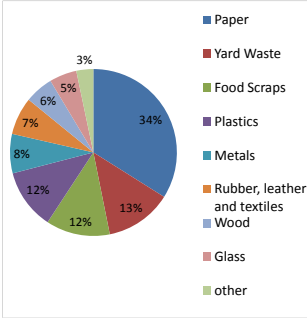


Changing the Way New Mexico Values Trash



Green Waste Solutions

New Mexico Waste Characterization

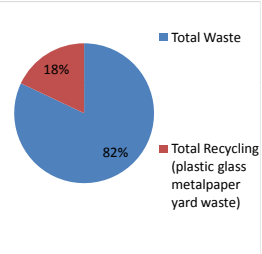


- 1,644,798 tons landfilled (2010)
- About ½ the material buried in landfills comes from packaging
- Most packaging is easily recyclable
- 49% of waste in New Mexico landfills comes from home
- New Mexico waste disposal cost based on an average tip cost of \$31.29 \$51,500,000 (2010)

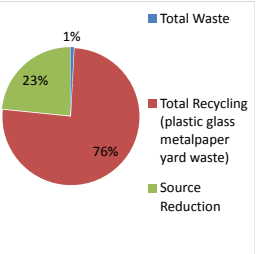
Based on USEPA Franklin Associates 2009 metrics

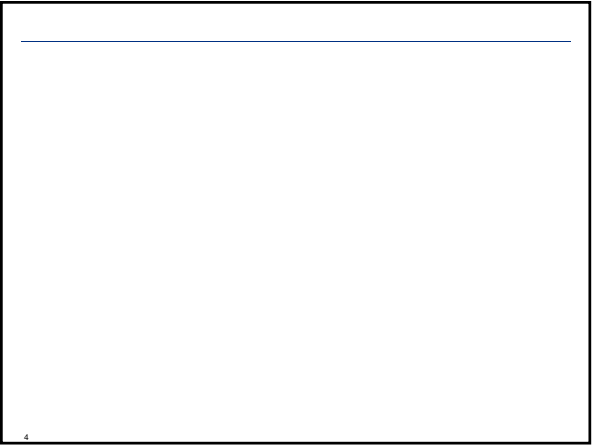
New Mexico predictions with SMART BET

Before



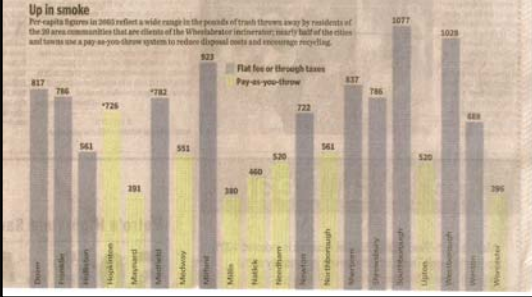
After





HOW DO WE KNOW PAYT WORKS?

Up in smoke Boston Globe 2007

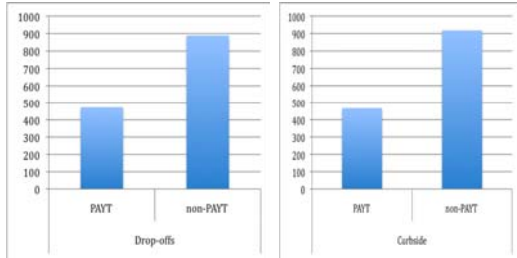


Municipalities generate 45% less waste in PAYT communities

PAYT: an incentive to Reduce Reuse and Recycle

Drop-offs 114 communities

Curbside 115 communities



New England Case Study [2010 GWS and ICF]

