Pay-As-You-Throw (PAYT) Workshop

October 21, 2006
Atlanta, GA
Workshop Agenda

1 - Welcome

2 - Introduction to PAYT
   A. What is PAYT
   B. Why Implement PAYT
   C. Who Should Implement PAYT
   D. Case Studies

3 - Implementation
   A. Common Obstacles
   B. Solutions to Obstacles
   C. Developing a Strategy
   D. Role of Public Relations
   E. Results Measurement

4 - Key Lessons

5 - Questions and Answers
1 - Welcome
Georgia Department of Community Affairs (DCA)

- Created in 1977
- Serves as an advocate for local governments
- Georgia’s lead agency for:
  - solid waste reduction efforts
  - housing finance and development
- Operates host of state and federal grant programs
- Provides comprehensive planning, technical and research assistance to local governments
- Approves local government SWM plans

www.dca.state.ga.us
Presenters

Gershman, Brickner & Bratton, Inc. (GBB):

- National solid waste management consulting firm
- Founded in 1980
- Works at local, state and national levels for public and private sectors
- Expertise in solid waste collection, processing, recycling and disposal issues, including construction waste and demolition debris projects
- PAYT projects completed in Fort Worth, TX and Annapolis, MD

www.gbbinc.com
Tim Bratton  
GBB Senior Vice President

• 30+ years of management and financial experience in the solid waste management field  
• Lead evaluator / negotiator on many vendor solicitations  
• Hundreds of field visits to review solid waste management programs  
  • MRFs / transfer stations and landfill facilities  
  • WTE facilities  
  • C&D recycling systems  
• Managed GBB’s procurement and PAYT project in Ft. Worth, TX
Frank Bernheiselon
GBB Vice President

- 30+ years in solid waste and resource recovery planning and development
- Managed a wide range of projects
  - program and business planning
  - feasibility studies
  - contract development and negotiation
  - engineering.
- Project Manager for PAYT system audit in Santa Monica
- Managed PAYT project for Annapolis, MD
François Coulombe
Marketing Manager

• 15 years of marketing experience
• Manage GBB Marketing efforts
  • website
  • newsletters
  • Proposals
  • tradeshows
  • Lead generation
• Assist in GBB Client Projects
  • GA DCA
  • Nashville District Energy System website
Getting to Know the Attendees

• Who are you?

• Where are you from?
  • Organization
  • Location

• What are you looking to get from this workshop?
2 - Introduction to Pay-As-You-Throw (PAYT)
A - What Is PAYT?

• PAYT is a fee-for-service payment program for MSW.

• This Workshop will focus primarily on how residential waste/recycling services are paid for.

• PAYT provides direct economic incentive that encourages residents to:
  • Reduce the amount of waste they generate
  • Recycle more

• PAYT is also known as:
  • Unit-Based Pricing
  • Variable Rate Pricing
PAYT Nationwide

Pay-As-You-Throw Programs by State
Click on a state to view a list of communities with pay-as-you-throw

If your community has PAYT but isn’t listed on your state’s table, tell us about your program.

Concept

Ensures that citizens/businesses see and feel the cost of waste disposal services.

Traditional System:
• No separate payment; costs paid from property taxes through the General Fund
• All pay the same flat fee for all services

PAYT:
• Based on amount of waste thrown away – NOT fixed fee
• Similar to electricity / gas / utilities
Concept

PAYT Price to Customer:

- **Volume**
  - Pay for each bag or can of waste set out
  - Pay for size of container selected

- **Weight**
  - Less common due to cost of equipment and billing infrastructure
Commercial PAYT
Advantages

- Fairness among customers
- Provides tool for control over costs
- Incentive / motivation to recycle more and be creative to prevent waste
  - Lower disposal costs
  - Revenues from recyclables
- Solution that helps people save money and diverts material to reuse markets
Advantages

• 25% - 35% waste reductions reported

• Behavioral changes:
  • Purchase in bulk
  • Choose product with less packaging
  • Look for ways to reuse

• Reduce greenhouse gas emissions
  • Fewer natural resources used
  • Less energy consumed
  • Less pollution created
Advantages

• Landfill space used at slower rate
• Long run – Incentive for manufacturers to redesign products
• Increases public awareness of environmental issues
• Increases participation in composting and recycling programs
Disadvantages

- Potential increase of illegal dumping
- Requires capital investment: fee collection system, containers, etc
- Concerns from lower-income residents about amount to pay
Disadvantages

• Potential for rate shortfall
• Gearing up for customer service
• Container, particularly cart planning and delivery
• Transition planning will take staff time from other duties
• Effort and costs increase when the MSW collection system is substantially changed along with PAYT: new trucks, routes, policies and procedures, etc
B – Why Implement PAYT System?

