PAY-AS-YOU-THROW SUMMER 2008 BULLETIN

Using PAYT Makes You SMART*

*SAVE MONEY AND REDUCE TRASH

Welcome

Pay-As-You-Throw (PAYT) is continuing to experience significant growth. Communities across the country are constantly discovering the benefits of PAYT programs, and the U.S. is being joined by an ever-growing number of domestic and international cities! The impetus for this conversion is simple... communities that implement the PAYT program for solid waste disposal **Save Money And Reduce Trash!**

The economic benefits can be realized by both the local government and the citizens. It is an answer to help address soaring municipal solid waste management costs and also to earn the city a stable revenue from recycled materials! Citizens are spared from tax increases and enjoy a more equitable system. PAYT means less waste and more recycling, and that means fewer natural resources need to be extracted. It also means that the greenhouse gas emissions associated with the manufacture, distribution, use, and disposal of products are reduced! With all of PAYT's economic and environmental benefits, it is easy to see why more and more communities are choosing this option for solid waste management.

PAYT has also been adopted internationally from Toronto to Taipei. Several countries in the European Union have made significant efforts to research and implement PAYT programs. The Environment Secretary of Scotland, for example, outlined a vision to increase Scotland's recycling of municipal waste to at least 70 percent by 2020!

As solid waste efforts increase, the PAYT e-bulletin continues to highlight domestic and global efforts to address environmental and economic sustainability of municipal solid waste disposal.

PAYT Spans the Country

Massachusetts Makes Enormous Strides...

Hamilton Reduces Waste 33% in First Months of New Program

In March 2008, Hamilton, Massachusetts, a suburban town north of Boston with approximately 2,500 single family homes, started a modified Pay-As-You-Throw program. Residents are allowed to set out one barrel of trash per week and unlimited recycling (collected every other week) at the town's expense. Additional trash needs to be put into official Town of Hamilton blue bags (33 gal) that residents purchase for $1.75 each.

The program was developed during a period in which the Town was without a DPW Director. The Town's Recycling Committee led the initiative, with assistance from a MassDEP Technical Assistance Grant. The Recycling Committee recommended the program, developed publicity materials, presented it to the Board of Selectmen and Town Meeting, and answered calls made to a dedicated "Hotline". The town's hauler, Hiltz Disposal, also provided significant support and advice in the planning process. In addition, MassDEP provided $4/household in grant funding to help cover start-up and publicity costs. The community voted at a Special Town Meeting in October 2007 to authorize the Selectmen to establish a fee-based system. In December, the Selectmen set the actual bag fee and the start date of March 12, 2008.

Prior to the start date, many residents came into Town Hall to buy additional recycling bins and/or pick up stickers to convert a barrel to use as a large recycling container. Organizations and individuals requested and received in-home consultations from members of the Recycling Committee. The Recycling Committee also arranged for a local retailer to sell large rotating composters at cost to residents. The composters proved so popular they sold more than two times as many as they'd anticipated.

As of the end of April, the results were clearly impressive. The new DPW Director, John Tomasz, remarked on how smoothly the program is operating. Residents who were away during the winter remarked on the transformation of the trash habits of everyone in town. The tonnage results speak for themselves. The month of March and the month of April each showed a 33 percent reduction in trash tonnage compared to the same months in the previous year. This translated to a monthly savings of over $5,000 in avoided disposal costs, which is a significant amount for the Town's budget. Selectman Dave Carey reported on the results at the Annual Town Meeting in May 2008 and received applause from the attendees!

Increased Recycling Could Mean $70,000 Savings to Dartmouth

Residents of Dartmouth, Massachusetts (pop. 32,293) have quickly taken to the Pay-As-You-Throw (PAYT) program they implemented last October. As of early April, recycling had increased 55 percent, and solid waste tonnage sent to the Crapo Hill Landfill had decreased 51 percent. The town collects trash and recycling weekly at the curb from approximately 10,000 households. Residents pay an annual assessment of $95 that covers PAYT solid waste collection, unlimited curbside recycling, seasonal yard waste removal and Christmas tree collection. All trash must be placed in official PAYT bags that are sold at numerous retail outlets. Residents pay $2.00 for a 33-gallon bag and $1.00 for a 14-gallon bag.

