



Changing the Payment Model: Pay-as-You-Throw and Financial Efficiency

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Michigan Recycling Coalition Annual Conference

May 2016

Overview

- **Introduction to WasteZero and pay-as-you-throw**
- Midwestern states' experience with PAYT
- Examples of successful pay-as-you-throw cities & WasteZero model
- Potential solutions for Michigan

About WasteZero



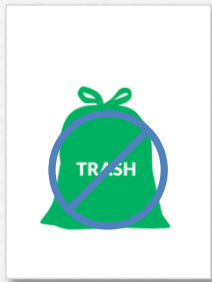
- In business since 1991, & 100% driven to **cut trash in half across the US**
- Is the **national leader** in municipal waste reduction
- Deep experience with a **full range** of waste reduction approaches
- Provides comprehensive capabilities, from **analysis to results**
- Has nearly a **100% success rate** with WasteZero-designed programs
- Is a certified **B Corp**, meeting rigorous social & environmental standards
- HQ in Raleigh, NC, with regional support around the nation



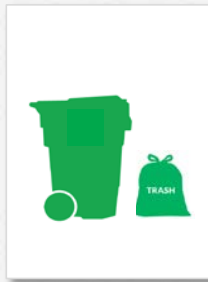
Our programs are the most effective available, reducing waste by 44% on average, with many surpassing 50%.

A Continuum of Solutions

WasteZero provides a wide range of solutions. The list below is not comprehensive, but it provides a good overview of the key types.



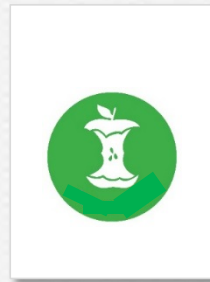
**PAYT / Unit
Based Pricing**



Overflow



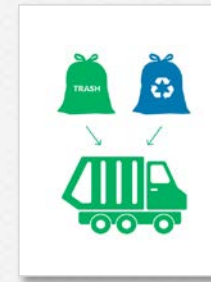
Yard Waste



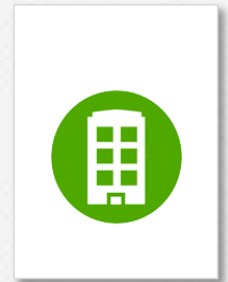
Organics



Textiles



**OneRoute®
Co-Collection**



**Multi-Family
Housing**

Consulting → Program Design → Pilot Development → Full-Scale Implementation

We Want to Solve The Trash Problem

- Many cities are looking for ways to both save money and generate revenue.
- The cost of trash has risen 2.4 times faster than inflation over the last 30 years.
- Even financially healthy communities spend more than they need to on trash.
- The high cost of trash diverts resources from things that would actually improve quality of life
- Communities need help to...



- Generate revenue
- Reduce costs
- Align revenues with costs
- Free up resources



- Reduce waste
- Increase recycling
- Save energy and resources
- Reduce greenhouse gases

Traditional Payment Models—A Major Driver of Waste



Electricity



Gas



Water



Residents pay for most utilities based on how much they use. This creates a built-in incentive to conserve. Trash is different...