- Compels the generator to divert more
- Higher diversion rates result
- Lower disposal costs
- Opportunities to improve collection services overall
- Complements Enterprise Fund accounting and Full Cost Management
Impact on Costs

Citizens:
• Citizens pay for services used
• Citizens have control over their cost rather than paying flat fee and subsidizing neighbors who don’t recycle
• Fees are more equitable

Communities:
• Typically lowers costs of collection/disposal
• Frees-up funding for other services
• Forces rigorous accounting
25%-35% waste reductions reported due to increases in diversion

PAYT used in tandem with recycling and composting programs =

Increased effectiveness of each program

Stepped up Public Information and Awareness programs are needed
C – Who Should Implement PAYT System?

PAYT works best when tailored to LOCAL needs of communities, case study range:
- Austell, GA, 6,200 population
- San Jose, CA, 850,000 population

Does not matter who provides collection services
- Municipal
- Private hauler
D – Case Studies

PAYT programs in the USA:

• Over 6,000 current programs  
  (MSW Management 2006)
• Less than 200 in the mid-80s

• Concept Pioneered in California!
  – Richmond in 1916
  – Berkeley in 1924
D – Case Studies

• Fort Worth, TX
  • Curbside collection, carts

• San Jose, CA
  • Curbside collection, carts

• South Kingstown, RI
  • Convenience Center, bag and tag

• Athens – Clarke County, GA
  • Curbside collection, curbside, backyard or porch pick-up, carts

• Austell, GA
  • Curbside collection, carts

• Decatur, GA
  • Curbside collection, rear or side yard pick-up, carts
City of Fort Worth, TX

- 661,850 residents / 172,000 Households (as of 1/1/06)
- Implemented Citywide in July 2003
- Preceded by 7-Year Pilot Program in 8 routes of approximately 10,000 households
- Operations contracted to private firm

Recycle more, pay less
The more you recycle, the less garbage you have.
The less garbage you have, the smaller cart you need.
The smaller the garbage cart, the less you pay per month.
City of Fort Worth, TX

Residential curbside collection services:

• Weekly:
  • Garbage
  • Recyclables
  • Yard trimmings
  • Up to 10 cubic yards of loose brush

• Monthly:
  • Up to 10 cubic yards of bulky Items / household

• Billed monthly on water bill
City of Fort Worth, TX

Fees:

- Recycling 64-gallon cart = No charge
- Garbage cart monthly fee:
  - 32-gallon = $11.45
  - 64-gallon = $16.45
  - 96-gallon = $21.45
  - Bags for excess garbage = $15.00 for 5
- Optional yard trimmings cart fee:
  - 96-gallon = $50.00
- Disposal fee, $12.94 per ton
City of Fort Worth, TX

Enforcement:

• Enforced by solid waste staff and code officers
• Sticker on a garbage bag outside of the cart that is not an approved pre-paid bag
• Water account charged $10 for collection and disposal fee for each excess bag
City of Fort Worth, TX

Enforcement:

- Ramp up slow
  - Educate first
  - However, recognize that enforcement actions must come to bear eventually

- Code officers are not garbage men but they have to be involved in this process

- Consider using other city staff to assist if necessary

- Work the bad areas first

- Have the backing of the City Council, the Political Will to follow through must be there
City of Fort Worth, TX

Results

• First year results:
  • Recycling / Diversion: from 6% to 20%
  • Households that recycle: from 38% to 70%
  • 92% of residents pay less than before
  • Costs for municipal SW disposal: from $32M to $24M
  • Sales of recyclables generated $540k
City of Fort Worth, TX

Key to success

• Education / outreach
  • Direct Mail
  • Local media
  • Community group meetings (Neighborhood Assoc. etc.)
  • Yard signs
  • Cart hang tags
  • English / Spanish
  • Door-to-door in problem areas

• Took their time
• Patience, Patience, Patience
  • Residents’ attitudes will not change overnight even though the service does.

• Stay on your game plan
City of San José, CA

- Nation’s 10th largest city
- Over 850,000 residents / 190,000 households
- “Recycle Plus” PAYT program started in July 93
- 3-Years of planning before implementation
- Operations contracted to private firm
City of San José, CA

Curbside Setout

Keep all carts 5 feet away from anything that may block the collection truck, including yard trimmings piles and parked cars.

Extra Recyclables

Oil Filter Bag & Oil Jug (City-issued)

Recycling Cart

Garbage Cart

Optional Yard Trimnings Cart

Yard Trimnings
Set out yard trimmings no later than 6 AM on your collection day, and no earlier than the day before. Refer to the “Yards & Streets” page for items that can be collected. You will be notified of alternate collection methods if loose collection is not possible on your street (e.g., bike lanes, red curbs).