"The Dartmouth town government and the residents of Dartmouth should be applauded for making the (PAYT) program work, and doing so in record time," Virginia Valiela, executive director of the Greater New Bedford Regional Refuse Management District, said in a memo to her board members. The reduction in solid waste buried at the landfill is about 470 tons per month, and the additional recycling equates to another 70 tons per month, Ms. Valiela said. The Refuse District manages an integrated solid waste management program for the member communities of Dartmouth and New Bedford.

In mid-April, Dartmouth's Board of Public Works announced that the annual assessment of $95 would be lowered to $80 per year, due to the enormous success of the PAYT program in reducing solid waste disposal costs. The Town recently took out advertisements in the local newspaper, thanking the residents of Dartmouth for making the program a success and reporting on the results of the program to date. The Town is also conducting a PAYT survey of its residents. The survey can be found at ***www.town.dartmouth.ma.us.***

Massachusetts DEP Offers Funding for PAYT

The Department of Environmental Protection in Massachusetts continues to offer cities and towns Pay-As-You-Throw assistance through its Municipal Sustainability Grant program. Two types of assistance are provided: (1) Technical assistance for PAYT planning, and (2) Start-up funds for new PAYT program implementation.

In FY08, 21 communities were each awarded 80 hours of hands-on technical assistance from one of MassDEP's six regional Municipal Assistance Coordinators (MACs). MACs assist communities with preparing cost/benefit analyses for proposed PAYT programs, developing communications plans to educate elected officials and the general public about the benefits of PAYT, and developing detailed PAYT implementation plans.

In addition, MassDEP awarded six communities at total of $114,000 in start-up funds to implement PAYT programs in FY08. The individual grants ranged from $2,000 to $40,600. Two of the new PAYT programs were implemented in communities that collect trash and recyclables at transfer stations (Athol; pop. 11,000 and Duxbury, pop. 15,300). The other four new PAYT programs were implemented by curbside trash/recycling communities and include: Shrewsbury (pop. 33,400), Sunderland (pop. 3,700), Dartmouth, and Hamilton (see adjacent articles).

PAYT start-up grants are awarded at $4 per participating PAYT household, with a cap of $100,000. Grantees must also meet the following criteria:

- Provide a detailed implementation plan and timeline
- Establish a rate structure that recovers variable costs (disposal fees) through PAYT bag/sticker sales, and fixed costs through tax base or direct assessment.
- Document approval by vote of the local governing body (City Council, Board of Selectmen) to implement and operate PAYT for a minimum of two years
- Provide no more than one free bag, sticker or container per household per week, with container volume not exceeding 36 gallons.

For more information about MassDEP's PAYT grant program, go to ***http://www.mass.gov/dep/recycle/recawgr.htm*** and click on Municipal Sustainability Grant application or contact Joseph Lambert at ***joseph.lambert@state.ma.us.***

New Hampshire Embraces PAYT

An increasing number of cities and towns in New Hampshire are turning to incentive-based recycling programs to increase participation and avoid expensive waste removal costs. Exeter and Newmarket are two of the best in the state at keeping recyclables out of their solid waste streams. Both have Pay-As-You-Throw (PAYT) programs, requiring residents to pay per trash bag collected.

Donald E. Maurer, supervisor of solid waste technical assistance for the state Department of Environmental Services, said the $75 per ton average cost of disposing of solid waste is forcing more communities to find ways to decrease that budget line. Maurer said 47 towns in New Hampshire have PAYT programs, and 10 more are actively considering it. Residents of those towns pay an average of $1.50 per bag, which provides incentive to use as few as possible and recycle whatever they can. "We're beginning to see it more and more. We've had more towns than ever look at Pay-As-You-Throw," Maurer said. "It's a positive program because it encourages people to recycle to save money."

