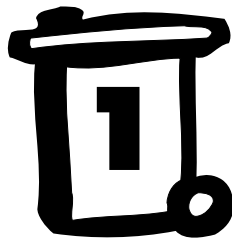


# Worksheet



## PROGRAM GOALS

**Use this worksheet to identify and prioritize the specific goals of your pay-as-you-throw program.** Begin with the goals listed below, ranking each goal on a scale of 1 to 5. A ranking of 5 means it is critical that your program meets this goal. A ranking of 1 means the goal is of minimal importance. List any other program goals that come to mind, and rank them as well.

As you think about goals, consider other stakeholders in your community—to be successful, your program also will need to have their goals in mind. To help you identify the issues other stakeholders will want addressed, copy the back of this form and use it to solicit more ideas about goals during pay-as-you-throw meetings or presentations.

Goal	Importance
Reduce the amount of solid waste generated/increase recycling rates Notes:	1 2 3 4 5
Reduce the total cost of solid waste management Notes:	1 2 3 4 5
Remove solid waste management costs from the tax base entirely (by raising sufficient revenues to cover all solid waste management costs) Notes:	1 2 3 4 5
Subsidize other solid waste programs (such as recycling) Notes:	1 2 3 4 5
Increase equity by asking residents to pay only for the waste they generate Notes:	1 2 3 4 5
Increase understanding among residents of solid waste issues/environmental issues Notes:	1 2 3 4 5

**Worksheet 1** (Continued)

**Program Goals:** List below the different goals for the pay-as-you-throw program and rank them on a scale of 1 to 5. A ranking of 5 means it is critical that the program meets this goal. A ranking of 1 means the goal is of minimal importance.

Goal	Importance
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5
	1 2 3 4 5

# Worksheet



## POTENTIAL BARRIERS

**Use this worksheet to identify barriers that might affect your program and consider how they can be overcome.**

Begin by reviewing the potential barriers on the matrix below. As you review these potential barriers, be sure to distinguish between perceived problems—challenges that have solutions or do not apply in your community—and real barriers that might actually prevent you from achieving your pay-as-you-throw goals. For example, illegal dumping often turns out to be a perceived barrier. It usually can be overcome with a strong education and outreach program and effective enforcement. Multi-family housing, by contrast, may be a real barrier for some communities. A high concentration of population in multi-family housing might prevent a community from extending pay-as-you-throw to these residents.

Then, on the following page, list the barriers that you feel might apply to your community's program. For each of these, consider the ways in which you might overcome them. The second page of this form can be copied and used during pay-as-you-throw meetings or presentations to solicit other potential barriers from attendees and to brainstorm more solutions.

### Sample Barriers and Solutions

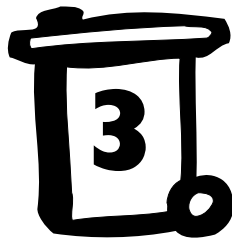
Potential Barriers	Possible Solutions
Illegal dumping/burning	<ul style="list-style-type: none"><li>- Educate residents about pay-as-you-throw</li><li>- Provide several legal diversion options</li><li>- Develop enforcement plan</li></ul>
Uneven revenues/revenue shortfalls as residents generate less waste	<ul style="list-style-type: none"><li>- Use multi-tiered pricing</li><li>- Plan for reduced waste amounts in steady-state when setting prices</li></ul>
Multi-family housing	<ul style="list-style-type: none"><li>- Include charges in rent</li><li>- Under a bag-based system, have tenants purchase bags</li><li>- Use bar code readers on building garbage chutes</li></ul>
Perception that waste collection is free/pay-as-you-throw is a tax increase	<ul style="list-style-type: none"><li>- Educate residents about pay-as-you-throw</li><li>- Set prices at levels residents will accept</li></ul>
Pay-as-you-throw is regressive/low-income residents feel greater impact	<ul style="list-style-type: none"><li>- Offer these residents rebates, coupons, or discounts</li><li>- Offer free bags to recipients of general assistance</li></ul>
Overstuffing of containers	<ul style="list-style-type: none"><li>- Set weight limits on containers</li></ul>
Lack of support from private waste haulers	<ul style="list-style-type: none"><li>- Involve haulers in the planning process</li><li>- Pass ordinance mandating haulers offer variable rates</li></ul>

## Worksheet 2 (Continued)

**Potential Barriers:** List below potential pay-as-you-throw barriers and consider whether each is actually relevant to your community. For each potential barrier you feel may impact your program, list any possible solutions that come to mind.