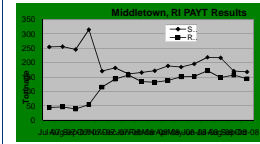
7

Immediate sustainable change

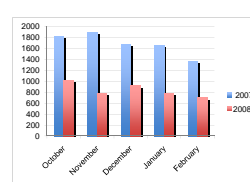
Worcester MA



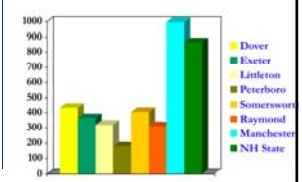
Middletown RI



Malden MA

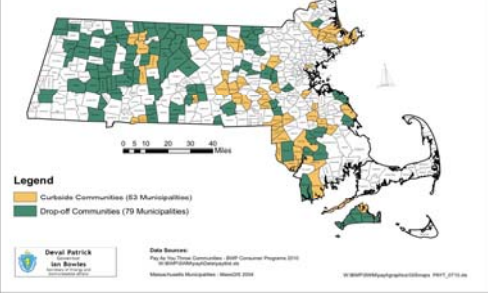


New Hampshire



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Municipal Solid Waste Pay-As-You-Throw Communities in Massachusetts
November 2010



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HOW DO WE GET STARTED?

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Community Dumpsters are unique: Two Options

- **Create a Curbside Program**
 - Bags or Containers
 - Two Tiered or Proportional Rate
- **Continue with the 'Community Dumpster' and modify**
 - Bags
 - Alternative ideas
 - Two Tiered or Proportional

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Rate Structure Options

- | Proportional | Two Tiered |
|---|---|
| <ul style="list-style-type: none"> • All fixed costs within the unit based cost (administrative costs, convenience center/ transfer station overhead). • All variable costs included in the unit based cost (cost of trash tip/transport). • All costs within a bag or tag charge. | <ul style="list-style-type: none"> • All fixed costs remain in the tax or fee structure (administrative costs, convenience center/ transfer station overhead). • All variable costs included in unit based bag to tag charge (cost of trash tip/transport). |

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Proportional Variable Structure vs. Linear Structure

Variable

- Increments not equal.
- Based on real cost of logistics (collection cost per stop is the same no matter what size is picked up).
- 32 gallon \$20 per month
- 64 gallon \$24 per month
- 96 gallon \$28 per month

Linear

- Equal increments.
- Based on the assumption that 100% of users choose the smallest container.
- 32 gallon \$25 per month
- 64 gallon \$50 per month
- 96 gallon \$75 per month.

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Hauler program two-tiered or proportional in conjunction with a drop off

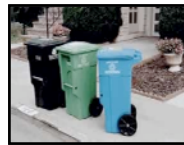
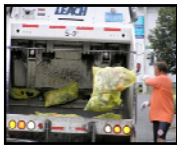
1. Haulers create their own unit based program (either two-tiered or proportional)
 - Monitored during annual permit process.
 - Transfer station or drop off uses a bag or tag or punch card or credit card for residents (either two-tiered or proportional).
2. Municipality creates a two-tiered program both Haulers and drop off use a special color bag



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Option 1: Change to Curbside Program

- Change from Dumpster program to a **curbside container** program.
 - Automated or Semi Automated collection.
 - Create rate structure that is two tiered or proportional.
- Change from Dumpster to **curbside bag** program.
 - Bears could be an obstacle .
 - Could use bags in conjunction with a container.



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Curbside- Containers (two-tiered)

- Two-tiered container structure could be developed by determining a cost to cover the new trucks and increased logistical overhead and including within the monthly flat fee.
 - There will be some savings over current fee:
 - ✓ Number of pick ups weekly
 - ✓ Total tonnage tip reduction
- The container cost should be based on the assumption that all or most homes would choose the **smallest container size of 32 gallons**.

