




# Tackling Contamination


Presented by

Harvey Gershman, President  
Gershman, Brickner & Bratton, Inc.

September 30, 2015



## Harvey Gershman




*"Earth Day 1970 first inspired my career to focus on helping do better things with waste. And, I have been able to do just that for the past 40+ years."*

**Harvey Gershman**  
*President and Co-Founder*

Specialties: Strategic thinking and planning; procurement and negotiation assistance; system administration; change management; and project financing coordination.

**GBB Quality – Value – Ethics – Results**  
**Founded 1980**



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## GBB's Waste Consulting Services

- Economic, technical and environmental reviews
- Procurements
- Due diligence third-party reviews
- Waste characterization and sourcing
- Process planning and conceptual designs
- Independent feasibility consultant



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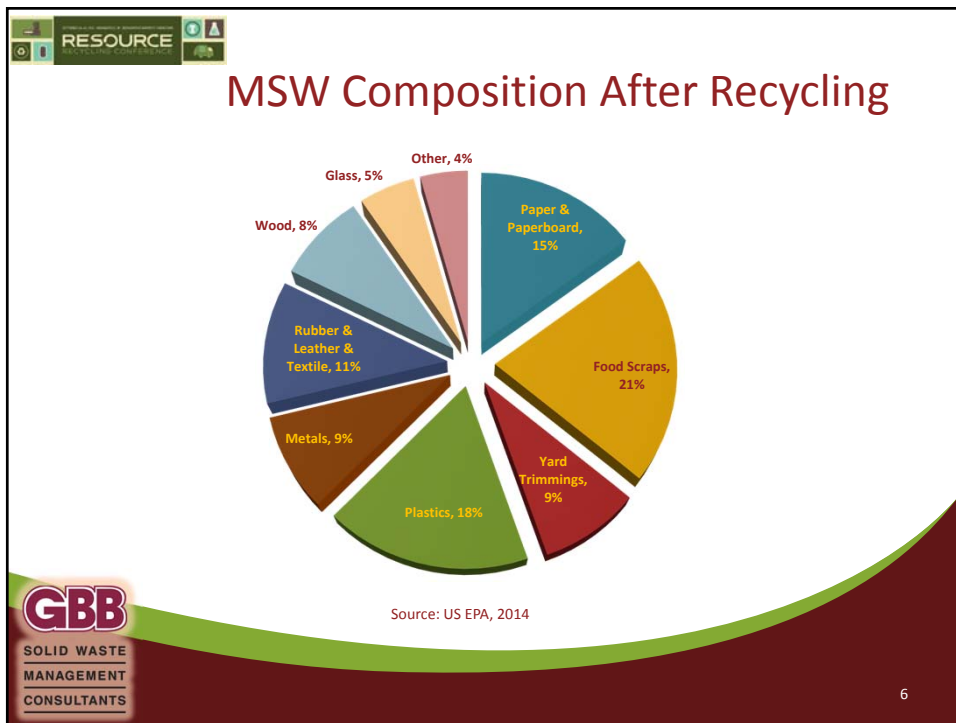
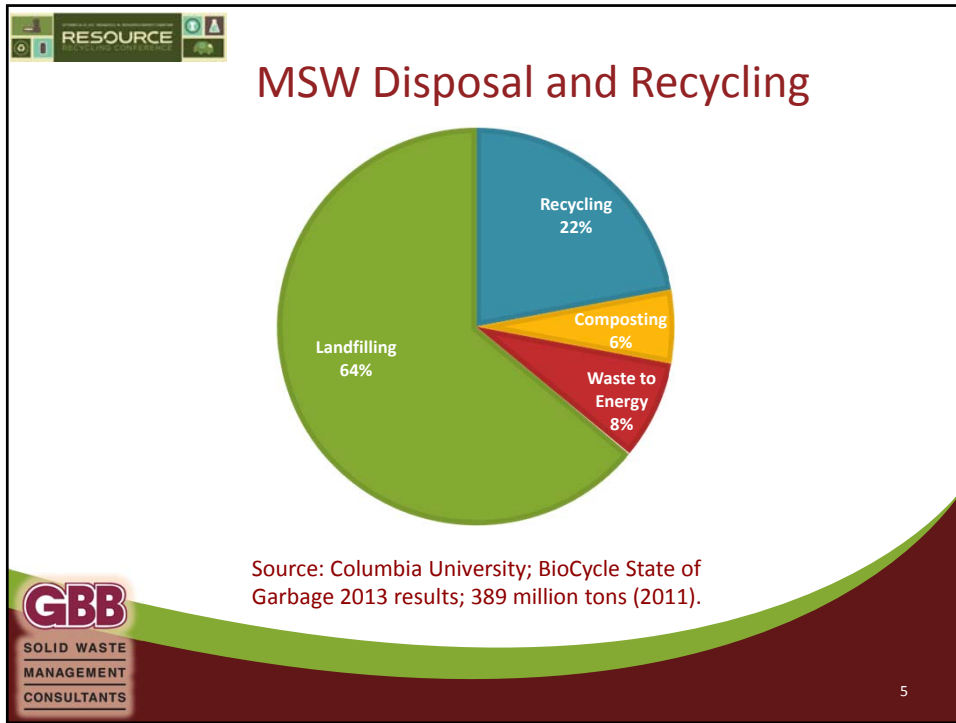
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## U.S. MSW BACKGROUND

