

PAPER

ORGANIC

PLASTIC

GLASS

E-WASTE



Trends in FL Curbside Recycling

2019 Fl. SWANA Summer Conference



July 30, 2019

10:30 AM – 11:30 AM

Tampa, FL

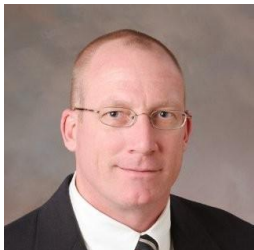
Panelists



Amy Boyson
Community Affairs Manager
Waste Management Inc.



John Carlton, P.E., BCEE
Solid Waste Planning Lead
HDR Engineering Inc.



David Gregory
Solid Waste Division Manager
Orange County, FL

In Session Question?

Email your questions anytime during the presentation to:

FISwanaRecycle@gmail.com

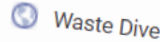
Question will be addressed at the end of the session!

The Issue is Global...



Vox

China isn't taking plastic recycling. It's creating a crisis.
 Within the recycling community, there had been rumblings that China might ... Operation Green Fence was the 2013 effort to just start getting ...
 Apr 2, 2019



'Life After National Sword': domestic market pivot, growing plastics ...
 "We need to create more recycling infrastructure and process scrap here ... bulky rigids — their
 "biggest challenge since Green Fence and with ...
 Mar 20, 2019



The Guardian

Australia urged to invest in recycling manufacturing after Indonesia sends rubbish back
 Australia could quickly solve the problem of Indonesia and other countries rejecting its waste if governments invested in recycling ...
 3 weeks ago



THE WALL STREET JOURNAL



'We Are Swamped': How a Global Trash Glut Hurt a \$25 Billion Industry

India's garbage business, from scrap pickers on the ground through layers of sorting middlemen to plastic pellet producers, is struggling with low prices after China restricted garbage imports

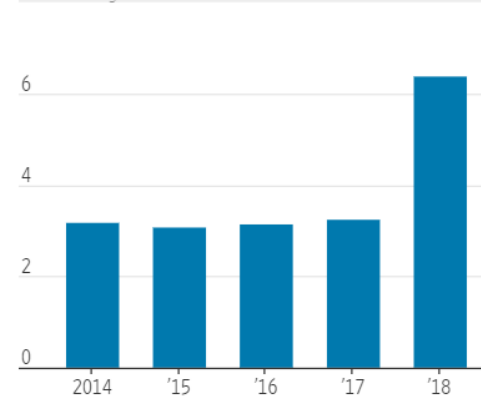
A worker carries a bag of scrap plastic items at the Tiki wholesale market near New Delhi last week. REBECCA CONWAY FOR THE WALL STREET JOURNAL

Market Upheaval

India's imports soared last year when China restricted purchases and global prices fell.

Paper imports

8 billion kilograms



Waste Management Recycling Overview

Where We Recycled

Material Recovery Facilities (MRFs)

- 43 Single Stream
- 4 Dual Stream
- 37 Paper Only or Other Commercial Materials
- 8 Construction and Demolition Debris
- 6 High Grade
- 6 Other



W



PAPER

9,025,439



MIXED ORGANICS

3,376,683



FLY ASH

972,894



GLASS

771,043



METAL

487,770



PLASTIC

433,040



C&D / WOOD

115,036



E-WASTE / LAMPS

31,295



OTHER

121,608

15.33
MILLION TONS
Total Recycled
Materials

ORGANIC WASTE

3.38 Million Tons of Organic Material Recycled

15.4

MILLION
GALLONS

of EBS* produced

Food converted to biogas
produced enough renewable
energy to power over
1,350 homes

Total gallons of the EBS (organic slurry)
produced as of 8/2018

44

ORGANICS
RECYCLING
FACILITIES

The largest organics recycling
infrastructure

- 40 Waste Management managed composting and mulching facilities, 13 of which can accept food waste
- 4 CORE* facilities

