

US EPA ARCHIVE DOCUMENT

“Pay-As-You-Throw”

Unit Pricing of Municipal Solid Waste



MSW Hierarchy Pyramid



Potential Benefits

■ Encourages the Three Rs:

- Reduce
- Reuse
- Recycle





Potential Benefits

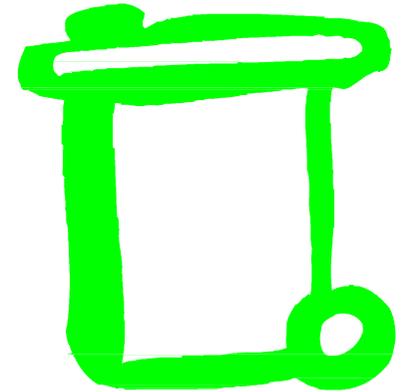
■ Encourages the Three Es:

- Environment
- Economics
- Equity



Waste Reduction Results

■ Perkasie, PA	54%
■ MN Town 1	60%
■ MN Town 2	37%
■ Duke University Study of 14 cities	44%

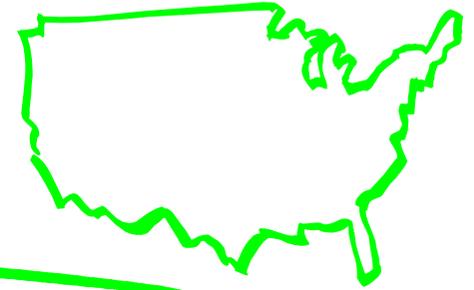


6 MA Cities

■ Before Unit Pricing	1.5 - 4.5 ppd
■ After Unit Pricing	0.89 - 1.09 ppd

■ Cornell University, Tompkins County, NY	76% of residents reduced waste
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Different Unit Pricing Programs



Community	Population	Type of Program	Change in MSW	Change in recycling
■ Plantation, FL	64,000	Bags	*	+21%
■ Perkasi, PA	7,900	Bags	-54%	+50%
■ High Bridge, NY	4,000	Stickers	*	+18%
■ Illion, NY	9,500	Bags	-51%	+41%
■ Pasadena, CA	119,374	Can	-21%	*
■ Loveland, CO	31,000	Stamp	-62%	*
■ Austin, TX	450,000	Can	-40%	*
■ Dupage County, IL	668,000	Bags	-53%	*

* Data not available

Deciding Whether to Use Pay-As-You-Throw

- **Will the program meet our MSW goals?**
- **Will residents support the program?**
- **Will costs and revenues balance?**



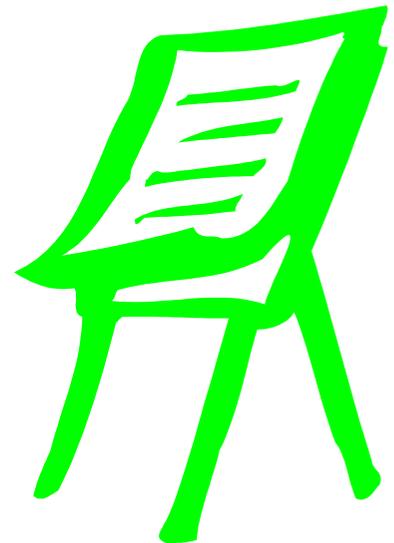
Pay-As-You-Throw Goals (Examples)



- **Raise sufficient revenues**
- **Encourage MSW reduction through price signals**
- **Convey a better understanding of social costs to citizens**
- **Charge for recycling and other complementary programs**
- **Allow for the needs of special groups**
- **Keep the program simple to use and run**

Education and Outreach

- **Need the support of residents!**
- **Build consensus with an outreach campaign**
- **Citizens' advisory council can help:**
 - **Set goals**
 - **Build consensus**





Building Consensus



- **Explain current MSW issues**
- **Present community's MSW goals**
- **Explain how Pay-As-You-Throw can meet these goals**
- **Residents more likely to support program when they see tangible benefits**

Techniques for Building Consensus



- **Hold public meetings**
- **Issue press releases/outreach to local media**
- **Prepare briefs for elected officials**
- **Work with retailers**
- **Enclose information with utility bills/other mailings to residents**



Rate Structure Container Options

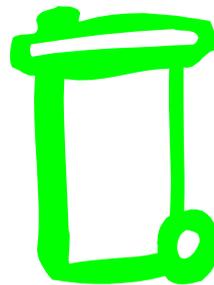
■ **Tags**



■ **Bags**



■ **Cans**







Rate Structure Systems for Unit Pricing

■ **Proportional
(linear)**



■ **Variable
Container**



■ **Two-tiered/
Multi-tiered**



Complementary Programs

- **Recycling collections**
- **Yard trimmings collections for composting**
- **Bulky items pickups**



Designing a Rate Structure

■ Costs

- **Estimate Demand:**
_____ cubic yards/tons MSW
- **Determine Services**
(curbside recycling, low-income assistance, etc.)
- **Estimate Costs:**
\$ _____ fixed and variable costs



Designing a Rate Structure

■ Revenues

- Develop Rates: \$ _____ per unit

- Calculate Revenues:

_____ units MSW x \$ _____ per unit = \$ _____



Designing a Rate Structure

■ Balance

- Weigh costs against revenues
- Adjust costs and/or revenues as needed





Challenges and Solutions

- | | |
|---|---|
| ■ Illegal dumping | Education, legal diversions, enforcement |
| ■ Multi-family housing | Include charges in rent, bar code chutes |
| ■ Low-income groups | Rebates, discounts |
| ■ Covering costs & revenue stability | Two-tiered billing |
| ■ Regressivity & hidden tax issues | Appropriate pricing and refunds |