

Recycling

Second of Three Parts

Best Practices for Pay-As-You-Throw— Planning for Implementation

PAY-AS-YOU-THROW (PAYT) PROGRAMS CAN COME IN MANY DIFFERENT forms, but one feature of nearly all successful programs is that the municipal leaders implementing them have devoted time and effort to doing things right during the planning stage. No matter what shape a PAYT program takes—bags, tags or variable-rate carts—careful, dedicated planning is a requirement for success. This article, the second in a three-part series about best practices for PAYT, addresses some of the key elements that officials need to consider as they plan their programs. We explored the different types of PAYT programs last month (*Waste Advantage Magazine*, July 2013), and next month we will look at how best to implement a PAYT program.

While planning for a PAYT program's implementation can involve a large number of individual activities, the process can be distilled into three primary steps: gathering data on the community's current solid waste disposal situation, designing the program to meet the community's unique goals and specific needs and understanding the potential benefits of PAYT for the community.

Data-Gathering

As the old saying goes, you can't know where you're going if you don't know where you are. It's the same with public-sector planning. Before municipal leaders can design a PAYT program and understand its potential benefits, they must first develop a detailed understanding of where their community currently stands in terms of municipal solid waste (MSW) collection and disposal. Gather data on:

- **MSW tonnage:** The first step is to understand how much waste the community currently generates. Municipal planners need to identify the size of the "addressable" population for PAYT—the number of single-family homes and small multi-family dwellings that will receive PAYT collection services (or that make use of the local convenience center or drop-off location). Once they do that, they must gather several years of historical data on the MSW tonnage these households generate. This data provides a baseline that can be used to understand how much MSW may be reduced by the PAYT program.

- **Hauler relationship:** Town leaders need to know everything about how their waste and recycling are transported. Does the community collect its own waste or does it contract with a private hauler? And if it contracts with a private hauler, what are the obligations and terms of the contract?

- **Tipping Fees:** Leaders must gather details about the community's tipping fees, including how much is the tipping fee per ton (including, if applicable, fuel surcharges fees, transport costs, etc.), as well as any potential future changes to those fees. They must also consider the nature of their disposal agreements. For example, a city or town that pays a high per-ton tipping fee may realize substantial financial benefits from a good PAYT program. However, municipalities involved in "put or pay" agreements where they must guarantee disposal of a certain volume of waste—or pay penalties—will benefit less. In either case, a sound PAYT program will provide environmental benefits, but a town does need to weigh the financial implications.

- **Recycling:** Officials should gather several years of historical data on recycling



Pay-as-you-throw programs reduce solid waste volume and increase recycling. Photo courtesy of WasteZero.

tonnage for eligible PAYT households, information about the structure for collecting revenue from the sale of recyclables, and any potential changes in recycling revenue in the next few years. They must also collect details on the nature of the recycling program—source separated or single-stream using bins or carts, and convenience center or curbside collection. Gathering this information will help leaders estimate the additional, incremental amount of recycling that their chosen PAYT program is likely to generate. It will also help them determine whether they can expect to earn extra revenue from those added recyclable materials, and if so, how much.

- **Fee Structure:** Leaders must collect key information about the current solid waste budget and how the function is funded, whether via the general fund or an enterprise fund, and whether residents pay a recurring fee to support the services. Doing this allows the community to understand what its goals for the program should be in terms of balancing revenue and costs.

Frequency of collection: Municipalities must document the frequency of garbage and recycling collection, whether weekly, bi-weekly or another interval.

- **Other miscellaneous costs:** Identify other costs that could be affected by a PAYT program, including those for transportation, other waste services, and disposal such as yard waste, bulky materials and compost.

Now that municipal leaders know where they are, they can set the course for where they're going. The data collected here will be used as the inputs for the next two phases of PAYT planning: program design and benefits assessment.

Program Design

Using the information they have gathered, municipal leaders should move next to designing their PAYT program to perform optimally in their city or town and to meet the community's unique expectations for it. This pivotal point in the planning process is essential to the future success of the program.

The first key question in this phase is about which type of PAYT program is the best fit for the community. The previous article in this series discussed the different options for PAYT programs, as well as the pros and cons of each. Municipalities wishing to implement PAYT can choose from among cash-based programs, overflow programs, variable-rate carts, tag-based programs and bag-based programs. Within each type of program, there can be variations and even combinations. In any case, the key is to design a program that meets important criteria for residents and the municipality. For residents, the program must be:

- Fair and Easy to understand
 - Convenient, user-friendly and designed to incentivize the proper behaviors
- For the city or town, it must:
- Drive the desired results in the near- and long-term
 - Be financially viable
 - Meet the community's environmental objectives
 - Earn high levels of resident satisfaction
 - Represent a minimal commitment of additional resources, if any

The information that town leaders collect in the data-gathering phase can help them determine which type of PAYT program best matches their needs.

