

Reducing Waste in New London, CT: Understanding the Impacts of a SMART System

New London, CT

January 2018



Produced by WasteZero, Inc. for the CT Department of Energy
& Environmental Protection (DEEP) and New London, CT

Why Consider a SMART Program Now?

- The state is facing financial challenges
- The regional disposal capacity is decreasing
- New London's DPW resources are stretched
- New London's recycling rate is 18%¹. DEEP's residential recycling goal is 25% by 2018 and 60% by 2024.²

Notes:

1. Computed using City of London data; see next slide
2. DEEP, *Draft Comprehensive Materials Management Strategy*, 2016

Regional Disposal Capacity is Decreasing Costs are Increasing



Very Few Residential Landfills
Remaining



Regional Disposal Capacity is Decreasing Costs are Increasing



Very Few Residential Landfills Remaining



CT's Permitted Current Incineration Capacity is Maxed



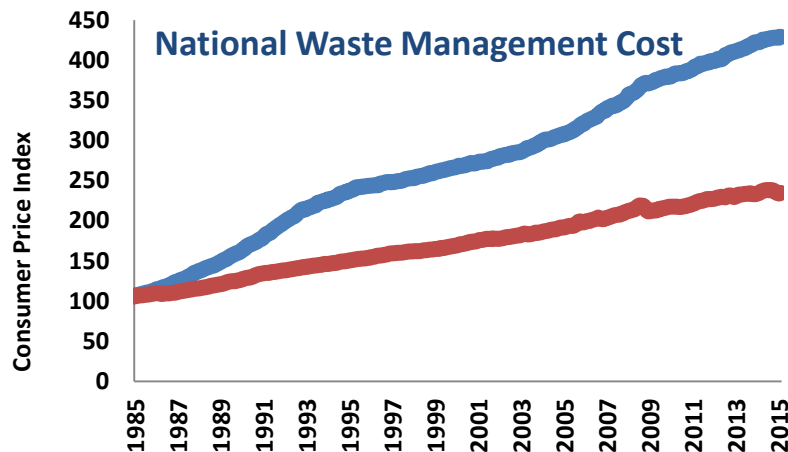
Regional Disposal Capacity is Decreasing Costs are Increasing



Very Few Residential Landfills Remaining



CT's Permitted Current Incineration Capacity is Maxed



Source: US Labor Department, Bureau of Labor Statistics

Source: DEEP 2016 Comprehensive Materials Management Strategy

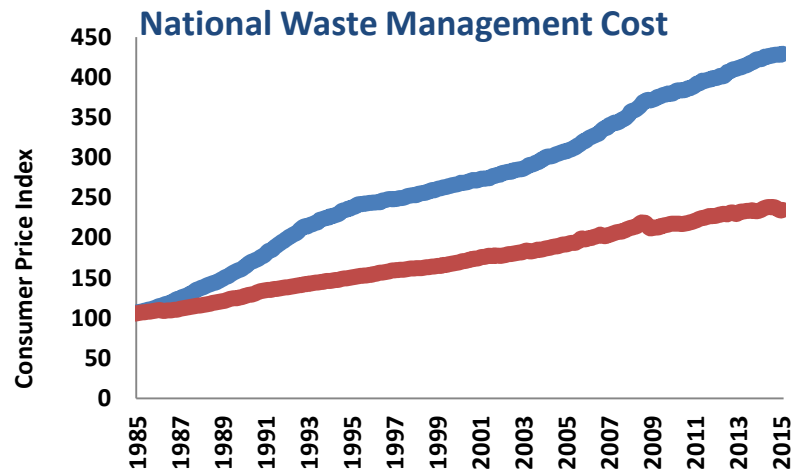
Regional Disposal Capacity is Decreasing Costs are Increasing



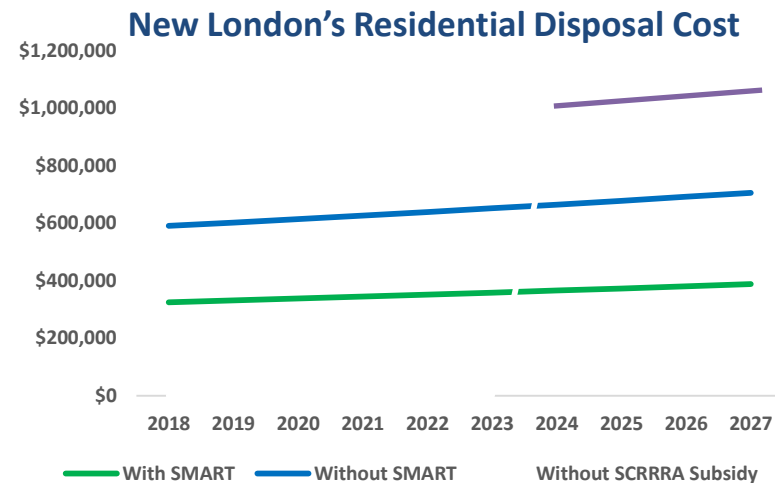
Very Few Residential Landfills Remaining