19

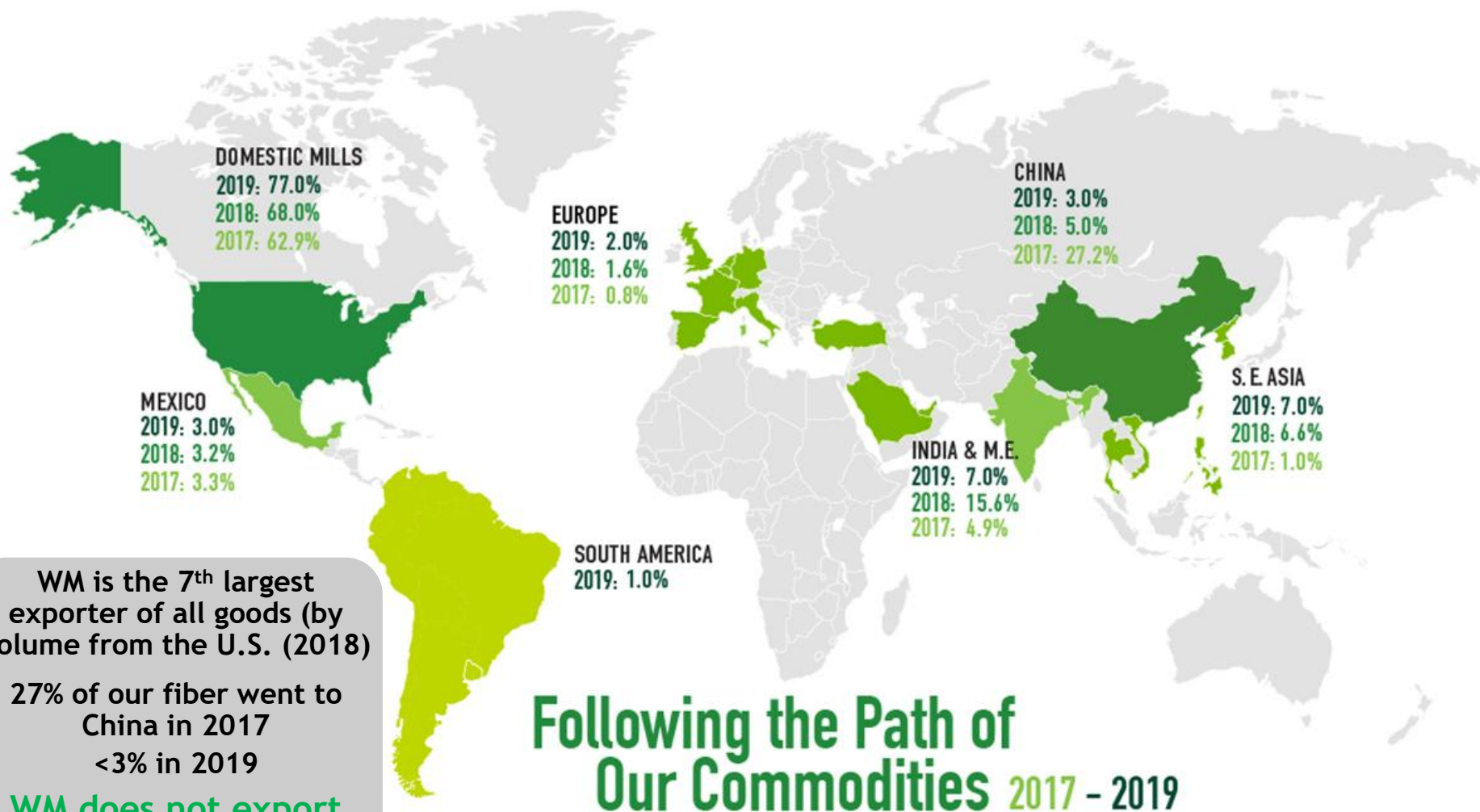
BULKBIN™
PROGRAMS

Utilizing 2,500+ Bins

Serving customers across
various industries, including
manufacturing, distribution
and retail



Where do our recyclables go?