The second part of the program design phase is pricing, and it requires a delicate balance. Planners must weigh their community's needs for revenue-generation with the corresponding need for the program to influence the desired behavioral change—MSW reduction and increased recycling. If the community prices for the program components (such as bags or tags) are too high, residents may balk at the cost and not participate as expected. On the other hand, if the program components are priced too low, residents will not have the full incentive to reduce their MSW and increase their recycling. Designing a PAYT program to strike the perfect balance between revenue-generation and pricing that influences residents appropriately is essential.

Benefits Assessment

Having gathered data on the current situation and plotted out the structure of the program, the final step in planning is for municipal leaders to use that information to understand what the PAYT program will mean for them and their community. Developing an understanding of what the city or town stands to gain from PAYT in the benefits-assessment phase is valuable in moving from planning to implementation because it gives municipal leaders concrete details about the program that they can use to communicate its value to other stakeholders in local government and with residents of the community. The benefits of PAYT can come from a number of different arenas.

Financial Benefits

There are two main benefits of PAYT for finances: the net financial impact, and the impact of PAYT on recycling-based job creation. The net financial

impact of any PAYT program is made up of several different elements, detailed below. Some of those elements derive from new incremental revenue, while others are made up of funds that otherwise would have been spent if the community had not adopted PAYT.

- *Tipping fee savings:* The amount of money, previously spent on disposal, that is saved when the PAYT program diverts waste into more productive uses, such as recycling and composting
- *Bag/tag revenues and/or changes in fee structure:* The incremental amount of money collected by municipalities from the sale of PAYT bags or tags, or collected via a new fee structure such as with variable-rate carts
- *Revenue from sale of recyclable goods:* The potential incremental revenue that could be gained from selling an increased amount of recyclables collected with PAYT
- *Savings from operational improvements:* Budget savings from such factors as decreased operating and maintenance expenses for MSW collection vehicles, reduced fuel requirements and labor cost savings

An increase in the amount of recyclables almost always leads to increased employment in the community and the surrounding region. This increased employment can take the form of jobs in collection, processing and remanufacturing. Once the community builds an understanding of how great an increase in recyclables collection they can expect to see, they can estimate the impact of that increased collection on local and regional jobs. As an example of PAYT's significant potential for job-creation, using figures from a 2011 study from the Tellus Institute, if PAYT were instituted nationwide, the resulting increase in recycling would lead to the creation of more than 224,000 new jobs.

Environmental Benefits

The environmental benefits of PAYT can be very significant, and they can take a number of different forms. With the right inputs and tools, such as the EPA's Waste Reduction Model (WARM), municipalities can estimate the reduction in greenhouse gas emissions as a result of adopting PAYT. Municipalities can also estimate the amount of energy saved and the extension of the life of their local or regional disposal site.

As an example of PAYT's potential for significant environmental impact, it is estimated that if PAYT were implemented in every U.S. community, greenhouse gas emissions would be reduced by an amount equal to the exhaust from almost 20 million vehicles each year, and the amount of energy saved would be the equivalent of installing roughly 100 million rooftop solar arrays.¹

Waste Reduction Benefits

PAYT will have a positive impact on MSW and recycling volume; the only question is how much? While it is of course impossible to predict the future, informed communities with good historical data and a strong understanding of their current and future operational arrangements can forecast that impact with a great degree of confidence.

Careful planning for PAYT can give municipal leaders the information they need to build the right program for their community and help them satisfy their unique needs and objectives. Gathering the right kind of information about the community's MSW situation, designing the program appropriately for the community and identifying the benefits of PAYT are key steps on the path toward successful PAYT implementation. | **WA**

The final article in this series will focus on PAYT implementation. *Greg Peverall is Vice President of Business Development at WasteZero (Raleigh, NC), a company specializing in municipal waste reduction programs. He can be reached at (919) 322-1234 or gpeverall@wastezero.com.*

Note

1. According to WasteZero.

RECYCLING FACILITY & TRANSFER STATION PROPERTY FOR SALE

3.1 Acres cleared

- ✓ Access to railroad spur to be built on property which abuts railroad
- ✓ Owner will obtain permits
- ✓ Zoned heavy industrial
- ✓ Permitted use, many other uses



Approx. ½ mi. west of I-75, Bayshore Exit 143

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