proposed to increase to \$33.00 annually; July 2019
- Nearly all Meck County residents receive curbside single-stream collection.
 - Meck County processes all residential recyclable materials.
 - Yes, we still allow glass, but are reevaluating that.

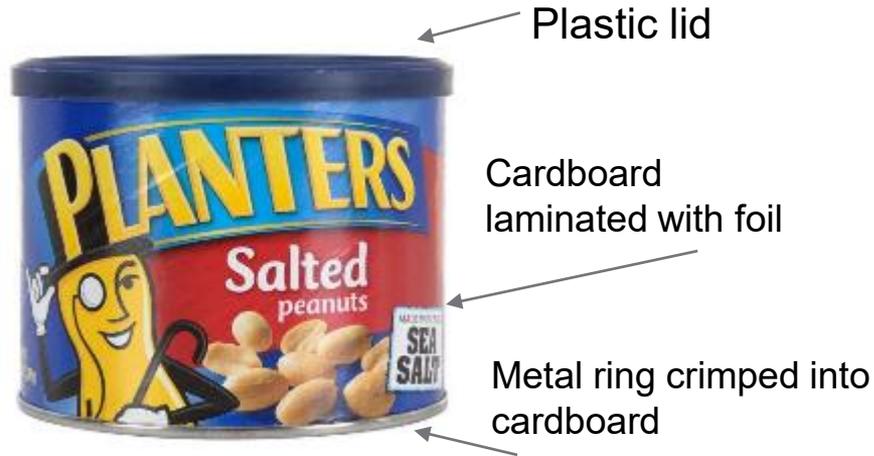
No longer emphasizing recycling *more*
– now, **Recycle Right!**

What Mecklenburg County is doing:

- We have made TV and radio ads highlighting the Recycle Right! campaign
- Social Media Posts – Facebook, Instagram, NextDoor
- Local paper, local magazines – even placing brochures at grocery store entrances/exits
- Billboards for those not connected to TV
- Annual hard-costs of over \$300,000
- Branded web presence – www.WipeOutWaste.com

Our Residents are Confused!

Is this recyclable? (Not the one on the left)



Today

VS.



1938

Left with No Choice...



Can

Vs.



Pouch

What Can Jurisdictions Do?

Get deeply involved in understanding your LOCAL system.

- If you depend entirely on a 3rd party for service, expect big increases in coming years
- Curbside recycling differs greatly across regions due to availability of markets
- Transportation plays a BIG role, as it affects costs

Be Prepared for Funding Issues

- Even if it appears cheaper today to not recycle, consider long term costs
- Encourage residents to use products that have a second life in recycling, and encourage them to let manufacturers know their desires to have 'recyclable' items
- Work with SWANA and other industry groups involved with end use of products

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Questions?

ICMA

INTERNATIONAL CITY/COUNTY
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