

**PAY AS YOU THROW—
IMPLEMENTATION
STRATEGIES**

**Wednesday, February 27, 2019
NH DES Training**

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www.nerc.org

Save As You Reduce and Recycle®



PAY AS YOU THROW - PAYT



AKA

Unit-Based Pricing,
Variable Rate Pricing,
User Pay, or SMART
(Save Money and
Reduce Trash)

**OPTIMAL PAYT SYSTEM:
MEASURES THE AMOUNT OF
INDIVIDUAL WASTE COLLECTED &
CHARGES THE WASTE PRODUCER A
FEE EQUAL TO THE COST OF
GENERATION**

PAYT AROUND THE COUNTRY

- Two states mandate: Vermont & Minnesota
- At least 34 towns in NH
- 7,100 communities in the US
 - ✓ Massachusetts - 59%+
 - ✓ Iowa - 56%+
 - ✓ California - 50%
 - ✓ New York State - 42%



PAYT IMPLEMENTATION

- Measure waste by weight or volume
- Volume-based models use a range of “units” for identifying how charges will be levied
 - ✓ Bags, tags, containers RFID

DESIGN VARIABILITY

- “Full-unit pricing”
 - ✓ Users pay for all the garbage they dispose
- “Partial-unit pricing”
 - ✓ No charge for disposal of set base amount
 - ✓ Additional bags or containers paid for by the resident

DESIGN VARIABILITY, cont.

- “Variable-rate pricing”
 - ✓ Residents choose to rent a container or purchase bags
 - ✓ Price corresponds to the volume

BAG SYSTEMS

- Imprinted trash bags
 - ✓ Varying sizes 20-35 gallon bags
- Price covers bag cost & part or all of the cost of hauling/disposal
- Drop-off or curbside collection
- Avoids need for billing



STICKERS

- Stickers are purchased to affix on specific sized bags or containers
- Price of sticker covers the cost of the sticker & part or all of the cost of hauling and disposal
- Applicable for curbside collection or drop-off
- Avoids need for billing

TRASH TAG

- All trash must be in a bag with a tag or it will not be picked up
- Maximum weight: 30 pounds
- Recycling will reduce your need for trash tags



No. 000001

PER BAG PUNCH CARDS

- Residents purchase punch cards
- Price is based on the number of dots or bags offered on the card
- Drop-off facility operators punch the dots for each bag disposed
- Not appropriate for curbside collection
- Avoids need for billing

CARTS OR CANS

- Increasing charge for larger containers or collection of multiple containers of same size
- Haulers may charge flat fee per cart to defray embedded hauling cost, but must add unit-based disposal charge per container
- Used primarily for curbside collection
- Requires billing system



HYBRID

- Residents receive a smaller limited volume of service for flat fee or “no cost”
- Additional containers or bags incur a cost
- Allows for phase in of PAYT into existing town or municipal system

WEIGHT-BASED SYSTEMS

- Containers, bags, or vehicles are weighed
- Charged on weight of trash disposed
- Drop-off or curbside programs
- Requires billing or direct payment to drop-off center operators

REVIEW EXERCISE 4

**CONTAINER & PRICING
CHOICES**

CITIZENS ADVISORY COMMITTEE

- Advantages & Disadvantages
- Role: evaluating the available options for solid waste management & funding
 - ✓ PAYT is a natural fit for these groups
- Define goals & expectations
- Define role in the decisionmaking process

IDENTIFICATION OF PAYT GOALS

- Why the municipality is interested in pursuing a PAYT program?
- Political considerations?
- Goals and interests of other stakeholders?

**GROUP BRAINSTORM &
REVIEW WORKSHEET 1**

**IDENTIFYING PROGRAM
GOALS**

MUNICIPAL PROFILE

- What background information is necessary to make informed program design decisions?
- Serves as a guideline for ensuring that all necessary information about current waste and recycling activities is compiled for making program design decisions

**KEY INDICATORS -
WORKSHEET 2**

**DISCUSS & REVIEW
COMPLETED MUNICIPAL
PROFILES**

LEGAL AUTHORITY/LEGAL ISSUES

- Does the municipality/town of legal authority to implement a PAYT program?
- Can the municipality/town require haulers to participate?
- Draft & enact any necessary ordinances to charge a variable rate for waste collection

LEGAL AUTHORITY/LEGAL ISSUES

- Draft & enact any additional necessary & complementary ordinances
 - Banning waste burning & illegal dumping
 - Limiting container weights
 - Add additional items for recycling
 - Prohibiting use of unauthorized containers
- Define enforcement responsibilities
 - Work with police & health departments

POLITICAL CONSIDERATIONS

- What are the barriers to implementing PAYT? Possible Solutions?
- Understand what the concerns may be & how to respond
- Understand the decision-making process in your municipality/town in order to move the project forward successfully

INITIAL POLITICAL AND CITIZEN
CONFUSION AND RESISTANCE TO
PAYT PROGRAM IMPLEMENTATION IS
LIKELY TO OCCUR AT LEAST ON
SOME SCALE.

POLITICAL CONSIDERATIONS

- Which elected officials/decision-makers/stakeholders already support PAYT; which do you think might support PAYT if they knew more about it?
- What are citizen activists saying? How can they be persuaded?
- Who are typical allies in PAYT? Environmental activists, seniors, others?

**GROUP BRAINSTORM -
WORKSHEETS 3 & 6**

**POTENTIAL BARRIERS
& POLITICAL
CONSIDERATIONS**

ADDITIONAL PLANNING TASKS

- Develop & implement policies for:
 - ✓ Accommodating low-income residents, physically handicapped, & elderly residents
 - ✓ Accommodating residents of multi-family units
- Develop procedure for gathering & analyzing data on waste generation amounts & costs
 - ✓ Conduct baseline data collection

**WHAT PAYT SYSTEM IS
RIGHT FOR YOUR
COMMUNITY?**

**GROUP DISCUSSION OF
THE ABOVE FACTORS &
ANY OTHERS THAT COME
INTO PLAY WHEN MAKING
THIS DECISION**

COST INFRASTRUCTURE & RATE STRUCTURE DESIGN

- What costs do you want your PAYT system to include?
- Consider the philosophical, political, & economic influences in your community

COST INFRASTRUCTURE & RATE STRUCTURE DESIGN

- Step 1: Waste Collection Forecast
 - ✓ Estimate the amount of waste you will be collecting under Pay-As-You-Throw
- Step 2: Estimate your program costs & the cost of any complementary programs

KEY FINANCIAL ASSUMPTIONS

- Will all costs associated with collection and disposal of MSW and recyclables be included in the PAYT program?
- Or, just a portion of those costs in the PAYT program? If only a portion, which costs are they? Why?

KEY FINANCIAL ASSUMPTIONS

- What are the costs?
 - Fixed and variable MSW, Recycling, other complementary programs
- Should there be a sliding scale for cost of disposal?
 - Based on what?

KEY FINANCIAL ASSUMPTIONS

- Should there be a cost associated with recycling?
- What are the costs associated to MSW, recycling, C&D, yard waste?
 - ✓ Tipping/handling fees? Hauling? Processing?
 - ✓ Which should be included?

KEY FINANCIAL ASSUMPTIONS

- Should the town/facility implement a mandatory recycling ordinance?
- Or, other mandate to go along with this message & help increase diversion?

KEY FINANCIAL ASSUMPTIONS

- How is the program going to affect existing solid waste & recycling operations?
- Does the town need to reconfigure their transfer station in order to make this work?

KEY FINANCIAL ASSUMPTIONS

- Step 3: Estimate the per container price (or per bag, volume) needed to meet program costs
- Prices will be dependent on two things
 - ✓ Type of PAYT program planned
 - ✓ Assumptions regarding the specific costs the PAYT program are proposed to cover
- Develop/test the rate structure, budgeting & tracking systems

**WORKSHEET 5 -
GROUP DISCUSSION**

**RATE STRUCTURE
DESIGN**

PUBLIC OUTREACH

- What are the public outreach goals for the program and how will they be achieved?
- Who are the targeted stakeholders?
 - ✓ Decisionmakers, residents, haulers, businesses, seniors, multi-family property management/residents, low income residents, seasonal populations, others

PLANNING AND DESIGN PHASE

- Soliciting feedback
- Feedback should be initiated during the planning stage, through outreach, surveys, involvement of a citizen taskforce.

GROUP DISCUSSION

**WHAT ARE TARGET
AUDIENCES FOR INITIAL
FEEDBACK?
HOW CAN THEY BEST BE
REACHED?**

IMPLEMENTATION PHASE

- Outreach during the implementation phase begins during the final design
- Planning the education and outreach campaign: Informing residents about how to participate (where to buy bags, any changes to the recycling program, complementary programs being added or modified, how to handle bulky items, etc.)

IMPLEMENTATION PHASE

- Develop outreach materials & schedule briefings and presentations
- Create a phone bank hotline for the first few weeks of program operation

**GROUP DISCUSSION &
REVIEW WORKSHEET 7**

**WHAT TYPES OF OUTREACH
MATERIALS SHOULD BE
DESIGNED?**

**WHAT MESSAGES ARE
IMPORTANT TO RELAY?**

IMPLEMENTATION SCHEDULE

Tasks and Staff Training

- Reassign collection & management staff as needed to new roles in outreach, enforcement, & administration
- Determine ongoing administrative tasks that will be associated with the program (billing, accounting procedures, program maintenance, etc.)

IMPLEMENTATION SCHEDULE

- Prepare staff to address resident concerns & questions
- Develop a phase-in strategy
 - ✓ Collect all wastes for several weeks
 - ✓ Leave "error tags" to educate customers that only correctly paid & packaged trash will be collected in the future

IMPLEMENTATION SCHEDULE

- Work with retail establishments to carry bags, if necessary.
- Consider working with the business community to ensure that they lock their dumpsters to prevent illegal dumping.
- Address specifics for each system: Bag-and tag; Can-based; Weight-based; Hybrid)

**GROUP DISCUSSION:
REVIEW WORKSHEET 8**

**WHAT OTHER TASKS MAY
BE NECESSARY?**

PROGRAM MAINTENANCE, MONITORING AND EVALUATION

- Setup an ongoing system for program maintenance, monitoring and measurement
- Quantity of bags being ordered; if different size bags are being used, what is the ratio of use (e.g., two 33-gal. bags are purchased for every one 20- gal. bag); are enough bags being purchased?

PROGRAM MAINTENANCE, MONITORING AND EVALUATION

- Storage and distribution mechanisms – are they effective?
- Accounting and billing procedures – do they need adjustments? Waste generation – is it showing a reduction? How much?

PROGRAM MAINTENANCE, MONITORING AND EVALUATION

- Recyclable collection – is it showing an increase? How much?
- Rate structure – is it adequate? Public education – are residents receiving frequent reminders and 3R instructions?
- Enforcement – are residents participating correctly? Is there illegal dumping?

NERC CAN HELP

We're experts in

- Waste reduction & recycling
- Recycling program design & implementation
- Food scraps/Organics management
- Green procurement
- C&D reuse & recycling
- Electronics recycling
- School reuse, recycling & composting
- Textile recycling programs
- Multi-stakeholder dialogues & negotiations
- & More!

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CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

SMART (PAY-AS-YOU-THROW) IMPLEMENTATION HANDBOOK

PART 1 - HOW TO USE THIS HANDBOOK

Introduction

The Connecticut Department of Environmental Protection (DEP) has put together this pay-as-you-throw (PAYT) handbook to assist municipal officials interested in implementing a pay-as-you-throw program. It includes the following:

- A planning guide for running PAYT planning, design and implementation Task Force meetings
- A series of worksheets that can be applied to help in the planning and implementation of each individual program, including worksheets that help to set goals, define barriers to implementation, choose the program that is right for your municipality and help set the right rate, among others
- A collection of supplemental materials that can be used to support Task Force meetings and other aspects of planning and design, including sample public education materials that can be adapted for use, information on how to develop an RFP for bags and possible bag and tag vendors, and other planning and design support information
- A disk containing a presentation on PAYT that can be individually customized by each municipality and used as a means of informing local community and civic groups at various meetings
- Case studies and a list of program contacts
- A list of publications for further reading

Who Should Use This Handbook

The handbook is designed to be used by all public officials and volunteers who are involved in the planning, design and implementation of PAYT programs. The handbook should be kept in the possession of the chief PAYT program manager, but materials from it can be reproduced liberally, when necessary.

How to Use These Tools

If a Task Force is formed to evaluate PAYT as an option, use the Meeting Guide section to help plan meetings, determine possible guest speakers and distribute appropriate support materials throughout the process. In that case, the handbook should be kept by the chairman of the Task Force.

With or without a Task Force, the worksheets should be filled out by at least one public official responsible for the program. Several of the worksheets, particularly Worksheets #1, 4 and 5, should be filled out by various stakeholders and discussed at length.

The supplemental materials are designed for use by anyone who needs them. They provide excellent background and support material during the various planning and implementation stages and should be consulted throughout the process.

Also provided in this handbook is a disk that contains a PowerPoint presentation on PAYT. It is designed for use in the education and information phase of implementation. Customize the disk any way you choose to fit your needs, and then use the presentation to address local civic organizations throughout your municipality.

In the meantime, DEP is planning to develop a PAYT Mentoring Program; whereby a public official experienced in PAYT will be available to provide technical assistance during the planning stages. Be sure to keep in touch with DEP on this issue if you are interested in participating.

Also, feel free to consult the U.S. EPA's PAYT Web site at www.epa.gov/payt. Some of the materials included in this handbook are from the EPA Web site. There is a wealth of easily downloadable background material available from the site.

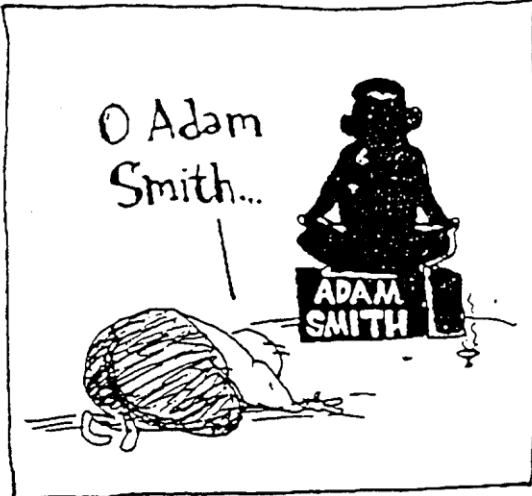
A copy of the DEP's guidelines for receiving a PAYT grant is included. The state is making start-up funds available to qualifying municipalities to cover initial start-up costs. The grants will be available on a first come, first serve basis.

Last, enclosed are evaluation forms. We would appreciate hearing your comments on what has worked, what hasn't worked, and how this handbook could be improved.

In the meantime, for more information, contact Judy Belaval or Nan Peckham at 860/424-3365.

Acknowledgements

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Part 2

Task Force Meeting Guide



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Section 2
TASK FORCE MEETING HANDBOOK

Table of Contents

	Page
Introduction	3
Who Should Use This Handbook	3
Understanding the Task Force's Mission	3
Choosing Task Force Members	4
Meeting Logistics.....	4
Section I - PAYT Program and Design	5
Introductory Meeting	5
Suggested Meeting Agenda	5
Program Design Issues Meeting	6
Suggested Meeting Agendas.....	6
Identification of PAYT Goals.....	6
Legal Authority/Legal Issues.....	6
Identification of Program Barriers.....	7
Discussion of Decision-Making Process	7
Types of PAYT Systems and Their Pros and Cons	8
Funding Issues	8
Determination of Rate Structure	9
Section II - Program Implementation	11
Introductory Meetings.....	11
Suggested Meeting Agendas.....	11
PAYT Program Impact Meetings	12
Suggested Meeting Agendas.....	12
Multi-Family Housing	12
Working with Local Businesses to Improve Recycling.....	13
Fire Districts.....	14
Seasonal Population	14
Low-Income Residents	15
Illegal Dumping	15
Existing Operations.....	16
Working with Local Haulers.....	16
Expansion of Recycling Services.....	17
Enforcement.....	17
Public Education Meetings	18
Suggested Meeting Agendas.....	18
Implementation Logistics Meetings	20
Suggested Meeting Agendas.....	20
Administrative Issues.....	20
Working with Retail Establishments	21
Setting Up a Phone Bank	21
Program Maintenance, Monitoring and Measurement	22

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INTRODUCTION

Very often municipal leaders choose to form citizens advisory committees and/or task forces and charge them with the task of evaluating all the available options for solid waste management and funding. PAYT is a natural option to be examined by these groups. This handbook is designed to be used as a guide by those groups as they examine the potential of PAYT for their communities.