The cost of disposing solid waste has steadily increased since the 1970's when the price was $15 per ton. Maurer said New England's rates are higher than anywhere in the country because there are fewer landfills. At one point, there were 500 landfills in the state; now there are 9.

In addition to the cost avoidance of removing recyclables from the waste stream, Maurer said communities can take a chunk out of their budgets by selling the recyclables to vendors. Exeter has made residents pay per trash bag for 16 years to promote recycling and save money. "Exeter was on the cutting edge of Pay-As-You-Throw," Town Manager Russell Dean said. "I think it's been a very successful program. I think the residents have really bought into it. There's always been a lot of attention paid to recycling in Exeter."

Maurer said PAYT has proven most effective because it does not force people to recycle. "People with mandatory recycling tend not to like it," he said. "And then trash becomes a bit of a sensitive issue."

Recycling Revenue in Epping on the Rise

Recycling revenues in Epping, New Hampshire were $48,000 higher than expected last year, and Solid Waste Manager Jim Freeman said he expects that number to grow this year.

Freeman said the math is easy when figuring out why recycling is beneficial to the town. He said that not only is the town paid for recycling that it sends out, but the more people recycle, the less trash the town has to ship out.

"The simplest way to put it is this," Freeman said. "We spend $80 per ton to have trash taken out. But, we bring in $80 a ton just on paper, recycling. That is $160 per ton of paper that we recycle rather than throwing away." He said the increased revenues and decreased expenditures allowed him to come in 4 percent under budget, and allowed him to lower his request in this year's budget by 3 percent.

"I'm a firm believer that if we get 100 percent cooperation we could have the facility running in the black. It's just getting people to go along with it." Freeman, who has been on the job just over a year, said his biggest challenge is educating the public on the benefits of recycling. "Once people realize the benefits, I'm able to 'convert' a lot of them," Freeman said. "People know it is good for the environment, but sometimes that doesn't get through to them. Once they see that it can help lighten their tax burden, they tend to get on board."

Freeman is also looking into options that would allow the town to recycle styrofoam, which would further increase income while decreasing costs. "I have heard of a company that pays for styrofoam, so I'm trying to get in contact with them," Freeman said. He said his next goal is to get into the schools and educate children, and incorporate a strong recycling program within the schools.

Bath and Brunswick Reaping Benefits from Recycling Efforts

Both Bath and Brunswick, Maine, are reporting drastic changes in the recycling habits of residents over the past year. Pay-per-bag trash removal and single-stream recycling have significantly reduced the amount of trash disposed in landfills by increasing recycling.

Bath

"Curbside single-stream recycling has nearly doubled since Pay-As-You-Throw started," said Bath city manager William Giroux. "The average total tons recycled have gone up approximately 50 percent and curbside trash collection has been cut in half."

While five-bag rolls of the signature blue trash bags cost between $6.25 and $10-for 15-gallon and 33-gallon bags, respectively—curbside recycling pickup is free in Bath. "If you drive around on recycling day, you'll see a lot more stuff than you used to," said Lee Leiner, deputy director of the Bath Public Works department. "There are more bins and more houses with bins. It's a point of pride for people. They'll say 'I only use one bag every two weeks.' It's like a challenge for some people. It has them look closely at what they buy and what they throw away, which is precisely the behavior we were hoping for."

Specifically, the average amount of residential material recycled in Bath over the nine months prior to the October 1, 2007, implementation of Pay-As-You-Throw (PAYT) was 40.33 tons per month. Since then, the average monthly tonnage has been 74.09 tons. Curbside trash pickup has dropped from 209.12 tons per month to 111.96 tons per month in the same time.

