

Updates on Recycling Tonnage and Materials Pricing Trends

*To the Philadelphia Solid Waste &
Recycling Committee*

By: Phil Bresee, Recycling Director

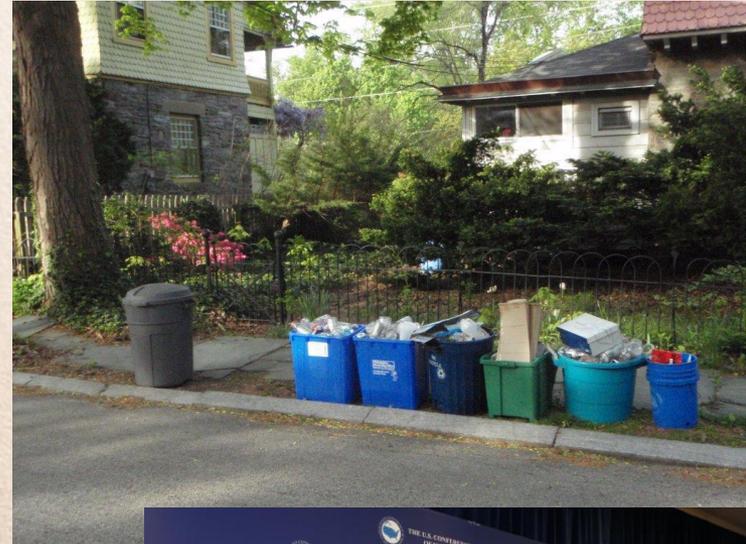
October 22, 2015

1. Progress Refresher



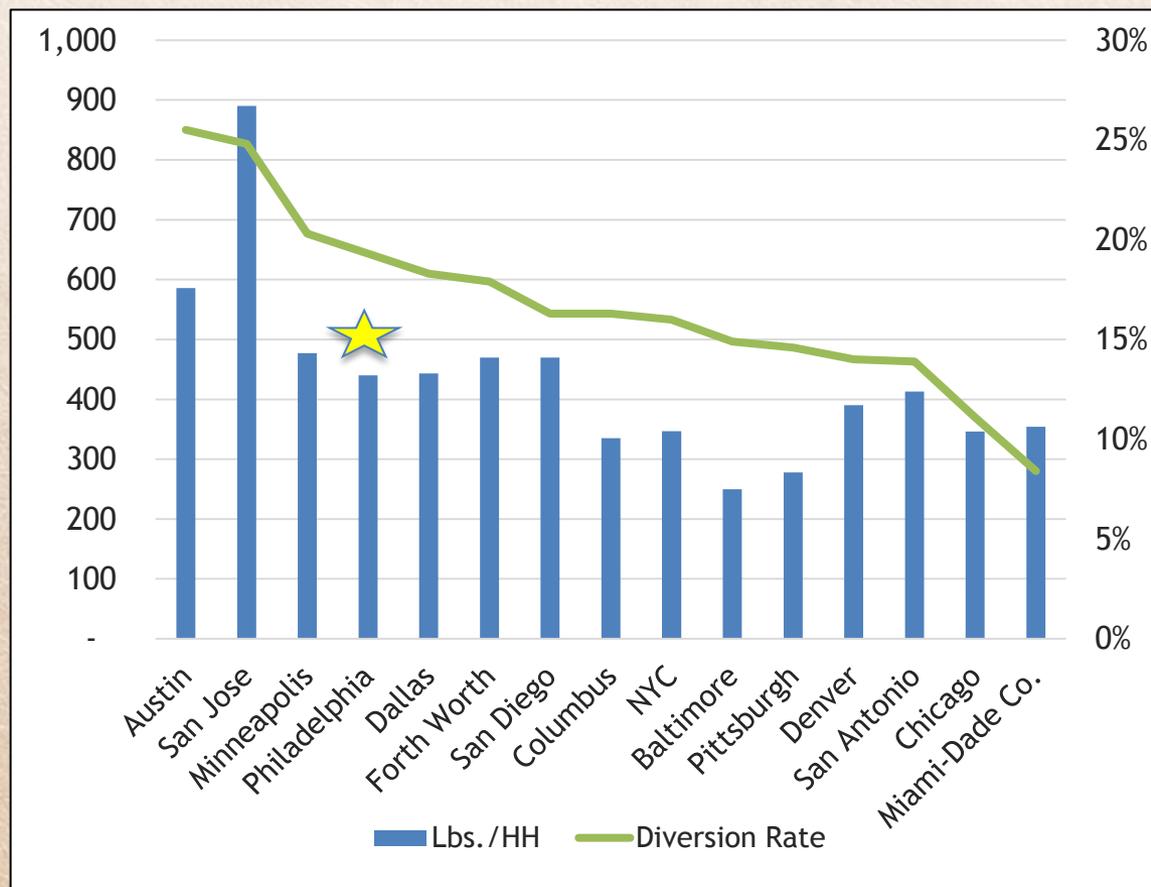
Philly's Recycling Success Phantastic!