These committees/task forces should be identified as Citizens Solid Waste Advisory Committees and/or Task Forces. Avoid calling them PAYT Task Forces, since it is likely they will be exploring various options along with PAYT and the title could be misleading and confusing, serving to galvanize opponents before anything has even been decided. Another advantage to specifying that the committee/task force be an overall solid waste advisory panel is that the committee can become permanent. It is recommended that municipalities maintain permanent committees/task forces to oversee all solid waste management operations once they have been implemented

When the committee/task force turns its attention to PAYT, this handbook will help walk it through planning, design and implementation stages. The first section of the handbook (Program Planning and Design) is designed to assist in the planning and design of a PAYT program. The second section (Program Implementation) focuses on the implementation phase. Task Forces can use a part or all of these sections, depending on its needs.

This handbook contains sample agendas along with relevant discussion points. It also contains materials that can be used as handouts at meetings to supplement discussion. Worksheets that can help guide the decision and implementation phases are included, as well as sample promotional and educational materials that can be adapted during implementation.

Who Should Use This Handbook

This handbook is designed to be used by the designated chairman of the Task Force. Its main function is to serve as a guide for assistance in planning meeting agendas and in providing necessary background materials to those engaged in PAYT planning and implementation activities.

Of course, this handbook is just a guide and contains suggested agenda items for meetings. Obviously, the input of Task Force members also should be sought with regard to topics for discussion.

Understanding the Task Force's Mission

Before forming a Task Force, be sure that there is a very clear understanding of why this Task Force is being established. Providing a clear definition of what the goals and expectations of the Task Force are to members will prevent them from veering off path or from not achieving the

desired objectives. Furthermore, the Task Force should be clear on what its role in the decision-making process is. For instance, is the Task Force's responsibility to make recommendations to a final decision-maker or is it responsible for making certain decisions? Who does the Task Force report to? What is the timeline for completion? All this should be clearly determined beforehand.

Choosing Task Force Members

Who is appropriate to serve on the Task Force, in large measure, will depend on the goals of the Task Force. Some people will be more appropriate than others, based on their personal areas of expertise. However, choosing members from the following areas could be a starting point:

- Elected officials, including a member of the Board of Selectmen/Town Council and Board of Finance
- A member of the public works dept., and/or recycling coordinator
- A local hauler(s)
- Local business representatives
- Members from local civic groups
- A member from a local "tax watchdog" group
- Concerned citizens, senior citizens, environmentalists, members of local environmental committees

Make sure that committee members understand the purpose of the Task Force and their role on it from their start. Also make sure that there is a straight line of communication between the Task Force and key decision-makers at all times.

Meeting Logistics

Once the Task Force is established, it must decide such things as how often it will meet and where. How often it will meet will be guided by what the Task Force is charged with doing and the timeline for completion. Someone should be appointed to be the Chairman of the Task Force, either by the decision-makers who have formed the Task Force, or by members of the Task Force itself. From the outset, however, the Task Force should be clear on what its objectives are, the timetable for completion and its role in the decision-making process.

Section I

PAYT PROGRAM PLANNING AND DESIGN

Use this section of the handbook if your Task Force is assigned the development of various planning and design decisions.

Introductory Meeting

Suggested Meeting Agenda

- Introduction of individual members and statements concerning their interest in serving on Task Force
- Definition of specific objectives of Task Force and timeline for completion
- Setting of future meeting schedule
- Introduction of PAYT (see presentation in Appendix)
- Overview of existing solid waste/recycling activity (*Worksheet #2, Municipal Profile*)

Notes

1. Adapt the sample "Overview of PAYT" Powerpoint presentation included in Appendix III - Section C in this handbook before the meeting and present it to the Task Force.
2. Use Worksheet #2 as a guideline for making sure that you have assembled all the necessary information about current waste and recycling activities in your community. Summarize this information and present it to Task Force members, so that everyone shares the same amount of knowledge and understanding about current solid waste activities. Without a strong understanding of current waste handling activities, it will be impossible to move forward with a program design.

Covering these two subjects, along with the completion of introductions and establishment of the future meeting schedule, should be enough for the first one or two meetings. Depending on what your next meeting topic is, it might be appropriate to hand out appropriate worksheets for completion by Task Force Members before the next meeting.

- ✓ **Supplemental Materials:** Worksheet #2, PAYT Presentation
- ✓ **Possible Guest Speaker(s):** Public Works Director, Transfer Station Manager

Program Design Issues Meetings

Suggested Meeting Agendas

Each of the agenda items described below can form the basis of one meeting or more. Depending on what your Task Force has been charged with completing, some of these agenda items may be necessary, while others may not.

Each agenda item comes with discussion notes and a list of relevant supplemental materials, such as handouts, worksheets and other materials that are included in the appendix of this handbook.

Agenda Item: Identification of PAYT Goals

Notes

Filling out *Worksheet #1, Identifying Program Goals*, can be useful in identifying the reasons why the municipality is interested in pursuing a PAYT program. It can also help to clearly identify and prioritize program benefits, which can be helpful once program education begins. If a PAYT system hasn't been chosen yet (bags, tags, containers, etc.), this exercise can also help determine which PAYT system makes the most sense, given the priorities identified.

Have committee members fill out the Worksheet in advance of attending the meeting so everyone can discuss their ideas.

✓ **Supplemental Materials:** Worksheet #1

Agenda Item: Legal Authority/Legal Issues

Notes

The Town Attorney should be contacted in early planning phases to make sure that the town has the necessary authority to enact a PAYT program and if it doesn't, to advise on what steps have to be taken to provide it with the necessary authority. Very often, little or no legal steps need to be taken, but issues that should be reviewed include:

- Ability of town to enact a PAYT program
- Ability of town to require haulers to participate
- Illegal dumping ordinances

The appropriate person(s) should meet with the Town Attorney early in the program planning phase and report on the meeting to the Task Force.

- ✓ **Supplemental Materials:** Information on Illegal Dumping, Sample Ordinances

Agenda Item: Identification of Program Barriers

Notes

Familiarizing oneself with all the potential barriers to implementation is crucial, so there are no unexpected surprises later. Very often, the most difficult barriers to overcome are those of perception. Those perceptions can include the following:

- The program will increase illegal dumping
- The program is “another tax”
- Enforcement issues (“do we need ‘garbage police’?”)
- Impact on lower income families
- Multi-family participation

It is important to recognize that in the majority of PAYT programs, barriers such as illegal dumping and other negative perceptions about the program, are overcome through careful planning and program promotion. The barriers are very often nothing more than perceptions that can be corrected with a solid program and public education campaign. This may not be the case with multi-family housing, however. If a municipality consists mainly of large, multi-tenanted buildings, a PAYT program may not be easily adapted.

Have Task Force members fill out *Worksheet #6, Potential Barriers*, in advance of the meeting and then discuss everyone’s opinions. Use the worksheet results to form the basis for your program planning and implementation work. Keep in mind that the single largest barrier you might be faced with is the simple reality that most people dislike change, no matter what it is. And then discuss ways in which to make change more palatable.

- ✓ **Supplemental Materials:** Worksheet #6, Information on Low-Income Residents, Information on Multi-Family Challenges
- ✓ **Possible Guest Speaker:** An official from a municipality with a PAYT program

Agenda Item: Discussion of Decision-Making Process (where relevant)

Notes

What is the purpose of your Task Force? If it is serving as an exploratory committee – one that is charged with exploring the feasibility of the program by examining different program design issues – then it is possible the municipality has not yet made a firm commitment to implementing a PAYT program. If that is the case, then it would be wise for your Task Force to understand what the exact decision-making process will be in your municipality and how your Task Force

will relate to and participate in that decision-making process. Filling out *Worksheet #3, Political Considerations*, will be a starting point.

If your Task Force is charged with designing a program that the municipality is firmly committed to implementing, then understanding the decision-making process might be less critical to you. However, always make sure you have a clear understanding of who your Task Force reports to, why, and its position in the entire process. And, make sure you keep the responsible parties completely informed of your findings.

- ✓ **Supplemental Materials:** Worksheet #3
- ✓ **Possible Guest Speaker:** Chief Elected Official

Agenda Item: Types of PAYT Systems and Their Pros and Cons

Notes

If the Task Force hasn't been supplied with a mandate for a specific program system (bags, tags or containers), begin with *Worksheet #4, Container and Pricing Choices*. Have members review *Worksheet #4* in advance of the meeting and come in with their own opinions about which system will work best. Refer back to *Worksheet #1 – Identifying Program Goals*, to make sure that the system chosen meets the program goals established earlier. Always take projected start-up and operating costs as well as ongoing administrative responsibilities into account when debating program systems.

- ✓ **Supplemental Materials:** Worksheet #4, Case Studies

Agenda Item: Funding Issues

Notes

What costs do you want your PAYT system to include? There are many costs associated with the collection and disposal of solid waste. You need to examine these costs line item by line item and determine which of these costs you want to have covered by the PAYT system. You can find a line item breakdown of the solid waste budget from the Town Treasurer. It also should be part of the research you perform while completing *Worksheet #2, Municipal Profile*.

For instance, your Task Force may decide to include just disposal costs in the PAYT program. Or, it may choose to include costs associated with recycling as well. Remember that whatever costs you decide to fund through the PAYT system, it should provide ample opportunities for residents to save through reduction and recycling. Including costs in the PAYT system that residents can't directly control through their own recycling and reduction activities will make it more difficult for them to save money. This could result in a loss of support both for the program and for recycling. An example of this could result from including the cost of bulky waste

disposal in the PAYT program. Residents could find themselves paying for the cost of someone else's home renovation – a cost they can't possibly control through their own recycling activities. For this reason, bulky waste should have its own separate PAYT fee system.

Determining exactly which costs the PAYT program funds can become a philosophical, political and economic issue. While some advocate a "full cost accounting" approach – making sure the PAYT system covers all the costs associated with solid waste management - others believe that the municipality should keep some of the fixed costs in the tax base while charging actual collection and disposal costs in the PAYT system.

Philosophical considerations often enter the area of what costs and services a municipality should provide its residents as part of its municipal responsibilities. Economic considerations will dictate what the PAYT system might need to cover to meet the municipality's economic goals. Political considerations will have an impact on the decision as well, since elected officials will have ideas on what costs residents will bear before they revolt about a charge they perceive as too high. All of these issues can be aired as part of the decision-making process.

- ✓ **Supplemental Materials:** *Worksheet #2 and Worksheet #5, Rate Structure Design*
- ✓ **Possible Guest Speaker(s):** Chief Elected Official/Town Manager, Public Works Director, Town Treasurer/Controller

Agenda Item: Determination of Rate Structure

Notes

Once you've determined which costs you want the PAYT system to fund, and you have determined the type of system you're going to implement (bags, tags, container – subscription or pay-as-you-go) you can do the calculations necessary to come up with the system costs. Use *Worksheet #5, Rate Structure Design*, to do the necessary calculations, filling in only those costs the Task Force has decided to incorporate into the PAYT system.

Once a rate structure has been determined, make sure to share it with relevant personnel, such as public works director, town treasurer, etc.

- ✓ **Supplemental Materials:** *Worksheet #5*

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Section II

PROGRAM IMPLEMENTATION

Use this section of the handbook when PAYT program design issues (type of program, rate structure, etc.) have already been resolved and your Task Force is charged with implementation-related activities.

Introductory Meetings

Suggested Meeting Agenda

- Introduction of individual members/statements concerning their interest in serving on Task Force
- Definition of specific objectives of Task Force and timeline for completion
- Setting of future meeting schedule
- Overview of existing solid waste/recycling activity (Worksheet #2)
- Summary of PAYT program design decisions

Notes

Use *Worksheet #2, Municipal Profile*, as a guideline for making sure that you have assembled all the necessary information about current waste and recycling activities in your community, if it hasn't been completed already. Present this information to Task Force members, so everyone shares the same amount of knowledge and understanding about current solid waste management activities. This information will be important to the committee when discussing certain PAYT program impacts, such as how the program will impact the commercial sector, residents in multi-family units, etc.

Prepare a brief summary of how the PAYT program is going to operate (bags, tags, rate structure, etc.) Providing solid waste management background information (*Worksheet #2, Municipal Profile*) and the summary of the PAYT program structure, along with housekeeping issues, could occupy one or two meetings, depending on how much ground needs to be covered and the level of familiarity Task Force members already have with the issues. If necessary, the PAYT presentation contained in the appendices could be adapted for use at one of the meetings.

- ✓ **Supplemental Materials:** Worksheet #2, PAYT Presentation
- ✓ **Possible Guest Speaker(s):** Public Works Director, Transfer Station Manager

PAYT Program Impact Meetings

Suggested Meeting Agendas

Program impacts address the different members of your community who will be affected by the implementation of a PAYT program. Program impact issues form a type of bridge between program design and program implementation. After program design issues have been resolved, but before actual program implementation activities can begin, how the PAYT program is going to impact the community as a whole should be studied. For instance, sectors of the community that will be affected by a PAYT program include:

- Residents who live in multi-family apartments and condominiums
- Members of the commercial sector, especially small business owners
- Fire districts, if waste removal taxes are included in their districts
- Low income residents
- Seasonal residents

Other program impacts that should be studied include:

- Illegal dumping ordinances and any other ordinances that might be required
- Impacts on existing collection/drop-off operations, including both drop-off centers and arrangements with private haulers
- Addition/expansion of additional recycling services
- Program enforcement

Each of these different impacts can form the basis of one or more meetings. Depending on what your Task Force has been charged with completing, and depending on the demographics of your community, some of these agenda items may be necessary while others may not.

Each agenda item comes with discussion notes and a list of relevant supplemental materials, such as handouts, worksheets and other materials that are included in the appendix of this handbook.

Agenda Item: Multi-Family Housing

Notes

Residents who live in apartment or condominium complexes may not put their trash out individually for collection. In these facilities, the waste may all go into a common dumpster. If the owners/landlord are charged by weight by the trash disposal company, they are already functioning under a pay-as-you-throw system. If they are not, it is sometimes difficult to

integrate a pay-as-you-throw program into facilities that utilize a shared dumpster because of enforcement issues. One resident who does not participate correctly can “contaminate” the entire load.

This is not to say there are no solutions. Appoint a multi-family subcommittee to first gather information about existing multi-family residences. Have them find out what the current arrangements are for waste collection and disposal. They can contact the landlord or president of the cooperative association to discuss the program with them and possible solutions. Have them report their findings back to the Task Force for further discussion and recommendations.

In some cases, it can become the responsibility of the landlord to distribute bags/tags to residents. However, unless the landlord or the town provides residents of these facilities with recycling opportunities, there may be some resistance. If landlords are not providing adequate recycling, remind them that recycling certain materials is mandatory in the state of Connecticut and work with them to find recycling solutions for their facilities.

- ✓ **Supplemental Materials:** EPA materials on multi-family housing
- ✓ **Possible Guest Speakers:** President of local cooperative association; landlords

Agenda Item: Working with Local Businesses to Improve Recycling

Notes

It is often difficult for small business owners to recycle successfully, especially if they are charged for the rental and collection of containers for recyclable materials in addition to their waste container. Small businesses are often such small generators that it doesn't pay for them to lease separate containers for recyclables. However, in Connecticut, all businesses regardless of size are required to recycle and there are effective recycling options for small businesses. Call the CT DEP Recycling Office for additional information.

Set up a subcommittee to examine how the program will affect small businesses. Ideally, small businesses should participate in the PAYT program along with residents. Larger businesses are generally charged by weight or volume by private haulers, so they are already operating under a PAYT system. It is also generally more cost effective for large businesses to recycle.

Depending upon the findings of the subcommittee, the Task Force may decide to make a set of recommendations on how the municipality can provide ongoing recycling assistance to small businesses. One way is to make a drop-off center for recyclables available to them. Another way may be to provide technical assistance. Talking to recycling coordinators at other communities will be helpful.

- ✓ **Possible Guest Speakers:** Members of the business community, officials from other communities with PAYT programs

Agenda Item: Fire Districts

Notes

Some municipalities have fire districts within their municipalities, sometimes in the downtown areas. Fire districts sometimes tax the members of their district separately. Included in those taxes could be solid waste removal.

First, discover if your municipality has any fire districts. If it does, find out if solid waste and recycling collection and disposal is paid for in fire district taxes. If it is not, then the fire district will have no bearing on your PAYT program. However, if the fire district taxes do include solid waste collection, then you will have to work with fire district officials to integrate the PAYT program.

A decision might be made to remove solid waste collection out of the fire district taxes and have fire district members purchase bags/tags directly themselves. In this case, the fire district may have to adjust its taxes to reflect that change. Or, the municipality could sell bags/tags to the fire district and require them to distribute accordingly. Or, an entirely different solution may arise. The key is to not overlook the inclusion of fire districts, if you have them.

