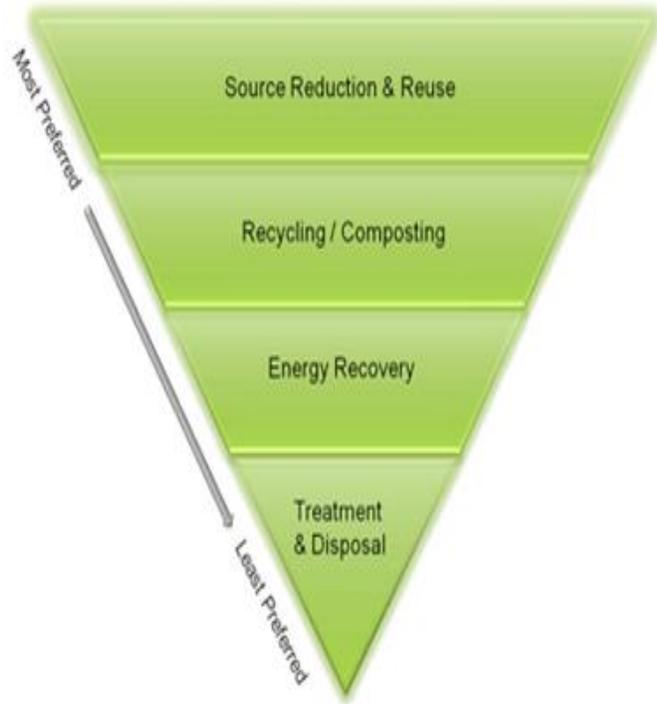


Recycling at a Crossroad: Quality, Contamination, and the Changing Market Place

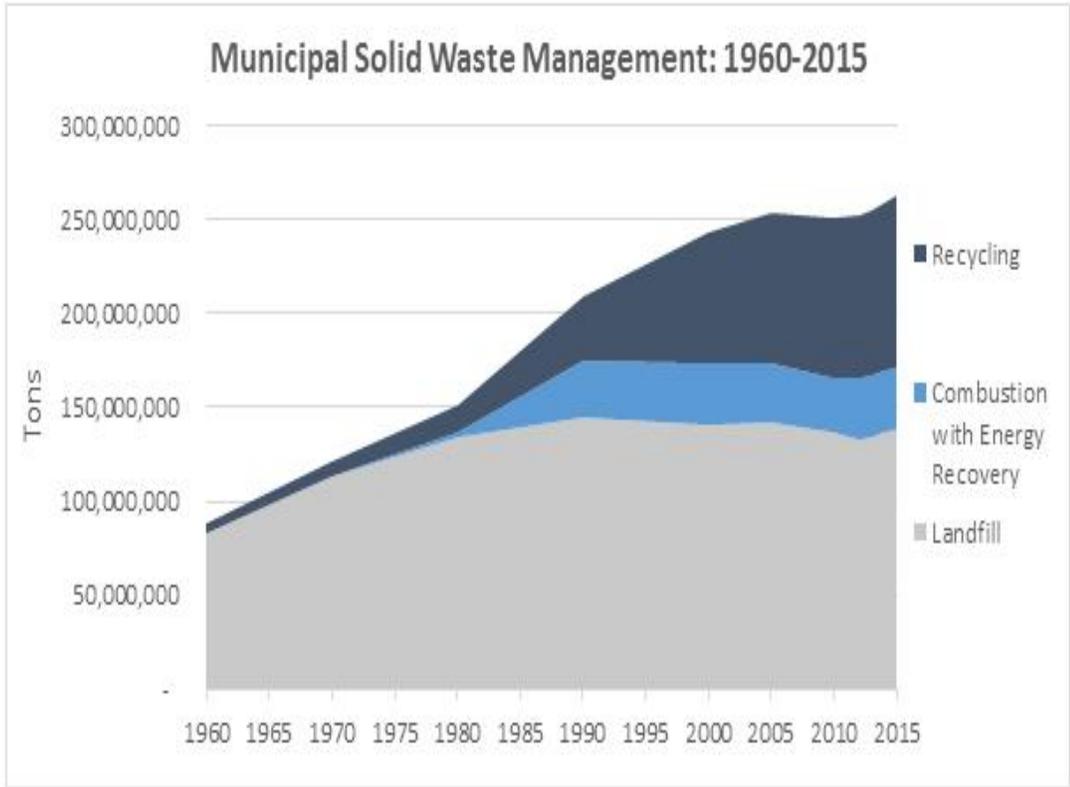
Joseph Rizzuto
Executive Director



Waste Management Hierarchy



Municipal Solid Waste Management: 1960-2015



Source: U.S. E.P.A.