Carts & Collection
Set out all carts no later than 6 AM on your collection day, and no earlier than the day before. Collection occurs between 6 AM and 6 PM.

Missed pick-up – If collection at your residence has been missed, call 277-2700.

Lost or damaged carts – Write your recycling cart serial number on the “Recycling Basics” poster. If your cart is lost, stolen, or damaged, call 277-2700. First-time replacement is free.

Holiday pick-up – Collection does not occur on Thanksgiving, Christmas, or New Year's Day. After these holidays collection will be one day later throughout the rest of the week. For example, if the holiday falls on a Thursday, Thursday collection would occur on Friday, and Friday collection would occur on Saturday. You will receive a schedule reminder.
City of San José, CA

• Two-month billing period
• Weekly garbage, recycling & yard trimming collection
• Fees include collection and monthly street sweeping
City of San José, CA

Fees:

- 32, 64 or 96 gallon recycling cart provided at no charge
- Garbage cart monthly fee:
  - 20-gallon = $18.98
  - 32-gallon = $20.15
  - 64-gallon = $40.30
  - 96-gallon = $60.45
  - Extra garbage sticker = $4.90 each
- Disposal cost of $39.21 per ton is included
City of San José, CA

Fees:

- **Yard trimmings cart fee:**
  - Loose in the street, no charge
  - 32, 64 & 96-gallon = $2.50 / month

- **Bulky Items on-call collection fee:**
  - SFD curbside: 3 items for $25
  - MFD on-site: 3 items $55.50
City of San José, CA

Enforcement:

• By Contract collector’s route auditors
• Identify nonconforming set-outs
• Tag and leave
• Generator must correct
• Extra charge for collection if not corrected
• Final enforcement with fines by City
City of San José, CA

Results

- One of the few cities in America that recycles more than 64% of solid waste
- Before 1993:
  - Cost for garbage collection = $12.50/month
  - Average of 3 32-gallon garbage can / week
- In first 3 years:
  - 87% of residents opted for 32-gallon garbage can
  - Recycling volumes nearly tripled
  - 90% satisfaction with program
City of San José, CA

Key to success

• Public involvement in program design
  • Questionnaires to all households
  • Community meetings
  • Pilot projects in 17 neighborhoods
  • Public review committee for selection of contractors

• Education / Outreach
  • 250 community meetings
  • Comprehensive public outreach campaign
    • English / Spanish / Vietnamese
  • Focus groups
  • School education programs

• Getting prices right
Towns of South Kingstown & Narragansett, RI

- 30,000 residents
- Oceanfront shoreline community swells up to 50% during summer season
Towns of South Kingstown & Narragansett, RI

- Implemented in August 1994
- Town implemented a citizen drop-off program at the local transfer station
- Residents have the option of either contracting with a private hauler or accessing the Town’s transfer station
- Neighboring Town of Narragansett participates as well
Fees:

- First year fee was $1.00/ tag
- Currently $1.35 / tag (35-pound / 33-gallon limit per bag)
- Disposal of bulky waste = $0.05/pound
- Disposal of yard waste = $0.035/pound
- Yard waste bag = $0.90 each

Recycling voluntary:

- Maximized recycling = Minimized cost for trash tags
Towns of South Kingstown & Narragansett, RI

Results:

- Success exceeded expectations
- 71% reduction in trash in 1st year
  - 7,608 tons to 2,175 tons
- 53% reduction in refuse disposal cost in 1st year
  - For average family of 4
  - From $92/year (unlimited use vehicle sticker) to $52/year (assumes 1 tag per household, per week x 52 weeks/year)
Enforcement:

- Residents reluctant to put tags on bags; users try to dispose of bags without tags, thereby saving money.
- Some residents would cut the tag in half and tightly wrap around bag neck, whereby it appeared one whole tag was used (seldom occurrence).
- Tags expire June 30th of each year since new tag prices go into effect July 1st of each year (to cover any operational or tip fee increases). Residents over-bought tags the first year, but users seem to have adjusted their tag purchases for following years.
Athens-Clarke County, GA

• Approximately 100,000 residents / 35,000 Households

• Implemented City and County wide in September 11, 1995

• Operations handled by the Solid Waste Department within the old City limits and contracted to franchise haulers within the County limits but outside the old City limits
Residential collection services
(3 components):

- Curbside service - ACC provides roll carts
- Backyard service – Customer provides 32 gal. containers
- Porch pick-up service

- Weekly:
  - Garbage and recyclables
  - Recycling services for residential customers are included at no additional cost
- On call basis:
  - Bulky and household items, special pickups
- Billed monthly on water bill
# Residential Fees:

## Curbside Rate

<table>
<thead>
<tr>
<th>Container Size</th>
<th>Curbside Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 gallon</td>
<td>$12.50</td>
</tr>
<tr>
<td>32 gallon</td>
<td>$13.50</td>
</tr>
<tr>
<td>64 gallon</td>
<td>$16.50</td>
</tr>
<tr>
<td>96 gallon</td>
<td>$22.50</td>
</tr>
<tr>
<td>128 gallon</td>
<td>$30.50</td>
</tr>
<tr>
<td><strong>(two-64 gallon containers)</strong></td>
<td></td>
</tr>
<tr>
<td>160 gallon</td>
<td>$42.50</td>
</tr>
<tr>
<td><strong>(one 64 gallon and one 96 gallon container)</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Residential Fees:

#### Backyard Rate

<table>
<thead>
<tr>
<th>Container Size</th>
<th>Backyard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>One trash can, less than 32 gallon</td>
<td>$15.50</td>
</tr>
<tr>
<td>1-32 gallon trash can</td>
<td>$16.50</td>
</tr>
<tr>
<td>2-32 gallon trash cans</td>
<td>$19.50</td>
</tr>
<tr>
<td>3-32 gallon trash cans</td>
<td>$25.50</td>
</tr>
<tr>
<td>4-32 gallon trash cans</td>
<td>$33.50</td>
</tr>
<tr>
<td>5-32 gallon trash cans</td>
<td>$45.50</td>
</tr>
</tbody>
</table>
Commercial Curbside Service for Small Businesses:

- Blue, garbage bags CANNOT exceed 40 pounds
- Trash collected up to 3 times per day
- Recyclables are collected at no additional charge from commercial curbside customers
- Recyclables must be in clear bags provided by the customer
- Billed monthly on water bill
Garbage Dumpster Services for Small Businesses:

- Collections can occur between 1 to 5 times per week
- Dumpsters vary from 4, 6, 8 cubic yard
- Dumpster recycling services are provided at no additional charge if the business uses ACC for garbage service
- Billed monthly on water bill
Apartment Complex Garbage and Recycling Collection:

- The ACC Solid Waste Department provides both garbage and recycling services to apartment complexes. Recycling collection is provided at no additional charge as part of solid waste collection services.
**CBD is the Central Business District, which is essentially the downtown Athens area.**

In addition to the rates charged to the customers based on the service level, refuse is required to be placed in authorized bags (blue bags) that are purchased for $1.00 each. The cost of the bags covers the disposal cost, the cost to manufacture the bags and a small administration cost.

<table>
<thead>
<tr>
<th>Collections per week</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - Commercial Outside CBD</td>
<td>$23.00</td>
</tr>
<tr>
<td>3 - Commercial Inside CBD</td>
<td>$28.00</td>
</tr>
<tr>
<td>2 - Residential Inside CBD</td>
<td>$33.00</td>
</tr>
<tr>
<td>7 - Commercial</td>
<td>$76.50</td>
</tr>
<tr>
<td>14 - Commercial</td>
<td>$155.00</td>
</tr>
</tbody>
</table>
Garbage Dumpster Services (includes Apartment Complexes)

The monthly fees for garbage dumpsters are:

<table>
<thead>
<tr>
<th>Collection Frequency</th>
<th>4-yard</th>
<th>6-yard</th>
<th>8-yard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 per week</td>
<td>$83</td>
<td>$101</td>
<td>$119</td>
</tr>
<tr>
<td>2 per week</td>
<td>$152</td>
<td>$183</td>
<td>$215</td>
</tr>
<tr>
<td>3 per week</td>
<td>$219</td>
<td>$266</td>
<td>$313</td>
</tr>
<tr>
<td>4 per week</td>
<td>$287</td>
<td>$349</td>
<td>$409</td>
</tr>
<tr>
<td>5 per week</td>
<td>$355</td>
<td>$431</td>
<td>$507</td>
</tr>
</tbody>
</table>

Commercial dumpster customers shall sign either a one, two or three year service contract with Athens-Clarke County for collection services. Any customer requesting a change in service level or collection schedule over and above the one free change allowed to each customer during a calendar year, will be assessed a fee of $10.00 per change.
Recycling Dumpster Services

- Dumpster recycling services are provided at no additional charge if the business is using the County’s garbage services.
- If the business is not a customer of the County, but wishes to arrange for recycling services, the monthly fees for recycling dumpsters are:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>4-yard</th>
<th>6-yard</th>
<th>8-yard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 per week</td>
<td>$53</td>
<td>$56</td>
<td>$59</td>
</tr>
<tr>
<td>2 per week</td>
<td>$91</td>
<td>$94</td>
<td>$98</td>
</tr>
<tr>
<td>3 per week</td>
<td>$129</td>
<td>$133</td>
<td>$136</td>
</tr>
<tr>
<td>4 per week</td>
<td>$167</td>
<td>$171</td>
<td>$174</td>
</tr>
<tr>
<td>5 per week</td>
<td>$205</td>
<td>$208</td>
<td>$211</td>
</tr>
</tbody>
</table>

Commercial dumpster customers shall sign either a one, two or three year service contract with Athens-Clarke County for collection services.