CT's Permitted Current Incineration Capacity is Maxed



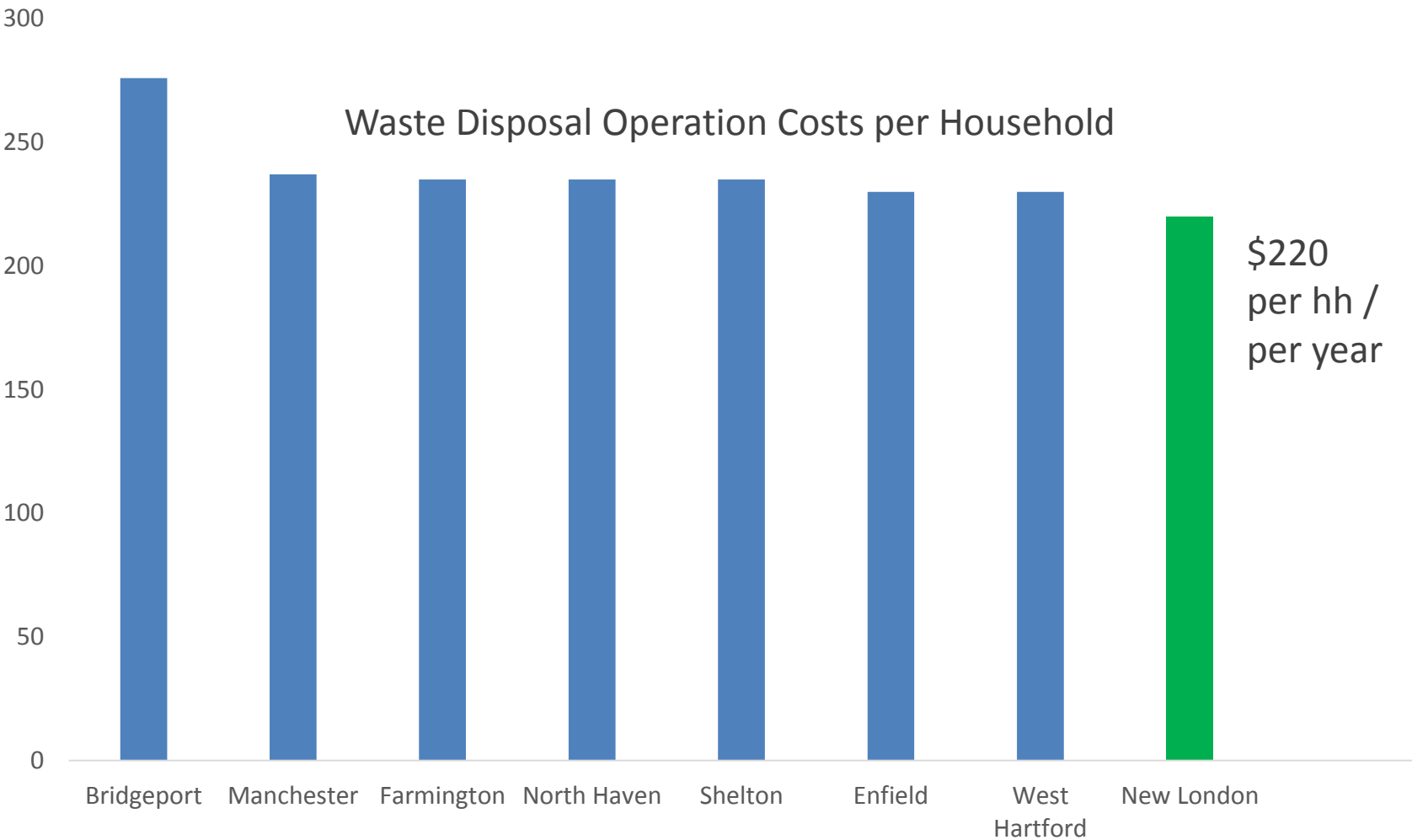
Source: US Labor Department, Bureau of Labor Statistics