- 1 Cost of service is usually embedded in the property tax bill or flat fee



- 2 Limited incentive to reduce, reuse, or recycle



- 3 Residents generate more waste

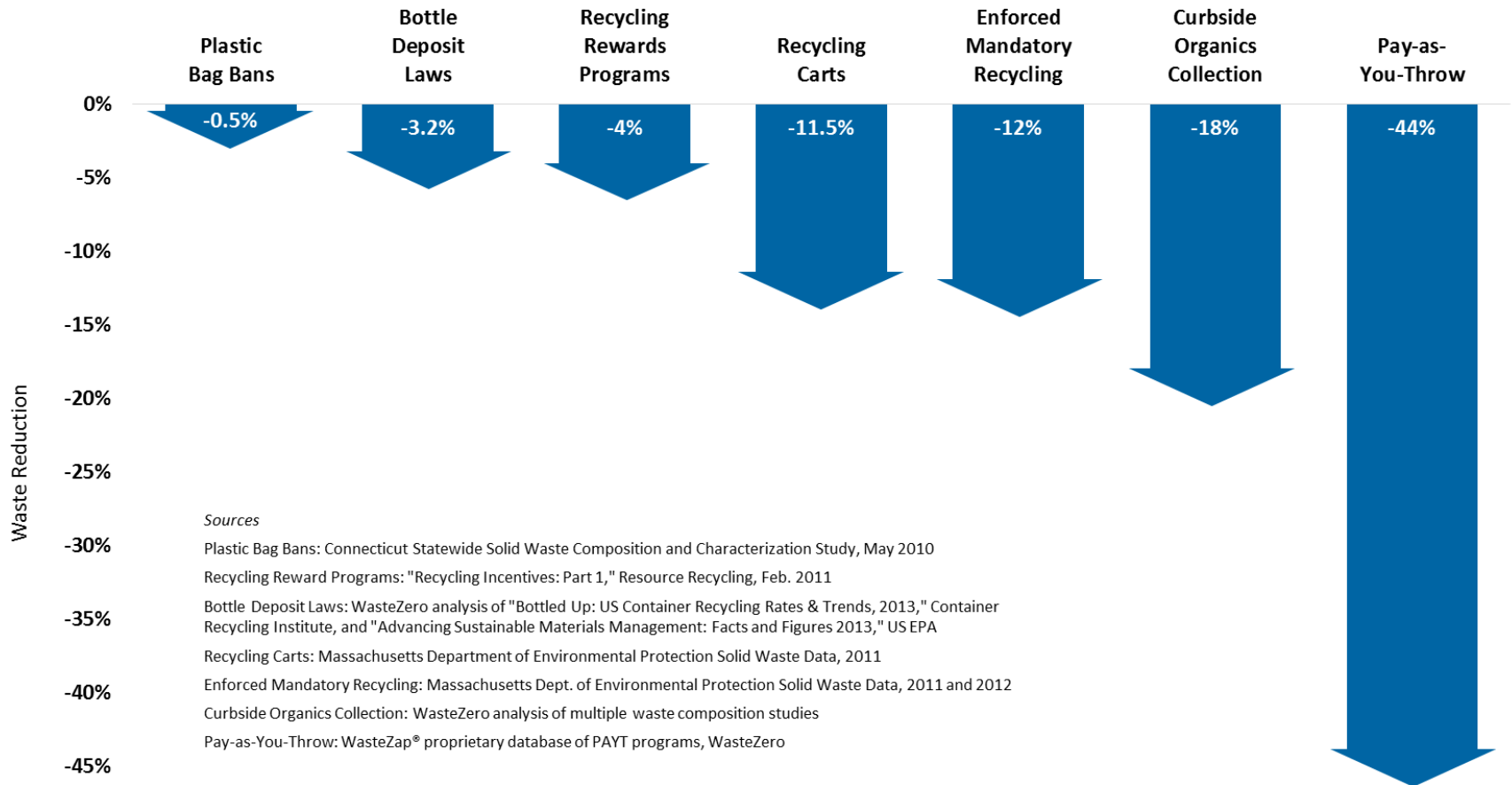


The traditional approach causes waste and does not provide incentives to recycle.

Comparison of Potential Solutions

Various methods have been tried to encourage residents to reduce waste and recycle more. Most are quite limited in their impact. Pay-as-you-throw offers the greatest impact, when properly implemented.

Comparing Waste Reduction Options (via PayAsYouThrow.org)



Types of PAYT

PAYT programs can take many different forms:



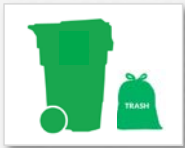
Cash

Residents pay a set fee in cash for each bag they dispose of at a convenience or transfer station.



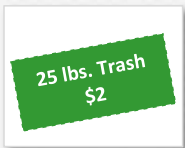
Variable-Rate Carts

Residents choose from among different sizes of carts, paying more for the larger carts and less for the smaller ones.



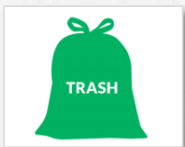
Overflow

Residents pay a flat fee that covers everything they can fit into a certain size cart, and then pay extra (usually by the bag) to dispose of anything that does not fit into that cart.



Stickers/Tags

Residents pay by the bag by affixing a pre-paid tag or sticker to each bag of trash.



Bags

(Most Effective Method)

Residents dispose of their waste in specialized bags approved by the municipality and clearly marked with the municipal seal or other unique instructions or information.

In WasteZero's experience, bag-based pay-as-you-throw systems are the most effective.