Any customer requesting a change in service level or collection schedule over and above the one free change allowed to each customer during a calendar year, will be assessed a fee of $10.00 per change.
Enforcement:

- Enforced by Community Protection Division
- Overflow decals (stickers) are required on all trash bags outside of the trash can.
- Garbage left outside of the can will not be collected unless it is bagged and tagged with an overflow decal (sticker).
- Water account charged $2 for collection and disposal of excess bag
Key to success

- Education / outreach
  - Mail
  - Local media
  - Annual calendars/Resource Guides
  - E-mail Updates
  - Water bill inserts
  - Cart flyers
  - English / Spanish
  - Door-to-door and Door hangars
  - Web site
- Took their time
City of Decatur, GA

- Approximately 18,500 residents / 6,000 Households
- Implemented City wide in July 1998
- Operations handled by the Solid Waste and Street Cleaning Division
City of Decatur, GA

Residential collection services:

- Weekly:
  - Garbage and recyclables, yard trimmings, furniture and appliances collected from the curb (rear or side yard)
  - Recycling services for residential customers are contracted to a private hauler at no additional cost
- Billed yearly on property taxes ($230)
City of Decatur, GA

Residential Fees:
Curbside Rate

<table>
<thead>
<tr>
<th>Garbage Bag Sizes</th>
<th>Curbside Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 33-gallon (blue) bags</td>
<td>$13.38</td>
</tr>
<tr>
<td>10 15-gallon (yellow) bags</td>
<td>$6.42</td>
</tr>
<tr>
<td>10 8-gallon (green) bags</td>
<td>$3.75</td>
</tr>
</tbody>
</table>
Commercial collection services:

Business operators pay fees based on the size of their commercial container and the number of service visits each week.

- small downtown businesses that do not have space for a regular commercial refuse container are provided 95 gallon carts.
- Regular commercial service for large businesses, institutions and multi-family dwelling units costs $3.85 per cubic yard.
City of Decatur, GA

### Commercial Collection Rates

<table>
<thead>
<tr>
<th>Type</th>
<th>Container Size</th>
<th>Collection</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small business</td>
<td>95 gallon cart</td>
<td>1 x weekly</td>
<td>$615/year</td>
</tr>
<tr>
<td>Large businesses, institutions and multi-family dwelling units</td>
<td>commercial refuse container</td>
<td>2 x weekly</td>
<td>$3.85/cubic yard</td>
</tr>
</tbody>
</table>
City of Decatur, GA

Enforcement:

Garbage and trash will only be collected if in the special bags. Special bags are collected from the rear or side yard.

Results:

- Increase in the amount of recyclables collected
- Decrease in landfill deposits
### Pay-As-You-Throw Program Results

#### City of Decatur, GA

<table>
<thead>
<tr>
<th></th>
<th>FY 05/06</th>
<th>FY 04/05</th>
<th>FY 03/04</th>
<th>FY 02/03</th>
<th>FY 01/02</th>
<th>FY 00/01</th>
<th>FY 99/00</th>
<th>FY 98/99</th>
<th>FY 97/98</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Landfill deposits</strong></td>
<td>8,960</td>
<td>9,519</td>
<td>10,073</td>
<td>10,176</td>
<td>10,063</td>
<td>10,850</td>
<td>10,426</td>
<td>9,843</td>
<td>11,734</td>
</tr>
<tr>
<td><strong>Recycling</strong></td>
<td>2,535</td>
<td>2,341</td>
<td>2,242</td>
<td>2,820</td>
<td>2,758</td>
<td>2,431</td>
<td>2,182</td>
<td>2,191</td>
<td>1,415</td>
</tr>
<tr>
<td><strong>Compost Facility</strong></td>
<td>3,024</td>
<td>2,678</td>
<td>2,909</td>
<td>2,518</td>
<td>2,728</td>
<td>3,197</td>
<td>2,921</td>
<td>2,409</td>
<td>2,269</td>
</tr>
</tbody>
</table>
City of Decatur, GA