New Jersey & Cape May County Solid Waste

- In 2016, New Jersey generated 9.7 million tons of municipal solid waste
 - 4.26 million tons recycled
 - 5.4 million tons disposed
- In 2018, Cape May County generated 90,047 tons of municipal solid waste
 - 28,604 tons of single stream recycling

Source: NJDEP

Recyclables are the largest U.S. export item by volume

Recyclables: 1,100,200 TEU

Agricultural Goods: 630,400 TEU

TEU: twenty-foot equivalent (cargo capacity of container ships and container terminals)



Source: JOC.com

Lead-up to China's National Sword 2017

- In the 1980's, a significant percentage of U.S. recycling end-market infrastructure closed due to China becoming major player in the industry
- U.S. became largely dependent on China as the recycling end-market
- China accepted and paid for recyclable regardless of quality

China's National Sword 2017

- Leading producer and consumer of basic materials (metals, paper, plastic)
 - Influx of secondary raw materials
- February 2017 announcement to World Trade Organization
- State-dominated media portrayed China as being the world's dumping ground (mixed paper and plastic scrap “foreign garbage”); Governmental agencies campaign to increase domestic recovery industry
- Heightened inspections at ports of entry
 - Increased scrutiny toward bales of low quality plastics and paper with high moisture content

China's National Sword 2017

- July 2017
 - Ban of recovered mixed paper
 - Ban of recycled plastics (#1 & #2)
 - Ban of PVC (#3)
 - Ban of Polystyrene (#6)
 - Contamination limit of 0.5% for recovered paper and plastic grades not already subject to outright ban
 - U.S. MRF average is approximately 23%

China's National Sword 2017

Impact on Commodity Paths

- Commodity market prices drop
 - Average ton price of mixed paper \$75 to \$5 after 0.5% contamination limit
- Other markets explored – not large enough to make-up loss of China market
 - India
 - Indonesia
 - Vietnam

Recycling at a Crossroad

- Changing waste streams continues to stress Municipal Recycling Facilities and poses recycling challenges
 - Complex, lighter stream
 - Newsprint: 18 Million tons in 2000 to 2 Million tons in 2015; Lighter-weight packaging: In 2000, 1 ton = 48,000 plastic bottles; In 2015, 1 ton = 92,000 plastic bottles
 - E-Commerce
 - Small corrugated packages
 - Market share pressure, less plastic, not recyclable
 - Recycling industry created myth that recycling is free
 - End-market revenues covered costs of processing

Recycling at a Crossroad

“Wishful Recycling”

Adds to economic and
environmental costs, with no
benefits and less recycling

Are you a Wishful Recycler?

Wishful recyclers toss the wrong items into curbside recycling bins hoping they will be recycled.



Wishful recycling damages machinery, causes fires at recycling centers and ends up being sent to landfill.

#RecycleRightNJ



Contamination

the wrong materials in the recycling stream; the right materials prepared the wrong way



Contamination Crisis

Recycling contamination damages machinery, limits the resale value of recyclable material and can cause recyclable materials to be sent to the landfill