Source: DEEP 2016 Comprehensive Materials Management Strategy

New London's DPW Operating Budget

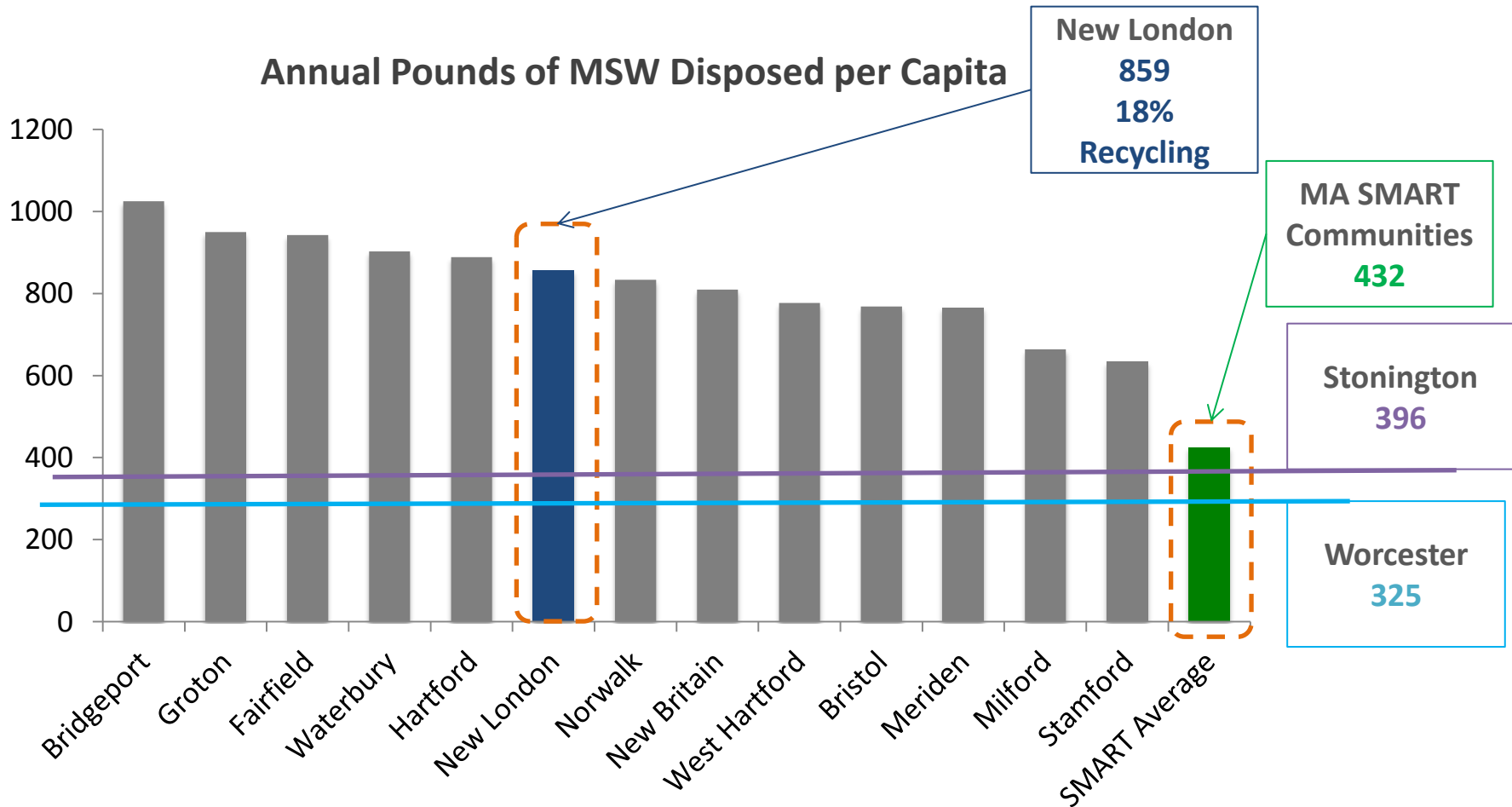
- New London's DPW operating budget is lower than most CT communities.



DPW resources are stretched and new equipment is needed

New London's Ranking

Each resident in CT throws away about 798 pounds of trash every year.



Note: Figures are calculated using MSW tonnage data provided by the municipalities themselves; SMART Average is specific to bag-based SMART programs in the state of MA. WasteZero tracks the results of a large number of bag-based programs across New England (and a few outside New England) in its WasteZap® database. The average for all bag-based SMART programs in that database is 440 annual pounds per capita.

Most Waste in Garbage Cans Is NOT Trash

What is the bottom line

Most of what we throw away in New London can easily be **reused, recycled or composted.**

- **75%** - the amount of waste that could be diverted according to the US EPA.
- **33 lbs** – the amount of trash the average home in West Hartford throws away every week



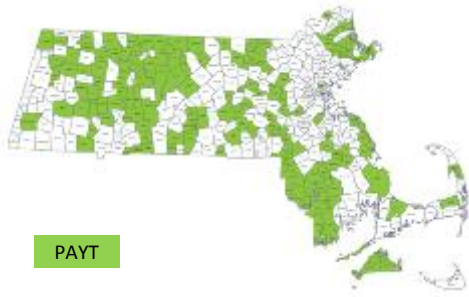


Is SMART the Best Solution?

Similar Efforts in Other States

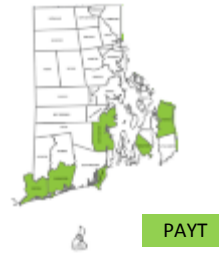
SMART has a strong presence in the Northeast. The experience of municipalities in this region can be productively applied in Connecticut.

Massachusetts



- 41% of MA's cities and towns use PAYT.
- Average waste reduction in bag-based communities has been 44%.
- The latest city to adopt PAYT, Fall River, is exceeding its goals.

Rhode Island



- Currently, 6 of RI's 39 municipalities have PAYT.
- Rhode Island Resource Recovery Corporation (RIRRC), which handles all of RI's solid waste, is currently designing a uniform statewide PAYT program for RI.