Potential Barriers	Possible Solutions

# Worksheet



## PUBLIC OUTREACH

**Use this worksheet to identify specific public outreach goals for your program and consider ways to achieve them.** This worksheet will help you plan for the two distinct parts of public outreach: A) soliciting feedback about pay-as-you-throw during the planning stage and B) educating the community during implementation about the program's final design and informing residents about how to participate (for example, where to buy bags and how to handle bulky items). (Refer to the "Public Outreach Materials" section beginning on page 91 of this workbook for more ideas on how to generate feedback and educate your community.)

### Part A Soliciting Feedback

Using this table, consider how you will obtain input during the planning stage about the proposed pay-as-you-throw program. Begin with the audiences from whom you are seeking feedback. Then, consider possible methods of achieving this. In the last column, list when you should begin each of the different strategies for gathering input.

Audience	Outreach Methods	Schedule
EXAMPLE: <i>Retailers/other businesses</i>	<ul style="list-style-type: none"><li>- Direct visits to local retailers to discuss the program and ask them about distributing or selling bags in stores</li><li>- Invite retailers to public pay-as-you-throw meetings</li><li>- Include retailers in your citizens' advisory council or other planning organization</li></ul>	About 6 months before program implementation
EXAMPLE: <i>Residents</i>	<ul style="list-style-type: none"><li>- Develop a pay-as-you-throw fact sheet introducing the program and asking for feedback</li><li>- Issue press releases to the local media to get media coverage</li><li>- Hold public meetings on pay-as-you-throw</li><li>- Invite community residents to join your citizens' advisory council or other planning organization</li></ul>	About 6-9 months before program implementation
EXAMPLE: <i>Elected officials</i>	<ul style="list-style-type: none"><li>- Hold a briefing for elected officials to introduce the program and ask for their input</li><li>- Include elected officials in the citizens' advisory council or other planning organization</li></ul>	About 6 months before program implementation

**Worksheet 3** (Continued)

**Soliciting Feedback:** For each of the audiences listed below, consider possible outreach methods and a schedule of when to begin these strategies. Copy this page as needed to consider ways of reaching additional audiences.

<b>Audience</b>	<b>Outreach Methods</b>	<b>Schedule</b>
Retailers/other businesses		
Residents		
Elected officials		
Media		
Solid waste staff		
Private haulers		
Other:		

## **Part B** Educating the Community

Use the table below to consider how to educate your community about pay-as-you-throw. Begin by considering which audiences you will need to reach. For each audience, list the specific goals of the outreach effort and the message you will use to reach that group. In the last column, indicate what products you could develop to accomplish this.

<b>Audience</b>	<b>Goal</b>	<b>Message</b>	<b>Products</b>
EXAMPLE: Residents	<ul style="list-style-type: none"> <li>- Show residents that pay-as-you-throw is needed</li> <li>- Convince residents the program is fair and not an added tax</li> <li>- Explain how to use the new bag-based system</li> </ul>	<ul style="list-style-type: none"> <li>- The current MSW program ultimately is not sustainable</li> <li>- The program will save you money, if you reduce waste (include details about how to reduce waste)</li> <li>- Participating is easy—just buy bags for your trash at area retailers (include details on prices, recycling, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>- Flyers posted around town</li> <li>- Public meetings</li> <li>- Press releases</li> <li>- Invite participation through the citizens' advisory council</li> <li>- Brochure mailed to all households</li> </ul>
EXAMPLE: Media	<ul style="list-style-type: none"> <li>- Generate positive media coverage of pay-as-you-throw</li> <li>- Convince media that the program is needed and will work</li> </ul>	<ul style="list-style-type: none"> <li>- The current MSW program ultimately is not sustainable</li> <li>- Pay-as-you-throw has multiple benefits: it will give both residents and the municipality money, reduce waste, and is fairer to residents</li> <li>- More and more communities are adopting pay-as-you-throw</li> </ul>	<ul style="list-style-type: none"> <li>- Press release/press kit</li> <li>- Briefings for reporters</li> <li>- Invite reporters to town meetings/other pay-as-you-throw presentations</li> </ul>
EXAMPLE: Civic groups	<ul style="list-style-type: none"> <li>- Convince community and business leaders that pay-as-you-throw is needed and will work</li> <li>- Show that the municipality's long-term financial health will be compromised if no change is made</li> <li>- Involve these leaders in the development of the program and in selling it to residents</li> </ul>	<ul style="list-style-type: none"> <li>- The current MSW program is not sustainable</li> <li>- Pay-as-you-throw will help both residents and the municipality to save money</li> <li>- The municipality is interested in getting help from community groups in developing the program</li> </ul>	<ul style="list-style-type: none"> <li>- Briefings for civic groups at their meetings</li> <li>- Public meetings</li> <li>- One-on-one meetings with civic group leaders</li> </ul>