The Bag-Based PAYT Model

WasteZero's primary approach to PAYT ([see video](#)) is the most effective available means of reducing municipal solid waste, and it works with all collection methods.

- 1 Cut Fees (if possible)
- 2 Pay per Bag for Trash
- 3 Residents Recycle More

CITY OF ANYTOWN
PO BOX 2334
ANYTOWN, USA

Waste and Water Charge

Service	Rate	Usage	Amount
Water	\$2.00	100	\$2.00
Waste	\$1.00	1	\$1.00
Solid Waste	\$1.00		\$1.00

PLEASE RETURN THIS PORTION WITH OUR PAYMENT

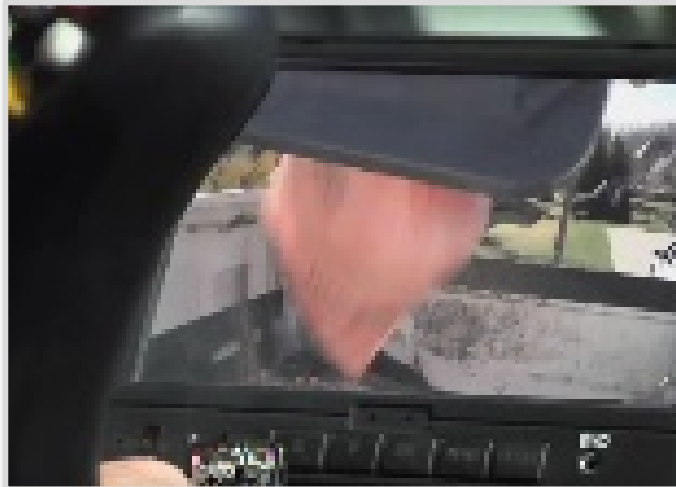
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- Fairer to residents
- Easy to implement
- Works better than any alternative
- No direct cost to the City
- Works with any collection method, automated ([see video](#)) or manual

Bag-Based PAYT Works with Automated Carts

- Inexpensive on board camera allows driver to recognize a non-compliant bag as cart is dumped
- City can educate & enforce as needed
- No additional workers required
- No switching out of different carts



The Bag-Based PAYT Model and WasteZero Trash Metering®

To run optimally, bag-based programs require a range of components. WasteZero has developed a comprehensive offering that includes the components below, called WasteZero Trash Metering®.

Official Bags



- Drawstring closure for convenience, litter control
- Trash and recycling bags differentiated by
 - Color
 - Printing

Distribution



- Delivery to retailers for sale or distribution to residents
- Retailer relationship management
- Order processing and fulfillment
- Inventory management
- Customer service
- Accounting and reporting

Communications



- Communications support to educate residents about the program:
 - Launch Announcements
 - Program Web Site
 - Ongoing Toll-Free Customer Service Line
 - Educational Materials

Media



- Media relations before, during, and after launch:
 - Press briefings
 - Talking points
 - Press releases
 - Data collection (regarding program results)

These programs can be structured to operate at no direct cost to the City.

Overview

- Introduction to WasteZero and pay-as-you-throw
- **Midwestern states' experience with PAYT**
- Examples of successful pay-as-you-throw cities & WasteZero model
- Potential solutions for Michigan

Pay-as-You-Throw in Minnesota



M.S. 115A.93 (passed in 1992)

- “A licensing authority shall require licensees to impose charges for collection of mixed municipal solid waste that increase with the volume or weight of the waste collected.” (Also applies to local government units in M.S. 115A.9301.)
- “A licensing authority that requires a pricing system based on volume instead of weight...shall determine a base unit size for an average small quantity household generator and establish, or require the licensee to establish, a multiple unit pricing system that ensures that amounts of waste generated in excess of the base unit amount are priced higher than the base unit price.” (Also applies to LGUs in M.S. 115A.9301.)

PAYT in Minnesota—Results



- ~2/3 of Minnesota households have subscription hauling.
- Hard to know what anyone pays for garbage to measure effect.
- Minnesota has focused on giving opportunity for recycling (carts, education) rather than using garbage pricing as tool for behavior change.
- Most compliance for PAYT is in hauler-provisioned variable rate carts.
- Many rural cities use bag-based PAYT

PAYT in Iowa



Iowa

- No PAYT statute, but comprehensive planning & rules mostly require it
- Dozens of towns <20,000 use bag-based PAYT (no carts).
- Lots of small haulers without landfills in this decentralized state like PAYTa
lot; they often run the program.
- Bag-based towns are achieving 500-600 pounds per capita per year easily.
- Larger cities use overflow tags along with automated carts.