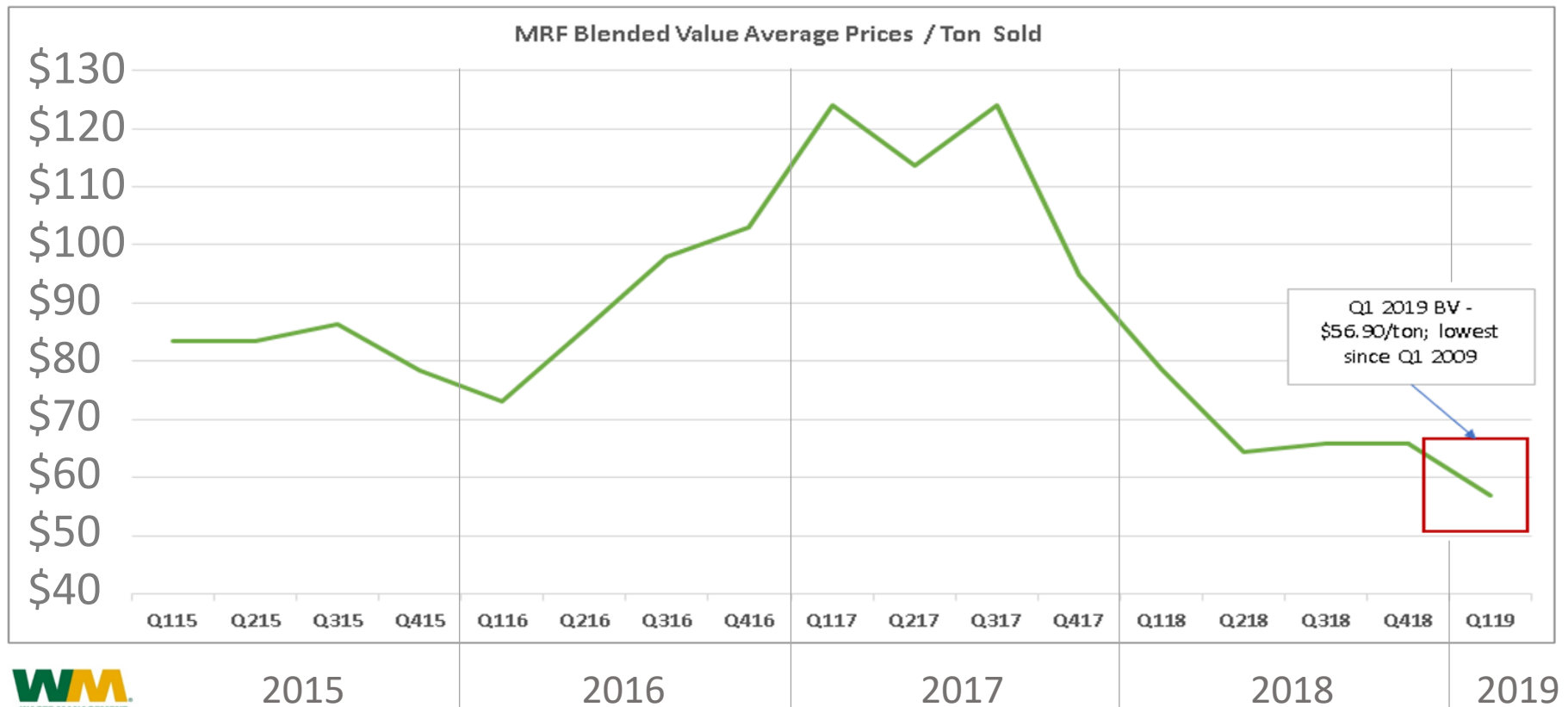


WM is the 7th largest exporter of all goods (by volume from the U.S. (2018))

27% of our fiber went to China in 2017
<3% in 2019

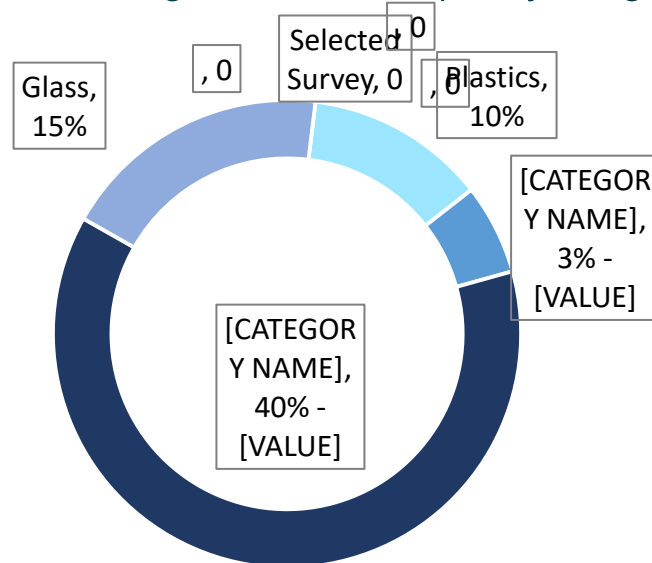
WM does not export residential plastics

Effect on commodity prices & are they stabilizing?



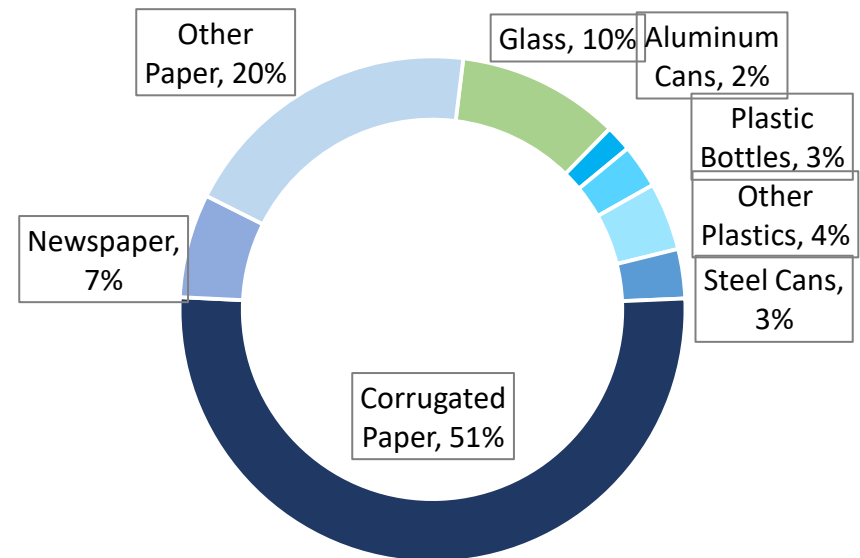
Survey & Analysis of Recycling Composition

- FI Residential Curbside Survey:
 - › 25 Entities Surveyed Representing ~50% of the Population Florida
 - Mostly metropolitan, but also some smaller entities
 - › Approximate Contamination Rates:
 - Dual Stream 5%-10%
 - Single Stream 20% - 40% (*)
- Selected Single Stream Sample by Weight:



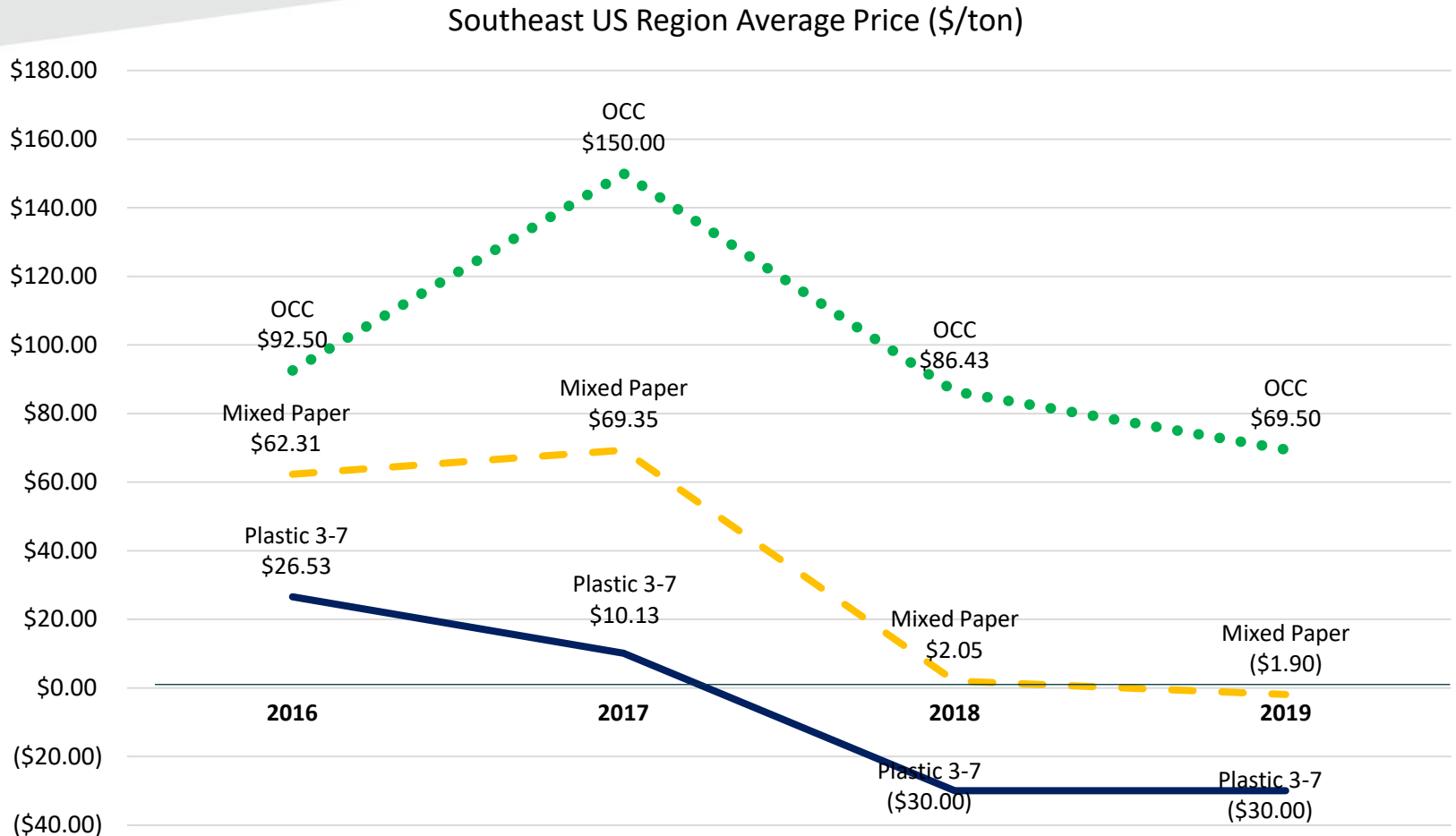
- 2018 Statewide Data per FDEP
 - › Based on 2018 Recycling Credit Data Reporting by Weight
 - › Selected Data for Curbside Recycled Categories Only (e.g., excludes C&D)
 - › Combined Residential and Commercial

Selected FDEP 2018 Recycling Credits Data



(*) Some SS programs reported low contamination (<10%), but not sure if this included rejected loads before processing so excluded.

Prices locally and by commodity?



Source: www.recyclingmarkets.net

Will we and how quickly will we see domestic markets develop to take up excess supply of commodities?

- Dylan de Thomas with TRP Interview by Resource Recycling July 2019
 - › \$400 M in investments in plastics processing planned resulting in capacity to consume 350,000 tons of plastic
 - › \$2.5 B in investment in fiber processing planned resulting in capacity to consume 5.8 million tons of Fiber
 - › Plastics Mills Faster to Setup than Paper Mills
 - › 2-5 Years before we see prices rebound

Survey of Contract Processing Costs

- Survey Findings in FI
 - › 25 Entities Surveyed Representing ~50% of the Population Florida
 - Mostly metropolitan, but also some smaller entities
 - › Fee Ranges \$50-\$105 / ton
 - Older Contracts Have Costs Embedded in Collection Agreements (Some Generate Revenue)
 - Generally Older Contracts Have Lower Rates
 - › Current / New Contracts >\$80 a ton - Average Around \$80-\$85
- Selected Survey
 - › Observed Contract Rate Rising from \$50 - \$60 a ton to >\$80 a ton last 18 months
 - › Net Cost to Process Recyclables ~\$40-\$50 a ton
- What is driving the increase in processing costs?

How has Orange County approached the challenge of getting recycling processing capacity?