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# PROCESSING TRENDS

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## WASTE & RECYCLING NEWS


**Guest column: Houston's One Bin: It's no 'dirty MRF'**  
May 16, 2013  
By Laura Spanjian, Houston's sustainability director

**Guest column: Houston's One Bin: It's a dirty MRF**  
May 30, 2013  
By Tyson Sowell | Texas Campaign for the Environment


**Guest Column: Call it a 'dirty MRF' or not, a single-bin system can work**  
July 2, 2013  
By Brian Wells | Bulk Handling Systems

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## Mixed Waste Processing Report




**The Evolution of  
Mixed Waste  
Processing Facilities  
1970-Today**

Prepared for:  
The American Chemistry Council


Prepared by:  
Gershman, Brickner & Bratton, Inc.

<http://plastics.americanchemistry.com/Education-Resources/Publications/The-Evolution-of-Mixed-Waste-Processing-Facilities.pdf>




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## Potential MWPFF Recovery Rates

Material	Highly Mechanical Sorting System, %
<b>Fiber</b>	
Mixed Fiber	50-70
Cardboard (OCC)	65-75
<b>Plastics</b>	
PET	85-90
HDPE	85-90
Plastics #3-#7	75-80
Film	25-40
<b>Metals</b>	
Ferrous	90-95
Aluminum	90-95
<b>Organics Foodwaste, yardwaste</b>	80-90

**Source:** SWANA webinar, July 23, 2014. Title: *Mixed Waste Processing: What Does It Offer?* Presenters: Karl Hufnagel, PE, Civil Engr. – Brown and Caldwell; Eric Winkler, Sales – Bulk Handling Systems



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## CONTAMINATION TALE OF TWO CITIES