Illinois

- Chicago's suburbs are usually organized with bundled services.
- Cities often ask for PAYT/sticker or tag service + variable rate cart service.
- Haulers run the sticker/tag program.
- 50%+ households still want to use PAYT stickers on their own bags.
- Lake County goals for cities: 1.6 pounds/capita/day (584lbs/year), average now is 1.8 lbs (657 lbs/year); goal likely to go smaller.
- Counties drive the change to PAYT, some better than others.



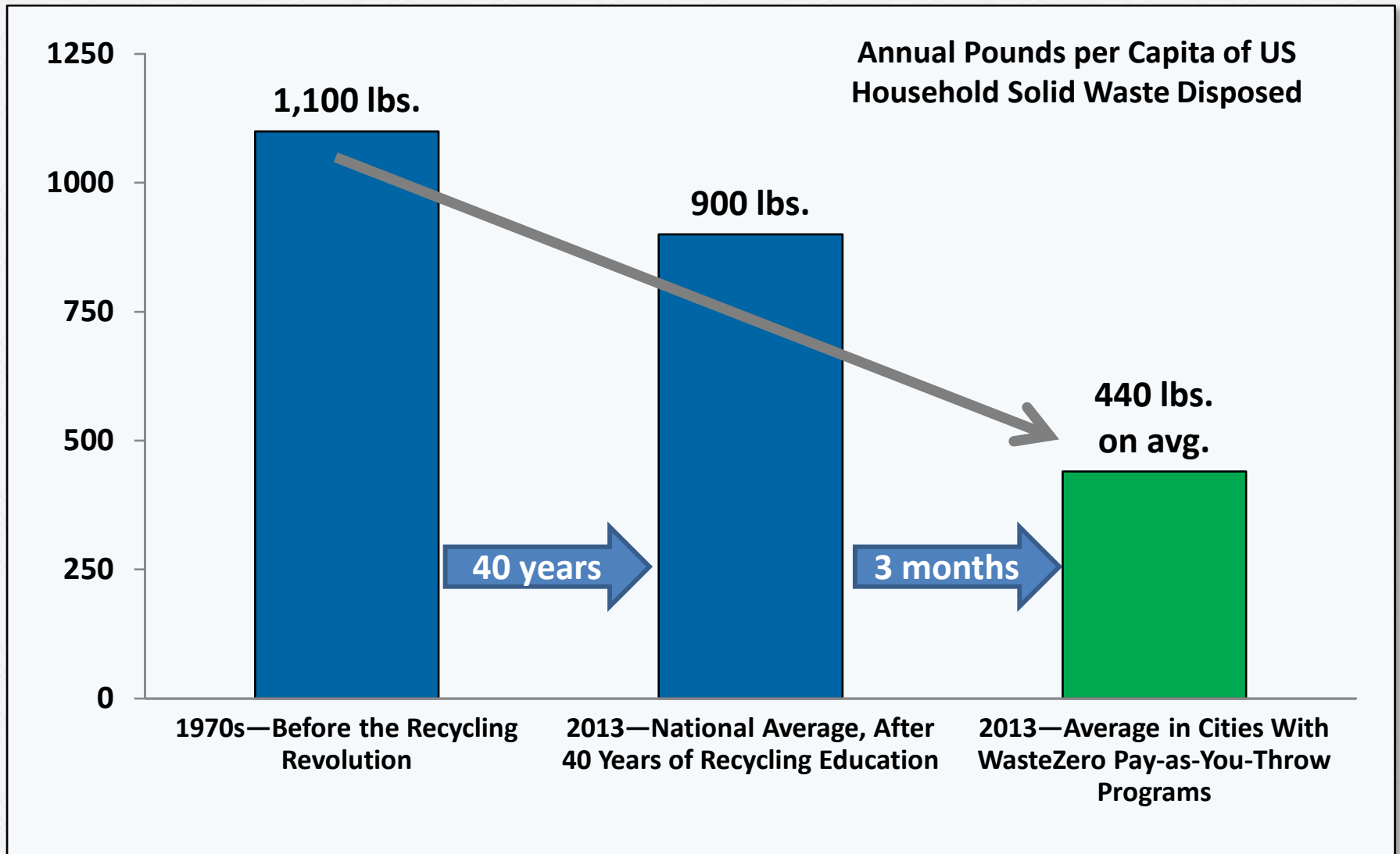
Wisconsin

- State law now requires that any new charge for garbage must be offset by a reduction in property tax levy; disincentive for starting new PAYT programs
- Voters soundly defeated a Wausau advisory referendum on paying for garbage that had little voter education. (Question-not exact: “Do you want to be charged for garbage service and have an equal amount deducted from your property taxes?”)
- Lots of unlimited garbage service for a monthly fee
- Dozens of tag and bag programs in smaller cities and towns
- Many larger cities have overflow tag PAYT

Overview