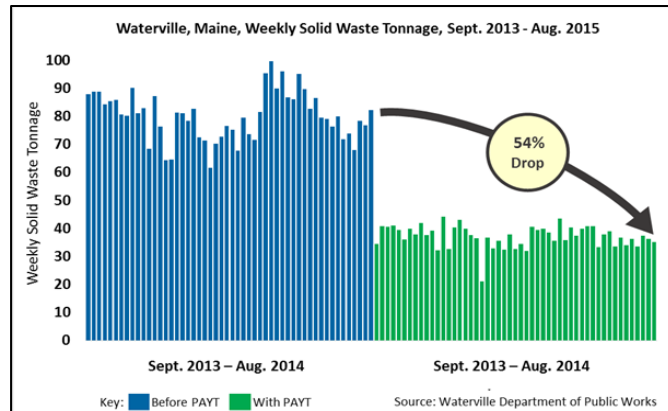
Maine



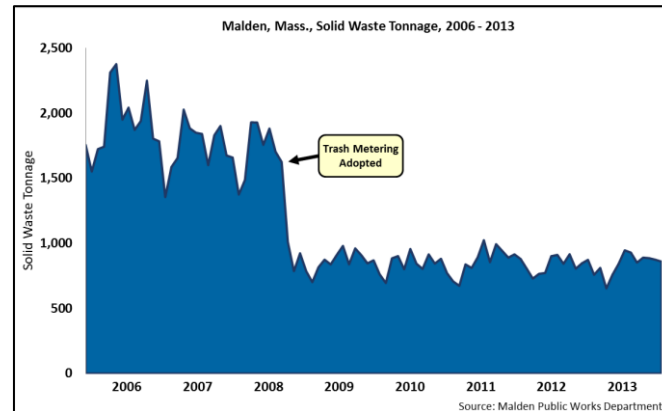
- 31% of ME's 1.33 million people (about 417,000) live in PAYT towns.
- Average waste reduction in bag-based communities has been 44%.
- 33 additional towns with a combined total population of more than 400,000 are also currently considering SMART/PAYT.

In addition, unit-based pricing for solid waste is mandatory in Minnesota, Oregon, Vermont, and Washington; Massachusetts is also considering this move.

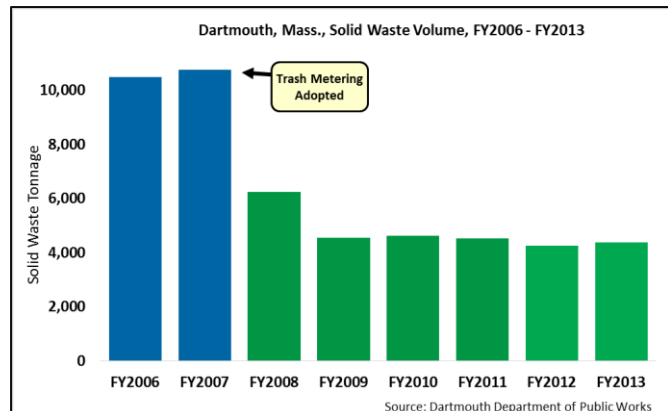
SMART Trash Works



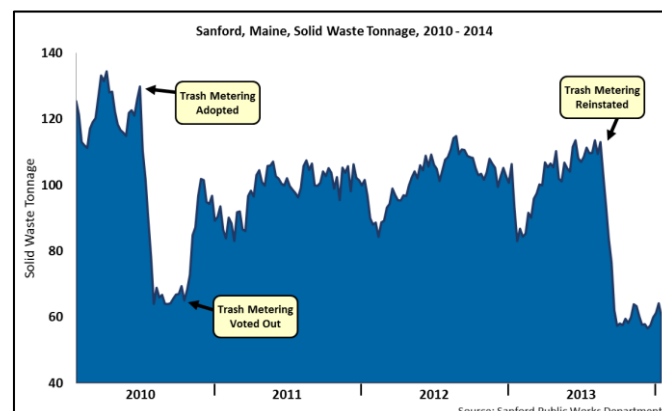
WATERVILLE, MAINE
54% DECLINE IN MSW IN 1 YEAR



MALDEN, MASS.
52% DECLINE IN MSW OVER 5 YEARS



DARTMOUTH, MASS.
59% DECLINE IN MSW



SANFORD, MAINE
POWERFUL MESSAGE

The SMART System is used in thousands of US and international cities and towns

Case Study—Fall River, MA

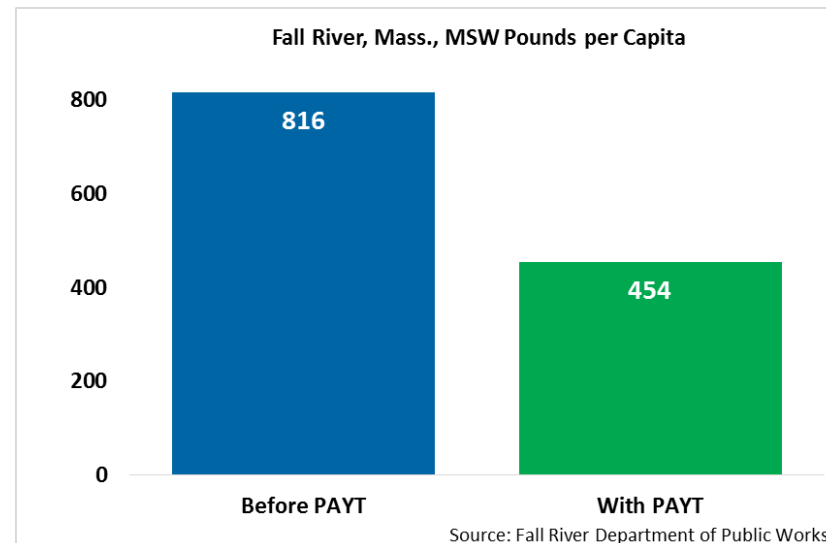
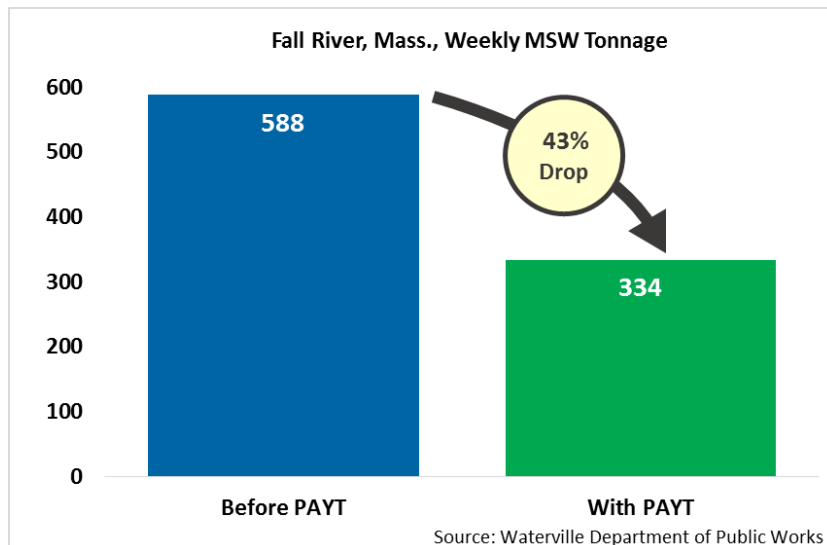
Successful PAYT With Existing Single-Stream Curbside Recycling