- Curbside recycling tonnages up 113% since FY 2008
 - Per HH yield of ~450 lbs./yr.
 - Diversion rate through single-stream = ~20%
- Residential disposal tonnages down ~18% (down 30% from peak year in FY 2004)
- Total residential MSW generation down 8% from FY 2008 (19% from FY 2004 peak)
- Annual fiscal benefits have ranged between \$5.5 and \$15 million



Curbside Recycling Comps (blue-bin materials only)

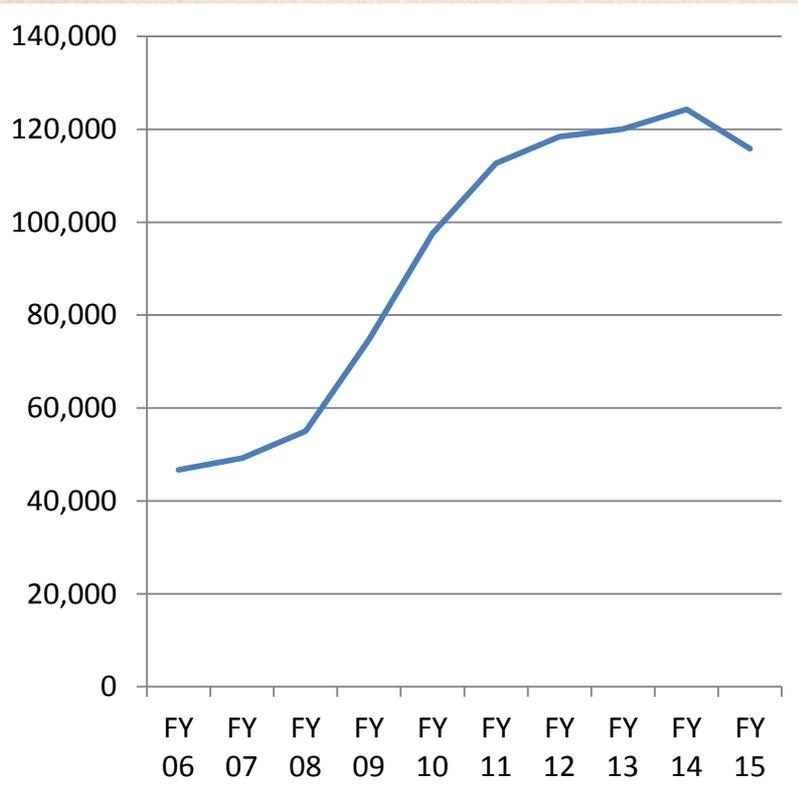
- Philly's annual lbs. yields per household and diversion rate rank high among large U.S. cities and counties