#RecycleRightNJ

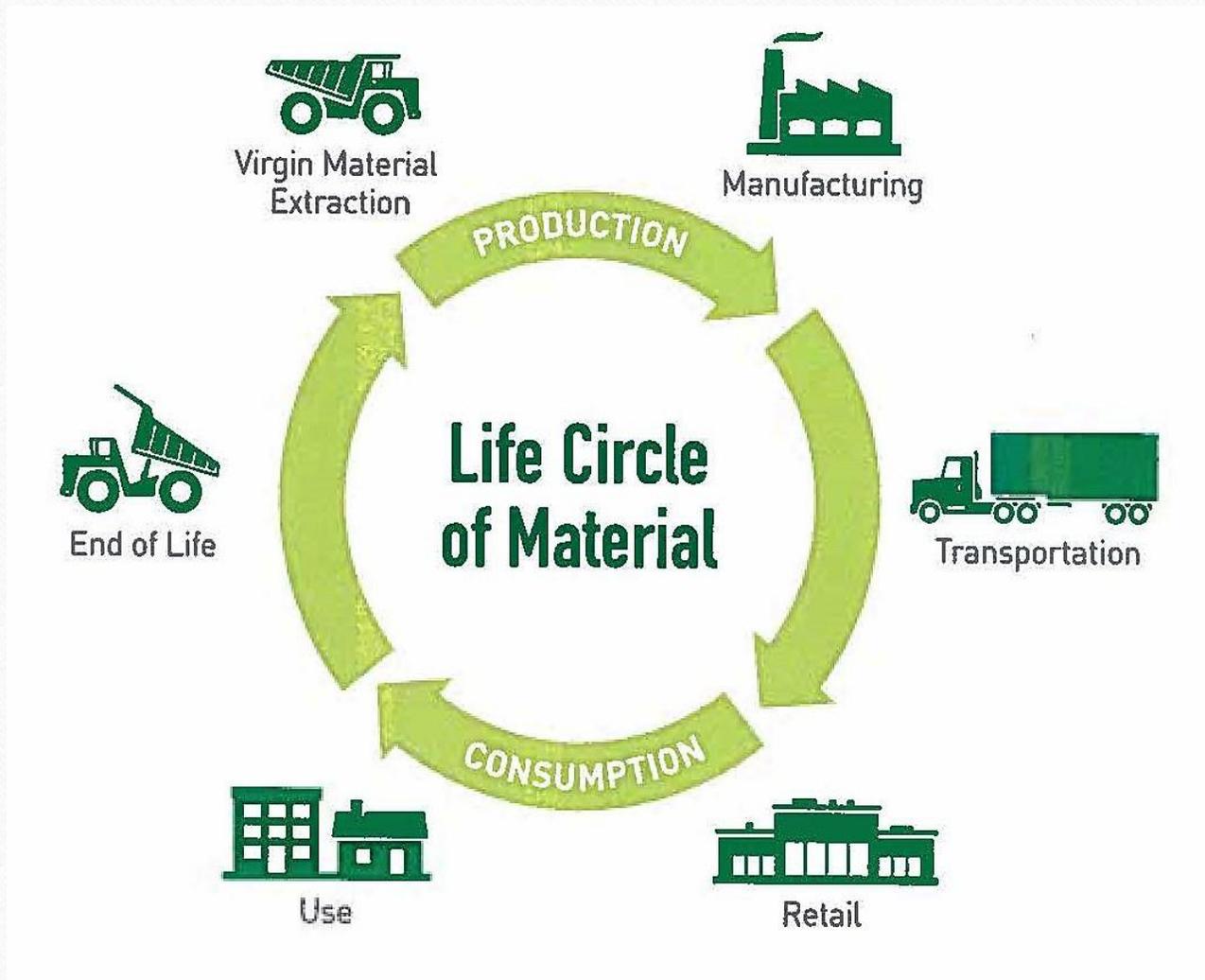


Recycling at a Crossroad

- Recyclables do not create an economic or environmental benefit until they are sold as commodities and manufactured into products

Sustainable Materials Management

- “The use and reuse of materials in the most productive and sustainable way across their entire life cycle.” – U.S. E.P.A.
- Sustainable Materials Management examines social, environmental, and economic factors.
- “Waste Management – along with many other companies, cities, states and even academic institutions – has turned to goals based on environmental attributes, most notably reductions in greenhouse gas (GHG) emissions through a life cycle approach to assessing recycling.” – Waste Management 2018 Sustainability Report