- Expiring Processing Contract
- Commitment to Recycling
- Short-term Actions
- P3 Procurement Process



County Recycling Program Info:

217,000 Residential Units

62,200 Tons

Single Stream Collection

High Contamination

RFI - <https://bit.ly/30UElOo>

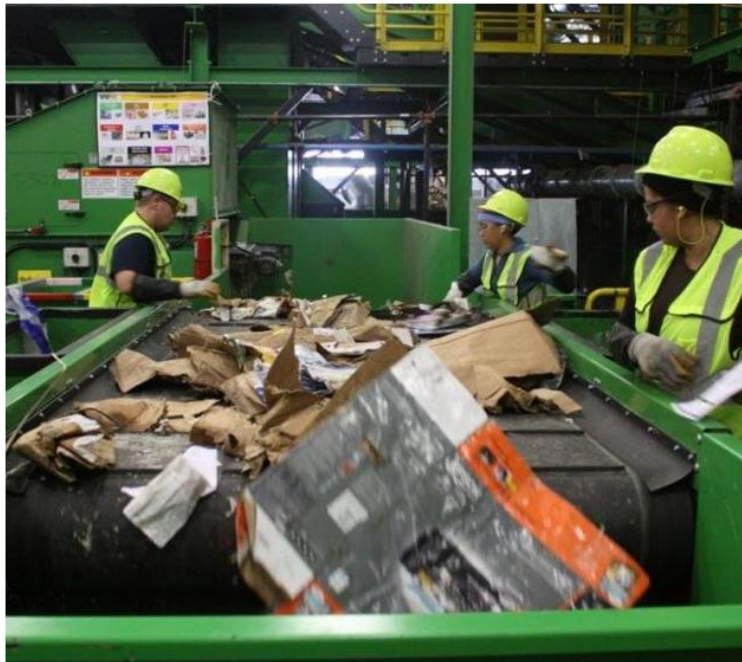
Neighboring / Potential Partner Communities:

195,182 Residential Units

92,800 Tons

What investments are being made to MRFs to improve efficiency and reduce contamination?

WM invested \$100 Million in 2018/\$100 Million 2019



MRF of the Future near Chicago: Largest Residential Recycling Investment for WM; Opening in Q4 2019

How to deal with contamination?

Orange County Tagging Program

WM Education Programs

Cost of Education





Closing Thoughts...

“Redefine Recycling” – JC

“Sky is not falling” – AB

“Innovative, Collaborative & Inclusive” - DG

Thank you!

Panelists:

Amy Boyson, WM Inc.
ABoyson@WM.com

David Gregory, Orange County
David.Gregory@OCFL.net

John Carlton, PE BCEE, HDR
John.Carlton@HDRinc.com

Moderator:

Thierry Boveri, CGFM, Raftelis
TBoveri@Raftelis.com

Value of Education

FREE YOUR RECYCLABLES.

No plastic bags. Put items directly into your recycling container.



WM
WASTE MANAGEMENT

RECYCLE OFTEN. RECYCLE RIGHT.

For more information, visit RecycleOftenRecycleRight.com

#Recycling101

**RECYCLE OFTEN. RECYCLE RIGHT.**

[Recycling Basics](#)[Resources](#)[Get Started](#)[Newsroom](#)



RECYCLE OFTEN. RECYCLE RIGHT.™



Recycle all my empty bottles, cans, paper and cardboard.



Keep foods and liquids out of my recycling.



Keep loose plastic bags and bagged recyclables out of my recycling.

**RECYCLE OFTEN. RECYCLE RIGHT.**

[Recycling](#)[Resources](#)[Get Started](#)[Newsroom](#)



RECYCLING RIGHT STARTS AT SCHOOL

The most powerful habits and attitudes are created at an early age. Recycling can be one of them. WM's recycling curriculum has been developed in alignment with STEM and the Next Generation Science Standards and includes all required materials and background information you need to create a recycling lesson plan for any classroom.



Are you in the clear on recycling contamination?

Nationally, on average, 25% of all items in recycling bins are actually trash. That's a big problem impacting recycling efforts around the world. You can help by following three simple rules:

1. Recycle empty plastic bottles, cans, paper and cardboard.
2. Keep foods and liquids out of your recycling.
3. Keep plastic bags out of your recycling.

WM
WASTE MANAGEMENT

#recycling101

RECYCLE OFTEN. RECYCLE RIGHT.

For more information, visit RecycleOftenRecycleRight.com

Back to Basics:

Let's get back to the basics of recycling.

Remember these three rules each time you recycle:

- 1 

Recycle all empty plastic bottles, cans, paper and cardboard.
- 2 

Keep food and liquids out of the recycling.
- 3 

Empty recyclables directly into your cart - NO bagged recyclables.