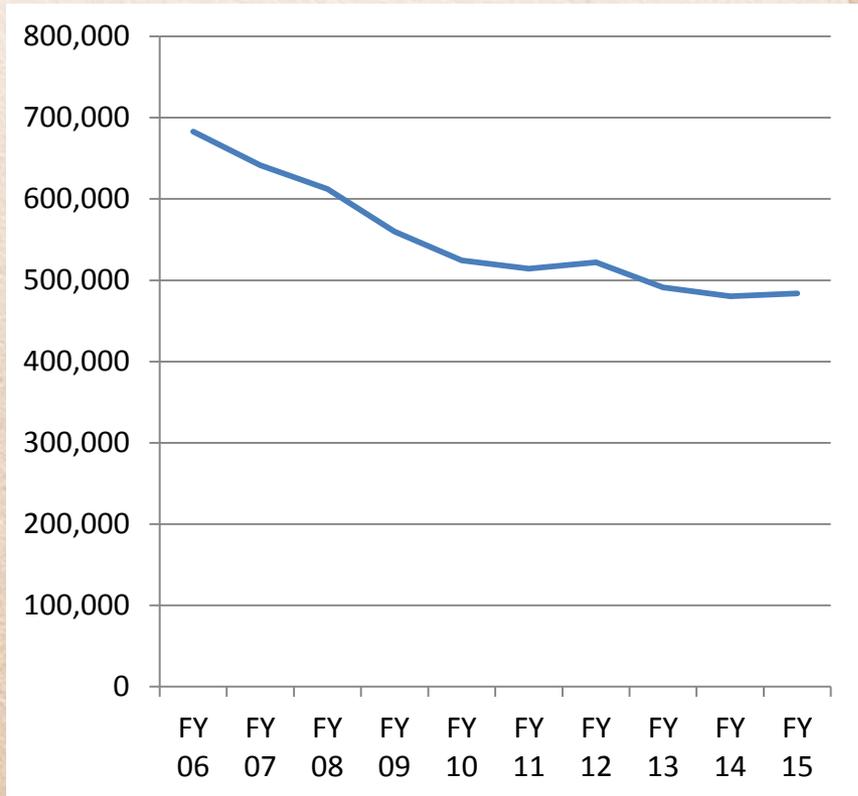
2. Recycling Tonnages 2015

Philly Residential MSW Trends FY 2006 - FY 2015 (in tons per year)

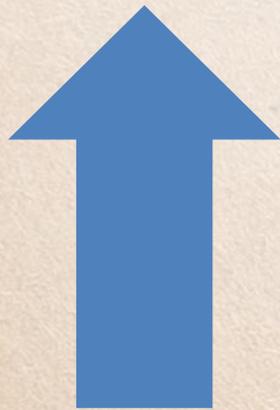
Curbside Recyclables



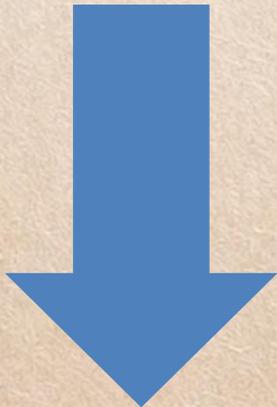
Curbside Trash



FY 2015 Curbside Recycling - Blip or Beginning of Trend?



Garbage up .7%

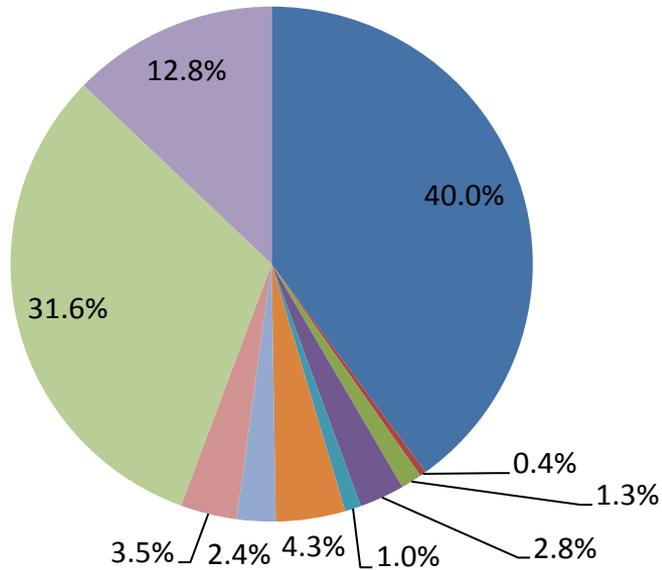


Curbside
Recycling
down 8.8%

- Overall residential MSW generation *decrease* of 1.3%
- First decrease in recycling tonnages in 10 years
- What are main causes?

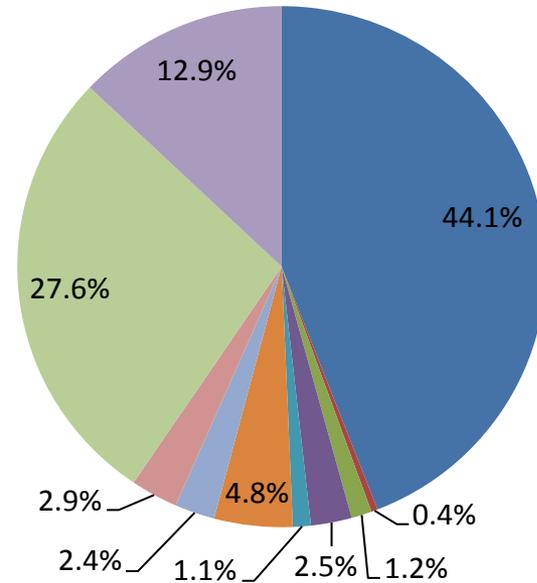
Philly's Evolving Recycling Ton...