**Worksheet 3** (Continued)

**Educating the community:** For each of the audiences listed below, consider the goals of your outreach effort, the specific message of your outreach to that audience, and the products you might develop to accomplish this. Copy this page as needed to consider ways of reaching additional audiences.

Audience	Goal	Message	Products
Residents			
Civic groups			
Media			
Retailers/other businesses			
Private haulers			
Other:			



# Worksheet



## CONTAINER AND PRICING CHOICES

Use this worksheet to compare the advantages and disadvantages of the different container and pricing choices and select the best system for your program. In Part A, rank in terms of importance the characteristics of the main container and pricing combinations: bags or tags/stickers that are sold at retail stores or municipal offices; cans under a “pay as you go” pricing system (under which residents are billed based on the number of cans they set out for collection); and cans under a subscription system. (Another pricing option that can be used in combination with any of the container and pricing choices is a two-tiered system, which uses a per-container fee for variable MSW costs while retaining a monthly flat collection charge for fixed MSW costs. This helps prevent revenue fluctuations).

After ranking the different container and pricing combinations, review your work and record a preliminary system choice in Part B. Be sure to consider the overall program goals you established in Worksheet 1 when making this choice.

### Part A Container and Pricing System Characteristics

Consider the different advantages and disadvantages of the container and pricing systems and how relevant they are to your program. Rank each characteristic on a scale of 1 to 5. (A ranking of 5 means the issue is extremely important for your program. A ranking of 1 means the issue is of minimal importance.)

System	Advantage/Disadvantage	Importance
Bag Systems	<b>Advantages</b>	
	Stronger waste reduction incentive than can systems	1 2 3 4 5
	No billing system needed, so accounting costs lower	1 2 3 4 5
	Residents find bag systems convenient and easy to understand	1 2 3 4 5
	Lower implementation costs than can systems	1 2 3 4 5
	Faster, more efficient collections than cans	1 2 3 4 5
	Easy to monitor compliance	1 2 3 4 5
	Easy to adapt for bulky item collections	1 2 3 4 5
	<b>Disadvantages</b>	
	Greater revenue uncertainty than subscription can systems	1 2 3 4 5
	Bags must be purchased and made available to residents in stores or municipal offices	1 2 3 4 5
	Staff time required for purchasing, storing, and selling bags in municipal offices	1 2 3 4 5
	Residents might find buying and storing bags inconvenient	1 2 3 4 5
	Often incompatible with automated/semiautomated equipment	1 2 3 4 5
Animals can tear bags, and bags can tear during lifting	1 2 3 4 5	