The city of Fall River, Mass., began a pay-as-you-throw program in August 2014 as a supplement to its system of curbside automated MSW collection with single-stream recycling. Even in light of the advanced existing infrastructure, the results were immediate and significant.

In the first month of the program, the city saw a 43% decrease in solid waste tonnage

89,000 population
\$29,000 median income/HH
Bag-based PAYT with curbside automated trash and single-stream recycling collection

<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>



How Would a SMART Program Work?

The Way Things Work Now

1. Hidden in Tax Bill



2. No Incentive







3. Unlimited Trash



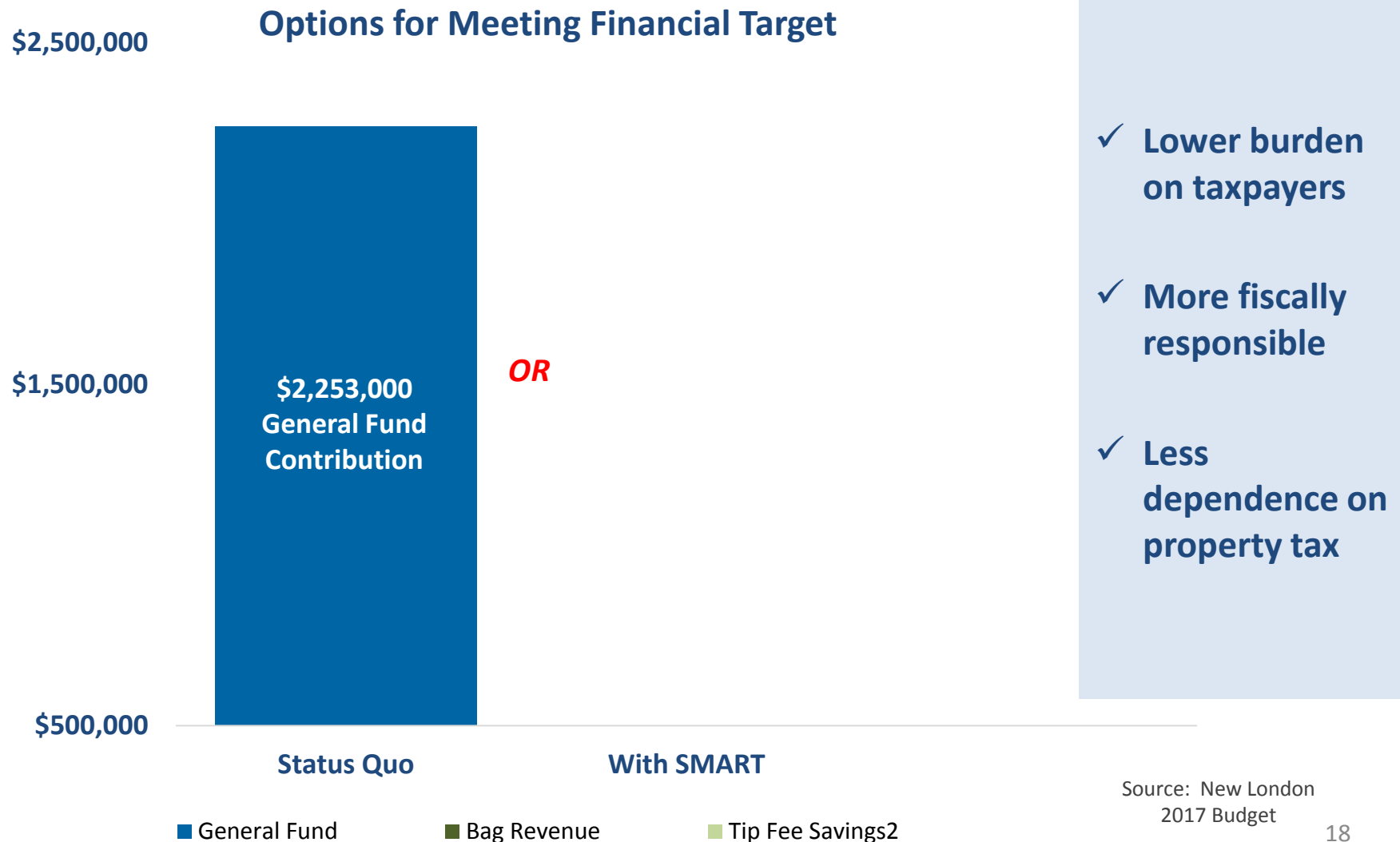
Those who waste less subsidize the behavior of ever....