Avg. MRF Ton 2013



- Mixed Paper & Cardboard
- Aluminum Cans
- Other Metal
- HDPE Mix
- Mixed Glass
- Aseptic Containers
- Steel Cans
- PET
- Mixed Plastics/Rigid
- Rejects/Residue

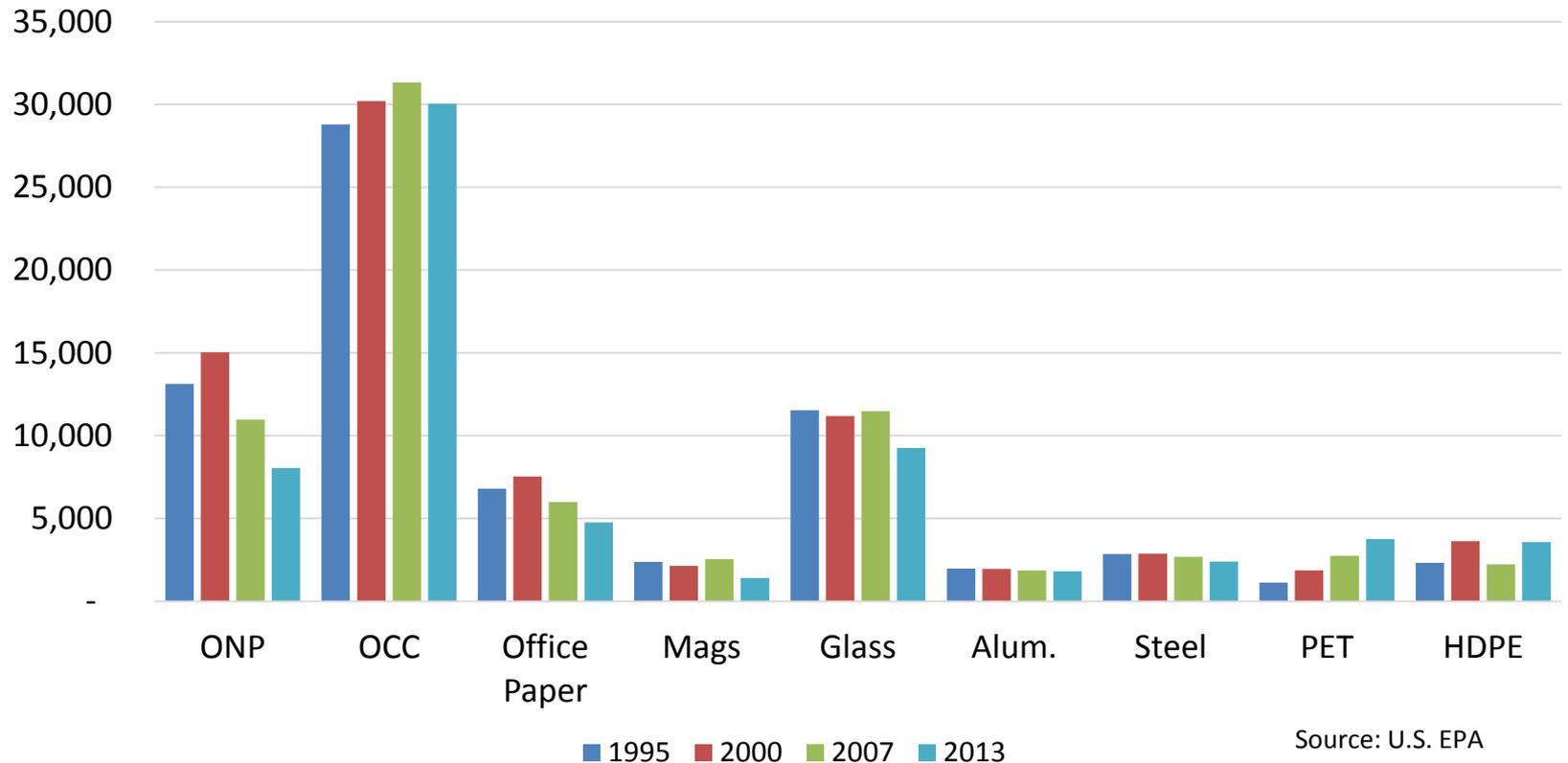
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Evolving Recycling Ton is U.S. Trend

