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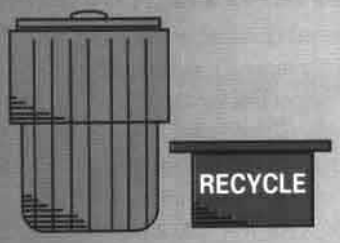

Pay-as-you-throw...

Thousands of communities find this method helps reduce waste while increasing recycling

Since the mid-1980s, growing numbers of municipal solid waste planners have made a change in the way they fund their programs. Traditionally, residents in most communities in the United States have been charged for waste collection and disposal either via a flat fee or through property taxes. Households pay the same amount no matter how much waste they put out at the curb.

To offer residents an incentive to reduce, reuse, and recycle, nearly 2,000 communities nationwide have switched to a system called pay-as-you-throw. While they can be structured in a number of ways, these programs are based on a simple idea: residents should pay for waste collection based on the amount generated.

More and more communities, even those with strong recycling programs, are recognizing the need for preventing waste before it is generated. By charging residents for garbage collection based on usage–in the same way they are charged for electricity, gas, and other utilities–planners are motivating households not only to recycle more but to generate less waste in the first place.

In addition, pay-as-you-throw encourages residents to consider what they're throwing away and how much it costs. "Increased awareness is definitely one of the greatest benefits of pay-as-you-throw," notes Esther Bowring, recycling coordinator for Montgomery County, Maryland. "It provides a real boost for recycling. People can get complacent about recycling. Pay-as-you-throw makes them more diligent..."

Pay-as-you-throw programs benefit both the environment and the economy, and offer a more equitable way of paying for waste collection services. These three categories of benefits are often referred to jointly as "the three E's."

Many of the communities that have implemented pay-as-you-throw programs have seen recycling increase. In some communities, recycling rates have increased modestly, while others have reported an increase of 50 percent or more. And communities with pay-as-you-throw also have reported reductions from 25 to 45 percent on average in the amount of waste their residents are generating. These kinds of waste reductions yield substantial environmental benefits. Fewer natural resources are used, for example, and less landfill space is consumed.

In addition, by encouraging residents to reduce waste, pay-as-you-throw programs also result in significant economic benefits. For many communities, less waste means lower disposal costs. "Economic benefits were our most important consideration when we implemented pay-as-you-throw in 1993. Our financial savings were phenomenal," says Tony Ilacqua, solid waste coordinator of the Town of Littleton, New Hampshire.

Towns like Littleton also have discovered another economic advantage to pay-as-you-throw. It helps them cover increases in the cost of their solid waste program. When Littleton had to switch from its local landfill to a new, regional facility, it began incurring a major new tipping fee. Rather than trying to implement a large tax increase to cover this cost, the town developed a pay-as-you-throw program and built the new tipping fee into the per-bag charge that residents paid.

Per-bag charge more acceptable than tax

Pay-as-you-throw also provides important equity benefits. In Littleton, for example, the new per-bag charge was much more acceptable to residents than a new tax because they felt it was fair. Each resident would only be charged for the waste generated. In fact, in many communities with pay-as-you-throw, this is the characteristic that matters most to residents. "Fairness is important to people, especially today," says Jane Hinshaw of the Department of Public Works and Transportation of Pasadena, California. While their other expenses seem constantly to rise, she added, "Pay-as-you-throw is one area where residents have a choice to reduce their costs. And they also appreciate the fact that they're no longer subsidizing their neighbor down the street who's throwing away more."

While all pay-as-you-throw programs charge residents based on the amount of waste generated, they can be structured in a

number of ways. To begin with, pay-as-you-throw programs can be either volume-based or weight-based. In volume-based systems, residents pay for waste collection based on the number and size of containers they set out. In weight-based systems, residents are charged per pound of waste.

Because weight-based programs are often more expensive to implement and operate, nearly all pay-as-you-throw programs currently are volume-based. Those communities that decide to implement volume-based programs need to make a number of decisions about containers, rate systems, and complementary programs.

Containers range from large-, small-, or variable-size cans to prepaid bags, tags, and stickers. Each option has specific advantages and disadvantages.

Some communities design their programs around large 60- or 90-gallon cans. Large cans provide revenue stability, since the number of cans set out usually stays the same each week.

Prepaid bags (usually 15 to 30 gallons in size), tags, and stickers also can be used to encourage residents to prevent more waste. Because these systems are typically based on smaller increments of waste, residents find it easier to translate waste reductions into savings.