Brunswick

PAYT has had about a year and a half to take hold in neighboring Brunswick, and has seen the amount of trash collected decrease by 36.58 percent, according to Craig Worth, Brunswick's deputy director of public works. That's more than 4 million pounds. The town has also seen an increased recycling rate of 61 percent.

"We're very happy with the results," Worth said. PAYT has deferred the closing of the Graham Road landfill-anticipated to cost $6 million to $8 million-by decades, Worth said. "Because we're burying less, the landfill will now be open 22 to 25 years further."

Legislative Action in Iowa Leads to Widespread Implementation of PAYT

In the late 1980's Iowa passed legislation requiring counties and cities to reduce their land filled solid waste 25 percent by 1994 and 50 percent by 2000. This rigorous goal required large efforts by solid waste planners and community members, and the mandated reduction in 1994 was largely a success. However, it was clear that to achieve the 2000 benchmark, significant changes to the waste management programs would be necessary.

With the growing waste reduction success of Pay-As-You-Throw (PAYT) programs throughout the U.S., the Iowa General Assembly in 1994 mandated that all communities implement a PAYT program if they failed the 25 percent reduction benchmark. This requirement enabled many communities to reevaluate their unsuccessful waste management programs and design new unit-based waste practices.

As a result PAYT programs have become widespread; nearly 60 percent of Iowa communities in 2006 were using a PAYT program. In Cedar Rapids, Iowa-a city of 120,000-the average household disposes of less than 40 pounds per week and the entire city diverts nearly 9,000 tons of waste a year. The same success has also occurred in Monticello, Iowa where the average residence recycles 761 pounds during the year.

The PAYT program has fostered vast environmental and economic benefits and has spread throughout the entire state of Iowa. For more information about Iowa's PAYT program please visit the Iowa Department of Natural Resources at ***http://www.iowadnr.com***.

Aloha!

Two teachers in Hawaii ponder the possibility of a PAYT program for the island state. "Right now, individuals and families have no reason to conserve or recycle," they write. They believe PAYT may be the answer! Read their thoughts at ***http://the.honoluluadvertiser.com/article/2008/Feb/28/op/hawaii802280315.html***.

International Highlights

From Toronto to Taipei!

Garbage Amnesty Deemed Too Costly in Toronto

Canada

A plea for a special garbage amnesty for Toronto residents on Christmas Day or moving day has been rejected. After a brief debate, committee members took the advice of city staff that sparing residents from even a day or two of normal recycling efforts on potentially high-volume days could cost the city up to $10 million in lost revenue.

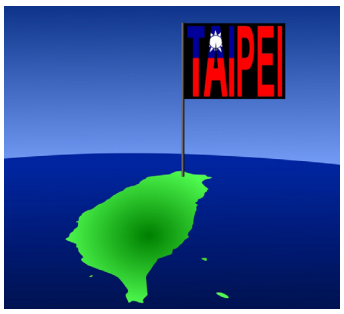
"Those [municipalities] that have amnesty days rue the day they offered them," said budget chief Shelley Carroll. "It is a very expensive proposition." Ms. Carroll also feels that any extra relief would make it harder for the city to reach its aggressive target to divert 70 percent of garbage from landfills by 2010.

Toronto approved a plan last year that will implement a new user-pay garbage collection system later this year based on the volume of trash left at the curb (see Fall 2007 PAYT Bulletin for the complete story).

Taipei's PAYT Helps Taiwan with Zero-Waste Goal

China-Taiwan

In 2006, Taiwan-an island of 23 million equivalent in size to the states of Maryland and Delaware combined- reported a daily per capita garbage volume of 0.6 kg, down from 1.1 kg per capita in 1997. The island's waste rates are strikingly lower than those of mainland China, where urban residents generate an average of 1.2 kg per day.