 **RECYCLE OFTEN RECYCLE RIGHT** #RORR To Learn More Visit RecycleOftenRecycleRight.com 

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www.recycleoftenrecycleright.com

Back To The Basics

Focus on recycling these items in your home curbside bin:

Aluminum & Steel Cans



Plastic Bottles & Jugs



Cardboard & Paper



When in doubt — throw it out!

rethink. reset. **recycle.**
FloridaRecycles.org

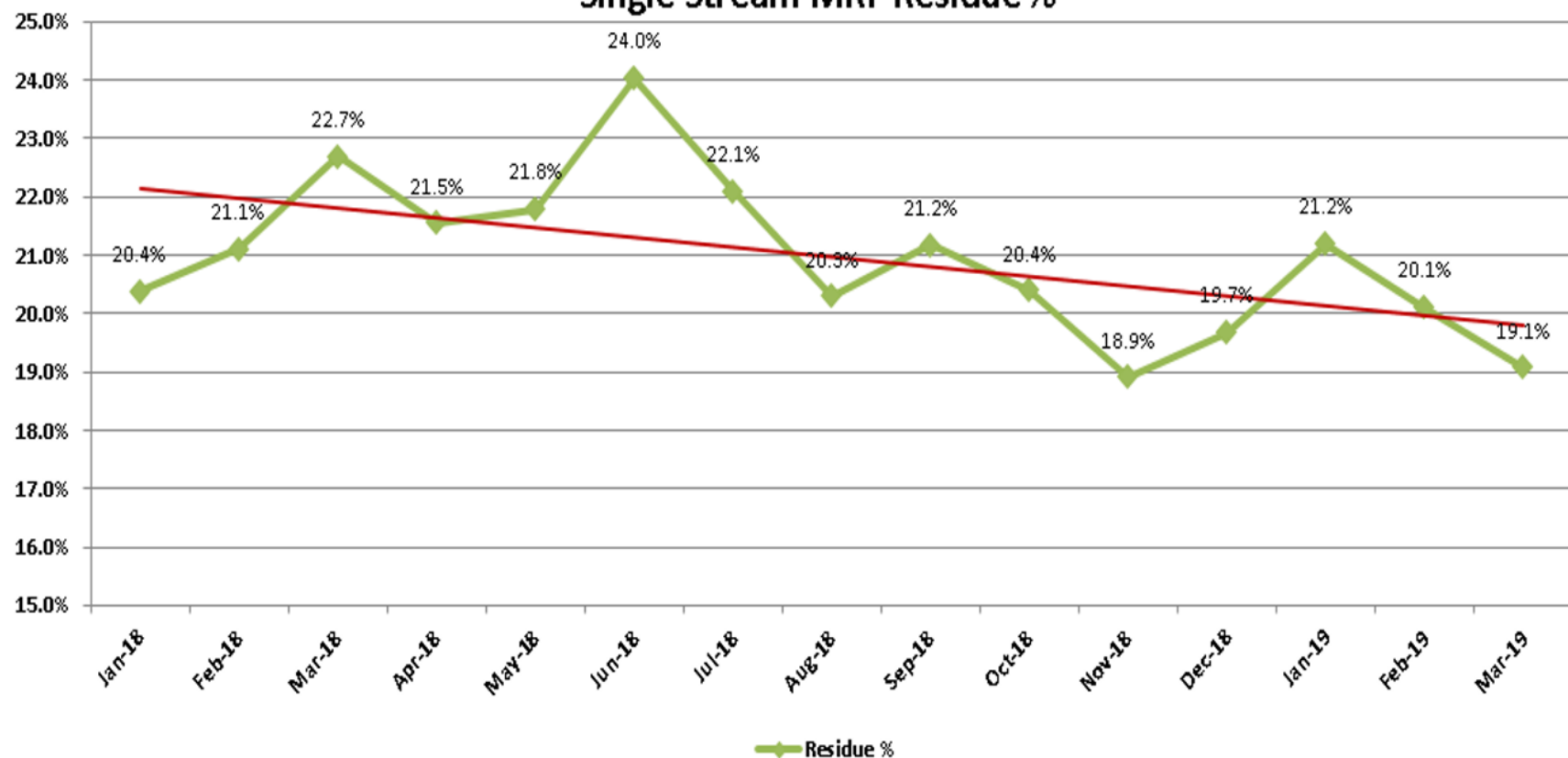
<http://floridarecycles.org/>

This is not recycling



- We spend 140K hours each year cleaning plastic bags, hoses, and Christmas tree lights out of equipment.
- Our recycling plants received over 5,000 bowling balls and 28,000 lbs of batteries last year. They are the largest source of fires.