SMART Trash is Fair

Public Service	Measuring Device	Pay for What You Use
Electricity		
Water		
Gas		
Trash		Why Not?

More Efficient Revenue-Generation for the City

SMART can help New London cover solid waste costs while asking less from residents to fund the solid waste budget. A SMART program will cost DPW 12% less to manage.



More Efficient Revenue-Generation for the City

SMART can help New London cover solid waste costs while asking less from residents to fund the solid waste budget. A SMART program will cost DPW 12% less to manage.

Options for Meeting Financial Target

\$2,500,000

\$1,500,000

\$500,000



\$2,253,000
General Fund
Contribution

OR



\$1,625,254
General Fund
Contribution

Status Quo

With SMART

■ General Fund

■ Bag Revenue

■ Tip Fee Savings2

✓ Lower burden
on taxpayers

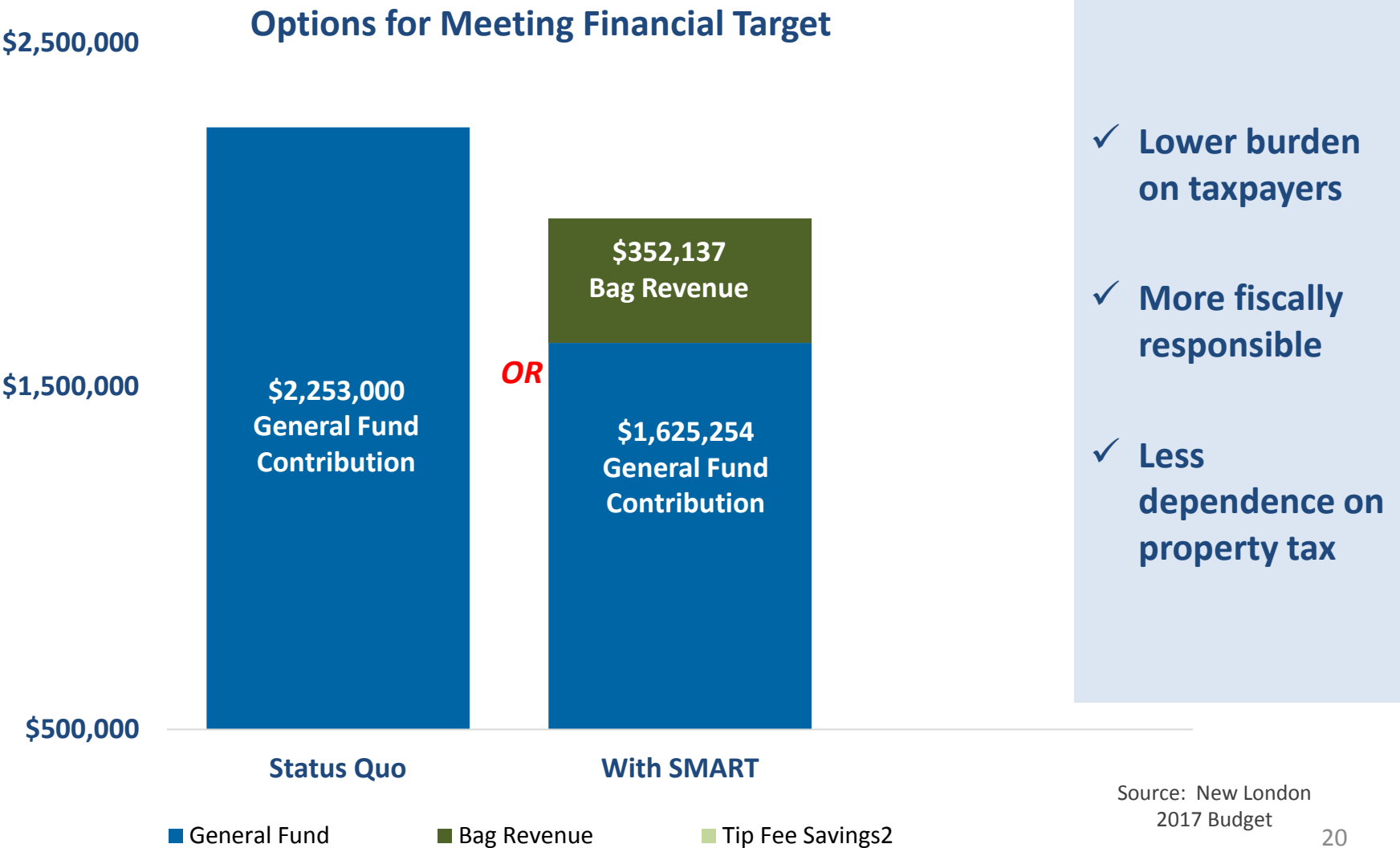
✓ More fiscally
responsible

✓ Less
dependence on
property tax

Source: New London
2017 Budget

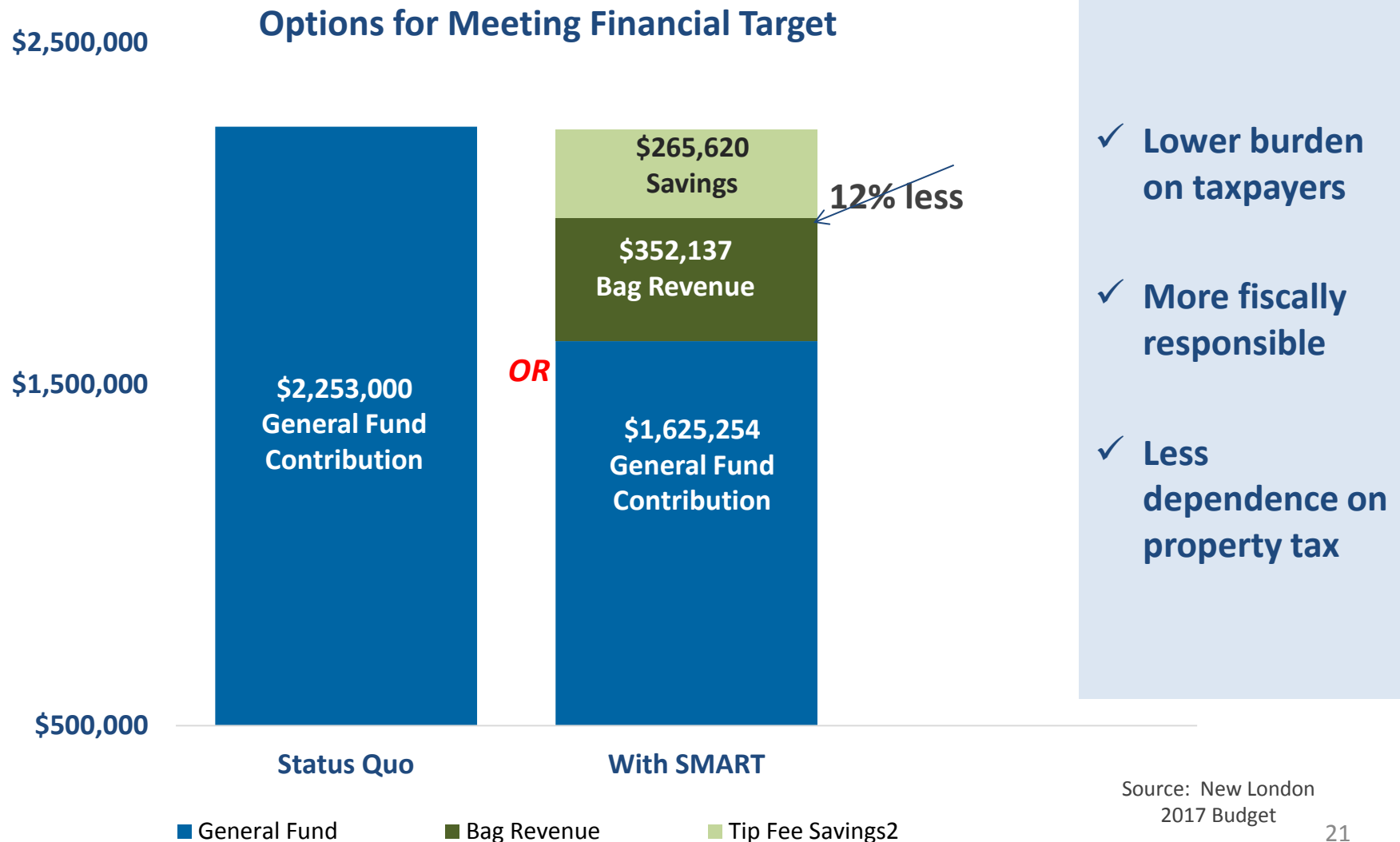
More Efficient Revenue-Generation for the City

SMART can help New London cover solid waste costs while asking less from residents to fund the solid waste budget. A SMART program will cost DPW 12% less to manage.



More Efficient Revenue-Generation for the City