Key to success

• Education / outreach
  • Mail
  • Public hearings and neighborhood meetings
  • Local media
  • Door-to-door and door hangers
  • Web site

• Took their time
City of Austell, GA

- 6,200 residents / 2,955 Households
- Implemented City wide in October 1993 by Ordinance
- Operations handled by the Division of Solid Waste
Residential collection services:

- **Weekly:**
  - Garbage (Monday) - Must be in designated City bags and must be tied
  - Yard debris is NOT considered household garbage and is collected at no charge (Twice per Week)
  - Recycling (Wednesday) is contracted through BFI and is mandatory by Ordinance

- **Bi-annual basis:**
  - Bulky and household items

- **Billed monthly on water bill**
  Recycling Collection Service
City of Austell, GA

Residential Fees:

- Residents pay a recycling fee of $2.54 per household per month

- Cost of garbage bags:
  - 20 gallon yellow garbage bag: $1.50 each
  - 32 gallon blue garbage bag: $2.75 each
City of Austell, GA

Enforcement:

- All garbage must be in designated City bags and must be tied
- No level of enforcement is in effect in the City
City of Austell, GA

Results:

- Low cost of service
- Cost of bags have not changed since implementation
City of Austell, GA

Key to success

- Education / outreach
  - Mail
  - Local media
  - Annual calendars/Resource Guides
  - E-mail Updates
  - Water bill inserts
  - Web site

- Took their time
3 – Implementation of Pay-As-You-Throw
A – Common Obstacles

- Resistance to change
  - Citizens
  - Elected officials
- Illegal dumping
- Recovering expenses / Covering admin costs
- Transition planning and resources
- Perception of increased costs
- Perception that program is ‘another tax’
- Multi-family housing
B – Solutions to Obstacles

Resistance to change

- Don’t believe it will work
- No space for cart or carts
- “I will be getting less service.”
- “What is wrong with the current system?”
- Perceive fee as additional tax
- Need motivation of why they should do this
  - Better storage of refuse and recyclables
  - Pay less and recycle more
Illegal Dumping

- Public education:
  - illegal dumping typically less of a concern than anticipated
- Enforcement policies
- Install lids/locks on dumpsters and commercial waste receptacles
- Dumpsters in areas not accessible by public
- Widely publicized violations to discourage offenders
- Full service convenience center or centers
Recovering Expenses / Covering Admin Costs

- Set prices at appropriate level to ensure that sufficient funds are raised to cover:
  - Amortized capital cost of transition
  - Waste collection
  - Complementary programs
  - Special Services
  - Administrative Costs

- Bag or Tag is easier
- Carts require prorating formula: 32, 64, and 96 gallon
- Weight based is complex
Perception of Increased Costs

Public outreach:

• Change perception
  Current costs of waste management vs. potential reduction with PAYT

Perception of ‘Another Tax’

Multi-Family Housing
C – Developing a Strategy

1. Set program goals
2. Establish PAYT team
3. Address barriers
4. Build public consensus
5. Design PAYT program
1 – Set Program Goals

- Clearly defined and measurable objectives
  - Help build community consensus
  - Facilitate monitoring and progress evaluation
- Need realistic goals
- Prioritize goals
  - Help design rate structure
  - Expect compromises between:
    - Costs
    - Citizen Convenience
    - Staffing Changes
Sample Goals

• Manage solid waste like a business
• Raise revenues to cover program costs
• Encourage recycling
• Generate revenue to ancillary programs
  • Anti-littering
  • Illegal dumping clean-up
• Do not change collection system
• Make other efficiency and productivity improvements in conjunction with PAYT
2 – Establish PAYT Team

- Solid waste staff
- Elected officials
- Civic leaders
- Affected businesses
- Outside advisors
- Equipment suppliers
- Service providers or contractors

Goals:
- Refine and prioritize goals
- Give community sense of program ownership
- Get input on residents’ concerns
- Sounding board
- Team champions PAYT effort in community
3 – Address Barriers

PAYT team identifies potential barriers to successful implementation and ways to address them
4 – Building Public Consensus

• Education and community relations = Most important elements of PAYT program

• If residents oppose program, it will fail

Goals:
• Unveil program to general public to community
• Present preliminary program options
• Present PAYT benefits
• Generate public discussions
Resistance to change!
  • Initial skepticism and opposition is typical

Basic principles to communicate:
  • Equity
  • Waste reduction
  • Waste management costs reduction
  • Municipal improvement
Pay-As-You-Throw Workshop

Public Consensus Activities:

• Public meetings
  • Interactive
  • Forum for public’s concerns
  • Charettes

• Briefings plus backup for public officials
  • Public officials at center of debate
  • Well-informed leadership can raise issues to attract residents’ interest