Agenda Item: Seasonal Population

Notes

Many municipalities in Connecticut have seasonal populations – either weekenders and/or summer visitors. Some communities also host colleges and private preparatory schools. Be sure to consider them during the planning process.

For instance, consider what time of year you will have the largest influx of seasonal visitors, and then try to coordinate the implementation of your program with that time. This way, the seasonal population will be around when the program is receiving widespread publicity and attention. Promoting the program at a time when seasonal visitors are not likely to be around will make it more difficult for them to participate when the time comes.

Treat seasonal visitors like any other resident of the community during the educational process. Even though they may be temporary visitors or part-time residents, their commitment to the community should equal those of permanent residents. In communities, such as coastal areas where homes are rented out by the week or month, it is typically up to the owner renting the house to make sure the vacationers understand the program. The owner can leave bags in the home, along with all the other home-related instructions, or tell the vacationers where they can purchase the bags. Information about where and how to recycle should also be provided.

Communities with school campus populations need to do a special outreach to them. But, for the most part, students are interested in participating in a program that is good for the environment. Work directly with school officials to determine the best way to include their campus in the program.

Agenda Item: Low-Income Residents

Notes

Notify the Social Services department of your municipality of the PAYT program and its requirements. The Social Services department generally has a record of the families requiring assistance. Free bags/tags could be issued to these families, if they qualify.

Work hard in your educational and promotional campaign to help people understand that they can control their waste disposal costs through recycling. Also, help residents to understand that the program is designed to be more equitable to all residents.

Agenda Item: Illegal Dumping

Notes

Illegal dumping is something that many municipal officials anticipate as a byproduct of PAYT programs, but simply doesn't materialize. Nationwide studies show that illegal dumping is not a problem for the vast majority of municipalities that implement PAYT programs. However, that doesn't mean that some simple precautions shouldn't be taken.

Determine if there are any ordinances regarding illegal dumping already on the books. If there are, review them to see if they need updating. If not, you may want to consider drafting ordinances designed to prevent illegal dumping. Ancillary ordinances could include ordinances against burning of trash, bags left open by not securing tightly and weight limits on bags. These objectives can also be accomplished through an active public education campaign.

As another precaution, you may want to contact local commercial enterprises and suggest that they install locks on their dumpsters, if they haven't already. The same subcommittee that is charged with working with the commercial sector could be charged with doing this as well.

If there is an instance of illegal dumping, it is often pretty easy to find the culprit. There is usually something in the garbage with an address on it. Fines can be levied and there also could be a brief notice in the police report section of the local newspaper, to discourage further instances.

In general, there is not an increase in roadside trash as a result of PAYT programs. Typically, the problems with illegal dumping stay the same – if you had it before the program, you may still have it. And, it is more common for bulky items – tires, sofas, etc. – to be abandoned than it is

for common household trash. Make sure you have a good way to handle bulky waste to protect against illegal dumping in this area. Your Task Force may want to look at bulky waste as a separate issue. Charges should be assigned to the disposal of bulky items. Review existing bulky waste procedures and charges to make sure they are adequate.

- ✓ **Supplemental Materials:** EPA's Illegal Dumping Prevention Guidebook (available from their Web site), EPA Web Site Printout on Illegal Diversion
- ✓ **Possible Guest Speakers:** Public Works and/or Transfer Station Operator to discuss bulky waste issues

Agenda Item: Existing Operations

Notes

Make sure you understand how the program is going to affect existing solid waste and recycling operations. Review Worksheet #2 to make sure you understand all aspects of current operations. For example, if your municipality operates a drop-off center, examine how the program might affect operations there. Will more people be using the drop-off center as a consequence, which will result in a traffic increase? If you're selling bags/tags at the drop-off center, how will that affect your personnel and storage space needs? Do you need to stay open longer? If your residents use a private hauler, how will the program affect how the hauler operates? (*see Agenda Item: Private Haulers for information.*)

If you think the changes to existing operations are going to be substantial, you may want to consider appointing a subcommittee to evaluate all the potential changes and make recommendations to the Task Force as a whole.

- ✓ **Possible Guest Speakers:** Transfer Station or Drop-off Center Operator, Private Hauler

Agenda Item: Working with Local Haulers

Notes

If residents of your local municipality have the opportunity to contract with a private waste hauler, make sure that haulers are part of the implementation process. Invite members from these firms to attend meetings. Ask them to state their concerns. Work cooperatively to find solutions. For instance, the municipality could offer to provide notices of non-compliance that private haulers could leave behind explaining to residents why they are not in compliance with the program. The information could contain information about the program, penalties for noncompliance and a phone number to call for more information.

Keep in mind that private haulers may become your first lines of enforcement. If residents are not using the proper bags or containers, or not applying tags, waste haulers should leave the waste behind, or pick it up but leave behind a warning. Some haulers understandably resist doing this because their customers complain when they are denied service. As one approach, you may want to explore legal issues regarding hauler participation in the program. For instance, you may want to make compliance with the PAYT program a condition of doing business in the town, perhaps through a licensing process. Explore ways of enforcing the program with the town attorney.

Agenda Item: Expansion of Recycling Services

Notes

If your municipality does not already provide residents with ample opportunities for recycling and/or composting, you may elect to use some of the revenues from your PAYT program to expand recycling activities in your municipality. You may want to delegate this activity to an exploratory subcommittee, who could investigate other municipal recycling programs and come back to the committee with their findings and recommendations. Once the Task Force has established which recycling activities it would like to add, recommendations should be made to the proper town authorities regarding the resources required.

- ✓ **Possible Guest Speakers:** Public Works Directors or Recycling Coordinators from other municipalities

Agenda Item: Enforcement

Notes

Program enforcement generally does not become an overriding concern in municipalities with PAYT programs. As discussed earlier, illegal dumping does not emerge as an issue and people generally comply with the PAYT guidelines. (See Agenda Item: Illegal Dumping and Agenda Item: Private Haulers for more information on enforcement.

Methods of enforcement include sending notices of violations to residents who are not participating in the program correctly and instructing private haulers to leave behind trash that is not meeting PAYT requirements. Make sure to provide residents with plenty of recycling and composting options as a positive incentive to participate in the program. And, be sure to consistently educate the public about the program and its benefits to keep awareness high. Make telephone numbers available on all your promotional materials. Your Task Force can discuss this issue and come up with their own recommendations.

Public Education Meetings

Once all program design and program impact issues have been resolved, it is time to begin planning your public education and promotion campaign. If town meetings were required as part of the approval process for implementing a PAYT program, residents may already have some familiarity with PAYT. However, there are fundamental differences between educating residents during an approval process and preparing residents for program participation in an actual program.

For instance, when educating for program participation, you can provide real specifics about how the program will operate and what residents need to do. When educating residents during an approval process, the emphasis is more on what the benefits of PAYT programs are and how the program will favorably impact the community. Be aware that during both types of campaigns, opposition to the program is likely to be strong. So, undertake your planning with that fact uppermost in your mind. Most people don't like any kind of change, and PAYT programs often represent a significant change. If PAYT programs were already in place, and residents were being asked to change to something else, they would likely have the same negative reaction.

Planning a comprehensive public education program will require several meetings, both to accomplish the planning and then to carry out the various activities. Keep in mind that it is very important that the chief elected official of your municipality play a key role in program education. If he or she is not a member of the Task Force, it is imperative that the importance of his/her role be clarified early on in the process. For instance, in smaller communities, it is a good idea if the chief elected official visits key local and civic organizations with a prepared PAYT presentation. Gaining the support of key groups can play a pivotal role in gaining overall community acceptance.

Suggested Meeting Agendas

Notes

- Determine what the budget is for promotion and education costs (Note: typical costs include the printing of a 3R brochure, postage, advertisements in local newspapers, etc.)
- Brainstorm ideas on the various ways to reach residents
- Identify the different local and civic groups that could be asked to participate in a public awareness campaign
- Identify the different sectors of the community that will have different stakes in the program and may require special attention
- Determine what resources are required for carrying out these ideas (manpower, costs, etc.)
- Put together an outline of all the activities you plan to undertake along with a timeline for completion; make sure that everyone is clear on their individual responsibilities and assignments with regard to carrying out these activities

- Activities can include, but not be limited to:
 - Creation of a 3R brochure that describes how residents can reduce, reuse and recycle waste
 - A "Q and A" fact sheet direct mailing
 - Operating informational booths at supermarkets, local fairs, etc.
 - Submitting op-ed pieces for the local newspapers
 - Advertising the program in local newspapers
 - Preparation of press releases
 - Presentations to various local groups by the CEO and others

- ✓ **Supplemental Materials:** Worksheet #7 - Public Outreach, Appendices

- ✓ **Possible Guest Speakers:** Public officials from municipalities that have implemented PAYT programs

Implementation Logistics Meetings

During the planning and implementation of a comprehensive public awareness campaign, the Task Force also should be addressing certain logistical issues that are associated with the ongoing operation of the program. These logistical considerations can include:

- determining ongoing administrative tasks that will be associated with the program (billing, accounting procedures, program maintenance, etc.)
- working with retail establishments to carry bags, if necessary
- providing ongoing recycling technical assistance to small businesses, if necessary
- creating a phone bank hotline for the first few weeks of program operation
- setting up an ongoing system for program maintenance, monitoring and measurement

Most of these issues will be explored best through the creation of subcommittees, so be sure to set up subcommittees early in the process.

Also, refer to *Worksheet #8, Implementation Checklist* for further guidelines and additional potential agenda items.

Suggested Meeting Agendas

Agenda Item: Administrative Issues

Notes

Determining the amount of administrative resources that must be devoted to a PAYT program is usually part of the design process. For instance, municipalities that don't want to create complicated billing systems may avoid certain container-type programs. By the time you reach this stage of program implementation, you will have a good idea as to what the administrative responsibilities will be that are associated with the type of program you selected. What must be addressed at this stage is defining responsibilities and tasks, dividing them up and delegating clear assignments.

The most common administrative issues associated with PAYT programs include such tasks as billing, accounting and overseeing distribution of bags/tags, if that is the type of program chosen. Administrative tasks associated with container PAYT programs often require more sophisticated billing and accounting procedures than programs using bags or tags (review *Worksheet #4: Pros and Cons of Different PAYT Systems*; see also *Worksheet #8: Implementation Checklist*).

In a PAYT program using bags, some of the issues relating to storage and delivery can be addressed in your Request for Proposals (RFP). For instance, some municipalities require their vendor to store bags, delivering them to the municipality upon request or on a monthly basis. Other municipalities have retailers contact the vendor directly when they need a reorder of bags,

saving the town from developing its own storage and distribution system for bags. Finding a secure location for the storage of bags and/or stickers is of critical importance, since these materials represent a significant source of income for the municipality. Theft could cost a municipality hundreds of thousands of dollars in bag/tag fees.

Determine in advance what your administrative tasks are that are associated with the type of program you are implementing, and then determine how to structure your RFP accordingly. If there are ways vendors can help solve your administrative worries, make that part of your RFP. It is also useful at this stage to be in contact with officials from other municipalities with programs and demographics similar to yours.

- ✓ **Supplemental Materials:** Sample RFP's, List of PAYT program contacts
- ✓ **Possible Guest Speakers:** Officials from other municipalities

Agenda Item: Working with Retail Establishments

Notes

If you chose a bag system, you may be relying on local retailers to sell the bags. This is generally not a problem. Retailers are usually eager to carry the bags because they know it is something customers must purchase. Most municipalities do not allow retailers to make a profit on the sale of the bags, and most retailers accept this. In fact, some retailers who might choose not to participate in the program at the beginning, often ask to join later, as customers begin to ask for the bags. One pharmaceutical store saw a 20% increase in sales after it began carrying the bags. In Connecticut, the bags are exempted from state sales tax as well.

Set up a subcommittee to contact local retailers. Talk to them about the program and find out their concerns. Ask the subcommittee to report back with their findings. Use their findings to help shape your administrative functions and RFP requirements, as well as your billing, storage and distribution decisions.

Agenda Item: Setting Up a Phone Bank

Notes

For the first few weeks of program implementation there is likely to be a barrage of telephone calls from residents. Rather than relying on existing municipal personnel to field these calls, it is better to staff a temporary phone bank. You can ask members of local environmental committees or other sources to volunteer their time, or you can simply pay and train temporary workers.

Set up a subcommittee to oversee the phone bank. Regardless of who is fielding the calls, everyone should receive some basic training. Take a few hours to train the workers verbally. Also provide them with written materials, such as the Q and A that was prepared for distribution in your community as part of your public education campaign. Do some role playing as a group

by coming up with the questions you think you will be getting, and then practice the answers together.

Agenda Item: Program Maintenance, Monitoring and Measurement

Notes

Once the program is fully implemented, procedures for the consistent monitoring of the program should be put into place. Areas that need to be monitored and measured include:

- Quantity of bags being ordered; if different size bags are being used, what is the ratio of use (e.g., two 33-gal. bags are purchased for every one 20- gal. bag); are enough bags being purchased?
- Storage and distribution mechanisms – are they effective?
- Accounting and billing procedures – do they need adjustments?
- Waste generation – is it showing a reduction? How much?
- Recyclable collection – is it showing an increase? How much?
- Rate structure – is it adequate?
- Public education – are residents receiving frequent reminders and 3R instructions?
- Enforcement – are residents participating correctly? Is there illegal dumping?
- Multi-family and small businesses – are there ways to enhance or expand their participation?
- Recycling/drop-off operations: are recycling and composting programs working effectively or are contamination levels rising?

The chief function of the Task Force with regards to program maintenance should be to identify all the areas that require regular monitoring and submit recommendations as to what resources – both financial and manpower – are needed to make sure the program is adequately maintained. If the tasks identified cannot be completed by existing municipal personnel, a new Task Force may be required to ensure that the monitoring is completed in the future.

✓ **Supplemental Materials:** Worksheet #9

PART 3

HOW TO USE THE PAY-AS-YOU-THROW (PAYT) WORKSHEETS



INTRODUCTION

The following worksheets are designed to help your municipality work through the different design issues surrounding the implementation of PAYT program. Upon completion of these worksheets, you will have established the following elements of your program:

- Program goals and objectives
- How to facilitate the decision-making process
- Type of program (bags, tags, container)
- Rate structure
- Implementation parameters

The following worksheets are included:

- Worksheet #1: Identifying Program Goals
- Worksheet #2: Municipal Profile
- Worksheet #3: Political Considerations
- Worksheet #4: Container and Pricing Choices
- Worksheet #5: Rate Structure Design
- Worksheet #6: Potential Barriers
- Worksheet #7: Public Outreach
- Worksheet #8: Implementation Checklist
- Worksheet #9: Monitoring and Evaluation

Worksheets #1, 3, 4 and 6 should be filled out by various stakeholders. For instance, if you have formed an Implementation Committee, members of the committee should be asked to fill out these questionnaires. If you haven't formed an Implementation Committee, seek out both decision-makers and interested community members. The worksheets could be filled out together at a meeting, forming the basis for discussion. Worksheets #2 and 5 are primarily information gathering in nature, and could be filled out by one or two people who conduct the necessary research. The results can be shared subsequently with others and their findings applied to program design decisions. Worksheet #8 can be referred to as a general guide during implementation, while Worksheet #9 provides guidance on how to monitor the program once it is implemented.

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PART 3 – PAYT WORKSHEETS

Table of Contents

Introduction

Worksheet #1: Identifying Program Goals

Worksheet #2: Municipal Profile

Worksheet #3: Political Considerations

Worksheet #4: Container and Pricing Choices

Worksheet #5: Rate Structure Design

Worksheet #6: Potential Barriers

Worksheet #7: Public Outreach

Worksheet #8: Implementation Checklist

Worksheet #9: Monitoring and Evaluation

Worksheet



IDENTIFYING 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 third page 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 to keep taxes down Notes:	1 2 3 4 5
Remove solid waste management costs from the tax base entirely or partially (by raising sufficient revenues to cover all or a portion of solid waste management costs) Notes:	1 2 3 4 5
Subsidize other solid waste programs (such as recycling) Notes:	1 2 3 4 5

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Worksheet 1 (Continued)

Identifying Program Goals (Continued)	
Goal	Importance
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 /environmental issues Notes:	1 2 3 4 5
Create source of revenue to fund increased recycling services Notes:	1 2 3 4 5
Protect your municipality from paying for out-of-town trash Notes:	1 2 3 4 5
Create a separate fund for disposal costs to meet unmet put-or-pay requirements Notes:	1 2 3 4 5
Create a means for controlling the destination of waste Notes:	1 2 3 4 5

Worksheet 1 (Continued)

Program Goals: List below the additional 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

Additional Goals	
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
	1 2 3 4 5
	1 2 3 4 5

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Worksheet



MUNICIPAL PROFILE

Use this worksheet to compile all the background information that is necessary for you to make program design decisions.