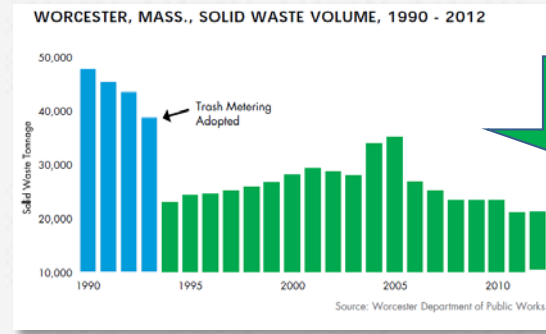
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WasteZero Trash Metering® Results

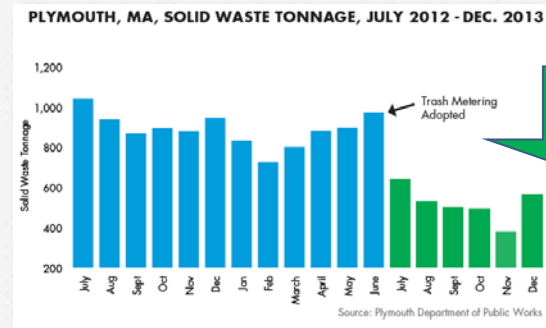


WasteZero Trash Metering® Results

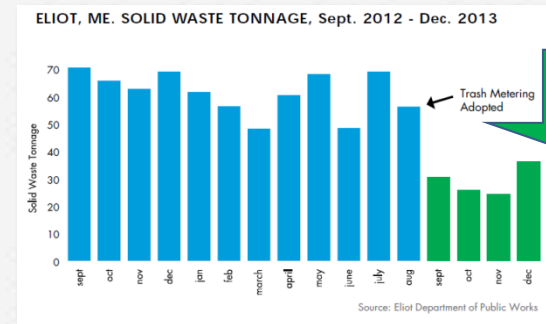
- Average reduction of MSW and disposal costs of 44%
- Substantial increases in recycling
- Significant results within 30-90 days
- Permanent impact
- Effective in cities and towns, regardless of
 - Population size
 - Average income level
 - Numerous demographic factors
 - Method of trash collection



47%



39%

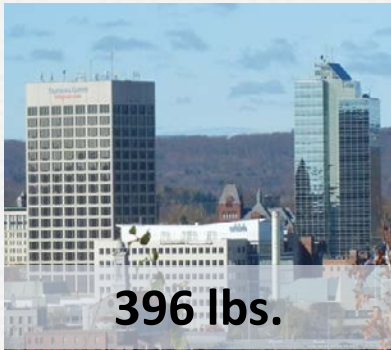


57%

Utility Pricing: Pre-Paid Bags (Pounds of Trash Per Capita)

The national average is 857 pounds of trash per capita per year.*

Worcester, MA



Dartmouth, MA



Malden, MA



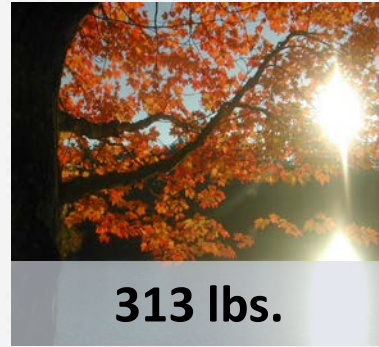
Tiverton, RI



Gloucester, MA



Sanford, ME



Decatur, GA



Waterville, ME




*Calculation Based on Data from *Advancing Sustainable Materials Management: Facts and Figures 2013*, US EPA, June 2015, City figures from WasteZero WasteZap database.