**Worksheet 4** (Continued)

<b>System</b>	<b>Advantage/Disadvantage</b>	<b>Importance</b>
<b>Tag or Sticker Systems</b>	<b>Advantages</b>	
	Stronger waste reduction incentive than can systems	1 2 3 4 5
	No billing system needed, so accounting costs lower	1 2 3 4 5
	Residents find tag/sticker systems convenient and easy to understand	1 2 3 4 5
	Lower implementation costs than can systems	1 2 3 4 5
	Cost of purchasing tags/stickers is less than bags	1 2 3 4 5
	Easily adapted for different size containers	1 2 3 4 5
	Easily adapted for bulky item collections	1 2 3 4 5
	<b>Disadvantages</b>	
	Greater revenue uncertainty than subscription can systems	1 2 3 4 5
	Tags/stickers must be purchased and made available to residents in stores or municipal offices	1 2 3 4 5
	Staff time required for purchasing, storing, and selling tags/stickers in municipal offices	1 2 3 4 5
	Residents might find buying and storing tags/stickers inconvenient	1 2 3 4 5
	Municipality must communicate size limits to residents, and collection crews must monitor size-limit compliance	1 2 3 4 5
Tags/stickers can fall off in rainy or cold weather or be stolen by other residents	1 2 3 4 5	
<b>Can Systems (Pay As You Go)</b>	<b>Advantages</b>	
	Residents have flexibility to set out as few or as many containers each week as needed	1 2 3 4 5
	New cans may not be required if residents already own cans of roughly uniform volume	1 2 3 4 5
	Cans are reusable and prevent animals from scattering waste	1 2 3 4 5
	Cans can work with automated/semiautomated collection systems	1 2 3 4 5
	<b>Disadvantages</b>	
	Greater revenue uncertainty than subscription can systems	1 2 3 4 5
	Smaller waste reduction incentive if large cans are used	1 2 3 4 5
	Complex tracking and billing system needed to count set-outs at each stop and bill accordingly	1 2 3 4 5
	Billing system creates lag time between collecting waste and receiving payment for the service	1 2 3 4 5
	Greater implementation costs if purchase, inventory, and distribution of cans is required	1 2 3 4 5
Collection time greater than with bag systems	1 2 3 4 5	
Alternate system needed for collection of bulky items	1 2 3 4 5	

**Worksheet 4** (Continued)

System	Advantage/Disadvantage	Importance
<b>Can Systems (Subscription)</b>	<b>Advantages</b>	
	Revenues are stable and easy to forecast	1 2 3 4 5
	Simplified collection process for collection crews	1 2 3 4 5
	New cans may not be required if residents already own cans of roughly uniform volume	1 2 3 4 5
	Cans are reusable and prevent animals from scattering waste	1 2 3 4 5
	Cans can work with automated/semiautomated collection systems	1 2 3 4 5
	<b>Disadvantages</b>	
	Reduced waste reduction incentive, since residents have no incentive to reduce waste below their minimum service level	1 2 3 4 5
	Complex tracking and billing system needed to track residents' subscription level and bill accordingly	1 2 3 4 5
	Billing system creates lag time between collecting waste and receiving payment for the service	1 2 3 4 5
	Greater implementation costs if purchase, inventory, and distribution of cans is required	1 2 3 4 5
	Collection time greater than with bag systems	1 2 3 4 5
	Alternate system needed for collection of bulky items	1 2 3 4 5

## Part B Choosing a Container and Pricing System

After ranking the different system characteristics, review your work to see which system offers the most relevant advantages and the fewest disadvantages. If you are very concerned about revenue instability or uneven cash flow, consider whether you should use a two-tiered pricing system.

Next, go back to the prioritized list of program goals you created in Worksheet 1. Consider which container and pricing system would best enable you to achieve your community's goals. If needed, use the table below to help you consider your options. List your program goals in the first column and consider the impact of each container/pricing system choice on the goals.

Program Goal	Container/Pricing Systems				
	Bags	Tags/Stickers	Cans (Pay As You Go)	Cans (Subscription)	Two-Tier Pricing
EXAMPLE: Reduce MSW as much as possible	Bags tend to be smaller, creating a stronger waste reduction incentive	Tags/stickers for smaller containers create a strong waste reduction incentive	Cans tend to be larger, reducing waste reduction incentive	Cans tend to be larger, reducing waste reduction incentive	Flat fee in combination with variable rate reduces waste reduction incentive
EXAMPLE: Minimize program costs	Low accounting costs, since no billing system needed	Low accounting costs, since no billing system needed	Billing system can increase costs	Billing system can increase costs	Potential for reduced administrative costs
EXAMPLE: Achieve revenue stability	Uneven cash flow possible	Uneven cash flow possible	Uneven cash flow possible	Steadier cash flow	Steadier cash flow

With the different system characteristics and your overall program goals in mind, make a preliminary container and pricing system choice and record it below.