Upon completion of this worksheet you will have, at your fingertips, knowledge of all the mechanics of your municipality's existing solid waste and recycling programs. Designing a pay-as-you-throw program without a full comprehension of all of this information would be impossible.

The worksheet asks you to research the following:

- Disposal, collection and recycling information on the residential portion of the waste stream
- Disposal, collection and recycling information on the non-residentially generated portion of the waste stream (i.e., businesses; often times waste generated by condominiums and apartment buildings are included as commercial waste as well)
- Information on various supplemental waste collection programs, such as leaves and yard waste, bulky waste, Christmas trees and any other solid waste programs your municipality may operate

This information can be gathered from a variety of sources, including:

- Public Works Department
- Tax Assessor's Office
- Town Treasurer
- Department of Environmental Protection (DEP) - Recycling Office
- Office of your chief elected official
- Resource Recovery Facilities and recycling processing centers that process the materials generated by your municipality

It is important that this questionnaire be completed. A full understanding of how a municipality is handling its current waste stream is essential to an effective program design. Without having these facts at your disposal, the program could be left vulnerable to failure.

Part A: General Information

1. Municipality: _____
2. Population: _____
3. Number of Single Family Households: _____
4. Number of Households in two- to six- family units: _____
5. Number/Population of Multi-Family Units (apartment buildings greater than six-family, condos, etc.):

Worksheet #2 (Continued)

6. Do you have a substantial seasonal population? Yes No

7. If yes, how large? _____

8. What time of year are they present? _____

9. Do you have any Fire Districts in your town? Yes No

10. If yes, do they make their own separate arrangements for waste disposal? Yes No

11. If yes, what are they? _____

12. What is the amount of the municipal budget dedicated to solid waste disposal in your current fiscal year?

13. What do these costs include (tipping fees, collection, transfer station, salaries, etc. Please itemize)?

Line Item:	Amount Allocated:

14. Does your municipality believe it may be paying the disposal costs of waste generated outside its borders (e.g., waste from neighboring towns)? Yes No

Worksheet #2 (Continued)

Part B: Residential Municipal Solid Waste (MSW)

This part of the questionnaire pertains to that portion of waste that is generated by residents living in single family, or two-to-six family homes. Most municipalities keep separate records for waste generated by the residential sector and commercially-generated waste (waste that is generated by businesses and large multi-family units). In this section, use only residential figures.

The questionnaire asks you to collect information regarding three areas of residential waste disposal. Information on residential recycling will be collected in the following section.

- Disposal
- Collection
- Recycling

Disposal Information

1. Where is your municipality's residential solid waste brought to for disposal?

2. What is the current tipping fee (cost per ton for disposal)?

3. Is the tipping fee projected to rise? Yes No

4. If yes, when? _____

5. If yes, by how much? _____

6. If no, how long is it expected to stay the same? _____

7. If your municipality has a contract with a Resource Recovery Facility (RRF), is it meeting its minimum put-or-pay obligation? (A put-or-pay obligation is the amount of tonnage the municipality is under contract to provide each year.) Yes No

8. Put-or-Pay Minimum: _____

9. If no, how much is the annual shortfall? _____

10. Is the shortfall paid completely by the municipality? Yes No

Worksheet # 2 (Continued)

11. If no, describe the current arrangement for payment of the balance of the put-or-pay obligation that is owed to the RRF.

12. If you are meeting your put-or-pay obligation, how many tons is your municipality delivering over the commitment?

13. Who pays tip fees at final disposal site: residents (included in the bill they receive from their waste hauler) or municipality (included in the tax base)?

14. Does your municipality use a transfer station before delivering waste to its final disposal site?
Yes No

15. If yes, where is it located? _____

16. Who operates the transfer station that your municipality uses?

17. Are transfer station fees included in the final disposal tip fee? Yes No

18. If no, what are the costs? _____

19. Who pays them (residents in the bill they receive from their waste hauler or the town through taxes)?

20. What was your previous year's annual disposal rate for residential waste and your current rate of disposal?

- Previous Year's Total: _____
- Current Year's Estimate: _____

Worksheet #2 (Continued)

Collection Information: Curbside

1. Who collects waste from residents (private haulers, municipal haulers)?

Private Haulers _____ Municipal _____

2. If the service is provided by municipal haulers, are residents billed a fee by the municipality or are costs covered in the tax base?

3. If private haulers are used, who contracts with the haulers (residents contract directly, or municipality contracts directly)?

4. If the municipality contracts with haulers directly, is it with a single hauler for the whole municipality or does the town contract with different haulers for different areas?

Single Hauler _____ Multiple Haulers _____

5. If multiple haulers are contracted, how many in total are collecting from residents?

6. If haulers are contracted directly by the municipality, what are the annual collection costs (minus disposal costs)?

7. Are collection costs covered in the tax base or do residents pay a fee to the waste hauler?

8. Describe the level of service provided (weekly, bi-weekly pick-up; curbside/ back door service, etc.):

9. If contracted directly by the resident, what are the monthly charges?

10. How many private haulers do residents have to choose from?

Worksheet #2 (Continued)

11. Describe the level of service provided to them (if you know):

Collection Information: Drop-off Center

1. Does your municipality operate a drop-off center where residents can bring their waste materials?
Yes No

2. If yes, are they charged for using it?

3. How are residents charged? By weight or by volume (they purchase stickers, pay a flat fee, etc.)

4. How many or what percentage of the residents utilize the drop-off center to drop off their waste?

5. How many tons of waste are collected at the drop-off center annually from residents?

6. What are the annual costs for operating the drop-off center?

7. How many of these costs are covered in the tax base?

8. What are its hours of operation?

Worksheet #2 (Continued)

Part C: Residential Recycling

This part of the questionnaire asks you to collect information regarding three areas of residential recycling:

- Curbside collection of recyclables
- Drop-off of recyclables
- Processing of recyclables

Collection Information: Curbside Recycling

1. Is curbside service available for the collection of recyclables from residents? Yes No

2. If yes, do residents receive curbside collection from a private hauler or the municipality?

Private Hauler _____ Municipality _____

3. What recyclable materials are collected?

4. How are they collected (collection bin; bags, etc.):

5. Who pays for the service, the resident or the municipality?

Resident _____ Municipality _____

Collection: Drop-off Center for Recyclables

1. Do you operate a drop-off center for recyclables? Yes No

2. If yes, what materials are collected there?

3. Is there are charge to residents for dropping off their recyclables? Yes No

4. If yes, what are they?

Worksheet #2 (Continued)

Processing of Recyclables

1. Where are recyclable materials delivered for processing?

2. Do you pay a tip fee for delivery of recyclables at the processing center or other places?
Yes No

3. If yes, what are those fees?

4. Is there a chance this fee could rise in the near future? Yes No

5. If yes, when? _____

6. By how much? _____

7. Do you currently share in any revenues from the materials? Yes No

8. If yes, please describe:

9. If you are not currently charged a tipping fee for processing, is there a chance you may be charged a tip fee in the future? Yes No

10. If yes, when? _____

11. How much: _____

12. What was the curbside recycling rate for collection of recyclables from residents in the previous year?

13. How much recyclable material was collected at the drop-off center in the previous year?

Worksheet # 2 (Continued)

14. What is the combined annual tonnage of recyclables recovered (curbside and drop-off):

15. What percentage did this represent of the total residential waste stream?

16. Are you reaching the state-mandated reduction and recycling goals of a 40% diversion rate?
Yes No

17. If not, what is the estimated shortfall? _____

18. What, in your opinion, are the reasons for not meeting recycling goals?

19. What are some of the strategies you think are needed to increase recycling rates?

20. How often are residents updated on recycling program information?

Worksheet #2 (Continued)

Part D: Commercial MSW

This part of the questionnaire pertains to that portion of waste that is generated by businesses and large, multi-family buildings, such as apartments and condominium associations. In this section, use only commercially-generated figures.

The questionnaire asks you to collect information regarding three areas of commercial waste disposal:

- Disposal
- Collection
- Recycling

Disposal Information

1. Where is commercial waste brought to for disposal?

2. What is the tipping fee (cost per ton) for disposal?

3. Do commercial businesses pay for collection and disposal, or just for collection of waste materials?

4. If commercial businesses pay only collection costs, does the municipality pay for disposal costs?
Yes No

5. Is the waste collected from multi-family housing units (apartments, condominiums, etc.) considered commercial waste in your municipality? Yes No

6. If it is not considered commercial waste, is it included in the residential waste stream? Yes No

7. If accounted for separately, what is the Annual Disposal Rate for waste generated from multi-family housing units?

8. If not accounted for separately, what is the Annual Disposal Rate for waste generated from multi-family housing units and businesses combined (all commercial MSW)?

Worksheet #2 (Continued)

9. What percentage of your total MSW generation is from commercial sources?

Collection Information

1. Do businesses contract directly with waste haulers for collection of their waste?
Yes No

2. If yes, approximately how many haulers pick up from businesses in your municipality?

3. Do small businesses in your community have access to a drop-off center for waste disposal?
Yes No

4. If yes, how is a small business defined (ex., by number of employees)?

5. If yes, are they charged a fee for bringing waste to the site? Yes No

6. If yes, what is the fee charged?

Recycling Information

1. What recyclable materials are collected from the commercial sector?

2. To the best of your knowledge, do the same haulers that pick up waste materials from their customers also pick up recyclable materials? Yes No

3. If no, do businesses make separate arrangements for the collection of their recyclable materials?
Yes No

4. If yes, with whom?

Worksheet #2 (Continued)

5. Is there a drop-off center available to small businesses for collection of recyclables? Yes No

6. If yes, which recyclable materials are collected from businesses?

7. Are small businesses charged a fee for using the drop-off center for recyclable materials?
Yes No

8. If yes, what are the fees?

9. What is the annual recovery rate of recyclable materials from the commercial waste stream?

10. What is the percentage of the total commercial waste stream that is being recovered for recycling? (ex., commercial waste stream equals 3,000 tons; if 500 tons are recovered for recycling, then approximately 17% is being recovered for recycling):

11. What percentage of the total amount of recyclable materials collected from your municipality (residential recyclable materials combined with commercial) consists of commercial recyclables? (ex.:, total recycling rate is 23% of waste stream. Residential component of that 23% is 15%; therefore, commercial component is 8%):

12. Are you reaching state-mandated recycling goals (40% reduction and recycling) of your commercial MSW? Yes No

13. If no, what is the estimated shortfall?

14. What, in your opinion, are the reasons for not meeting recycling goals in the commercial sector?

Worksheet #2 (Continued)

15. What are some of the strategies you think are needed to increase recycling rates?

Part E: Miscellaneous Materials

Bulky Materials

1. How are bulky materials currently collected in your municipality?

2. What are the associated collection costs?

3. Where are they disposed?

4. What are the associated charges for disposal?

5. Who pays the costs of bulky waste collection?

6. Who pays the disposal costs?

7. What is the average annual generation rate of bulky materials?

Leaves/yard waste

1. How are leaves and yard waste collected in your municipality?

Worksheet # 2 (Continued)

2. What are the associated collection costs?

3. Where are they disposed?

4. What are the associated disposal charges?

5. Who pays the costs of leaf and yard waste collection?

6. Who pays the disposal costs?

7. What is the average annual generation rate of leaves and yard waste in your municipality?

8. How much of this is recovered for composting?

9. Is finished compost available to residents? Yes No

10. Is any kind of support given to encourage residents to compost at home? Yes No

11. If yes, please describe what those efforts are (publicity, education, provision of backyard composting bins, etc.)

12. Please describe any other waste-related collection or disposal activity that you think should be included, or will be impacted by, a PAYT program (e.g., tires, Christmas trees, etc.)

Worksheet #2 (Continued)

13. Additional comments

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Worksheet



POLITICAL CONSIDERATIONS

Use this worksheet to assess the decision-making process in your town.

Initial political resistance to PAYT programs is not uncommon. Understanding what some of the concerns may be and understanding the decision-making process are critical to moving the project forward successfully. This worksheet is designed to help you understand the political decision-making process in front of you so you can define your approach.

Question	Response
Form of Government: (Mayor/Town Council; Board of Selectmen, etc .)	
Name/Title of Chief Elected Official	
Next election date for your chief elected official	
Who will be the decision-makers in your community?	
What do you think are their primary concerns?	
What will be the decision making process in your municipality for approval of a PAYT program?	
Why do you think a PAYT program will be beneficial to your municipality?	
Which elected officials/decision makers/stakeholders are supporting the program?	

Worksheet #3 (Continued)

Political Consideration (Continued)	
Question	Response
Which elected officials/decision-makers/stakeholders do you think might support PAYT if they knew more about it?	
What do you think is needed to garner political support for a PAYT program in your community?	
How do you think the above can be achieved?	

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.

Review the characteristics of the different container and pricing combinations available and make a determination of how each option would work in your town:

- Bags or tags/stickers that are sold at retail stores or municipal offices;
- Cans used with a “pay as you go” pricing system (under which residents are billed based on the number and size of cans they set out for collection);
- Cans used with a subscription system.

A rate system often 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 analyzing the advantages and disadvantages of the different systems, answer the three questions and make a preliminary system choice. Be sure to consider the overall program goals you established in Worksheet # 1 when making this choice.

Worksheet 4 (Continued)

Part A: Bag Systems

System	Advantage/Disadvantage
Bag Systems	Advantages
	• Provides stronger waste reduction incentive than can system
	• No billing system needed, so accounting costs are lower
	• Residents find bag systems convenient and easy to understand
	• Lower start-up and implementation costs than can systems
	• Faster, more efficient collection than cans
	• Easy to monitor for compliance
	• Easy to adapt for bulky item collections
	Disadvantages
	• Can lead to a greater revenue uncertainty than subscription can systems
	• System for storing and distributing bags must be developed
	• Residents might find purchasing and storing bags inconvenient
	• Often incompatible with automated/semiautomated equipment
	• Animals can tear bags and bags can break during lifting (NOTE: bags can still be placed inside trash containers if residents already use them)

1. A bag system would work in our town because:

2. The disadvantages of a bag system to our town would be:

3. Based on this evaluation of the pros and cons, a bag system is/is not the best choice for our town.

Is best choice _____ Is not best choice _____

Worksheet 4 (Continued)

Part B: Tags or Sticker Systems

System	Advantage/Disadvantage
Tags or Stickers	Advantage
	• Provides stronger waste reduction incentive than can systems
	• No billing system needed, so accounting costs are lower
	• Residents find tag/sticker systems convenient and easy to understand
	• Lower start-up and implementation costs than can systems
	• Cost of purchasing tags/stickers is less than bags
	• Easily adapted for different size containers
	• Easily adapted for bulky item collections
	Disadvantages
	• Can lead to a greater revenue uncertainty than subscription can systems
	• Administration program required to purchase tags/stickers and make them available to residents in stores and through the municipality
	• Residents might find purchasing tags/stickers inconvenient
	• Tags/stickers can fall off in rainy or cold weather or be stolen
	• Tags/stickers can sometimes be counterfeited
	• Municipality must educate community about size limits and collection crews must monitor size-limit compliance

1. A tag system would work in our town because:

2. The disadvantages of a tag system to our town would be:

3. Based on this evaluation of the pros and cons, a tag system is/is not the best choice for our town.

Is best choice _____ Is not best choice _____

Worksheet 4 (Continued)

Part C: Can Systems (Pay-As-You-Go)

System	Advantage/Disadvantage
Cans (Pay-As-You-Go)	Advantages
	<ul style="list-style-type: none"> • Residents have the flexibility to set out as few or as many containers needed each week
	<ul style="list-style-type: none"> • Cans are reusable and prevent animals from scattering waste
	<ul style="list-style-type: none"> • Cans can work with automated/semi-automated collection systems
	Disadvantage
	<ul style="list-style-type: none"> • Greater revenue uncertainty than subscription can systems
	<ul style="list-style-type: none"> • System does not provide a significant waste reduction incentive.
	<ul style="list-style-type: none"> • Complex tracking and billing system needed to count set-outs at each stop to bill accordingly
	<ul style="list-style-type: none"> • Billing system creates lag time between collecting waste and receiving payment for the service
	<ul style="list-style-type: none"> • Greater start-up costs if purchase, inventory and distribution of cans is required
	<ul style="list-style-type: none"> • Collection time greater than with bag systems
<ul style="list-style-type: none"> • Alternative system needed for collection of bulky items 	

