Impacts of Single-Stream Recycling: The Philadelphia Story

Northeast Recycling Council 2015 Spring Conference

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City of Philadelphia
About Philadelphia:

• Fifth-largest City in U.S. with 1.55 million residents
• Consolidated city-county
• Residential MSW collected by Streets Department:
  o $85 million annual budget
  o Weekly collections to ~540,000 HH (>6 units), municipal buildings, public spaces, HHW & e-Cycling drop-offs
  o ~1,200 employees
  o 200+ trucks
  o Anti-litter programs
  o Manual collections

<table>
<thead>
<tr>
<th>Service Levels / Participation</th>
<th>Target / Goal</th>
<th>Funding</th>
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</thead>
<tbody>
<tr>
<td>• Curbside for municipalities with &gt;10,000</td>
<td>• Solid waste management planning</td>
<td>• $2 per ton assessment on landfill disposal</td>
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<tr>
<td>• Must collect at least 3 materials</td>
<td>• 35% recycling goal</td>
<td>• $35-$40 million annually</td>
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<tr>
<td>• Leaf waste collections</td>
<td>• Enforcement</td>
<td>• Grants for planning, capital, salary reimbursement, performance</td>
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<td>• Commercial &amp; institutional ordinance</td>
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<td>• Technical assistance project grants</td>
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<td>• Disposal bans</td>
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Philadelphia Curbside Recycling 1990’s-2000’s

- Program much-maligned...fear of tickets biggest driver of participation
- City fiscal crises
- PA DEP Consent Decree
- Recycling chief revolving door
- Lack of political support

Philadelphia Curbside Recycling FY 2000 - FY 2005

![Graph showing tons per year from FY 2000 to FY 2005](image-url)
2006: Single-stream phases-in...

- City’s MRF vendor retrofitted in 2006
- Initial Recyclebank pilots were single-stream
- Created opportunity to streamline operations, as well as promote “new” program
2008: Easier still...weekly recycling
2008: By bus, trolley and train...
2010: Website Enhancements & New Materials
2010: Mural Arts Program branding adds visual excitement…
2010: Recycling Rewards Goes City-wide
2012: Cartons Added

- Recyclebank Pilot
- Single-stream phase-in
- Mayor Nutter’s election
- Weekly pickup
- City-wide single-stream
- #3-7
- Cartons added
- Recyclebank goes city-wide

Tons per-year

Philly’s Success Phantastic!

- Curbside recycling tonnages up ~155% since FY 2008
  - Per HH yield of ~465 lbs./yr.
  - Diversion rate through single-stream = 21%
- Residential disposal tonnages down 31% from peak year (FY 2004)
- Total residential MSW generation down 19% from FY 2004
- Fiscal benefits between $9.7 and $15 million per year FY 2008 to FY 2014
Comparative Curbside Recycling Rates
(c. 2012; single-stream recyclables only)

- Austin
- Philadelphia
- Boston
- Atlanta, GA
- Minneapolis
- San Diego
- New York
- Dallas
- Baltimore
- San Antonio
- Denver
- Phoenix
- Fort Worth
- Miami-Dade County
- Washington, DC
- Chicago
Philadelphia’s Challenges

Changing MSW Stream...

<table>
<thead>
<tr>
<th>Material</th>
<th>2000</th>
<th>2010</th>
<th>Difference</th>
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</thead>
<tbody>
<tr>
<td>Paper &amp; cardboard</td>
<td>29.0%</td>
<td>14.7%</td>
<td>-14.3%</td>
</tr>
<tr>
<td>Plastics</td>
<td>13.2%</td>
<td>10.0%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>Glass</td>
<td>4.0%</td>
<td>1.9%</td>
<td>-2.1%</td>
</tr>
<tr>
<td>Metals</td>
<td>6.6%</td>
<td>3.5%</td>
<td>-3.1%</td>
</tr>
<tr>
<td>Organics</td>
<td>29.1%</td>
<td>27.2%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>C&amp;D</td>
<td>12.9%</td>
<td>24.1%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Other</td>
<td>5.2%</td>
<td>18.6%</td>
<td>13.4%</td>
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Low Hanging Fruit Picked...

- Non-Program Recyclable: 416,582, 87%
- Remaining Single-Stream Recyclables: 63,905
- Other: 13%
Philly’s Evolving Recycling Tons...

Inbound MRF Tons 2010

- Newspaper: 12%
- Mixed Paper: 19%
- Mixed Plastics/Rigid: 23%
- Alumnum Cans: 17%
- Steel Cans: 3%
- Other Metals: 2%
- PET: 4%

Inbound MRF Tons 2013

- Newspaper: 13%
- Mixed Paper: 10%
- Mixed Plastics/Rigid: 32%
- Mixed Plastics/Rigid: 12%
- Mixed Glass: 17%
- Mixed Glass: 12%
- Other Metals: 3%
- Mixed Glass: 1
Changing Outreach Focus

• Earlier campaigns & branding focused on encouraging recycling participation

• Emphasis on recyclables quality now key message across all platforms & partnerships
  – Recyclebank
  – Keep Philadelphia Beautiful
  – Recyclebycity.com
  – Civic associations
Philadelphia’s Challenges

Residential Recyclables Revenues

Boom revenue years set new expectations...
Philadelphia’s Challenges

- Single-stream capture rate = ~65%
- Could ROI be achieved on recycling infrastructure (carts, trucks) investment?
- Logistical and operational challenges
- Politics (new mayor 2015)
How to Move the Philly Needle?

- More focus on recyclables quality
- Increase public space & institutional recycling opportunities
- Increase recycling in multifamily communities
- Expand commercial recycling support
- Pursue bigger targets (organics)
- Legislative & regulatory:
  - Reduce MSW denominator (e.g., review collection & set-out practices; materials bans)
  - Commercial hauler reporting