PAYT in Richmond


Background

The City of Richmond provides curbside collection of residential solid, bulky, and yard waste on a weekly basis to about 61,000 households.

- The City performs this service through the Department of Public Works.
- Richmond offers a curbside recycling collection service through its partnership with Central Virginia Waste Management Authority (CVWMA).
- Richmond residents may dispose of household and bulk items at the transfer station, and yard waste at the landfill, at no charge.

	MSW
Tons/Year	67,236
Tip Fee/Ton	\$25.00

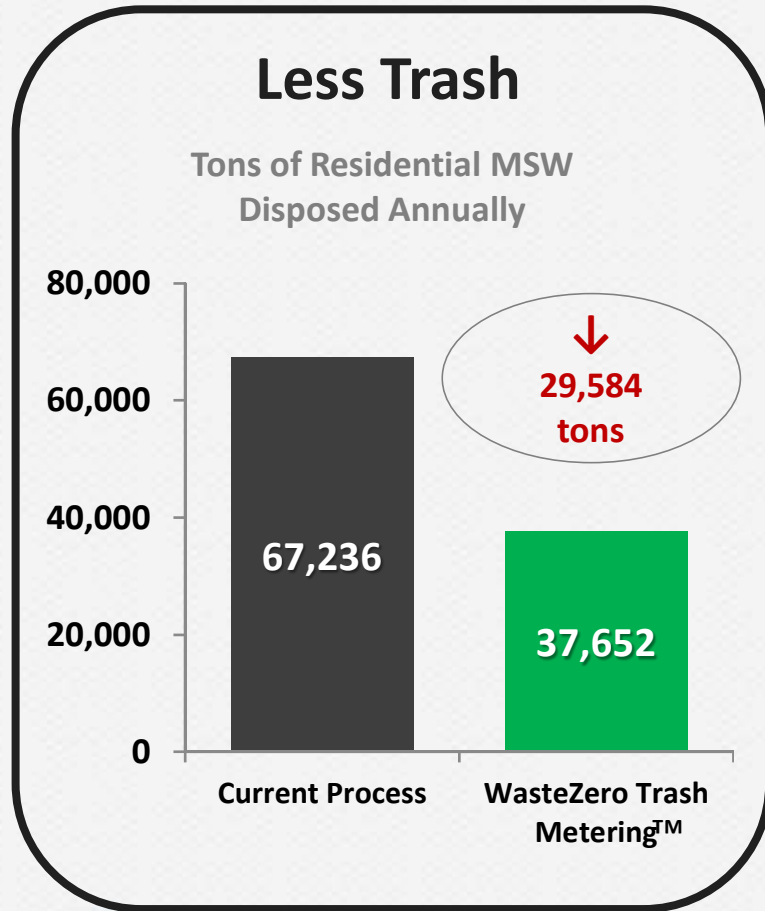
	Recycling
Tons/Year	7,843

	Solid Waste Budget
Revenues	\$11,933,793
Expenses	\$11,532,294

PAYT in Richmond

Preliminary Annual Tonnage Impact of PAYT

Based on a 44% reduction rate, Richmond's projected annual trash diversion is 29,584 tons, generating tipping fee savings of \$739,600 annually¹. Likewise, the city's recycling rate will jump from 10% to 34%.

