“Pay-As-You-Throw”

Unit Pricing of Municipal Solid Waste
MSW Hierarchy Pyramid

- Waste Prevention
- Composting and Recycling
- Landfilling and Combustion
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
## Different Unit Pricing Programs

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

* 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

\[ \text{Costs} \quad \text{\$} \quad \text{Revenues} \]
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