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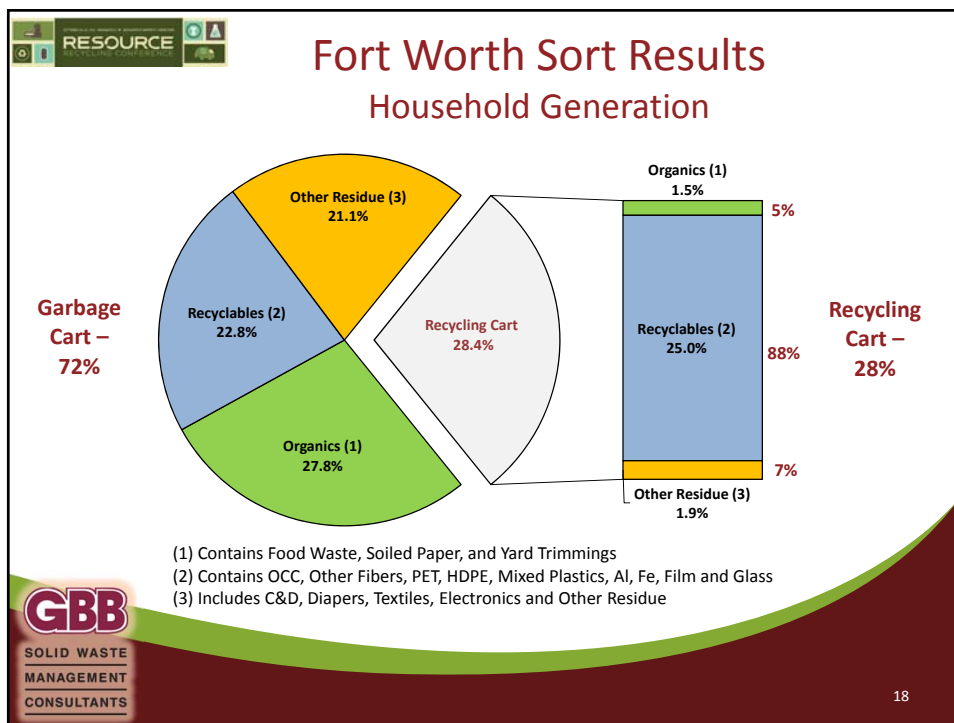
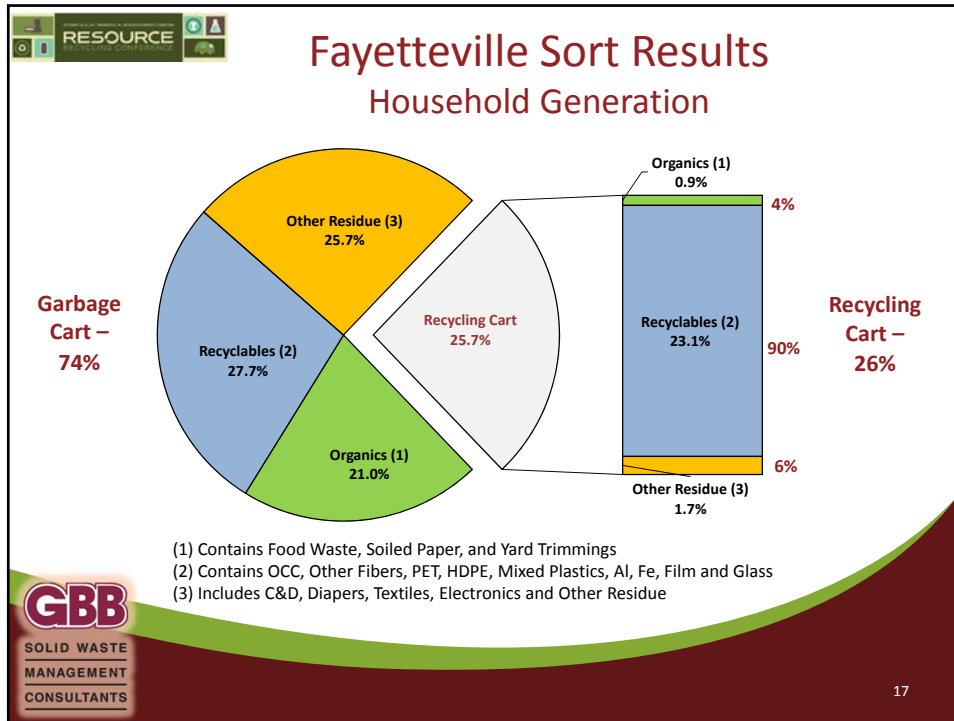
## Waste Sort – Recycling and Garbage

- Two recent waste sorts in:
  - City of Fayetteville, NC
  - City of Fort Worth, TX
- Both cities have curbside single stream recycling with high participation
- Evaluated individual set-outs per household in both the waste and recycling carts
- 75 Houses per day for five days were randomly selected and collected prior to normal pick-up
- 30 Categories were sorted from both bins

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# CONTAMINATION

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## Examples of Single Stream Contamination Issues



Food Waste & Vegetation

Contaminated Material & Food Waste

ONP Screen Jammed w/Plastic Waste

Household Trash, Electronics and Hoses

Source: ReCommunity

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### Automation Key to Separation and Quality



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### Quality Materials



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## Contamination Causes

- ❑ Generator Problems
  - Confused
  - Poor communications
  - Too many targeted recyclables
  - Maybe this is recyclable!
- ❑ Operator Problems
  - PAYT waste cart too small
  - Dual compartment collection
  - Glass!



the ONION  
SEARCH Q TOP HEADLINES

More Cities Providing Bins For Materials That Look Recyclable

NEWS IN BRIEF September 10, 2015



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## Addressing Single-Stream Recyclables Contamination

- ✓ Better communications
  - ✓ Internet and social media
  - ✓ Train the kids
  - ✓ Door-to-door reinforcement
  - ✓ Ongoing positive reinforcement and enforcement
- ✓ Help get the right size cart selected for PAYT
- ✓ Single compartment collection truck for recyclables
- ✓ MRFs need upgrades with latest unit operations
- ✓ Glass containers recycling drop offs and deposit legislation



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## My Key Item to Address Contamination

- *Right-size residential PAYT cart service*



City of San Jose, CA set outs; photo: GBB 2015

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# Thank you!!

**Harvey Gershman**

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