SMART can help New London cover solid waste costs while asking less from residents to fund the solid waste budget. A SMART program will cost DPW 12% less to manage.



SMART has No Impact on Household Operations

Now

Buy Trash Bags at Store



Put Trash Bags in Cart



Take Cart to Curb



With SMART

Buy Trash Bags at Store



Put Trash Bags in Cart



Take Cart to Curb



SMART Bags Pay for Trash Disposal



\$1.00 per Bag

Bag & Bag Distribution	\$0.32
Trash Disposal Cost	\$0.68
Total Cost	\$1.00



\$.80 per Bag

Bag & Bag Distribution	\$0.21
Trash Disposal Cost	\$0.39
Total Cost	\$0.60

Will a SMART Program Cost My Family More?

The average home in New London spends \$220 per year for solid waste services. SMART gives residents control over their costs.

Weekly Share of Tax

\$4.23

(\$220 per year)



OR

\$4.75

Will a SMART Program Cost My Family More?

The average home in New London spends \$220 per year for solid waste services. SMART gives residents control over their costs.

Weekly Share of Tax

\$4.23

(\$220 per year)

Weekly Share of Tax

\$3.05

(\$159 per year)

OR



\$4.75

Per week

Will a SMART Program Cost My Family More?

The average home in New London spends \$220 per year for solid waste services. SMART gives residents control over their costs.