1. A can pay-as-you-go system would work in our town because:

2. The disadvantages of a can pay-as-you go system to our town would be:

3. Based on this evaluation of the pros and cons, a can pay-as-you-go system is/is not the best choice for our town.

Is best choice _____ Is not best choice _____

Worksheet #4 (Continued)

Part D: Can Systems (Subscription)

System	Advantage/Disadvantage
Cans (Subscription)	Advantage
	<ul style="list-style-type: none"> • Revenues are stable and easy to forecast
	<ul style="list-style-type: none"> • Simplified collection process for collection crews
	<ul style="list-style-type: none"> • Cans are reusable and prevent animals from scattering waste
	<ul style="list-style-type: none"> • Cans can work with automated/semi-automated collection systems
	Disadvantages
	<ul style="list-style-type: none"> • Reduces waste reduction incentive, since residents have no incentive to reduce waste below their minimum service level
	<ul style="list-style-type: none"> • Complex tracking and billing system needed to track residents' subscription level and bill accordingly
	<ul style="list-style-type: none"> • Billing system creates lag time between collecting waste and receiving payment for the service
	<ul style="list-style-type: none"> • Greater implementation costs if purchase, inventory and distribution of cans is required
	<ul style="list-style-type: none"> • Collection time greater than with bag systems
	<ul style="list-style-type: none"> • Alternate system needed for collection of bulky items

1. A can subscription system would work in our town because:

2. The disadvantages of a can subscription system to our town would be:

3. Based on this evaluation of the pros and cons, a can subscription system is/is not the best choice for our town.

Is best choice _____ Is not best choice _____

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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 program costs and the cost of any complementary programs. Then estimate the per container price needed to meet your program 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

1. Current Waste Collection

_____ ÷ _____ = _____		
Tons of MSW collected in the base year	Current number of community residents in the base year	Tons of MSW per resident in the base year

2. Community Growth

_____ X _____ = _____		
Tons of MSW per resident in the base year	Estimated number of residents in the projection year	Annual MSW tonnage expected in the projection year without PAYT

3. Waste Collection Under PAYT

100 - _____ % = _____	_____ X _____ = _____		
Percentage decrease in MSW expected under PAYT	MSW reduction multiplier	Annual MSW tonnage expected without PAYT (from A-2)	Annual MSW tonnage expected under PAYT
_____ ÷ 12 = _____			
Annual MSW tonnage expected under PAYT	Tons of MSW expected per month under PAYT		

Worksheet # 5 (Continued)

Part B: Program Costs

Before calculating costs, you need to have already made some key financial assumptions. For instance, do you intend to include all costs associated with collection and disposal of MSW and recyclables, or a portion of those costs in the PAYT program? If you are only including a portion of those costs in the PAYT program, which costs are they?

After making these assumptions, use this section to estimate your monthly MSW and recyclables fixed and variable costs under the PAYT program in your projection year. Be sure to take into account the anticipated reduction of MSW when estimating costs. (For composting/yard waste collections or other supplementary programs, copy the next 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 PAYT and your supplementary programs.

Fixed and variable costs can include the costs described on the worksheet. However, if you are not employing a full-cost accounting approach to your PAYT program and have made a determination that you will not be including all costs associated with MSW collection and disposal in the PAYT program, you may not need to include all these costs in your analysis. Note also that many of the costs described below apply to municipalities that perform municipal collection. Many municipalities contract collection out to a private hauler, or residents may contract with a hauler directly. In those cases, many of these costs will not apply.

Do not forget to include transportation costs to a transfer station, or from a transfer station to the final disposal site. If your municipality operates a drop-off center and/or transfer station, estimate its fixed and variable costs below as well.

This information can be gathered from:

- Public works department
- Town Treasurer
- Office of the chief elected official
- Resource Recovery Facility and recycling processing center that processes the materials generated by your municipality
- Tax assessor’s office

1. Fixed MSW Collection and Disposal Costs Per Month (if applicable)

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	\$ _____
Total Fixed MSW Collection and Disposal Costs Per Month	\$ _____

2. Variable MSW Collection and Disposal Costs Per Month (if applicable)

Salaries and benefits (labor costs that vary with the amount of MSW collected)	\$ _____
Vehicle Maintenance (vehicle maintenance costs that vary with The 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	\$ _____
Total Variable MSW Collection and Disposal Costs Per Month	\$ _____

3. Total MSW Collection and Disposal Costs per Month

_____	+	_____	=	_____
Total Monthly fixed MSW Collection and Disposal Costs (from B-1)		Total Monthly Variable Collection and Disposal costs (from B-2)		Total Monthly MSW Collection and Disposal cost under PAYT

4. Fixed Recycling Collection and Processing Costs Per Month

Physical facilities (e.g. maintenance, mortgage utilities)	\$ _____
Salaries and benefits (labor costs that remain fixed regardless of quantity of recyclables collected)	\$ _____
Vehicle Amortization	\$ _____
Vehicle maintenance (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)	\$ _____
Education/Promotional Costs	\$ _____
Other fixed costs	\$ _____
Total Fixed Recycling Costs Per Month	\$ _____

5. Variable Recycling Collection and Processing Costs Per Month

Salaries and benefits (labor costs that vary with the amount of recyclables collected)	\$ _____
Vehicle Maintenance (vehicle maintenance costs that vary with the amount of recyclables collected)	\$ _____
Vehicle operating costs (vehicle operating costs that vary with amount of recyclables collected)	\$ _____
Contractor Fees (if any)	\$ _____
Tipping Fees	\$ _____
Other Variable Costs	\$ _____
Total Variable Recycling Costs Per Month	\$ _____

6. Total Recycling Collection and Processing Costs per Month

_____ + _____ = _____		
Total fixed Recycling per month (from B-4)	Total Variable Recycling costs per month (from B-5)	Total Monthly Recycling costs under PAYT
_____ - _____ = _____		
Total monthly recycling costs under PAYT (from B-6)	Net Revenue from sale of recyclables per month	Adjusted total monthly recycling costs under PAYT

7. Total Cost of PAYT and Complementary Programs

Total Monthly MSW collection and Disposal costs under PAYT (From B-3)	\$ _____
Adjusted total monthly recycling costs under PAYT (From B-6)	\$ _____
Other monthly complimentary Programs, if any	\$ _____
Total monthly cost of PAYT and Complementary Programs	\$ _____

Part C: PAYT Revenues

Use this section to estimate the per-container price needed to meet your program's costs. These prices will be dependent on two things. First, the type of program you have identified as being the best for your municipality (see Worksheet #4) and second, the assumptions you have made regarding what specific costs you wish the PAYT program to cover.

If you have selected either bags or containers for your program, be sure to use more than one size bag and container in your estimates. For instance, a 33-gallon bag will hold approximately 25 lbs. of waste, while a 20-gallon bag will hold a little more than half that. If you are choosing containers, you might want to contact planners in communities that are using containers of similar sizes for help with this estimate.

Once you have identified the size bags/containers you will be using in your program, perform the calculations below separately for each container. If you are uncertain about how to convert your specific container's capacity from volume to weight, see the information on page 7 of this worksheet. 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.

1. 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 PAYT (from A-3) Weight per container (From C-1) Number of containers per month

_____ - _____ = _____
 Total monthly cost of PAYT and complimentary Number of containers per month Estimated price per container

programs (from B-7)

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 near-by PAYT communities for data on whether 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

\$ _____

CONVERTING CONTAINER MSW CAPACITY from VOLUME to WEIGHT

If you have selected containers for your PAYT program and you need to convert your specific container's capacity from volume to weight (see page 5 of this worksheet) the information provided below may be helpful. However, it would probably be preferable to check with planners in other communities using similar containers or weigh a random sampling of filled containers and use the average weight for this calculation. If that is not feasible, the conversion factors given below will give you a ball park estimate of such weights. Please keep in mind that actual weights will vary widely depending upon the type of trash, density, moisture content, etc..

CONVERSION OF MSW WEIGHT PER CUBIC YARD TO MSW WEIGHT PER 90, 60, 30, OR 10 GALLON CONTAINER

(Based On Calculation: One Gallon = .00495 cubic yards)

Size Container In Gallons	Container Size in Cubic Yards (yd³)	Calculated Weight of Uncompacted Residential MSW Based on Conversion Factors in the Literature¹	Calculated Average Weight of Uncompacted Residential MSW Based on Conversion Factors in the Literature¹	Average Weight of Uncompacted Residential MSW CT Hauler Estimate²	Calculated Weight of Uncompacted Non-Residential MSW Based on Conversion Factors in the Literature¹	Calculated Average Weight of Uncompacted Non-Residential MSW Based on Conversion Factors in the Literature¹
90 gallon	0.446 yd ³	67 lbs – 134 lbs	100 lbs	70 lbs	134 lbs – 268 lbs	201 lbs
60 gallon	0.297 yd ³	45 lbs – 89 lbs	67 lbs	40 lbs	89 lbs – 178 lbs	134 lbs
30 gallon	0.149 yd ³	22 lbs – 45 lbs	34 lbs	20lbs– estimated based on 60 gallon weights	45 lbs – 90 lbs	68 lbs
10 gallon	0.050 yd ³	7 lbs – 15 lbs	11 lbs	Na	15 lbs – 30 lbs	22 lbs

G:/payt/conversion factors garbage gallons to lbs.doc

¹ Conversion Factors Presented in: *Measuring Recycling – A Guide for State and Local Governments* - US EPA, September 1997 – as quoted from Solid Waste Association of North America, Manager of Landfill Operations Training and Certification Course, January 1989

Residential Waste (uncompacted at curb)	1 cubic yard	150-300 lbs
Commercial Industrial Waste (uncompacted)	1 cubic yard	300-600 lbs

² March 22, 2001 personal communication with Mike Paine, President of Paine's Inc., Recycling and Rubbish Removal, Simsbury, CT
Section 3, Worksheet 5 - Page 7

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Worksheet



POTENTIAL BARRIERS

Use this worksheet to identify barriers that might effect 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 but seldom materializes as a significant program outcome. 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 make it more challenging for a community to extend 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
Perception that waste collection is free/pay-as-you-throw is a tax increase	<ul style="list-style-type: none"> Educate residents about pay-as-you-throw Set prices at levels residents will accept
Perception that program might hurt low-income residents	<ul style="list-style-type: none"> Offer these residents rebates, coupons, or discounts Offer free bags to recipients of general assistance
Uneven revenues/revenue shortfalls as residents generate less waste	<ul style="list-style-type: none"> Use multi-tiered pricing Plan for reduced waste amounts in steady-state when setting prices
Multi-family Housing	<ul style="list-style-type: none"> Include charges in rent Under a bag-based system, have tenants purchase bags Use bar code readers on building garage chutes
Overstuffing of containers	<ul style="list-style-type: none"> Set weight limits on containers

Worksheet 6 (Continued)

Sample Barriers and Solutions (Continued)	
Potential Barriers	Possible Solutions
Lack of support from private waste haulers	<ul style="list-style-type: none"> • Involve haulers in the planning process • Pass ordinance mandating haulers offer variable rates
Illegal dumping/burning	<ul style="list-style-type: none"> • Educate residents about pay-as-you-throw • Provide several legal diversion options- • Develop enforcement plan
Barriers That Might Apply to Your Community's Program	
<p>Potential Barriers: List below additional pay-as-you-throw barriers that might apply to your community's program. For each potential barrier you feel may impact your program, list any possible solutions that come to mind.</p>	
	•
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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 two distinct parts of public outreach: Part A: Soliciting feedback about PAYT during the planning stage and Part 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). Pages 1 and 3 list examples as guidance.

Part A: Soliciting Feedback

Using this table, consider how you will obtain input during the planning stage about the proposed PAYT 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 Method	Schedule
<i>Example: Retailers/Other Businesses</i>	<ul style="list-style-type: none"> • <i>Direct visits to local retailers to discuss the program and ask them about distributing or selling bags in stores</i> • <i>Invite retailers to public PAYT meetings</i> • <i>Include retailers in your citizens' advisory council or other planning organization</i> 	<i>About six months before program implementation</i>
<i>Example: Residents</i>	<ul style="list-style-type: none"> • <i>Develop a PAYT fact sheet introducing the program and asking for feedback</i> • <i>Issue press releases to the local media to get media coverage</i> • <i>Hold public meetings on PAYT</i> • <i>Invite community residents to join your citizens' advisory council or other planning organization</i> 	<i>About six to nine month before program implementation</i>
<i>Example: Elected Officials</i>	<ul style="list-style-type: none"> • <i>Hold a briefing for elected officials to introduce the program and ask for their input</i> • <i>Include elected officials in the citizens' advisory council or other planning organization</i> 	<i>About six months before program implementation</i>

Worksheet #7 (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.

Audience	Outreach Method	Schedule
Retailers/Other Businesses		
Residents		
Elected Officials		
Media		
Solid Waste Staff		
Private Haulers		
Other		

Worksheet # 7 (Continued)

Part B: Educating the Community

Use the table below to consider how to educate your community about PAYT. 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.

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

Worksheet #7 (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



IMPLEMENTATION CHECKLIST

Use this checklist to begin to define the different tasks that must be undertaken during program implementation.

You may also come up with implementation tasks not included here. As implementation proceeds, take each task and divide it into sub-tasks, assigning both a timeline for completion and which person or persons are responsible for completing the task.

The checklist is divided into three parts. Part A of the worksheet applies to all programs. Use Part B if you are implementing a bag or tag-based program, and Part C if you are implementing a can-based program.

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
 - Add additional items for recycling
 - Prohibiting unauthorized containers
- Define enforcement responsibilities (work with police and health departments).
- 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, 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 "errors 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 RFP's, solicit bids, and purchase bags or tags.
- ❑ If distributing through retailers, arrange distribution logistics (e.g. delivery and invoice schedule and marketing agreements). 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 RFP's, 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 an 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 PAYT and help make informed 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:		
High-Grade Paper	_____	_____
Mixed Paper	_____	_____
Corrugated Cardboard	_____	_____
Newsprint	_____	_____
Glass/Metal Food Containers	_____	_____
Plastics	_____	_____
Scrap Metal	_____	_____
Car Batteries	_____	_____
Nicad Batteries	_____	_____
Waste Oil	_____	_____
Other	_____	_____
Total tons of recyclables collected:	_____	_____

Part C: Composting Amounts

	Base Year	Current Year
Tons of organic materials collected for composting:	_____	_____

Part D: Costs

Tracking the costs incurred and the revenues recovered under PAYT is an important process. At least once a year, refer back to Worksheet #5, "Rate Structure Design," and recalculate 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 PAYT.

Part E: Education

Maintaining awareness of the program is critical to its continued success. Establish an ongoing committee that oversees regular promotional and educational efforts. Refer back to Worksheet #7 – Public Outreach for ideas and structure.

CT DEP PAYT IMPLEMENTATION HANDBOOK

Part 4 - Appendices

LIST OF APPENDICES

Glossary of Terms

APPENDIX I - Program Planning Issues

SECTION A - *Variable Pricing Workbook* - (CONEG)

SECTION B - Putnam, CT PAYT Authorizing Resolution & Mansfield, CT - SW Ordinance

APPENDIX II - PAYT Bags & Stickers

SECTION A - Sample RFP's for PAYT Bags

SECTION B - "Bag Issues" and "Helpful Hints on Shopping for the Right Bag"

SECTION C - List of Vendors for Bags, Tags and Stickers

SECTION D - State of Connecticut, Sales Tax Exemption for Bags

APPENDIX III - Public Education

SECTION A - Town of Stonington, CT - FAQ's

SECTION B - "Public Acceptance of PAYT" - MA Discussion

SECTION C - Frequently Asked Questions

SECTION D - EPA PAYT Fact Sheets and Clip Art

SECTION E - DEP PAYT Display Available to Towns

APPENDIX IV - List of Publications

SECTION A - Massachusetts DEP list of PAYT Publications, Reports, and Videos

SECTION B - EPA PAYT Materials

APPENDIX V - Case Studies and Program Contacts

SECTION A - PAYT Programs in Connecticut

SECTION B - 95 Massachusetts Municipalities with Unit-Based Pricing

SECTION C - More Detailed PAYT Case Studies

SECTION D - Advice From Maine Municipal Officials & Maine PAYT Contacts

SECTION E - PAYT Tip Sheet

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Implementation Logistics

Administrative Issues

Determining the amount of administrative resources that must be devoted to a PAYT program is usually part of the design process. For instance, municipalities that don't want to create complicated billing systems may avoid certain container-type programs. By the time you reach this stage of program implementation, you will have a good idea as to what the administrative responsibilities will be that are associated with the type of program you selected. What must be addressed at this stage is defining responsibilities and tasks, dividing them up and delegating clear assignments.