• Press Releases
  • Keep local radio, TV, and newspapers well informed
  • Generate press coverage
  • Prepare community for upcoming change

• Involve Retailers
  • Help educate citizens
  • Display posters / info about program

• Conduct Pilot Program
5 – Design PAYT Program

Make decisions on range of program components:

- Volume-based or weight-based system
- Containers
- Pricing structure
- Billing system
- Program service options
- Multi-family
- Special needs
Volume-Based or Weight-Based System

- Determine how solid waste will be measured
- Very different design and equipment requirements
- Few communities implement weight-based system
Volume Based:
- Residents charged:
  - Directly based on number of bags/cans set out
  - Via special trash bags/tags/stickers
- Less costly to set up and operate
- Potential disadvantage = residents compacting waste

Weight Based:
- Residents charged by the pound (Weighs at curbside)
- Good waste reduction incentive since every pound counts
- Provides precise measurements of waste generation
- More expensive method
  - Special equipment needed
  - Additional labor for complex billing
Containers

Containers, pricing structure and billing system are linked – one component can dictate the others

Possible container options:

- Large cans
  - 90 to 100 gallons
  - Households charged on number of cans used

+ Revenue Stability
- Household with low waste generation don’t have incentive to reduce waste
- Billing can be more complex
• Variable cans

• Cans ranging from 20 to 100 gallons
• Households charged on number and size of cans
  + Modest waste reduction can trigger savings
  - To save, households must request change in number / size of cans for which they are billed
  - Billing and inventory can be more complex
• Prepaid bags
  • Bags purchased from community at local stores
  • Only special bags collected

  + Modest waste reduction can trigger savings
  + No billing, inexpensive to implement / maintain

  - Revenue uncertainty
  - Bags can tear
  - Might need to adapt collection vehicles
Pay-As-You-Throw Workshop

- Prepaid stickers / tags

  - Stickers/tags purchased from community at local stores
  - Only bags with appropriate tags are collected
  + Modest waste reduction can trigger savings
  + No billing, inexpensive to implement / maintain
  - Revenue uncertainty
  - Stickers / Tags can fall, be counterfeited or be stolen
  - Might need to adapt collection vehicles
Weight Based Systems

• Commercial collection systems in operation
  • City of Overland Park, FL
  • City of Craig, CO
  • Private haulers

• Residential collection systems, Pilots only
  • Seattle, WA
  • Columbia, SC
  • Durham, NC
  • Mandham Township, NJ
  • Minneapolis, MN
  • Others
Cart Identification Methods

Molded in numbers

Bar coding

Radio frequency identification (RFID)
Auxiliary Equipment Needs
(On-board weigh scale system)
Pricing Structure

Containers, *pricing structure and billing system are linked* – one component can dictate the others

Factors to consider:
- Complexity to administer
- Impact on revenues stability
- Impact on resident’s waste reduction efforts
Types of Pricing Structures:

- **Proportional / Linear**
  - Flat price for each container
  - Must account for level of compaction
  + Strong incentive to reduce waste
  + Simplest Structure (Admin and billing)
  - Careful when setting price/container to avoid cash flow problems

- **Variable Container**
  - Different rate for each size
  + Strong incentive to reduce waste
  - Admin and billing can be complicated
  - Careful when setting price/container to avoid cash flow problems
• Two-Tiered
  • Flat monthly fee + flat rate per container
    + Revenue stability / fixed costs are covered
    - Less incentive for waste reduction

• Multi-Tiered
  • Flat monthly fee + different rate for each size
    + Revenue stability / fixed costs are covered
    + Encourages waste reduction
    - Admin and billing can be complicated / most complex system
Billing System

Containers, pricing structure and billing system are linked – one component can dictate the others

Collection Methods:
- Direct Payment
  - Pay for services by purchasing bags/tags
  - Must ensure sufficient number of easily accessible outlets
- Subscription
  - Residents notify agency of subscription level or number of container it intends to set-out
  - Residents must notify agency of change in service level
  - Less incentive in reducing waste
Billing System (Continued)

Containers, pricing structure and billing system are linked – one component can dictate the others

• Actual Set-out
  • Residents billed on actual number of containers set-out
  • Haulers must count items, record info for later billing
Enterprise Fund
- A Best Practice -

• Separate from General Fund
• Full Cost Accounting
• Flow of funds
• Budgeting
• Activity based
Revenue Sources

- Collection and disposal service fees
- Private hauler fees
- Energy and material recovery
- Investment income
Enterprise Fund Expenses

- Administrative
- Operating and maintenance
- Long-term obligations
- Debt service reserve
- Renewal and replacement
- Closure and post-closure
- Rate stabilization
Enterprise Fund Flow