Generation of Key Recyclables in U.S. (in 000's)



Changing Outreach Focus

- Earlier campaigns & branding focused on encouraging recycling participation
- Emphasis on recyclables quality now key message across all platforms & partnerships
 - Recyclebank
 - Keep Philadelphia Beautiful
 - Recyclebycity.com
 - Civic associations

KNOW THE RECYCLING INS & OUTS

IN

PAPER

- Newspapers & Inserts
- Magazines, Brochures, & Catalogs
- Junk Mail, Envelopes, Writing Paper
- Scrap Paper
- Paper Bags
- Phone Books
- Paperback Books
- Greeting Cards, Gift Wrap (non-metallic)

PLASTIC *emptied & rinsed - caps are OK*

- All Food & Beverage Containers
- Hard Plastic Takeout Containers
- Plastic Cold Drink Cups & Lids
- Detergent & Shampoo Bottles
- Pump & Spray Bottles
- Plastic Pails, Buckets, Garden Pots

CARTONS *emptied & rinsed*

- Milk
- Juice
- Ice Cream
- Wine
- Soups

METALS *emptied & rinsed*

- Aluminum, Steel & Tin Cans
- Empty Paint Cans
- Empty Aerosol Cans
- Metal trays & Baking Dishes
- Jar Lids & Bottle Caps
- Clean Aluminum Foil

CARDBOARD *flattened, free of grease & food & rinsed*

- Corrugated Cardboard
- Shipping Boxes
- Clean Pizza Boxes
- Paper Towel Rolls
- Egg Cartons
- Dry Food Boxes

GLASS *emptied & rinsed - caps are OK*

- All Bottles & Jars

OUT

PLASTIC BAGS

STYROFOAM™ FOOD/BEVERAGE CONTAINERS AND SHIPPING/ PACKING MATERIAL

FOOD WASTE

WET OR FOOD-SOILED PAPER

WAXED PAPER PLATES, CUPS, AND TAKEOUT CONTAINERS

GREASY & FOOD-SOILED PIZZA BOXES

TISSUES, PAPER TOWELS, AND NAPKINS

LIGHT BULBS

PORCELAIN AND NON-CONTAINER GLASS

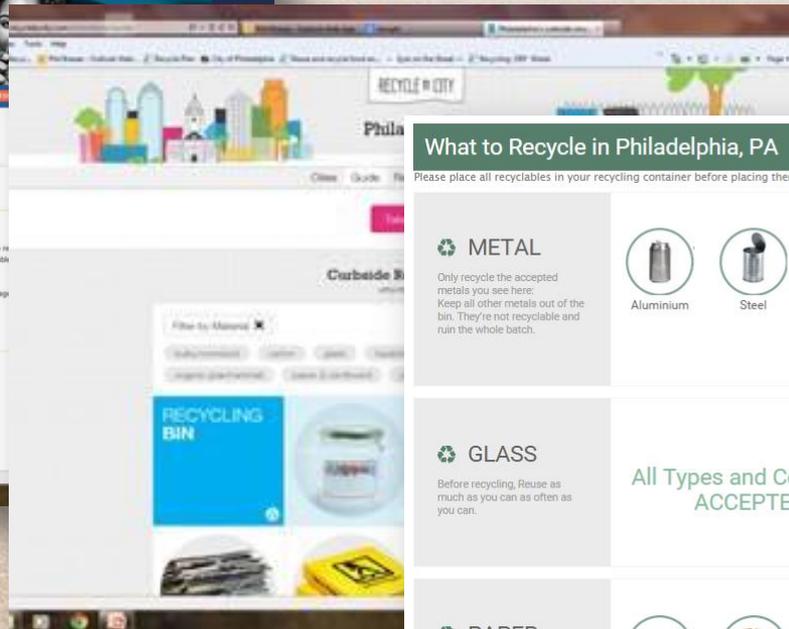
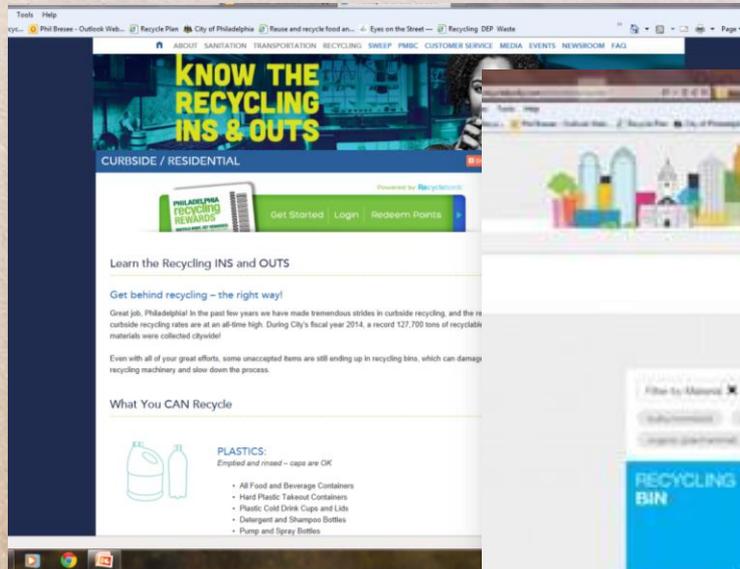
CASSETTE TAPES (VHS AND AUDIO)