The most common administrative issues associated with PAYT programs include such tasks as billing, accounting and overseeing distribution of bags/tags, if that is the type of program chosen. Administrative tasks associated with container PAYT programs often require more sophisticated billing and accounting procedures than programs using bags or tags (review Worksheet #4: Pros and Cons of Different PAYT Systems; see also Worksheet #8: Implementation Checklist).

In a PAYT program using bags, some of the issues relating to storage and delivery can be addressed in your Request for Proposals (RFP). For instance, some municipalities require their vendor to store bags, delivering them to the municipality upon request or on a monthly basis. Other municipalities have retailers contact the vendor directly when they need a reorder of bags, saving the town from developing its own storage and distribution system for bags. Finding a secure location for the storage of bags and/or stickers is of critical importance, since these materials represent a significant source of income for the municipality. Theft could cost a municipality hundreds of thousands of dollars in bag/tag fees.

Determine in advance what your administrative tasks are that are associated with the type of program you are implementing, and then determine how to structure your RFP accordingly. If there are ways vendors can help solve your administrative worries, make that part of your RFP. It is also useful at this stage to be in contact with officials from other municipalities with programs and demographics similar to yours.

- ✓ **Supplemental Materials:** Sample RFP's, List of PAYT program contacts
- ✓ **Possible Guest Speakers:** Officials from other municipalities

Working with Retail Establishments

If you chose a bag system, you may be relying on local retailers to sell the bags. This is generally not a problem. Retailers are usually eager to carry the bags because they know it is something customers must purchase. Most municipalities do not allow retailers to make a profit on the sale of the bags, and most retailers accept this. In fact, some retailers who might choose not to participate in the program at the beginning, often ask to join later, as customers begin to ask for the bags. One pharmaceutical store saw a 20% increase in sales after it began carrying the bags. In Connecticut, the bags are exempted from state sales tax as well.

Set up a subcommittee to contact local retailers. Talk to them about the program and find out their concerns. Ask the subcommittee to report back with their findings. Use their findings to help shape your administrative functions and RFP requirements, as well as your billing, storage and distribution decisions.

Setting Up a Phone Bank

For the first few weeks of program implementation there is likely to be a barrage of telephone calls from residents. Rather than relying on existing municipal personnel to field these calls, it is better to staff a temporary phone bank. You can ask members of local environmental committees or other sources to volunteer their time, or you can simply pay and train temporary workers.

Set up a subcommittee to oversee the phone bank. Regardless of who is fielding the calls, everyone should receive some basic training. Take a few hours to train the workers verbally. Also provide them with written materials, such as the Q and A that was prepared for distribution in your community as part of your public education campaign. Do some role playing as a group by coming up with the questions you think you will be getting, and then practice the answers together.

Program Maintenance, Monitoring and Measurement

Once the program is fully implemented, procedures for the consistent monitoring of the program should be put into place. Areas that need to be monitored and measured include:

- Quantity of bags being ordered; if different size bags are being used, what is the ratio of use (e.g., two 33-gal. bags are purchased for every one 20- gal. bag); are enough bags being purchased?
- Storage and distribution mechanisms – are they effective? Accounting and billing procedures – do they need adjustments? Waste generation – is it showing a reduction? How much?
- Recyclable collection – is it showing an increase? How much?
Rate structure – is it adequate?
- Public education – are residents receiving frequent reminders and 3R instructions? Enforcement – are residents participating correctly? Is there illegal dumping?
- Multi-family and small businesses – are there ways to enhance or expand their participation?
- Recycling/drop-off operations: are recycling and composting programs working effectively or are contamination levels rising?

The chief function of the Task Force with regards to program maintenance should be to identify all the areas that require regular monitoring and submit recommendations as to what resources – both financial and manpower – are needed to make sure the program is adequately maintained. If the tasks identified cannot be completed by existing municipal personnel, a new Task Force may be required to ensure that the monitoring is completed in the future.

PAYT Program Impacts

Multi-Family Housing

Residents who live in apartment or condominium complexes may not put their trash out individually for collection. In these facilities, the waste may all go into a common dumpster. If the owners/landlord are charged by weight by the trash disposal company, they are already functioning under a pay-as-you-throw system. If they are not, it is sometimes difficult to integrate a pay-as-you-throw program into facilities that utilize a shared dumpster because of enforcement issues. One resident who does not participate correctly can “contaminate” the entire load.

This is not to say there are no solutions. Appoint a multi-family subcommittee to first gather information about existing multi-family residences. Have them find out what the current arrangements are for waste collection and disposal. They can contact the landlord or president of the cooperative association to discuss the program with them and possible solutions. Have them report their findings back to the Task Force for further discussion and recommendations.

In some cases, it can become the responsibility of the landlord to distribute bags/tags to residents. However, unless the landlord or the town provides residents of these facilities with recycling opportunities, there may be some resistance. If landlords are not providing adequate recycling, remind them that recycling certain materials is mandatory in the state of Connecticut and work with them to find recycling solutions for their facilities.

- ✓ **Supplemental Materials:** EPA materials on multi-family housing
- ✓ **Possible Guest Speakers:** President of local cooperative association; landlords

Working with Local Businesses to Improve Recycling

It is often difficult for small business owners to recycle successfully, especially if they are charged for the rental and collection of containers for recyclable materials in addition to their waste container. Small businesses are often such small generators that it doesn't pay for them to lease separate containers for recyclables.

Set up a subcommittee to examine how the program will affect small businesses. Ideally, small businesses should participate in the PAYT program along with residents. Larger businesses are generally charged by weight or volume by private haulers, so they are already operating under a PAYT system. It is also generally more cost effective for large businesses to recycle.

Depending upon the findings of the subcommittee, the Task Force may decide to make a set of recommendations on how the municipality can provide ongoing recycling assistance to small businesses. One way is to make a drop-off center for recyclables available to them. Another way may be to provide technical assistance. Talking to recycling coordinators at other communities will be helpful.

- ✓ **Possible Guest Speakers:** Members of the business community, officials from other communities with PAYT programs

Fire Districts

Some municipalities have fire districts within their municipalities, sometimes in the downtown areas. Fire districts sometimes tax the members of their district separately. Included in those taxes could be solid waste removal.

First, discover if your municipality has any fire districts. If it does, find out if solid waste and recycling collection and disposal is paid for in fire district taxes. If it is not, then the fire district will have no bearing on your PAYT program. However, if the fire district taxes do include solid waste collection, then you will have to work with fire district officials to integrate the PAYT program.

A decision might be made to remove solid waste collection out of the fire district taxes and have fire district members purchase bags/tags directly themselves. In this case, the fire district may have to adjust its taxes to reflect that change. Or, the municipality could sell bags/tags to the fire district and require them to distribute accordingly. Or, an entirely different solution may arise. The key is to not overlook the inclusion of fire districts, if you have them.

Seasonal Population

Many municipalities have seasonal populations – either weekenders and/or summer visitors. Some communities also host colleges and private preparatory schools. Be sure to consider them during the planning process.

For instance, consider what time of year you will have the largest influx of seasonal visitors, and then try to coordinate the implementation of your program with that time. This way, the seasonal population will be around when the program is receiving widespread publicity and attention. Promoting the program at a time when seasonal visitors are not likely to be around will make it more difficult for them to participate when the time comes.

Treat seasonal visitors like any other resident of the community during the educational process. Even though they may be temporary visitors or part-time residents, their commitment to the community should equal those of permanent residents. In communities, such as coastal areas where homes are rented out by the week or month, it is typically up to the owner renting the house to make sure the vacationers understand the program. The owner can leave bags in the home, along with all the other home-related instructions, or tell the vacationers where they can purchase the bags. Information about where and how to recycle should also be provided.

Communities with school campus populations need to do a special outreach to them. But, for the most part, students are interested in participating in a program that is good for the environment. Work directly with school officials to determine the best way to include their campus in the program.

Low-Income Residents

Notify the Social Services department of your municipality of the PAYT program and its requirements. The Social Services department generally has a record of the families requiring assistance. Free bags/tags could be issued to these families, if they qualify.

Work hard in your educational and promotional campaign to help people understand that they can control their waste disposal costs through recycling. Also, help residents to understand that the

program is designed to be more equitable to all residents.

Illegal Dumping

Illegal dumping is something that many municipal officials anticipate as a byproduct of PAYT programs, but simply doesn't materialize. Nationwide studies show that illegal dumping is not a problem for the vast majority of municipalities that implement PAYT programs. However, that doesn't mean that some simple precautions shouldn't be taken.

Determine if there are any ordinances regarding illegal dumping already on the books. If there are, review them to see if they need updating. If not, you may want to consider drafting ordinances designed to prevent illegal dumping. Ancillary ordinances could include ordinances against burning of trash, bags left open by not securing tightly and weight limits on bags. These objectives can also be accomplished through an active public education campaign.

As another precaution, you may want to contact local commercial enterprises and suggest that they install locks on their dumpsters, if they haven't already. The same subcommittee that is charged with working with the commercial sector could be charged with doing this as well.

If there is an instance of illegal dumping, it is often pretty easy to find the culprit. There is usually something in the garbage with an address on it. Fines can be levied and there also could be a brief notice in the police report section of the local newspaper, to discourage further instances.

In general, there is not an increase in roadside trash as a result of PAYT programs. Typically, the problems with illegal dumping stay the same – if you had it before the program, you may still have it. And, it is more common for bulky items – tires, sofas, etc. – to be abandoned than it is for common household trash. Make sure you have a good way to handle bulky waste to protect against illegal dumping in this area. Your Task Force may want to look at bulky waste as a separate issue. Charges should be assigned to the disposal of bulky items. Review existing bulky waste procedures and charges to make sure they are adequate.

✓ **Supplemental Materials:** EPA's Illegal Dumping Prevention Guidebook (available from their Web site), EPA Web Site Printout on Illegal Diversion

✓ **Possible Guest Speakers:** Public Works and/or Transfer Station Operator to discuss bulky waste issues

Existing Operations

Make sure you understand how the program is going to affect existing solid waste and recycling operations. Review Worksheet #2 to make sure you understand all aspects of current operations. For example, if your municipality operates a drop-off center, examine how the program might affect operations there. Will more people be using the drop-off center as a consequence, which will result in a traffic increase? If you're selling bags/tags at the drop-off center, how will that affect your personnel and storage space needs? Do you need to stay open longer? If your residents use a private hauler, how will the program affect how the hauler operates? (*see Agenda Item: Private Haulers for information.*)

If you think the changes to existing operations are going to be substantial, you may want to consider appointing a subcommittee to evaluate all the potential changes and make recommendations to the Task Force as a whole.

- ✓ **Possible Guest Speakers:** Transfer Station or Drop-off Center Operator, Private Hauler

Working with Local Haulers

If residents of your local municipality have the opportunity to contract with a private waste hauler, make sure that haulers are part of the implementation process. Invite members from these firms to attend meetings. Ask them to state their concerns. Work cooperatively to find solutions. For instance, the municipality could offer to provide notices of non-compliance that private haulers could leave behind explaining to residents why they are not in compliance with the program. The information could contain information about the program, penalties for noncompliance and a phone number to call for more information.

Keep in mind that private haulers may become your first lines of enforcement. If residents are not using the proper bags or containers, or not applying tags, waste haulers should leave the waste behind, or pick it up but leave behind a warning. Some haulers understandably resist doing this because their customers complain when they are denied service. As one approach, you may want to explore legal issues regarding hauler participation in the program. For instance, you may want to make compliance with the PAYT program a condition of doing business in the town, perhaps through a licensing process. Explore ways of enforcing the program with the town attorney.

Expansion of Recycling Services

If your municipality does not already provide residents with ample opportunities for recycling and/or composting, you may elect to use some of the revenues from your PAYT program to expand recycling activities in your municipality. You may want to delegate this activity to an exploratory subcommittee, who could investigate other municipal recycling programs and come back to the committee with their findings and recommendations. Once the Task Force has established which recycling activities it would like to add, recommendations should be made to the proper town authorities regarding the resources required.

- ✓ **Possible Guest Speakers:** Public Works Directors or Recycling Coordinators from other municipalities

Enforcement

Program enforcement generally does not become an overriding concern in municipalities with PAYT programs. As discussed earlier, illegal dumping does not emerge as an issue and people generally comply with the PAYT guidelines. (See Agenda Item: Illegal Dumping and Agenda Item: Private Haulers for more information on enforcement.)

Methods of enforcement include sending notices of violations to residents who are not participating in the program correctly and instructing private haulers to leave behind trash that is not meeting PAYT requirements. Make sure to provide residents with plenty of recycling and composting options as a positive incentive to participate in the program. And, be sure to consistently educate the public about

the program and its benefits to keep awareness high. Make telephone numbers available on all your promotional materials.

Your Task Force can discuss this is issue and come up with their own recommendations.

Pay As you Throw/Variable Rate System Advantages and Disadvantages

Advantages

- Gives residents control of disposal costs
- “Fairer system”
 - ✓ Disposal as a utility
 - ✓ Generators charged for the service they use
- Reduces disposal costs for communities
 - ✓ Communities can structure the program to be cost- neutral, with revenues off-setting costs, so trash services are no longer a cost in a town’s budget
- Preserves tax revenue for other uses
- Allows for expansion of services, new equipment purchases, new staff
- Reduces or eliminates need to raise taxes or fees due to waste disposal
- Waste reduction, increased diversion, improved environmental quality
 - ✓ On average, results in a 20-45% decrease in waste generation
 - ✓ Doubling of recycling rates
- Preserves shrinking landfill space & forestalls need for more capacity
- Systems are flexible
 - ✓ Can be structured to fit local governments, haulers, customer needs
- Incentive-based
 - ✓ Towns maximize waste reduction and increase recycling by the most effective means available

Disadvantages

- Opposition to Change
 - ✓ Outreach & education of residents
 - ✓ Requires residents to be aware of guidelines, how the system works, & their responsibilities
- Winners and Losers (real or perceived)
 - ✓ Large families & residents on fixed incomes
 - ✓ Low income and/or elderly PAYT program discounts
- Need adequate funding for supervision, billing, enforcement, outreach, & education
- Dumping and Collection of Unmarked MSW
- Illegal dumping – roadside or in commercial dumpsters
- Typically, is limited or is short-term
- Have regulations, monitoring programs, and enforcement in place prior to implementing PAYT
- Multi-family, Rental units & apartments

Pay As You Throw—Implementation Strategies
Wednesday, February 27, 2019, 9-Noon
NH Department of Environmental Services Training

This training is designed to meet the needs of municipal officials and staff. We will explore Pay as You Throw options, planning, and implementation strategies through presentation, discussion, and hands-on exercises.

Topics to be Discussed

Understanding Pay as You Throw or Variable-Rate Waste-Disposal Pricing Systems

What is Pay as You Throw (PAYT)?

- Also known as Unit-Based Pricing, Variable Rate Disposal or Pricing, User Pay, or SMART (Save Money and Reduce Trash)
- PAYT incorporates two primary principles of environmental policy: the “polluter pays principle” and the “shared responsibility” concept.
- Under PAYT, the waste generator is charged for his or her waste generation. If a person chooses not to recycle and/or compost, it’s completely up to them for the most part, unless the state or municipality has a landfill ban in place or a mandatory recycling regulation.
- The optimal PAYT system measures the amount of individual waste collected, either by weight or volume, and charges the waste producer a fee equal to the social and economic cost of his or her waste generation.

PAYT Program Planning and Design

Types of Variable-Rate Waste-Disposal Pricing Systems

Variable-rate programs are flexible and adaptable to a wide range of community types.

They can be categorized into five major types:

- Variable Can or Subscribed Can
- One-can customers
- Bag Program
- Tag or Sticker Programs
- Hybrid System
- Weight-based System
- Other Variations

- ▶ Advantages/Disadvantages of each type. Review Worksheet 4.

Citizens Solid Waste Advisory Committees/PAYT Task Force Strategies

- Advantages and Disadvantages of involving citizens in PAYT program planning

Identification of PAYT Goals

- Identifying the reasons why the municipality is interested in pursuing a PAYT program
- Political considerations
- Goals and interests of other stakeholders (residents, haulers, businesses, seniors, multi-family property management/residents, seasonal populations, low income residents, others)

- ▶ *Group brainstorm and review Worksheet 1.*

Municipal Profile

- What is the background information that is necessary to make informed program design decisions?
 - ▶ Worksheet 2 – Give this to attendees in advance to complete and bring with them.
 - ▶ Review completed worksheets as a group and highlight key indicators.

