Pay As You Throw / FUTURE Overview

1. Basics – PAYT – SMART - FUTURE
2. New Windsor Pilot
3. Frequent Objections
Using recycling rates as a benchmark can create a false sense of accomplishment. If Zero Waste is the goal, than tracking the remaining waste is the most reliable indicator.

Source: MA DEP, Commonwealth Magazine
Disposal per Capita – DEEP Participants

SMART communities dispose of less residential MSW per capita than most Connecticut cities and towns. Worcester throws away 324 lbs. per capita.

Note: Figures are calculated using MSW tonnage data provided by the municipalities themselves.
Residential Per Capita Benchmark

Regional of Non-PAYT vs. PAYT Communities

Source: Municipalities themselves date is between FY 2015-2017
Moving Closer to Zero Waste

PAYT with Bags (average 344 lbs per capita)
PAYT with Variable Carts plus Curbside Food Collection (average 510 lbs per capita)
64 Gallon Overflow Carts
PAYT with Variable Carts no Curbside Food Collection (average 562 lbs per capita)

Source: Institute for Local Self Reliance date is between FY 2013-2017
Results: MSW Reduction

**WATERVILLE, MAINE**
54% DECLINE IN MSW IN 1 YEAR

**DARTMOUTH, MASS.**
59% DECLINE IN MSW

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

**SANFORD, MAINE**
POWERFUL MESSAGE

WasteZero’s database shows an average waste reduction of 44%

Source: Municipalities themselves
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.

**Source:** Fall River
SMART – Decreases Overall Generation by 20+%  

SMART’s price signal produces **source reduction** – moves materials into all other programs, and increases donations and home composting.

![Bar chart](chart.png)

**Source:** USEPA 2005
World PAYT Efforts

Zero Waste Europe’s 1st Category Municipalities must implement a Pay-as-you-throw rate structure

Europe

- Belgium and Estonia boast the lowest per capita disposal rates and highest recycling rates in Europe. All regions of Belgium have PAYT.
- Most municipalities in Switzerland including Zurich have PAYT
- Regions in Austria, and Italy also demonstrate very low per capita disposal rates (between 500-300 lbs) and are part of Zero Waste Europe.

South Korea and Japan

- Seoul Korea reduced waste by 42% through by using standard PAYT trash bags for residents and businesses. The program began in 2000.
- Many parts of Japan including parts of Tokyo and Kyoto use special bags to incentivize waste reduction.

Taiwan

- Taipei residents use official blue trash bags to bring waste to the curb. Residents place bags directly into the truck. Recycling can be loose or in special red bags and food scraps are also collected separately
- Taipei reduced overall waste generation by 1/3 and commodity recycling is over 50%

There are currently 302 municipalities moving toward Zero Waste in the European Union!
New Windsor Pilot
FUTURE Bags Pay for Trash Disposal

<table>
<thead>
<tr>
<th></th>
<th>$1.20 per Bag</th>
<th>$.65 per Bag</th>
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<tbody>
<tr>
<td>Bag &amp; Bag Distribution</td>
<td>$0.30</td>
<td>$0.20</td>
</tr>
<tr>
<td>Trash Disposal Cost</td>
<td>$0.90</td>
<td>$0.45</td>
</tr>
<tr>
<td><strong>Total Retail Price</strong></td>
<td><strong>$1.20</strong></td>
<td><strong>$0.65</strong></td>
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How FUTURE Works: It’s Simple!

1. Trash collection works the same as today (from the municipality or hauler).

2. Recycling collection remains free and works the same as today (from the municipality or hauler).

3. FUTURE trash bags would cost $0.65 (13-gallon kitchen bags) and $1.20 (33-gallon large bags), and will be available at convenient locations.

4. The FUTURE bag draws attention to waste while providing residents an economic incentive to recycle more and throw away less.
Average Weekly Bag Use per Household in New Windsor

The average household (HH) will use approximately one 33-gallon bag per week.