Single Stream MRF Residue %



Mapped out: Chinese money in U.S. recycling

Posted on September 25, 2018

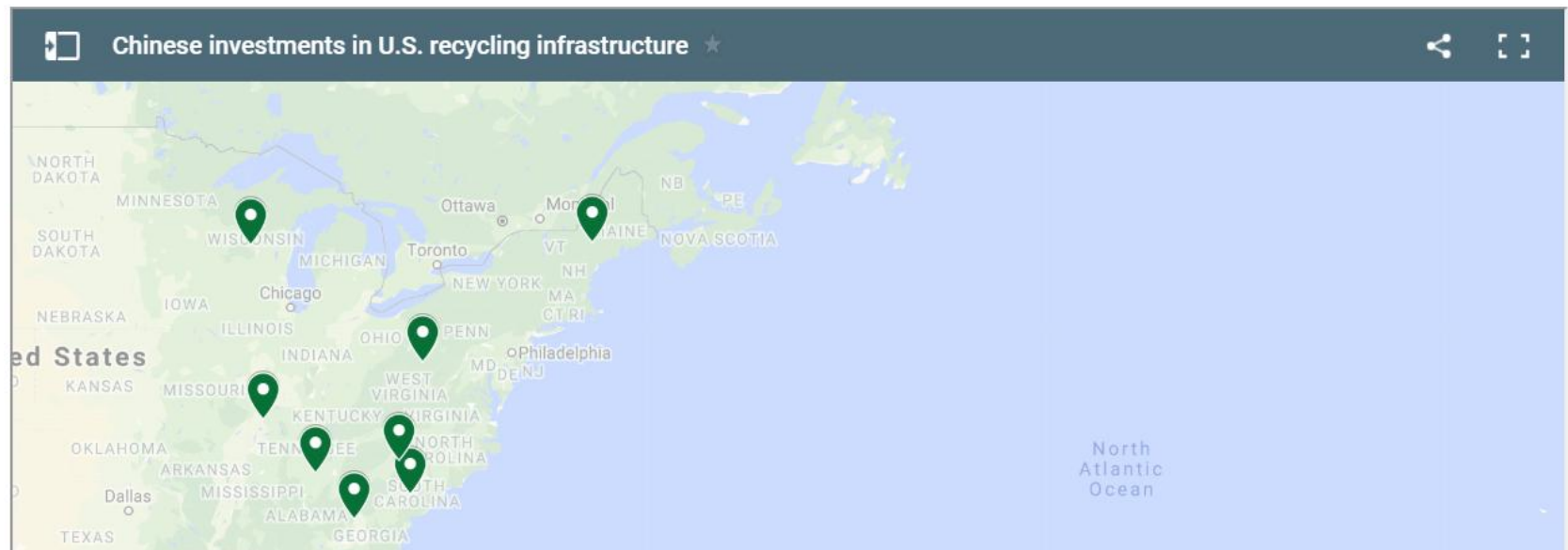
by [Editorial Staff](#)

Since the implementation of [Chinese scrap import restrictions](#) a number of Chinese companies have set up shop or established partnerships in the U.S. to process material and bypass restrictions. Below is a map keeping track of these investments.

Click the icon in upper left corner to view the list of points, and click on each point for complete details on the facilities in development, companies involved, materials being targeted and more.

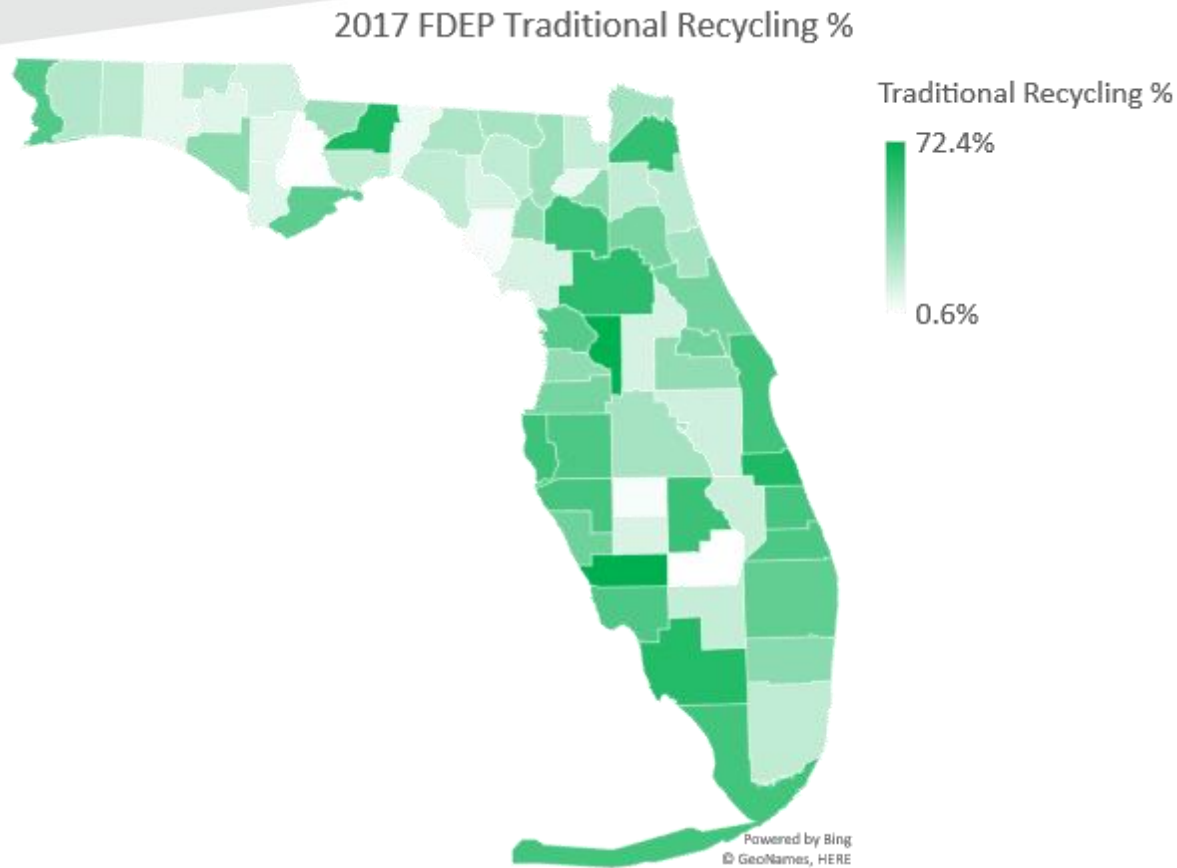
This map will be updated as needed.