Legal Authority/Legal Issues

- Does the municipality/town have legal authority to implement a PAYT program?
- Can the municipality/town require haulers to participate?
- Draft and enact any necessary ordinances to charge a variable rate for waste collection.
- Draft and enact any additional necessary/complementary ordinances.
 - Banning waste burning
 - Banning illegal dumping
 - Limiting container weights
 - Add additional items for recycling
 - Prohibiting unauthorized containers for use in the PAYT program
- Define enforcement responsibilities (work with police and health departments).

Political Considerations

Initial political and citizen confusion and resistance to PAYT program implementation may occur.

- What are the barriers to implementing PAYT? Possible Solutions?
- Understand what the concerns may be and how to respond.
- Understand the decision-making process in your municipality/town in order to move the project forward successfully.
- Which elected officials/decision-makers/stakeholders already support PAYT; which do you think might support PAYT if they knew more about it?
- What are citizen activists saying? How can they be persuaded?
- Who are typical allies in PAYT? Environmental activists, seniors, others?
 - ▶ *Group brainstorm and review Worksheets 3 & 6.*

Additional planning tasks

- Develop and implement policies for accommodating low-income residents, physically handicapped, and elderly residents.
- Develop and implement policies for accommodating residents of multi-family units.
- Develop procedure for gathering and analyzing data on waste generation amounts and costs. Conduct baseline data collection.

What PAYT System is right for your community?

- Group discussion of the above factors and any others that come into play when making this decision.

Cost infrastructure/Rate Structure Design

What costs do you want your PAYT system to include? Consider the philosophical, political, and economic influences in your community.

Step 1: Waste Collection Forecast

- Estimate the amount of waste you will be collecting under Pay-As-You-Throw.

Step 2: Estimate your program costs and the cost of any complementary programs.

Prior to calculating costs, some key financial assumptions are necessary.

- Will all costs associated with collection and disposal of MSW and recyclables be included in the PAYT program?
- Or, just a portion of those costs in the PAYT program? If only a portion, which costs are they? Why?
- What are the costs? Fixed and variable MSW, Recycling, complementary programs
- Should there be a sliding scale for cost of disposal? Based on what?
- Should there be a cost associated with recycling? What are the costs associated to MSW, recycling, C&D, yard waste—tipping/handling fees? Hauling? Processing? Which should be included?
- Should the town/facility implement a mandatory recycling or other mandate to go along with this message and help increase diversion?
- How is the program going to affect existing solid waste and recycling operations? Does the town need to reconfigure their transfer station in order to make this work?

Step 3: Estimate the per container price (or per bag, volume) needed to meet your program costs in Step 2. Prices will be dependent on two things: the type of PAYT program planned and the assumptions regarding the specific costs the PAYT program are proposed to cover.

- Develop and test your rate structure and your budgeting and tracking systems.
 - *Worksheet 5 – Give this to attendees in advance to complete as much as possible.*
 - *Provide completed sample worksheets to review as a group.*

Public Outreach

What are the public outreach goals for the program and how will they be achieved? Who are the targeted stakeholders (decisionmakers, residents, haulers, businesses, seniors, multi-family property management/residents, low income residents, seasonal populations, others)

Planning and Design Phase

- Soliciting feedback
- Feedback should be initiated during the planning stage, through outreach, surveys, involvement of a citizen taskforce.
 - Group discussion: *What are target audiences for initial feedback? How can they best be reached?*

Implementation Phase

- Outreach during the implementation phase begins during the final design.
 - Planning the education and outreach campaign: Informing residents about how to participate (for example, where to buy bags, any changes to the recycling program, complementary programs being added or modified, how to handle bulky items, etc.).
 - Develop outreach materials and schedule briefings and presentations.
 - Create a phone bank hotline for the first few weeks of program operation.
- *Group discussion: What types of educational outreach materials should be designed? What messages are important to relay? Review Worksheet 7.*

Implementation Schedule

Tasks and Staff Training

- Reassign collection and management staff as needed to new roles in outreach, enforcement, and administration.
 - Determine ongoing administrative tasks that will be associated with the program (billing, accounting procedures, program maintenance, etc.).
 - Prepare staff to address residents' concerns and questions.
 - Develop a phase-in strategy (e.g. collect all wastes for several weeks, but leave "errors tags" where needed to educate customers that only correctly paid and packaged trash will be collected in the future).
 - Work with retail establishments to carry bags, if necessary.
 - Consider working with the business community to ensure that they lock their dumpsters to prevent illegal dumping.
 - Address specifics for each system: Bag-and tag; Can-based; Weight-based; Hybrid)
- *Group discussion: What other tasks may be necessary? Review Worksheet 8.*

Program Maintenance, Monitoring and Evaluation

- Set up an ongoing system for program maintenance, monitoring and measurement.
 - Quantity of bags being ordered; if different size bags are being used, what is the ratio of use (e.g., two 33-gal. bags are purchased for every one 20-gal. bag); are enough bags being purchased?
 - Storage and distribution mechanisms – are they effective?
 - Accounting and billing procedures – do they need adjustments? Waste generation – is it showing a reduction? How much?
 - Recyclable collection – is it showing an increase? How much?
 - Rate structure – is it adequate? Public education – are residents receiving frequent reminders and 3R instructions?
 - Enforcement – are residents participating correctly? Is there illegal dumping?
 - Multi-family and small businesses – are there ways to enhance or expand their participation?
 - Recycling/drop-off operations: are recycling and composting programs working effectively or are contamination levels rising?
- *Review Worksheet 9.*

Identifying Program Goals (Continued)	
Goal	Importance
Increase equity by asking residents to pay only for the waste they generate <u>Notes:</u>	1 2 3 4 5
Increase understanding among residents of solid waste /environmental issues <u>Notes:</u>	1 2 3 4 5
Create source of revenue to fund increased recycling services <u>Notes:</u>	1 2 3 4 5
Protect your municipality from paying for out-of-town trash <u>Notes:</u>	1 2 3 4 5
Create a separate fund for disposal costs to meet unmet put-or-pay requirements <u>Notes:</u>	1 2 3 4 5
Create a means for controlling the destination of waste <u>Notes:</u>	1 2 3 4 5

Program Goals: List below the additional 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

Additional Goals	
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
	1 2 3 4 5
	1 2 3 4 5

Worksheet



MUNICIPAL PROFILE

Use this worksheet to compile all the background information that is necessary for you to make program design decisions.

Upon completion of this worksheet you will have, at your fingertips, knowledge of all the mechanics of your municipality’s existing solid waste and recycling programs. Designing a pay-as-you-throw program without a full comprehension of all of this information would be impossible.

The worksheet asks you to research the following:

- Disposal, collection and recycling information on the residential portion of the waste stream
- Disposal, collection and recycling information on the non-residentially generated portion of the waste stream (i.e., businesses; often times waste generated by condominiums and apartment buildings are included as commercial waste as well)
- Information on various supplemental waste collection programs, such as leaves and yard waste, bulky waste, Christmas trees and any other solid waste programs your municipality may operate

This information can be gathered from a variety of sources, including:

- Public Works Department
- Tax Assessor’s Office
- Town Treasurer
- Department of Environmental Protection (DEP) - Recycling Office
- Office of your chief elected official
- Resource Recovery Facilities and recycling processing centers that process the materials generated by your municipality

It is important that this questionnaire be completed. A full understanding of how a municipality is handling its current waste stream is essential to an effective program design. Without having these facts at your disposal, the program could be left vulnerable to failure.

Part A: General Information

1. Municipality: _____
2. Population: _____
3. Number of Single Family Households: _____
4. Number of Households in two- to six- family units: _____
5. Number/Population of Multi-Family Units (apartment buildings greater than six-family, condos, etc.):

6. Do you have a substantial seasonal population? Yes No

7. If yes, how large? _____

8. What time of year are they present? _____

9. Do you have any Fire Districts in your town? Yes No

10. If yes, do they make their own separate arrangements for waste disposal? Yes No

11. If yes, what are they? _____

12. What is the amount of the municipal budget dedicated to solid waste disposal in your current fiscal year?

13. What do these costs include (tipping fees, collection, transfer station, salaries, etc. Please itemize)?

Line Item:	Amount Allocated:

14. Does your municipality believe it may be paying the disposal costs of waste generated outside its borders (e.g., waste from neighboring towns)? Yes No

Part B: Residential Municipal Solid Waste (MSW)

This part of the questionnaire pertains to that portion of waste that is generated by residents living in single family, or two-to-six family homes. Most municipalities keep separate records for waste generated by the residential sector and commercially-generated waste (waste that is generated by businesses and large multi- family units). In this section, use only residential figures.

The questionnaire asks you to collect information regarding three areas of residential waste disposal. Information on residential recycling will be collected in the following section.

Disposal Information

1. Where is your municipality's residential solid waste brought to for disposal?

2. What is the current tipping fee (cost per ton for disposal)?

3. Is the tipping fee projected to rise? Yes No

4. If yes, when? _____

5. If yes, by how much? _____

6. If no, how long is it expected to stay the same? _____

7. If your municipality has a contract with a Resource Recovery Facility (RRF), is it meeting its minimum put-or-pay obligation? (A put-or-pay obligation is the amount of tonnage the municipality is under contract to provide each year.) Yes No

8. Put-or-Pay Minimum: _____

9. If no, how much is the annual shortfall? _____

10. Is the shortfall paid completely by the municipality? Yes No

11. If no, describe the current arrangement for payment of the balance of the put-or-pay obligation that is owed to the RRF.

12. If you are meeting your put-or-pay obligation, how many tons is your municipality delivering over the commitment?

13. Who pays tip fees at final disposal site: residents (included in the bill they receive from their waste hauler) or municipality (included in the tax base)?

14. Does your municipality use a transfer station before delivering waste to its final disposal site?

Yes No

15. If yes, where is it located? _____

16. Who operates the transfer station that your municipality uses?

17. Are transfer station fees included in the final disposal tip fee? Yes No

18. If no, what are the costs? _____

19. Who pays them (residents in the bill they receive from their waste hauler or the town through taxes)?

20. What was your previous year's annual disposal rate for residential waste and your current rate of disposal?

Previous Year's Total: _____

Current Year's Estimate: _____

Collection Information: Curbside

1. Who collects waste from residents (private haulers, municipal haulers)?

Private Haulers _____ Municipal _____

2. If the service is provided by municipal haulers, are residents billed a fee by the municipality or are costs covered in the tax base?

3. If private haulers are used, who contracts with the haulers (residents contract directly, or municipality contracts directly)?

4. If the municipality contracts with haulers directly, is it with a single hauler for the whole municipality or does the town contract with different haulers for different areas?

Single Hauler _____ Multiple Haulers _____

5. If multiple haulers are contracted, how many in total are collecting from residents?

6. If haulers are contracted directly by the municipality, what are the annual collection costs (minus disposal costs)?

7. Are collection costs covered in the tax base or do residents pay a fee to the waste hauler?

8. Describe the level of service provided (weekly, bi-weekly pick-up; curbside/ back door service, etc.):

9. If contracted directly by the resident, what are the monthly charges?

10. How many private haulers do residents have to choose from?

11. Describe the level of service provided to them (if you know):

Collection Information: Drop-off Center

1. Does your municipality operate a drop-off center where residents can bring their waste materials? Yes No

2. If yes, are they charged for using it?

3. How are residents charged? By weight or by volume (they purchase stickers, pay a flat fee, etc.)

4. How many or what percentage of the residents utilize the drop-off center to drop off their waste?

5. How many tons of waste are collected at the drop-off center annually from residents?

6. What are the annual costs for operating the drop-off center?

7. How many of these costs are covered in the tax base?

8. What are its hours of operation?

Part C: Residential Recycling

This part of the questionnaire asks you to collect information regarding three areas of residential recycling:

- Curbside collection of recyclables
- Drop-off of recyclables
- Processing of recyclables

Collection Information: Curbside Recycling

1. Is curbside service available for the collection of recyclables from residents? Yes No

2. If yes, do residents receive curbside collection from a private hauler or the municipality?

Private Hauler _____ Municipality _____

3. What recyclable materials are collected?

4. How are they collected (collection bin; bags, etc.):

5. Who pays for the service, the resident or the municipality?

Resident _____ Municipality _____

Collection: Drop-off Center for Recyclables

1. Do you operate a drop-off center for recyclables? Yes No

2. If yes, what materials are collected there?

3. Is there are charge to residents for dropping off their recyclables? Yes No

4. If yes, what are they?

Processing of Recyclables

1. Where are recyclable materials delivered for processing?

2. Do you pay a tip fee for delivery of recyclables at the processing center or other places? Yes No

3. If yes, what are those fees?

4. Is there a chance this fee could rise in the near future? Yes No

5. If yes, when? _____

6. By how much? _____

7. Do you currently share in any revenues from the materials? Yes No

8. If yes, please describe:

9. If you are not currently charged a tipping fee for processing, is there a chance you may be charged a tip fee in the future? Yes No

10. If yes, when? _____

11. How much: _____

12. What was the curbside recycling rate for collection of recyclables from residents in the previous year?

13. How much recyclable material was collected at the drop-off center in the previous year?

14. What is the combined annual tonnage of recyclables recovered (curbside and drop-off):

15. What percentage did this represent of the total residential waste stream?

16. Are you reaching state or local recycling or diversion goals? Yes No

17. If not, what is the estimated shortfall? _____

18. What, in your opinion, are the reasons for not meeting recycling goals?

19. What are some of the strategies you think are needed to increase recycling rates?

20. How often are residents updated on recycling program information?

Part D: Commercial MSW

This part of the questionnaire pertains to that portion of waste that is generated by businesses and large, multi-family buildings, such as apartments and condominium associations. In this section, use only commercially-generated figures.

The questionnaire asks you to collect information regarding three areas of commercial waste disposal: Disposal, Collection, and Recycling.

Disposal Information

1. Where is the commercial waste brought to for disposal?

2. What is the tipping fee (cost per ton) for disposal?

3. Do commercial businesses pay for collection and disposal, or just for collection of waste materials?

4. If commercial businesses pay only collection costs, does the municipality pay for disposal costs? Yes No

5. Is the waste collected from multi-family housing units (apartments, condominiums, etc.) considered commercial waste in your municipality? Yes No
6. If it is not considered commercial waste, is it included in the residential wastestream? Yes No
7. If accounted for separately, what is the Annual Disposal Rate for waste generated from multi-family housing units?

8. If not accounted for separately, what is the Annual Disposal Rate for waste generated from multi-family housing units and businesses combined (all commercial MSW)?

9. What percentage of your total MSW generation is from commercial sources?

Collection Information

1. Do businesses contract directly with waste haulers for collection of their waste? Yes No

2. If yes, approximately how many haulers pick up from businesses in your municipality?

3. Do small businesses in your community have access to a drop-off center for waste disposal? Yes No

4. If yes, how is a small business defined (ex., by number of employees)?

5. If yes, are they charged a fee for bringing waste to the site? Yes No

6. If yes, what is the fee charged?

Recycling Information

1. What recyclable materials are collected from the commercial sector?

2. To the best of your knowledge, do the same haulers that pick up waste materials from their customers also pick up recyclable materials? Yes No

3. If no, do businesses make separate arrangements for the collection of their recyclable materials? Yes No

4. If yes, with whom?

5. Is there a drop-off center available to small businesses for collection of recyclables? Yes No

6. If yes, which recyclable materials are collected from businesses?

7. Are small businesses charged a fee for using the drop-off center for recyclable materials? Yes No

8. If yes, what are the fees?

9. What is the annual recovery rate of recyclable materials from the commercial waste stream?

10. What is the percentage of the total commercial waste stream that is being recovered for recycling? (ex., commercial waste stream equals 3,000 tons; if 500 tons are recovered for recycling, then approximately 17% is being recovered for recycling):

11. What percentage of the total amount of recyclable materials collected from your municipality (residential recyclable materials combined with commercial) consists of commercial recyclables? (ex.:, total recycling rate is 23% of waste stream. Residential component of that 23% is 15%; therefore, commercial component is 8%):

12. Are you reaching state/local recycling goals of your commercial MSW? Yes No

13. If no, what is the estimated shortfall?

14. What, in your opinion, are the reasons for not meeting recycling goals in the commercial sector?

15. What are some of the strategies you think are needed to increase recycling rates?

Part E: Miscellaneous Materials

Bulky Materials

1. How are bulky materials currently collected in your municipality?

2. What are the associated collection costs?

3. Where are they disposed?

4. What are the associated charges for disposal?

5. Who pays the costs of bulky waste collection?

6. Who pays the disposal costs?

7. What is the average annual generation rate of bulky materials?

Leaves/yard waste

1. How are leaves and yard waste collected in your municipality?

2. What are the associated collection costs?

3. Where are they disposed?

4. What are the associated disposal charges?

5. Who pays the costs of leaf and yard waste collection?

6. Who pays the disposal costs?

7. What is the average annual generation rate of leaves and yard waste in your municipality?

8. How much of this is recovered for composting?

9. Is finished compost available to residents? Yes No

10. Is any kind of support given to encourage residents to compost at home? Yes No

11. If yes, please describe what those efforts are (publicity, education, provision of backyard composting bins, etc.)

12. Please describe any other waste-related collection or disposal activity that you think should be included, or will be impacted by, a PAYT program (e.g., tires, Christmas trees, etc.)