Based on data collected from hundreds of unit based programs:

- Residential trash in Carroll County will drop by 44% (from 56,673 tons/yr. to 31,737 tons/yr.), In New Windsor (497 tons to 278 tons)

- In New Windsor 278 tons per year equals 20 lbs per home per week

- A 33-gallon bag holds 21.25 lbs. of trash based the average PAYT type bag program (data captured from over 3 million homes)

- That’s .95 33 gallon bag per week per home in New Windsor.
FUTURE Saves Money for New Windsor

New Windsor spent $31,782 on waste disposal in 2016. Residents in New Windsor paid an average of $60 per household for disposal through taxes. Municipalities can choose how to handle the savings.

Solid Waste Expense, New Windsor

- $10,000
- $70,000
- $50,000
- $30,000
- $10,000
- $31,782 Tip Cost
- $55,516 Collection Cost
- $31,782 Tip Savings to be used for tax reduction, rebate, added service, etc.
- $55,516 Collection Cost

Status Quo

FuTuRe Program

Total Expense

$87,298

$55,516

FUTURE:

✓ Fairer for residents
✓ More fiscally responsible
✓ Makes Public Works Dept. less dependent on property tax

Source: New Windsor Budget
Results: Month 2 New Windsor (FuTuRe) Pilot

- Recycling has increased by over 80%
- Overall waste generation (recycling + trash) is down by 28%
- Waste is down by 44% Per capita trending at 388
- Average trash set out per home is tending at 17lbs per week
- Average annual savings with per home trending at $58 (plus savings on regular trash bags)
- Average annual expense per home is trending at about $51.18
- Average expense per household for pilot is trending at $34 (for the period of the pilot)
- 41 homes had only recycling set out (last collection day)
- Collection time has decreased for the hauler (7am to 10 am). Prior to FuTuRe route was scheduled to end around 12 or 12:30 (depending on number of drivers)
- According to the town resident calls have decreased
- Compliance is 99%

New Windsor is on track to meet the 44% waste reduction goal, suggested in WasteZero’s 2017 report to Carroll County
Projected Tipping Fee Savings for Residents with FUTURE

Tip and Transport expense will decrease by 44% from $3,627,000 to $2,031,000 in year one with a FUTURE Program. Revenue from FUTURE bags will cover the cost of tip and transport for the county.

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$10,000,000 $20,000,000 $30,000,000 $40,000,000 $50,000,000

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Current Program FuTuRe

Projected Cumulative Tip Fee Costs Over 10 Years

Current vs. FUTURE

FuTuRe SAVES $20 Million (over 10 years)

Tip Fees Under Current Program
Tip Fees Under FuTuRe

YR1 YR2 YR3 YR4 YR5 YR6 YR7 YR8 YR9 YR10

1 Projection factors in regional waste disposal capacity changes and assumes a 2.5% annual increase each year and assumes that all waste is transported out of state preserving the landfill.
Pilot Performance Metrics and Reporting

1. Weekly tonnage waste and recycling (year to date comparison)

2. Monthly revenue (year to date comparison)

3. Contamination in recycling

4. Weekly compliance report from County – photographs

5. Comments observations from hauler or staff, and residents, illegal dumping etc.
Frequent Objections
There must be a better way. We should study this more thoroughly and try other solutions first.

*The State of Connecticut, as well as other states and cities around the country have worked for decades to find programs that increase recycling and reduce waste.*

*SMART is the single most effective way to reduce trash while also saving money.*
West Hartford Switch from Bi-weekly to Weekly Recycling

Year to date comparison

2016: 26% MSW, 74% Recycling
2017: 26% MSW, 74% Recycling
SMART

Compared to SMART

Legend:
- MSW
- Recycling
Westport banned plastic bags about 10 years ago. Banning plastic bags is also a difficult political action. Although the ban was important for multiple reasons, it’s effect on waste volume is minimal.

10-Year Estimated Plastic Bag Ban Results:

- 390 tons
- $27,300 in disposal savings

10 Year Estimated SMART Results:

- 80,000 tons
- $7 million in disposal savings
This is unfair to the good recyclers because they will pay more.

This is not the case. Currently the good recyclers are subsidizing everyone else and as the cost of waste increases the subsidy increases.
Does the Program Penalize Good Recyclers?