GARDEN HOSES

NEEDLES AND SYRINGES

ELECTRONICS

Materials Quality Emphasis Across all-Platforms & Partnerships



Earn 15 Points

Most Popular

What to Recycle in Philadelphia, PA

Please place all recyclables in your recycling container before placing them at the curb.

METAL

Only recycle the accepted metals you see here: Keep all other metals out of the bin. They're not recyclable and ruin the whole batch.

Aluminium
Steel
Tin

Why Do YOU Make a Difference?

Because You Asked: Can I Recycle Plastic Grocery Bags in the Recycling Bin?

Because You Asked: Can I Recycle Plastic Bedsheet Bags?

Because You Asked: What Happens to Garbage Disposal Waste?

Recently Commented

Why Do YOU Make a Difference?

Pedal Power to the People: Bike Sharing Across the U.S.

Reusable Supplies Mean You're Always Ready to Party

Because You Asked: What Happens to Garbage Disposal Waste?

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Improved Operational Focus



Photo courtesy of Peter Tobias

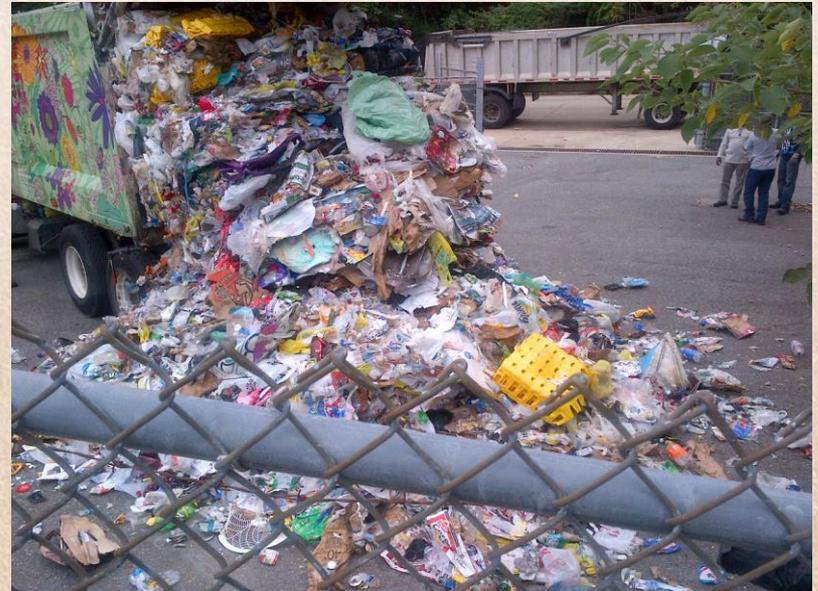
- Renewed emphasis on collection crew performance
- Maintain crew productivity *and* improve materials quality
- Random route inspections key tool in reducing on-route contamination