13. Additional comments

Worksheet



POLITICAL CONSIDERATIONS

Use this worksheet to assess the decision-making process in your town.

Initial political resistance to PAYT programs is not uncommon. Understanding what some of the concerns may be and understanding the decision-making process are critical to moving the project forward successfully. This worksheet is designed to help you understand the political decision-making process in front of you so you can define your approach.

Question	Response
Form of Government: (Mayor/Town Council; Board of Selectmen, etc .)	
Name/Title of Chief Elected Official	
Next election date for your chief elected official	
Who will be the decision-makers in your community?	
What do you think are their primary concerns?	
What will be the decision making process in your municipality for approval of a PAYT program?	
Why do you think a PAYT program will be beneficial to your municipality?	

Question	Response
Which elected officials/decision makers/stakeholders are supporting the program?	
Which elected officials/decision-makers/stakeholders do you think might support PAYT if they knew more about it?	
What do you think is needed to garner political support for a PAYT program in your community?	
How do you think the above can be achieved?	

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.

Review the characteristics of the different container and pricing combinations available and make a determination of how each option would work in your town:

- Bags or tags/stickers that are sold at retail stores or municipal offices;
- Cans used with a “pay as you go” pricing system (under which residents are billed based on the number and size of cans they set out for collection);
- Cans used with a subscription system.

A rate system often 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 analyzing the advantages and disadvantages of the different systems, answer the three questions and make a preliminary system choice. **Be sure to consider the overall program goals you established in Worksheet # 1 when making this choice.**

Part A: Bag Systems

System	Advantage/Disadvantage
Bag Systems	Advantages
	Provides stronger waste reduction incentive than can system
	No billing system needed, so accounting costs are lower
	Residents find bag systems convenient and easy to understand
	Lower start-up and implementation costs than can systems
	Faster, more efficient collection than cans
	Easy to monitor for compliance
	Easy to adapt for bulky item collections
	Disadvantages
	Can lead to a greater revenue uncertainty than subscription can systems
	System for storing and distributing bags must be developed
	Residents might find purchasing and storing bags inconvenient
	Often incompatible with automated/semiautomated equipment
	Animals can tear bags and bags can break during lifting (NOTE: bags can still be placed inside trash containers if residents already use them)

1. A bag system would work in our town because:

2. The disadvantages of a bag system to our town would be:

3. Based on this evaluation of the pros and cons, a bag system is/is not the best choice for our town.
 Is best choice _____ Is not best choice _____

Part B: Tags or Sticker Systems

System	Advantage/Disadvantage
Tags or Stickers	Advantage
	Provides stronger waste reduction incentive than can systems
	No billing system needed, so accounting costs are lower
	Residents find tag/sticker systems convenient and easy to understand
	Lower start-up and implementation costs than can systems
	Cost of purchasing tags/stickers is less than bags
	Easily adapted for different size containers
	Easily adapted for bulky item collections
	Disadvantages
	Can lead to a greater revenue uncertainty than subscription can systems
	Administration program required to purchase tags/stickers and make them available to residents in stores and through the municipality
	Residents might find purchasing tags/stickers inconvenient
	Tags/stickers can fall off in rainy or cold weather or be stolen
	Tags/stickers can sometimes be counterfeited
	Municipality must educate community about size limits and collection crews must monitor size-limit compliance

1. A tag system would work in our town because:

2. The disadvantages of a tag system to our town would be:

3. Based on this evaluation of the pros and cons, a tag system is/is not the best choice for our town.

Is best choice _____ Is not best choice _____

Part C: Can Systems (Pay-As-You-Go)

System	Advantage/Disadvantage
Cans (Pay-As-You-Go)	Advantages
	<ul style="list-style-type: none"> Residents have the flexibility to set out as few or as many containers needed each week
	Cans are reusable and prevent animals from scattering waste
	Cans can work with automated/semi-automated collection systems
	Disadvantage
	Greater revenue uncertainty than subscription can systems
	System does not provide a significant waste reduction incentive.
	<ul style="list-style-type: none"> Complex tracking and billing system needed to count set-outs at each stop to bill accordingly
	<ul style="list-style-type: none"> Billing system creates lag time between collecting waste and receiving payment for the service
	<ul style="list-style-type: none"> Greater start-up costs if purchase, inventory and distribution of cans is required
	Collection time greater than with bag systems
	Alternative system needed for collection of bulky items

1. A can pay-as-you-go system would work in our town because:

2. The disadvantages of a can pay-as-you go system to our town would be:

3. Based on this evaluation of the pros and cons, a can pay-as-you-go system is/is not the best choice for our town.

Is best choice _____ Is not best choice _____

Part D: Can Systems (Subscription)

System	Advantage/Disadvantage
Cans (Subscription)	Advantage
	Revenues are stable and easy to forecast
	Simplified collection process for collection crews
	Cans are reusable and prevent animals from scattering waste
	Cans can work with automated/semi-automated collection systems
	Disadvantages
	<ul style="list-style-type: none"> • Reduces waste reduction incentive, since residents have no incentive to reduce waste below their minimum service level
	<ul style="list-style-type: none"> • Complex tracking and billing system needed to track residents' subscription level and bill accordingly
	<ul style="list-style-type: none"> • Billing system creates lag time between collecting waste and receiving payment for the service
	<ul style="list-style-type: none"> • Greater implementation costs if purchase, inventory and distribution of cans is required
	Collection time greater than with bag systems
Alternate system needed for collection of bulky items	

1. A can subscription system would work in our town because:

2. The disadvantages of a can subscription system to our town would be:

3. Based on this evaluation of the pros and cons, a can subscription system is/is not the best choice for our town.

Is best choice _____ Is not best choice _____

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 program costs and the cost of any complementary programs. Then estimate the per container price needed to meet your program 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

1. Current Waste Collection

_____	÷	_____	=	_____
Tons of MSW collected in the base year		Current number of community residents in the base year		Tons of MSW per resident in the base year

2. Community Growth

_____	X	_____	=	_____
Tons of MSW per resident in the base year		Estimated number of residents in the projection year		Annual MSW tonnage expected in the projection year without PAYT

3. Waste Collection Under PAYT

100 - _____	% =	_____	X	_____	=	_____
Percentage decrease in MSW expected under PAYT		MSW reduction multiplier		Annual MSW tonnage expected without PAYT (from A-2)		Annual MSW tonnage expected under PAYT
_____	÷	12	=	_____		
Annual MSW tonnage expected under PAYT				Tons of MSW expected per month under PAYT		

Worksheet # 5 (Continued)

Part B: Program Costs

Before calculating costs, you need to have already made some key financial assumptions. For instance, do you intend to include all costs associated with collection and disposal of MSW and recyclables, or a portion of those costs in the PAYT program? If you are only including a portion of those costs in the PAYT program, which costs are they?

After making these assumptions, use this section to estimate your monthly MSW and recyclables fixed and variable costs under the PAYT program in your projection year. Be sure to take into account the anticipated reduction of MSW when estimating costs. (For composting/yard waste collections or other supplementary programs, copy the next 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 PAYT and your supplementary programs.

Fixed and variable costs can include the costs described on the worksheet. However, if you are not employing a full-cost accounting approach to your PAYT program and have made a determination that you will not be including all costs associated with MSW collection and disposal in the PAYT program, you may not need to include all these costs in your analysis. Note also that many of the costs described below apply to municipalities that perform municipal collection. Many municipalities contract collection out to a private hauler, or residents may contract with a hauler directly. In those cases, many of these costs will not apply.

Do not forget to include transportation costs to a transfer station, or from a transfer station to the final disposal site. If your municipality operates a drop-off center and/or transfer station, estimate its fixed and variable costs below as well.

This information can be gathered from:

- Public works department
- Town Treasurer
- Office of the chief elected official
- Resource Recovery Facility and recycling processing center that processes the materials generated by your municipality
- Tax assessor’s office

1. Fixed MSW Collection and Disposal Costs Per Month (if applicable)

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	\$ _____
Total Fixed MSW Collection and Disposal Costs Per Month	\$ _____

2. Variable MSW Collection and Disposal Costs Per Month (if applicable)

Salaries and benefits (labor costs that vary with the amount of MSW collected)	\$ _____
Vehicle Maintenance (vehicle maintenance costs that vary with The 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	\$ _____
Total Variable MSW Collection and Disposal Costs Per Month	\$ _____

3. Total MSW Collection and Disposal Costs per Month

_____	+	_____	=	_____
Total Monthly fixed MSW Collection and Disposal Costs (from B-1)		Total Monthly Variable Collection and Disposal costs (from B-2)		Total Monthly MSW Collection and Disposal cost under PAYT

4. Fixed Recycling Collection and Processing Costs Per Month

Physical facilities (e.g. maintenance, mortgage utilities)	\$ _____
Salaries and benefits (labor costs that remain fixed regardless of quantity of recyclables collected)	\$ _____
Vehicle Amortization	\$ _____
Vehicle maintenance (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)	\$ _____
Education/Promotional Costs	\$ _____
Other fixed costs	\$ _____
Total Fixed Recycling Costs Per Month	\$ _____

5. Variable Recycling Collection and Processing Costs Per Month

Salaries and benefits (labor costs that vary with the amount of recyclables collected)	\$ _____
Vehicle Maintenance (vehicle maintenance costs that vary with the amount of recyclables collected)	\$ _____
Vehicle operating costs (vehicle operating costs that vary with amount of recyclables collected)	\$ _____
Contractor Fees (if any)	\$ _____
Tipping Fees	\$ _____
Other Variable Costs	\$ _____
Total Variable Recycling Costs Per Month	\$ _____

6. Total Recycling Collection and Processing Costs per Month

_____ + _____ = _____		
Total fixed Recycling per month (from B-4)	Total Variable Recycling costs per month (from B-5)	Total Monthly Recycling costs under PAYT
_____ - _____ = _____		
Total monthly recycling costs under PAYT (from B-6)	Net Revenue from sale of recyclables per month	Adjusted total monthly recycling costs under PAYT

7. Total Cost of PAYT and Complementary Programs

Total Monthly MSW collection and Disposal costs under PAYT (From B-3)	\$ _____
Adjusted total monthly recycling costs under PAYT (From B-6)	\$ _____
Other monthly complimentary Programs, if any	\$ _____
Total monthly cost of PAYT and Complementary Programs	\$ _____

Part C: PAYT Revenues

Use this section to estimate the per-container price needed to meet your program's costs. These prices will be dependent on two things. First, the type of program you have identified as being the best for your municipality (see Worksheet #4) and second, the assumptions you have made regarding what specific costs you wish the PAYT program to cover.

If you have selected either bags or containers for your program, be sure to use more than one size bag and container in your estimates. For instance, a 33-gallon bag will hold approximately 25 lbs. of waste, while a 20-gallon bag will hold a little more than half that. If you are choosing containers, you might want to contact planners in communities that are using containers of similar sizes for help with this estimate.

Once you have identified the size bags/containers you will be using in your program, perform the calculations below separately for each container. If you are uncertain about how to convert your specific container's capacity from volume to weight, see the information on page 7 of this worksheet. 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.

1. 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

$$\frac{\text{_____}}{\text{Tons of MSW expected per month under PAYT (from A-3)}} + \frac{\text{_____}}{\text{Weight per container (From C-1)}} = \frac{\text{_____}}{\text{Number of containers per month}}$$

$$\frac{\text{_____}}{\text{Total monthly cost of and complimentary programs (from B-7)}} - \frac{\text{_____}}{\text{Number of containers per month}} = \frac{\text{_____}}{\text{Estimated price per container PAYT}}$$

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 near-by PAYT communities for data on whether 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



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 but seldom materializes as a significant program outcome. 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 make it more challenging for a community to extend 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
Perception that waste collection is free/pay-as-you-throw is a tax increase	Educate residents about pay-as-you-throw Set prices at levels residents will accept
Perception that program might hurt low-income	Offer these residents rebates, coupons, or discounts • Offer free bags to recipients of general assistance
Uneven revenues/revenue shortfalls as residents generate less waste	• Use multi-tiered pricing Plan for reduced waste amounts in steady-state when setting prices •
Multi-family Housing	• Include charges in rent Under a bag-based system, have tenants purchase bags • Use bar code readers on building garage chutes
Overstuffing of containers	• Set weight limits on containers

Sample Barriers and Solutions (Continued)	
Potential Barriers	Possible Solutions
Lack of support from private waste haulers	Involve haulers in the planning process Pass ordinance mandating haulers offer variable rates
Illegal dumping/burning	Educate residents about pay-as-you-throw Provide several legal diversion options- Develop enforcement plan
Barriers That Might Apply to Your Community's Program	
Potential Barriers: List below additional pay-as-you-throw barriers that might apply to your community's program. For each potential barrier you feel may impact your program, list any possible solutions that come to mind.	
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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 two distinct parts of public outreach: Part A: Soliciting feedback about PAYT during the planning stage and Part 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). Pages 1 and 3 list examples as guidance.

Part A: Soliciting Feedback

Using this table, consider how you will obtain input during the planning stage about the proposed PAYT 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 Method	Schedule
<p><i>Example: Retailers/Other Businesses</i></p>	<ul style="list-style-type: none"> • <i>Direct visits to local retailers to discuss the program and ask them about distributing or selling bags in stores</i> • <i>Invite retailers to public PAYT meetings</i> • <i>Include retailers in your citizens' advisory council or other planning organization</i> 	<p><i>About six months before program implementation</i></p>
<p><i>Example: Residents</i></p>	<p><i>Develop a PAYT fact sheet introducing the program and asking for feedback</i></p> <ul style="list-style-type: none"> • <i>Issue press releases to the local media to get media coverage</i> <p><i>Hold public meetings on PAYT</i> <i>Invite community residents to join your citizens' advisory council or other planning organization</i></p>	<p><i>About six to nine month before program implementation</i></p>

<p><i>Example: Elected Officials</i></p>	<p><i>Hold a briefing for elected officials to introduce the program and ask for their input</i></p> <ul style="list-style-type: none"> • <i>Include elected officials in the citizens' advisory council or other planning organization</i> 	<p><i>About six months before program implementation</i></p>
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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.

Audience	Outreach Method	Schedule
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 PAYT. 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.

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

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



IMPLEMENTATION

CHECKLIST

Use this checklist to begin to define the different tasks that must be undertaken during program implementation.

You may also come up with implementation tasks not included here. As implementation proceeds, take each task and divide it into sub-tasks, assigning both a timeline for completion and which person or persons are responsible for completing the task.

The checklist is divided into three parts. Part A of the worksheet applies to all programs. Use Part B if you are implementing a bag or tag-based program, and Part C if you are implementing a can- based program.

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
 - Add additional items for recycling
 - Prohibiting unauthorized containers
- Define enforcement responsibilities (work with police and health departments).
- 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, 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 "errors 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 RFP's, solicit bids, and purchase bags or tags.
- ❑ If distributing through retailers, arrange distribution logistics (e.g. delivery and invoice schedule and marketing agreements). 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 RFP's, 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 PAYT and help make informed 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:		
	Base Year	Current Year
High-Grade Paper	_____	_____
Mixed Paper	_____	_____
Corrugated Cardboard	_____	_____
Newsprint	_____	_____
Glass/Metal Food Containers	_____	_____
Plastics	_____	_____
Scrap Metal	_____	_____
Car Batteries	_____	_____
Nicad Batteries	_____	_____
Waste Oil	_____	_____
Other	_____	_____
Total tons of recyclables collected:	_____	_____

Part C: Composting Amounts

	Base Year	Current Year
Tons of organic materials collected for composting:	_____	_____

Part D: Costs

Tracking the costs incurred and the revenues recovered under PAYT is an important process. At least once a year, refer back to Worksheet #5, "Rate Structure Design," and recalculate 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 PAYT.

Part E: Education

Maintaining awareness of the program is critical to its continued success. Establish an ongoing committee that oversees regular promotional and educational efforts. Refer back to Worksheet #7 – Public Outreach for ideas and structure.