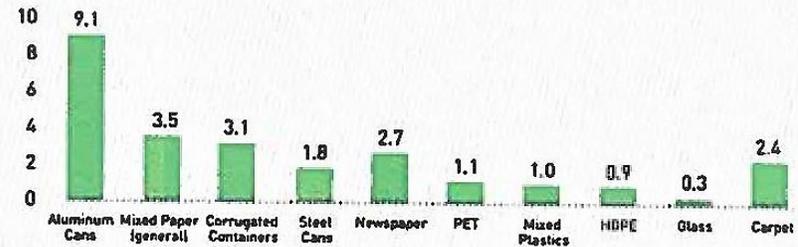


Source: Waste Management

Waste Management's Life Cycle Analysis

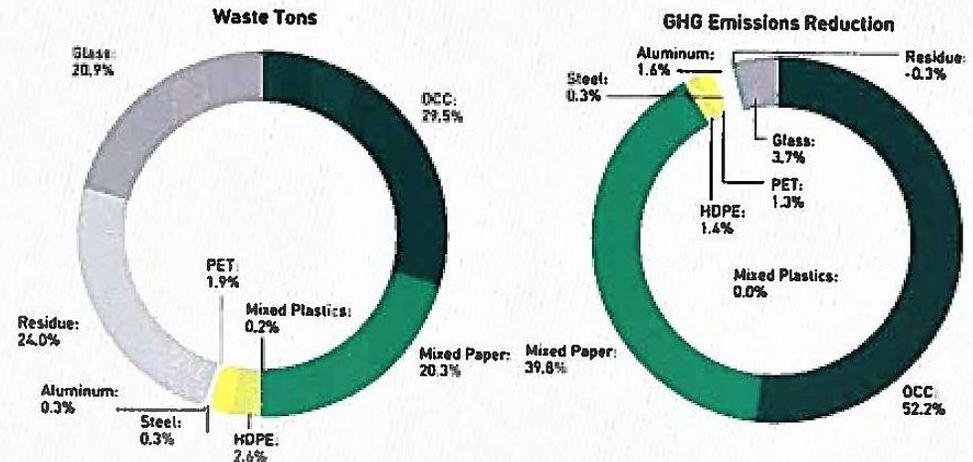
Waste Management data indicates focused efforts should be on recycling cardboard and paper first, then metal, PET and HDPE bottles to maximize the environmental benefits of the materials managed. – Waste Management 2018 Sustainability Report

What Reduces the Most GHGs When You Recycle?