If you're having trouble viewing the map below on either desktop or mobile, try viewing it on [Google Maps](#).



<https://resource-recycling.com/recycling/2018/09/25/mapped-out-chinese-money-in-u-s-recycling/>

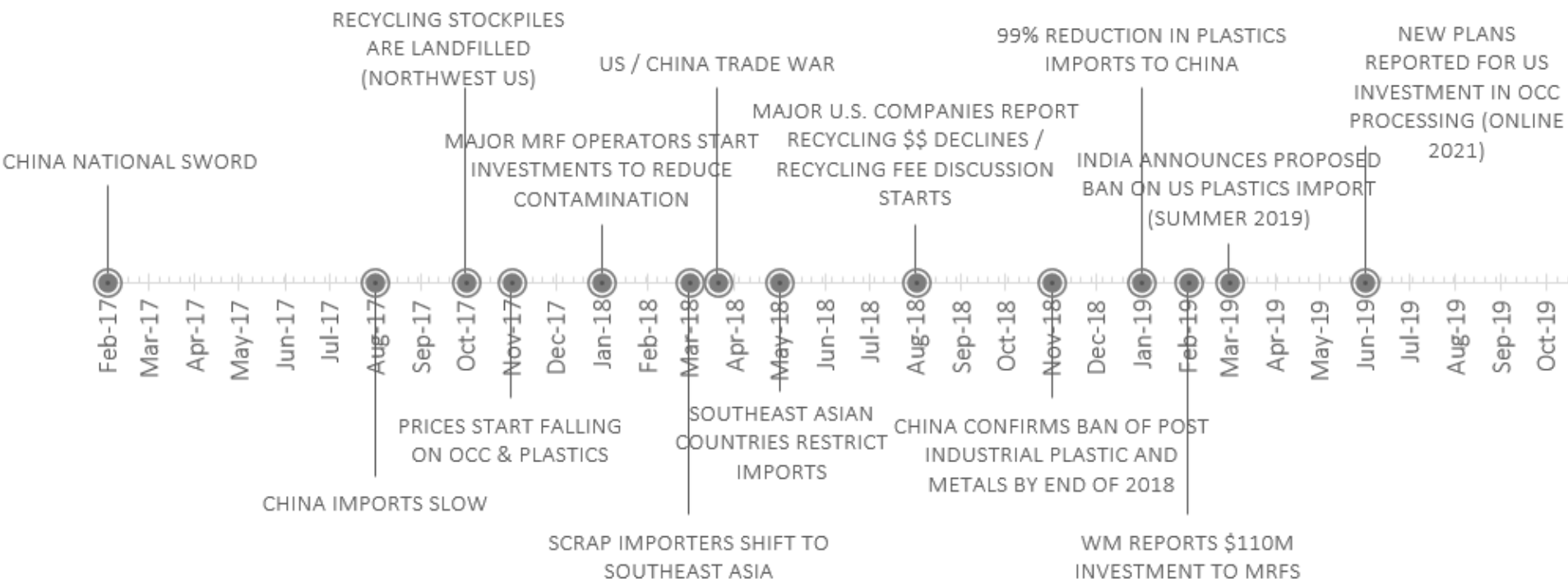
Where we are now...




Traditional Recycling

- National Avg. 34%
- FI Avg. 42%
- Includes Curbside + Commercial Recycling + _____

China's Effect...



FAQ – Plastics Resin Identification Code (RIC)

Resin Identification Number	Resin	Resin Identification Code –Option A	Resin Identification Code –Option B
1	Poly(ethylene terephthalate)	 PETE	 PET
2	High density polyethylene	 HDPE	 PE-HD
3	Poly(vinyl chloride)	 V	 PVC
4	Low density polyethylene	 LDPE	 PE-LD
5	Polypropylene	 PP	 PP
6	Polystyrene	 PS	 PS
7	Other resins	 OTHER	 O

Survey Scope

- Characterize curbside recycling in your community:
 - › Approximately how many residential units receive curbside collection?
 - › Single Stream (SS) / Dual Stream (DS)?
 - › Days per week / month collected?
 - › Automated Collection?
 - › Contamination Rates?
- Does your community own a recycling processing facility / MRF?
- Do you contract for recycling processing?
 - › If yes, with who and is it processed in your county?
 - › If yes, are you currently paying a recycling processing fee and what is the fee \$/ton?
 - › If yes, please describe any revenue sharing provisions?
 - › If no, is there a recycling fee being proposed as part of an amendment to an existing agreement or expected as part of a proposed agreement?
- Please describe any materials your community has stopped collecting (e.g., glass, certain plastics, etc.)?
- How would you rank each of the following challenges to recycling in your community (with 3 = Major Challenge and 0 = no challenge):
 - › Increasing Cost to Recycle
 - › Contamination Rates
 - › Declining Market Value of Recyclables
 - › Lack of Processing Capacity
 - › Lack of Regulation



Create your Google Account

to continue to Gmail

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Thierry

Last name

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Username

FISwanaRecycle

@gmail.com



Sorry, only letters (a-z), numbers (0-9), and periods (.) are allowed.

Password

4076282600

Confirm

4076282600



[Sign in instead](#)

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