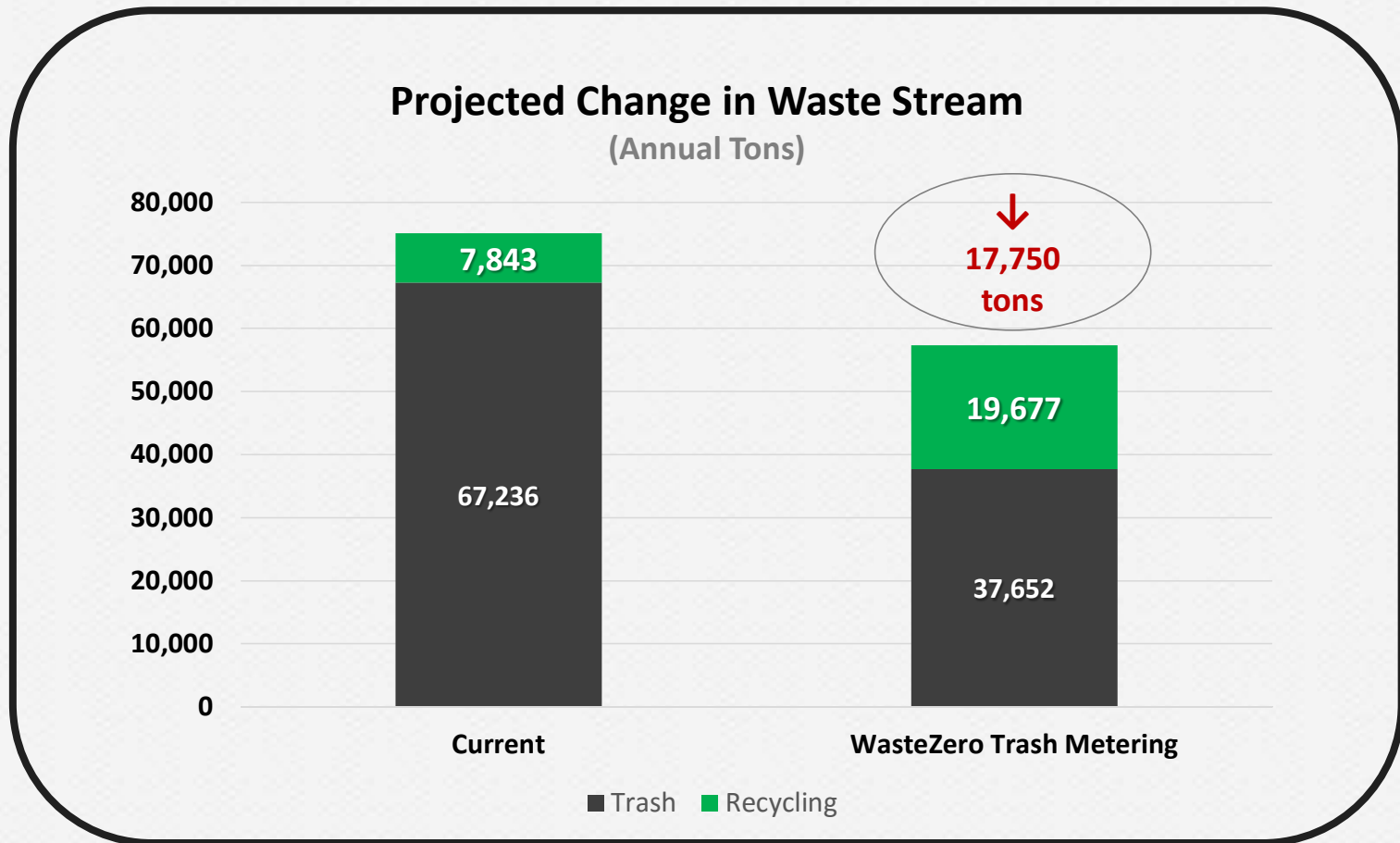


¹ Based on tip fee of \$25.00/ton

PAYT in Richmond

Preliminary Annual Tonnage Impact of PAYT

Total tonnage of material managed will drop by 17,750 (24%). Recycling diversion will increase from approximately 10% to about 34%.



PAYT in Richmond

Preliminary Annual Financial Impact of PAYT*

	1 Year	3 Years	5 Years	10 Years
Revenue Bag Sales ¹	\$5,995,800	\$18,004,800	\$30,036,900	\$60,073,700
Savings Tipping Fees	\$739,600	\$2,220,900	\$3,705,100	\$7,410,200
Net Program Impact	\$6,735,400	\$20,225,700	\$33,742,000	\$67,483,900

With the WasteZero Trash Metering™ program, Richmond could realize \$67.5 million in benefits and savings over the next ten years.

* Cumulative Benefits and Savings for Years 3,5, and 10

¹Net of program services and supplies

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How Could Michigan Boost PAYT?



- Consider measuring in pounds per capita per year when feasible
- Use cart-based bag model in an organized city
- For unorganized cities, consider a specific percentage or dollar increment between cart sizes for your haulers
- Know of a city in crisis? Call us! We specialize in program design and public engagement

Thank You!

WasteZero[®]
Save Money. Reduce Waste.

Paul Gardner

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