THE GREATER ENVIRONMENTAL IMPACT

Waste Tons vs. GHG Emissions Reduction

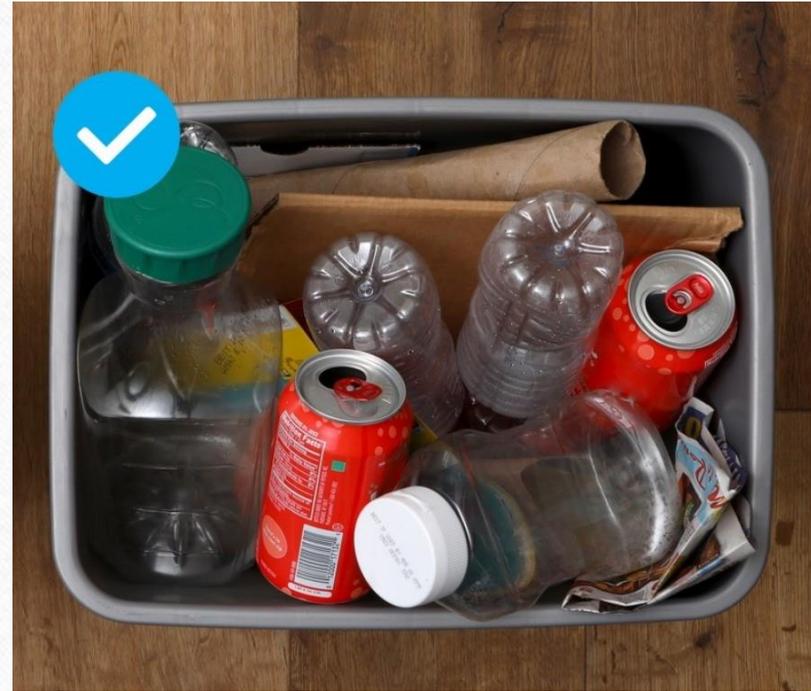


Source: Waste Management

Public Education

- A lot of items are recyclable – just not in recycling container
 - Plastic bags, textiles and yard waste
- Update/redefine and increase message/education
 - Back to basics
 - Bottles, jugs, jars and containers (without lids)
 - Empty. Clean. Dry.
 - Keep all recyclables free of food and liquid
 - Keep it loose
 - Never put recyclables in containers or plastic bags
- Helps reduce contamination

Recycling: Simple as 1-2-3



Source: Republic Services

Make Every Day an America Recycles Day

America Recycles Day (ARD), created by the National Recycling Coalition in 1997, is a nationally-recognized day (Nov. 15) that celebrates and promotes recycling in the United States. On this day, people are encouraged to spread the word about the benefits of recycling and to practice recycling themselves.

As an event initiative, The Cape May County Municipal Utilities Authority (CMCMUA) challenged schools throughout Cape May County during the month of October 2018 to collect plastic film, such as plastic grocery and produce bags, plastic wrapping from cases of water, and even dry cleaning bags. The results of this challenge will be posted on the CMCMUA website www.cmcmua.com.

We did not stop there though!

Announcing...

The 2nd Cape May County MUA America Recycles Day School Plastic Film Recycling Challenge

When: Now through April 15, 2019

The Challenge: Collect Plastic Film

How the Winner is Determined: Based on total



student body enrollment and total weight collected

The MUA Will Award: At the 2019 Earth Day Event, Saturday, April 20, 2019, a TREX Composite Bench to the winning school.

What to collect:

- Bread Bags
- Product Wrap (toilet and paper towel packaging, bottle water case over wrap)
- Ice Bags (dry please)
- Pellet and Salt Bags (make sure they are completely empty)
- Produce Bags
- Dry Cleaning Bags
- Grocery Shopping Bags

ALL bags and packaging MUST be clean and dry!

The CMCMUA will provide cardboard collection boxes and large plastic liner bags.

Is your school in? To register your school and request collection boxes and liner bags, go to www.cmcmua.com.

If you have any questions, please contact crumbocks@cmcmua.com or (609) 465-9026 ext. 1270.



Recycling Information

Solid Waste

Wastewater

Bids and RFPs

Board Meetings

About Us

How do I dispose of...?

CCMUA Waste Wizard

Share

CCMUA Waste Wizard

Waste Sorting Game

Need help?

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

Search

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

List of Materials

Powered by ReCollect



Hello Welcome to the CCMUA Waste Wizard Application by ReCollect which tells you what material goes where.

If you would like to contact your Municipality for bulk collection or drop off you can go [here](#) .

Last Modified June 18, 2018, 12:29 p.m.

How do I dispose of...?



[Back](#) **Cup (plastic)**

Search Type an item

Trash

Place item in curbside trash.

Set-out Time

Your municipality is the best source of information regarding curbside trash collection. [Click here for more information.](#)

[Back](#)



Hello Welcome to the CMCMUA Waste Wizard Application by ReCollect which tells you what material goes where.
If you would like to contact your Municipality for bulk collection or drop off you can go [here](#) .

Recycle Right Game

Quit Game



Plastic water bottle



Takeaways

- China proposing full ban on all recovered materials by 2020
- Development of domestic markets or new technologies?
 - Paper (pulping recovered fiber in U.S. and shipping pulp to mills in China)
- Sustainable Materials Management/Life Cycle thinking progression?

Takeaways

- Recycling industry and its markets continue to react/evolve
- Recycling center contractors insulating themselves from volatile end-markets
- Exploring shared opportunities
- Link Municipal websites to the CMCMUA website for recycling information
- Municipal involvement with Sustainable Jersey
- Recycling education to reduce contamination
 - Back to basics – bottles, jugs, jars, and containers
 - Recycle the right things, correctly!