• Sample simplified cost structure:

	32-Gallon	64-Gallon	96-Gallon
Container cost amortized over 4 years	10	15	20
Estimated annual cost per container of trash	36.5	73	109.5
Sub total	46.5	88	129.5
Round up to cover replacement or damaged carts, billing, collections and cart inventory	50	100	150

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Sample Rate Structures for Bags (two-tiered)

- The cost of the trash bag should include cost of the bag itself plus the cost to dispose of the contents within, based on weight.
- Two-tiered container structure could be developed by determining a cost to cover the new trucks and increased logistical overhead and including within the monthly flat fee.
 - There will be some savings over current fee:
 - ✓ Number of pick ups weekly
 - ✓ Total tonnage tip reduction

Sample cost structure

Average cost per ton disposal	\$40.00
Average cost per pound [cost per ton divided by 2000 lbs]	\$0.02
Average cost per bag [manufactured and distributed to muni office or direct to retail location]	\$0.25
Average cost per sticker [manufactured and delivered]	\$0.03
Total suggested bag cost [based on 23 lb weight] 33 gallon bag	\$0.71
Total suggested sticker cost [based on 23 lb weight] 33 gallon bag	\$0.49

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Option 2: Bag Program – Community Dumpster

- Like a "neighborhood watch program" - Neighbors check out each others trash.
 - Peer pressure will create a silent enforcement.
 - Nominate a "Bag Captain".
- More difficult to enforce but not impossible.
 - Install a camera on the truck to record time location and load as its dumped.
 - Examine load when it comes to the transfer station or landfill.
 - Examine (spot check) contaminated bags.
 - There may be a cost of a full time inspector.
 - Write articles in local news talking about new position and fines related to illegal dumping.
- Could be achieved with a free bag distribution.
 - Provide a certain number of bags in included and charge for additional bags.

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Other Variations – Community Dumpster

- Focus on Recycling
 - Offer curbside recycling.
 - Single stream or bi-monthly alternating week dual stream.
 - Offer additional recycling at drop off.
 - Offer paper recycling dumpster with trash dumpster.
- Weight based program
 - Weight the dumpsters and bill the cluster residents by the lb monthly.
 - Provide recycling at the dumpster location.
- Get creative ask the high schools to submit solutions.

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Suggestions

- Create an advisory committee to review feasibility.
- Assess costs for various options
- Assess current recycling levels.
- Consider additional programs as part of the SMART implementation. [glass, chipboard, swop shop etc.]
- Review ways to deal with, low income families.
- Review procedures for illegal dumping.
- Create public relations strategy for moving forward.

SMART BET
Saving Money and Reducing Trash Benefit Evaluation Tool

General Information

City State
 Year of data City population affected by SMART

Disposal Data

Current residential disposal tons per year Landfill/combustion tip fee per ton

Waste Disposal Breakdown (tons)

Landfill	<input type="text" value="822,399"/>	Disposal Practice (%)	<input type="text" value="100"/>	Distance to landfill	<input type="text" value="50"/> miles
Waste-to-energy (WTE)	<input type="text" value="0"/>	Distance to WTE facility	<input type="text" value="0"/>		

Current residential combined recycling and composting tons per year Recycling cost per ton

Waste Stream Composition

Current disposal stream composition by weight (%)		Current combined recycling and compost stream composition by weight (%)	
Misc	<input type="text" value="93"/>	Misc	<input type="text" value="93"/>
Glass	<input type="text" value="73"/>	Glass	<input type="text" value="33"/>
Plastic	<input type="text" value="205"/>	Plastic	<input type="text" value="33"/>
Paper	<input type="text" value="265"/>	Paper	<input type="text" value="565"/>
Wood	<input type="text" value="93"/>	Wood	<input type="text" value="23"/>
Food Scraps	<input type="text" value="215"/>	Food Scraps	<input type="text" value="15"/>
Yard Trimmings	<input type="text" value="81"/>	Yard Trimmings	<input type="text" value="265"/>
Total	100%	Total	100%

SMART BET [benefit evaluation tool]

SMART BET
Saving Money and Reducing Trash Benefit Evaluation Tool

Results for Stamford, Connecticut for 2009

Results

Estimated cost savings from implementing SMART

Estimated GHG savings from implementing SMART metric tons CO₂ equivalent per year^a
 (compared to current disposal practice)

Equivalent to annual emissions from passenger vehicles^a

^a Positive number indicates cost savings or GHG savings; negative number indicates increased cost or GHG emissions.

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Green Waste Solutions

www.thewastesolution.com
 Kristen Brown 843-241-327

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