Container and pricing system: \_\_\_\_\_

Used with a two-tiered or multi-tiered rate structure? \_\_\_\_\_ yes \_\_\_\_\_ no

# Worksheet



## RATE STRUCTURE DESIGN

**Use this worksheet to design a rate structure for your program.** In Part A, estimate the amount of waste you will be collecting under pay-as-you-throw. In Part B, estimate your pay-as-you-throw program costs and the cost of any complementary programs. Then, estimate the per-container price needed to meet your program's costs in Part C. Complete this worksheet by considering whether this price strikes the right balance between costs and revenues.

### Part A Waste Collection Forecast

Perform the following calculations to estimate the amount of MSW that will be collected from residents under your pay-as-you-throw program. Begin by estimating the amount of MSW collected in the year before program implementation (the "base year"). Then, revise this figure to reflect MSW collections two years after program implementation (the "projection year"). This is also called the steady-state, when residents' reductions in waste generation due to pay-as-you-throw have stabilized.

#### 1. Current Waste Collection

$$\frac{\text{_____}}{\text{Tons of MSW collected in the base year}} \div \frac{\text{_____}}{\text{Current number of community residents in the base year}} = \frac{\text{_____}}{\text{Tons of MSW collected per resident in the base year}}$$

#### 2. Community Growth

$$\frac{\text{_____}}{\text{Tons of MSW per resident in the base year [from A-1]}} \times \frac{\text{_____}}{\text{Estimated number of residents in the projection year}} = \frac{\text{_____}}{\text{Annual MSW tonnage expected in the projection year without pay-as-you-throw}}$$

#### 3. Waste Collection Under Pay-As-You-Throw

$$100 - \frac{\text{_____}}{\text{Percentage decrease in MSW expected under pay-as-you-throw}} \% = \frac{\text{_____}}{\text{MSW reduction multiplier}} \times \frac{\text{_____}}{\text{Annual MSW tonnage expected without pay-as-you-throw [from A-2]}} = \frac{\text{_____}}{\text{Annual MSW tonnage expected under pay-as-you-throw}}$$
$$\frac{\text{_____}}{\text{Annual MSW tonnage expected under pay-as-you-throw}} \div 12 = \frac{\text{_____}}{\text{Tons of MSW expected per month under pay-as-you-throw}}$$

## Part B Program Costs

In this section, estimate your monthly MSW curbside collection and disposal fixed and variable costs under pay-as-you-throw in the projection year. Then estimate monthly fixed and variable costs for your new (or existing) recycling program in the projection year. Be sure to take into account your residents' reduced MSW set-outs when estimating costs. (For composting/yard waste collections or other complementary programs, copy this page and use it to estimate their costs.) If you contract out for some or all of these services, enter this cost under the "contractor fees" line. Combine these costs at the end of this section to estimate the total cost of pay-as-you-throw and any complementary programs.

### I. Fixed MSW Collection and Disposal Costs per Month

Physical facilities (e.g., maintenance, mortgage, utilities)	\$ _____
Salaries and benefits (labor costs that remain fixed regardless of quantity of MSW collected)	\$ _____
Vehicle amortization	\$ _____
Vehicle maintenance (vehicle maintenance costs that remain fixed regardless of quantity of MSW collected)	\$ _____
Vehicle operating costs (vehicle operating costs that remain fixed regardless of quantity of MSW collected)	\$ _____
Contractor fees (if any)	\$ _____
Other fixed costs	\$ _____
<b>Total fixed MSW collection and disposal costs per month</b>	<b>\$ _____</b>

### 2. Variable MSW Collection and Disposal Costs per Month

Salaries and benefits (labor costs that vary with amount of MSW collected)	\$ _____
Vehicle maintenance (vehicle maintenance costs that vary with amount of MSW collected)	\$ _____
Vehicle operating costs (vehicle operating costs that vary with amount of MSW collected)	\$ _____
Contractor fees (if any)	\$ _____
Tipping fees	\$ _____
Other variable costs	\$ _____
<b>Total variable MSW collection and disposal costs per month</b>	<b>\$ _____</b>

### 3. Total MSW Collection and Disposal Costs per Month

_____	+	_____	=	_____
Total monthly fixed MSW collection and disposal costs [from B-1]		Total monthly variable MSW collection and disposal costs [from B-2]		Total monthly MSW collection and disposal costs under pay-as-you-throw