Weekly Share of Tax

\$4.23

(\$220 per year)

Weekly Share of Tax

\$3.05

(\$159 per year)



\$4.75
Per week

OR

Small Bags Only

+

Large Bags Only



\$3.65
Per week



\$4.05
Per week

OUT OF POCKET \$25.17 will yield a return of \$60.91

Estimated Annual Financial Impact of SMART*

Bag purchase price:

Small: \$.60

Large: \$1.00

	1 Year	3 Years	5 Years	10 Years
Revenue Bag Sales ¹	\$352,137	\$1,058,524	\$1,767,740	\$3,553,229
Savings Tipping Fees	\$265,620	\$798,454	\$1,333,422	\$2,680,231
Net Program Impact	\$617,756	\$1,856,978	\$3,101,162	\$6,233,460

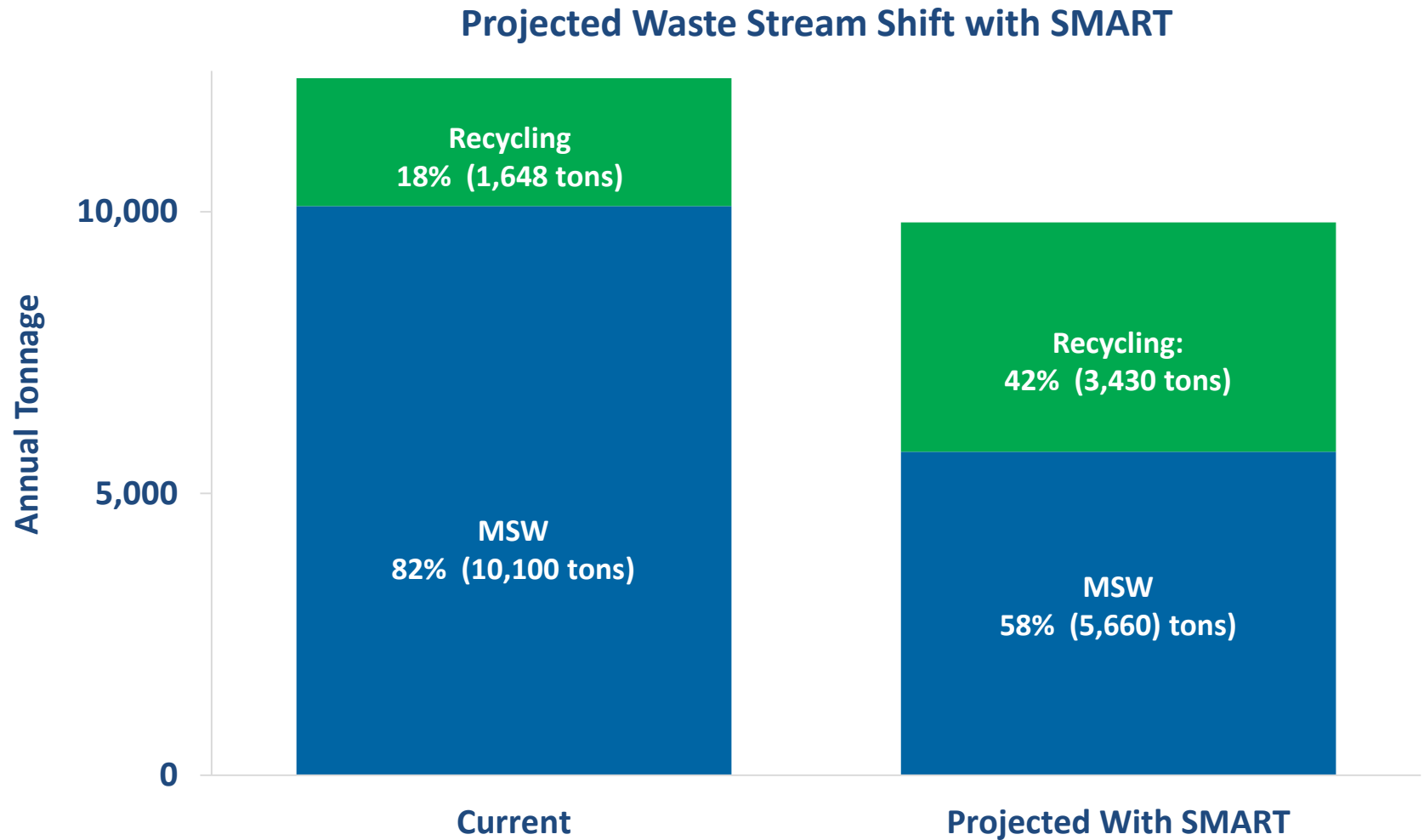
N

1. Benefits and Savings for Years 3,5, and 10 are cumulative

2. Revenues are Net of program services and supplies

New London could realize \$6.2 million in benefits and savings over the next ten years.

SMART's Impact on the Waste Stream



Environmental Impact of SMART



The projected 4,440-ton reduction in MSW would, according to the EPA Waste Reduction Model (WARM), generate energy savings equivalent to those listed below.

CO₂e (Greenhouse Gas)

Annual
Reduction

8,400
Metric Tons

- Reduced carbon footprint
- Less pollution
- Healthier environment for residents



Equivalent to:



Removing
1,600
passenger vehicles from the road

or

Reducing gasoline consumption by

939,000

gallons



BTUs (Energy Used)

Annual
Reduction

70,000
Million Units

- Reduced costs
- Reduced carbon footprint
- Increased energy security



Equivalent to:



Powering
620
residential homes

or

Installing

8,600

rooftop solar panel arrays



Thank You!



Contact for more information:

Kristen Brown
Vice President, Municipal Partnerships
kbrown@wastezero.com
(c) 843.241.3276