A FUTURE Program would incentivize homes that are not reducing reusing and recycling as much as they should.

*Curbside Value Partnership data

- **When trash is hidden in the taxes, the ‘Always Recyclers’ are covering up the behavior of those that are not participating.**

- **As tip costs rise, the ‘Always Recyclers’ will be paying disproportionally more per ton for trash than the ‘Sometimes Recyclers.’**

2.5% are Always Recyclers, another 13.5% are Frequent Recyclers, but 68% are only Sometimes Recyclers.
Frequent Objections

This information does not tell the entire picture. What about all the programs that failed?

_There are hundreds of SMART bag programs around the world._

_Only a handful of programs that have been discontinued. Two are located in Connecticut. The programs were discontinued for political reasons, not because of poor results._
Columbia voted at a Town Hall meeting to eliminate the program.
Coventry’s switch from SMART bags to SMART Carts

Source: CT DEEP, Town of Coventry
Residents will not comply and they will dump illegally

Actually, studies show that there is limited to any dumpling and compliance is in the 99% range
How Can the Town Enforce the SMART Program?

SMART compliance is very high and enforcement is usually not a challenge.

Most compliance issues happen during the first 6 weeks of a new program.

Most communities manage these with existing staff.

- Additional support can be provided if compliance is a concern.

A tiered enforcement system is recommended where one is not in place.

In all instances, the cost of enforcement has been a fraction of the financial savings related to SMART.

<table>
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<tr>
<th>Sanford, ME – City-Reported Compliance Rates</th>
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<tbody>
<tr>
<td>Week 1</td>
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<tr>
<td>Week 2</td>
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<tr>
<td>Week 3</td>
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<tr>
<td>Week 4</td>
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<td>Week 5</td>
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Automated Collection
Typical Ongoing Compliance Process

Official bags are placed in automated carts for collection

Trucks are equipped with video cameras mounted to the hopper (standard on most automated trucks)

Camera clearly shows what goes into hopper – driver can easily see bags on camera inside truck

Driver pushes one button on Tablet / app (or similar solution) if non-compliant bags are spotted

Non-compliant addresses are auto-uploaded to central database so notices (or citations) can go out.

Loads can easily be spot checked during start up phase.
Residents will not like it.

Actually, residents like the program once they have given it a try.
What Do Residents think after the Program is implemented

In a 2014 Public Policy Polling survey of almost 1,000 PAYT participants from 10 communities, significant majorities expressed satisfaction with the program.

**High Favorability**

*Do you have a favorable or unfavorable opinion of pay-as-you-throw?*

- Very Favorable: 52%
- Somewhat Favorable: 27%
- Somewhat Unfavorable: 11%
- Very unfavorable: 8%
- Not Sure: 2%

**High Effectiveness**

*Do you feel that pay-as-you-throw is performing better than you expected, as well as you expected, or worse than you expected?*

- Better Than Expected: 38%
- As Well As Expected: 51%
- Worse Than Expected: 10%

**Minimal Political Impact**

*Does having pay-as-you-throw in place make you more or less likely to vote for the officials who implemented it, or does it not make a difference?*

- More Likely: 24%
- Less Likely: 20%
- Not Sure: 3%
A post-implementation marketing campaign built resident confidence and turned a controversial pre-PAYT debate into a program the community is proud of.
Thank You!

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Financial Savings for Households

Residents using the average number of pay-as-you-throw bags—or even slightly more than that—would still pay less for solid waste services with PAYT than with the current trash fee.

<table>
<thead>
<tr>
<th>Current System</th>
<th>Estimated With PAYT</th>
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<tbody>
<tr>
<td>Baseline Tax</td>
<td>$236</td>
</tr>
<tr>
<td>With 1 Small Bag per Week: +$65</td>
<td>Baseline Tax + $114</td>
</tr>
<tr>
<td>With 1 Large Bag per Week: +$39</td>
<td>Households using one large PAYT bag per week would pay $218 per year for solid waste services.</td>
</tr>
</tbody>
</table>

PAYT gives residents control over their costs, and makes it easy to save money on trash services.