There are several different types of rate structures that are used in pay-as-you-throw programs. Under proportional rate systems, households are charged a flat fee for each container of waste they set out. For example, each can of waste costs $1, regardless of how many or how few containers are set out.

Another option is to use a two-tiered rate structure (also known as a hybrid rate structure). In two-tiered systems, residents pay a fixed, monthly fee plus a per-container fee.

In addition, communities with programs in place have found that introducing or expanding complementary programs when implementing pay-as-you-throw makes unit pricing more successful. The most common complementary programs are recycling and composting, which together allow residents to divert a large percentage of their waste. Because they help residents reduce their waste–resulting in less trash and more money saved–these programs enhance citizens' acceptance of pay-as-you-throw and their perception of it as fair.

Overcoming barriers

While the benefits of pay-as-you-throw are substantial, there are some potential barriers that communities might encounter when proposing or implementing a program of their own.

One of the most common concerns communities raise when considering pay-as-you-throw is illegal dumping. In general, however, municipalities that have pay-as-you-throw programs in place have reported that incidents of illegal dumping attributable to the program are rare. To reduce the potential for illegal dumping at the outset, however, many communities adopt a two-part strategy. First, these communities conduct an extensive outreach campaign to get residents to buy into a program before it is implemented. Enforcement is the second part. Including and publicizing steep fines for offenders will deter most individuals from attempting to dispose of waste outside the system.

Revenue instability can be another concern for communities. With tag, sticker, or bag programs, in particular, municipalities may fear that residents will buy several months' supply at one time, resulting in significant fluctuations in their cash flow. One way to combat this potential problem is to set rates and fees carefully. By accurately gauging waste amounts and setting per-container prices accordingly, planners can ensure that enough funds are raised over the course of the year to pay for the program and any complementary services.

Planners also can use a two-tiered system to smooth out their cash flow. "Revenue instability is a solvable problem," says Jim Morris, associate director of the office of continuing education at Cook College in New Brunswick, New Jersey. "The system that seems to address it best is the one that calls for a flat fee plus a variable rate. The analogy to this kind of system is phone service. You pay $10 to $12 per month for the service, regardless of whether you make any calls, and then pay for actual usage on top of that. This system provides stable revenues for service costs and ties the disposal fee, directly or indirectly, to the tipping fee."

Another potential hurdle communities might have to overcome in implementing pay-as-you-throw is multifamily housing.

There is no one ideal solution yet for multifamily housing," notes Janet Robins with Resource Integration Systems, Toronto, Ontario. "Communities can charge the owner or property manager, who would then have an incentive to offer composting and recycling services to their residents. But we don't have a technological answer yet." In the meantime, while potential solutions are being developed, some planners are simply adopting programs targeting the single-family residents in their community.

National Pay-as-You-Throw Programs

State	#	Program type
Alaska	2	Bag
Arkansas	7	Bag
Arizona	1	Can
California	180	Variable can, hybrid
Colorado	20	Bag
Connecticut	10	Bag, sticker
Florida	6	Variable can, bag
Georgia	15	Bag
Idaho	15	Variable can, bag
Illinois	54	Bag, sticker, hybrid
Indiana	43	Sticker, bag, hybrid
Iowa	92	Bag, sticker, hybrid
Maine	67	Bag, sticker, hybrid
Maryland	6	Bag, sticker
Massachusetts	78	Bag, sticker, hybrid
Michigan	37	Sticker, bag
Minnesota	300	Can, bag, hybrid
Missouri	2	Can
Montana	1	Hybrid
Nebraska	2	Can, hybrid
New Hampshire	18	Bag, hybrid, can
New Jersey	44	Bag, sticker, hybrid
New York	120	Sticker, bag, can
North Carolina	22	Sticker, bag, can
North Dakota	6	Can
Ohio	16	Can,hybrid,bag, sticker
Oklahoma	2	Can
Oregon	92	Can
Pennsylvania	54	Bag, hybrid, sticker
Rhode Island	6	Bag, sticker
South Carolina	1	Bag
South Dakota	2	Can, bag
Texas	23	Bag, hybrid, can
Virginia	4	Bag
Vermont	9	Bag
Washington	267	Variable can
Wisconsin	280	Bag, sticker, hybrid
Total	1904	

Free information available

To receive a free guide, *Pay-As-You-Throw: Lessons Learned About Unit Pricing* (EPA530-R-94-004), call (800)424-9346. For a free copy of EPA's *Pay-As-You-Throw Tool Kit* with guidebooks, a workbook for designing and implementing a pay-as-you-throw program, a videotape, and rate structure design software, call (617) 674-7275.

For general information, call Canterbury at (703)308-7264.