**4. Fixed Recycling Collection and Processing Costs per Month**

Physical facilities (e.g., processing equipment amortization, utilities)	\$ _____
Salaries and benefits (labor costs that remain fixed regardless of quantity of recyclables collected)	\$ _____
Vehicle amortization costs	\$ _____
Vehicle maintenance costs (vehicle maintenance costs that remain fixed regardless of quantity of recyclables collected)	\$ _____
Vehicle operating costs (vehicle operating costs that remain fixed regardless of quantity of recyclables collected)	\$ _____
Contractor fees (if any)	\$ _____
Other fixed costs	\$ _____
<b>Total fixed recycling costs per month</b>	<b>\$ _____</b>

**5. Variable Recycling Collection and Processing Costs per Month**

Salaries and benefits (labor costs that vary with amount of recyclables collected)	\$ _____
Vehicle maintenance costs (vehicle maintenance costs that vary with amount of recyclables collected)	\$ _____
Vehicle operating costs (vehicle operating costs that vary with amount of recyclables collected)	\$ _____
Equipment costs (e.g., baler, compactor, Bobcat operations) (equipment costs that vary with amount of recyclables collected)	\$ _____
Contractor fees (if any)	\$ _____
Other variable costs	\$ _____
<b>Total variable recycling costs per month</b>	<b>\$ _____</b>

**6. Total Recycling Collection and Processing Costs per Month**

_____	+	_____	=	_____
Total fixed recycling costs per month <i>[from B-4]</i>		Total variable recycling costs per month <i>[from B-5]</i>		Total monthly recycling costs under pay-as-you-throw
_____	-	_____	=	_____
Total monthly recycling costs under pay-as-you-throw <i>[from B-6]</i>		Net revenue from sale of recyclables per month		Adjusted total monthly recycling costs under pay-as-you-throw

**7. Total Cost of Pay-As-You-Throw and Complementary Programs**

Total monthly MSW collection and disposal costs under pay-as-you-throw <i>[from B-3]</i>	\$ _____
Adjusted total monthly recycling costs under pay-as-you-throw <i>[from B-6]</i>	\$ _____
Other monthly complementary program costs, if any	\$ _____
<b>Total monthly cost of pay-as-you-throw and complementary programs</b>	<b>\$ _____</b>

## Part C Program Revenues

Use this section to estimate the per-container price needed to meet your program's costs. If you plan to use more than one size container, estimate the amount of waste you will collect in each size container per month (you might contact planners in pay-as-you-throw communities for help with this estimate). Then perform the calculations in this section separately for each container. If you are uncertain about how to convert your container's capacity from volume to weight, refer to the report *Characterization of Municipal Solid Waste in the United States: 1995 Update*. You also might check with planners in other communities or weigh a random sampling of several filled containers and use the average weight for this calculation.

### I. Container Selection and Capacity

Container selection: \_\_\_\_\_ (cans, bags, tags, or stickers)  
 Volume of selected container: \_\_\_\_\_ gallons  
 Convert container capacity to weight: \_\_\_\_\_ tons

### 2. Estimated Per-Container Price

	÷		=	
Tons of MSW expected per month under pay-as-you-throw [from A-3]		Weight per container in tons [from C-1]		Number of containers expected per month
	÷		=	\$ _____
Total monthly cost of pay-as-you-throw and complementary programs [from B-7]		Number of containers expected per month		Estimated price per container

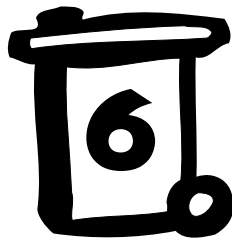
## Part D Program Balance

At this point, you have developed a price per container that will help you cover your estimated costs. Remember, however, that your per-container price is based on program costs in the projection year (once your program has reached the steady-state). Prior to the projection year, you can expect greater waste collection amounts. This will result in greater revenues, but also greater costs. You might consult with planners in nearby pay-as-you-throw communities for data on whether their costs were greater or less in the two years before reaching the steady-state. If needed, adjust your per-container price to strike a balance between reasonable fees and covering your costs completely. Also consider whether your fee sends a strong enough waste reduction price signal to residents. Enter the revised per-container price below.

Revised price per container \$ \_\_\_\_\_



# Worksheet



## IMPLEMENTATION CHECKLIST

Use this worksheet to review the different potential pay-as-you-throw program implementation activities and check off the relevant ones as they are completed. This checklist is divided into three sections. All planners should use Section A, which contains a checklist of specific implementation activities suggested for any pay-as-you-throw program. Then, select and use either Section B or C, depending on whether you plan on using a bag- or tag-based systems or a can-based system.