Curbside Recyclables Load Inspections

Trucks randomly targeted in all sanitation districts



Loads tipped and examined at sanitation yards



Plastic Bags



Food Waste & EPS



Garbage collected mid-route



Collection vehicle not pre-tripped



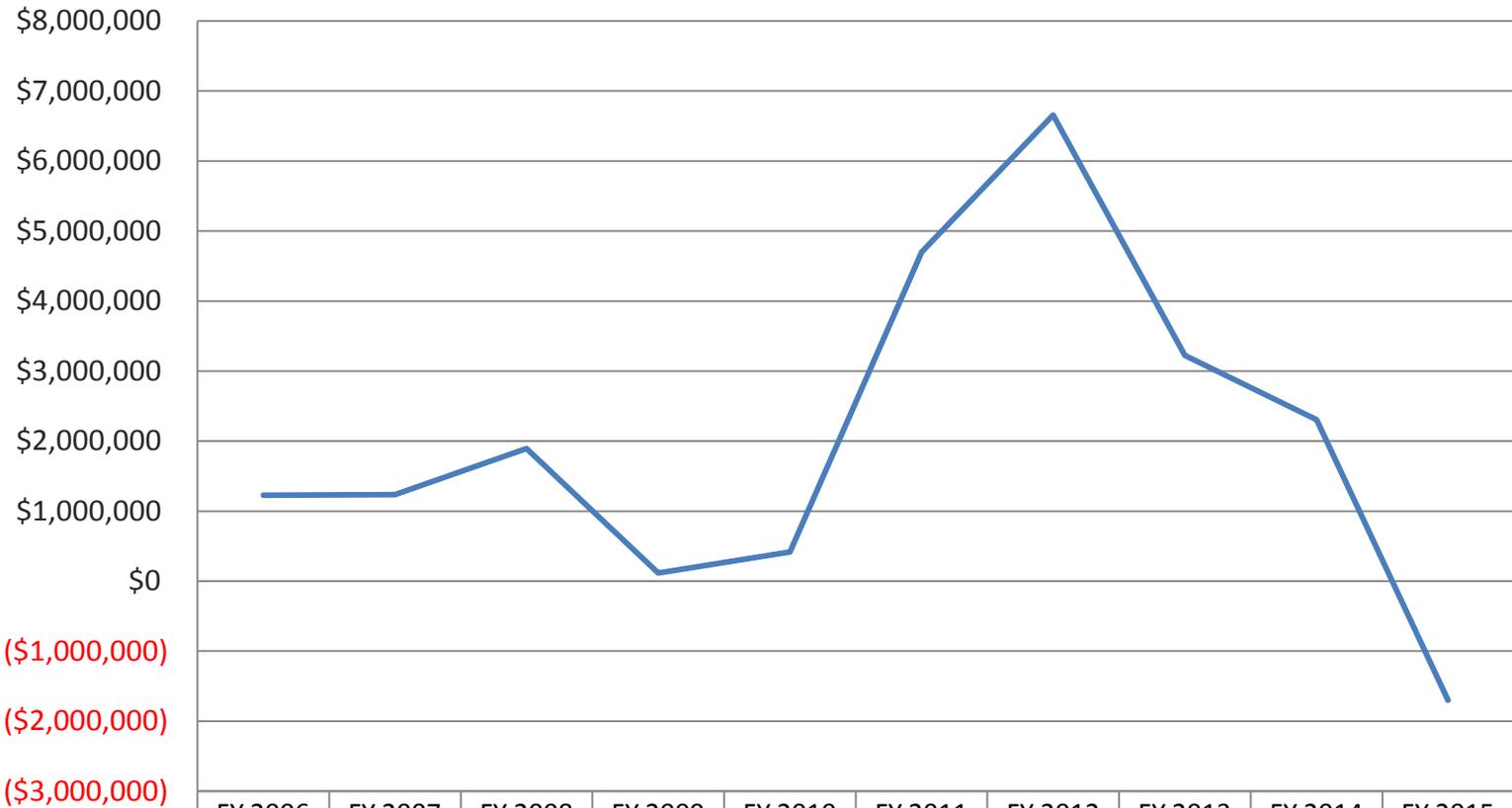
3. Recyclables Revenues

Recovered Materials Market Trends



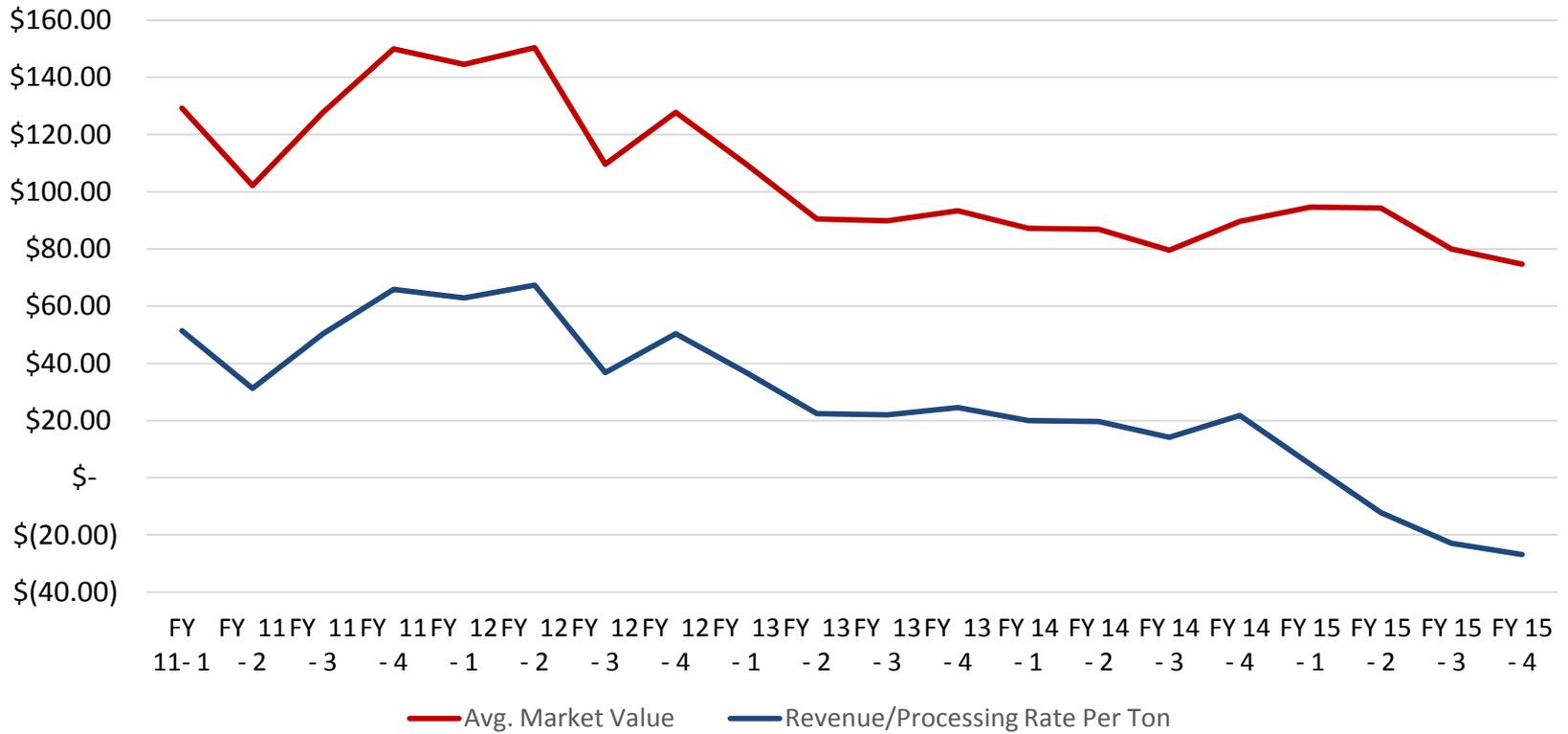
- Macroeconomic market forces continue to push markets lower:
 - Slower GDP growth in China
 - Strong U.S. dollar
 - Falling crude oil prices
 - Lingering effects from 2014-15 west coast ports labor dispute
- Localized impacts:
 - Glass processing prices
 - 21st century wage requirements

Annual Recyclables Revenues FY 2006-FY 2015



	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Net Revenues	\$1,226,40	\$1,236,89	\$1,895,13	\$114,383	\$413,871	\$4,700,00	\$6,655,91	\$3,224,00	\$2,307,00	-\$1,700,0

Average Per-Ton Recyclables Market Value vs. Revenues/Processing Fees FY 2011-FY2015



Single-stream MRF per-ton operating costs can exceed average market value of recyclables (~\$75)

Fiscal Benefits of Recycling Remain Solid

Fiscal Year	Recyclables Tons	Revenue Per Ton	Total Revenues	Disposal Rate	Avoided Disposal	Net Fiscal Gain(Loss)
2011	112,709	\$41.70	\$4,700,000	\$70.00	\$7,889,630	\$12,589,630
2012	118,418	\$56.21	\$6,656,000	\$70.00	\$8,289,260	\$14,945,260
2013	120,073	\$26.85	\$3,224,000	\$58.00	\$6,964,234	\$10,188,234
2014	125,648	\$18.36	\$2,307,000	\$59.00	\$7,413,232	\$9,720,232
2015	116,000	(\$14.22)	(\$1,650,000)	\$60.00	\$6,960,000	\$5,310,000

Even in down markets recycling is less expensive than disposal alternatives.