Investment Income

Collection and Disposal Charges

Tipping Fees

Recovered Products Revenue

Master Trust Enterprise Fund

Revenue Account

Operating Account

Rate Stabilization Account (if any)

Long-Term Obligation Account

Debt Service Reserve Account

Prior Bond Debt Account (if any)

General Account

Debt Service on Facility Bonds

Debt Service on Landfill or Other Community Solid Waste Bonds

Long-Term, Third-Party Contract Obligations (if any)

Other Third Party Contract Obligations (if any)

Vendor Service Fee (if any)

Landfill O & M

Community Administration Expense

Prior Bond Debt Account

Debt Service Reserve Account

Long-Term Obligation Account
Governmental Accounting

- Governmental Accounting Standards Board (GASB)
- Measurement Focus
- Cash
- Accrual
- Modified Accrual
Program Service Options

- Determine which services are most important to residents
- Array of services contribute to success / acceptance of PAYT program
- Goal: provide premium services while generating revenues to support core collection services

Service Options

- Recycling and Collection of Yard Trimming for Composting
  - Major contributors to success of PAYT program
  - Collection of wide-range of material is key
- Backyard Collection
- Bulky Items
Multi-Family

- One of biggest PAYT challenges
- Difficult to offer residents direct incentives

Options:
- Building Manager sells tags/bags to resident
  - Difficult to control access to dumpster area
- Modify dumpster/chute area to provide access only with card/proof of payment
  - Expensive
- Specialized chute and multiple bin system, over 200 implemented in Florida and New York
Small Multi-Family

- Can be included in single family programs
- Included in commercial collection with pricing incentives, Plano, TX is shown
Special Needs

• Disabled Citizens
  • Factor in need for backyard collection

• Low Income Citizens
  Need to provide assistance while offering incentive to reduce waste
  OPTIONS:
  • Reduce charges by set amount
  • Percentage discount
  • Credit on overall bill
  • Provide certain number of free bags/stickers
  • Assistance via existing low-income programs
Sample Implementation Timeline

• Bags at convenience center
  • Allow one year in advance of start date

• Curbside collection of bags
  • Allow one year in advance of start date

• Curbside collection in roll carts
  • One year if:
    • Purchase carts and trucks
    • Establish fees and build billing system
    • Change administrative procedures
D – Role of Public Relations

Key Element of a Successful PAYT Program!
Objectives of Public Outreach

*Have residents make the program’s goals, THEIR goals.*

**During planning/design**
- Learn about residents’ needs
- Inform about PAYT benefits
- Get input on goals of PAYT
- Get feedback on rate structure options

**During implementation**
- Build on efforts to increase PAYT acceptance
- Provide detailed info to help residents understand and participate in program
Essential info to convey:

• Types / Costs of services offered
• Collection schedule
• How fees will be collected
• How/where to purchase cans, bags, tags, stickers, etc.
• Penalties for non-compliance
• How to modify purchasing/behavior patterns to reduce waste
• Success stories from other communities
• Tips on waste prevention
• Additional, Big Picture, benefits
  • Saving energy
  • Preserving natural resources
Increase Effectiveness of Public Outreach

- Translate in more than one language
- Use illustrations
- Spend money
  - Minimum $1 per capita for first year
  - Robust $3 per capita for first year
Methods to convey program

- Flyer / letter from local official to introduce program
- Inserts in utility bills
- Press releases
- Public meetings
- Newsletter
- Special Events
Methods to convey program

• Direct mailings
• Ads
• Flyers / posters
  • Stores / Libraries / Schools / Public places
• Phone hotline to answer questions
• Website
• Meetings with local community groups
E – Results Measurements

Objectives:

• Provide facts about cost-effectiveness of program
• Justify future budget needs
• Provide data for adjustments in the program if needed
• Generate concrete accurate data to help other communities considering PAYT

Start BEFORE implementation to have benchmark against which to compare PAYT results.
Data to Track:

- Change in waste quantities
  - Trash / recycling / composting
  - By month and year
  - By origin and destination
  - Break down by customer group / program
  - Adjust for population growth

- Costs (Start up and Operation of program)
  - Disposal costs
  - Tipping fees
  - Admin costs
  - Monitoring / illegal dumping cleanup

- Revenues generated by program
- Citizens’ satisfaction level
4 – Key Lessons
1. Successful system has to:
   • Cover costs
   • Be simple and convenient
   • Encourage waste reduction
   • Minimize admin burden

2. Tradeoff must be considered

3. Complementary programs increase efficiency of PAYT program

4. Rate structure decisions: Your community’s solid waste concerns should be overriding factor
5 – Questions and Answers
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