### Part A All Container Systems

- Draft and enact any necessary ordinances to charge a variable rate for waste collection.
- Draft and enact any additional needed ordinances:
  - Banning waste dumping and/or burning
  - Limiting container weights
  - Mandating recycling
  - Prohibiting unauthorized containers
- Define enforcement responsibilities (work with the police and health department).
- Reassign collection and management staff as needed to new roles in outreach, enforcement, and administration.
- Prepare staff to address residents' concerns and questions.
- Plan your education and outreach campaign. Develop outreach materials and schedule briefings and presentations.
- Consider working with the business community to ensure that they lock their dumpsters to prevent midnight dumping.
- Develop and implement policies for accommodating low-income residents and physically handicapped and elderly residents.
- Develop and implement policies for accommodating residents of multi-family units.

- Develop and test your rate structure and your budgeting and tracking systems.
- Develop procedure for gathering and analyzing data on waste generation amounts and costs. Conduct baseline data collection.
- Develop a phase-in strategy (e.g., collect all wastes for several weeks, but leave “error tags” where needed to educate customers that only correctly paid and packaged trash will be collected in the future).

## **Part B** Bag- or Tag-Based Systems

- Determine weight limit for bags or size limit for trash that is tagged and the number of bags or tags to purchase.
- Identify vendors, develop specifications and RFPs, solicit bids, and purchase bags or tags.
- Plan and develop a distribution network (e.g., using town offices or local retailers).
- If distributing through retailers, arrange distribution logistics (e.g., delivery and invoice schedule and marketing agreements). Assign and train staff as necessary.
- If distributing through municipal offices, develop and implement inventory management system. Assign and train staff as necessary.
- Develop an education program informing residents how to participate (e.g., the location of bag or tag sales outlets and the procedures for bulky wastes).
- Develop and implement plans for bulky items, including pricing.

## **Part C** Can-Based Systems

- Evaluate whether residents can use their own cans or if the town will supply cans.
- Determine the container size and number of cans to purchase.
- Identify vendors, develop specifications and RFPs, solicit bids, and purchase cans.
- If you have a subscription system, develop and provide information to residents that allows them to estimate their trash set-out and select a subscription level.
- If residents will use one large can, develop plans for extra waste (e.g., supplement with bags or tags). Purchase necessary items and educate residents.
- Develop and implement plans to distribute new cans (for new residents, replacements for stolen containers, or changes in service level for subscription can systems).
- Distribute containers and maintain an inventory of extra containers.
- Develop and implement billing system.
- Develop and implement plans for bulky items, including pricing.

# Worksheet



## MONITORING AND EVALUATION

**Use this worksheet to monitor waste generation amounts and the amount of material recycled and composted.** For the first year after program implementation, enter base year data in the first column and data from the program's first year in the second. For monitoring the program after the first year, enter the previous year's data followed by the current year being evaluated. This information can be tracked over time to demonstrate the waste reduction impact of pay-as-you-throw and help inform decisions about potential changes in the program's scope or structure.

### Part A Waste Collection Amounts

	Base Year	Current Year
Tons of MSW collected:	_____	_____

### Part B Recycling Amounts

Tons of recyclables collected:	Glass	_____	_____
	High-Grade Paper	_____	_____
	Mixed Paper	_____	_____
	Corrugated Cardboard	_____	_____
	Newsprint	_____	_____
	Aluminum	_____	_____
	Plastic	_____	_____
	Steel	_____	_____
	Other	_____	_____
Total tons of recyclables collected:		_____	_____

**Part C** **Composting Amounts**

	<b>Base Year</b>	<b>Current Year</b>
Tons of organic materials collected for composting:	_____	_____

**Part D** **Costs**

Tracking the costs incurred and the revenues recovered under pay-as-you-throw is an important process. At least once a year, refer back to Worksheet 5, “Rate Structure Design,” and re-calculate program costs and revenues. This information can be used to evaluate the program’s economic sustainability on an ongoing basis. It also can be used to demonstrate the cost-effectiveness of the program to elected officials or planners from other communities interested in pay-as-you-throw.