Part of this reduction is due to the heavy emphasis placed on recycling by the Taiwanese government. According to Taiwan's Environmental Protection Administration (EPA), the island reported a recycling rate of 39 percent in 2007, up from 6 percent in 1998.

After a 15-year period of sporadic efforts to educate the public and encourage recycling that began in 1990, the government launched a ten-county pilot project in 2005 requiring citizens to sort garbage into recyclables, food waste, and refuse. The policy became mandatory nationwide in 2006, and citizens now face fines of up to $181 if caught mixing recyclables with household trash.

Taiwan's success can also be traced to Taipei's per-bag trash collection fee, introduced in 2001. The fee has reduced daily domestic waste in the city by one-third and increased recyclable material collection three-fold. Citizens are required to purchase government-issued trash bags at convenience stores and supermarkets. Local trash collectors will only accept waste in city-approved bags and can identify potential recyclables through the translucent plastic.

To achieve its long-term goal of zero waste, Taiwan's EPA has set overall waste reduction targets at 25 percent, 40 percent and 75 percent of the waste volume reported in 2001 (8.3 million tons) for the years 2007, 2011, and 2020, respectively. The target for 2007 was met at the end of 2006.

Recycling Trends Continue in the European Union

Scotland

The Environment Secretary of Scotland, Mr. Richard Lochhead, announced an ambitious plan to recycle 50 percent of country's municipal waste by 2013 and at least 70 percent by 2025. "Prior to the Scottish Parliament, Scotland's record was dreadful," Mr. Lochhead comments, "we were a throwaway society, burying our waste out of sight and out of mind and recycling barely 5 percent of household waste. As everyone acknowledges, we need to move away from landfills." The Zero Waste plan will greatly increase recycling efforts, limit waste incineration and minimize waste disposal throughout the entire country.

Recycling and waste management plans similar to that of Scotland may provide large benefits if adopted by the European Union as a whole. Recent research completed by Okopol has shown that the European Union-with stringent targets for solid waste recycling-could save up to 144 million additional tons of carbon dioxide each year. The European Union's average recycling rate is 37 percent and currently saves around 160 million tons of carbon a year. The current European recycling leader is The Netherlands, which has set a 65 percent recycling rate for 2020. With new ambitious recycling programs throughout the European Union, vast environmental benefits will be achieved through the elimination of large quantities of greenhouse gases like carbon dioxide.

PAYT is the Answer for EU, UK, says the Adam Smith Institute

In March of 2008, the Adam Smith Institute released a report, The Waste of Nations, arguing that Pay-As-You-Throw is the best way to encourage recycling and should be adopted by the UK government. "The evidence from around the world is clear: the best way to increase recycling is to introduce (PAYT) waste charges," Gordon Hector writes in the report. "A study of 7100 such schemes in the USA found an average 16-17% reduction in landfill, a 50% increase in recycling, with a source reduction in waste of around 16%."

According to the report, this effort would minimize the need for landfills and incinerators and stimulate millions of tones per year in emissions savings.

Read the full PDF of the report at ***http://www.adamsmith.org/images/pdf/the_waste_of_nations.pdf***.

The Costs of e-Cycling

Although recycling is generally received as an environmentally beneficial service, researchers from Germany and Spain have found that recycling programs require careful analysis as to the environmental impact of recycling electronic goods. Long distance travel of electronics to recycling centers may result in negative environmental impacts as compared to disposing the items at local landfills.

Researchers have found that proximity to a recycling center is vitally important. Distances beyond 113 km for washing machines, 262 km for refrigerators, 364 km for television sets, and 346 km for computers produce negative environmental results when recycled. Because of the limitations to recycling, it is recommended that items are reused, given to charity, or resold before placing in the recycling process.

The continual improvement in technology and relatively short life-cycle of electronic products has made waste management of electronics a major concern. The cost and benefits of recycling and landfill disposal create a delicate balance and requires careful study to achieve the greatest environmental benefit for unwanted electronic products.

What's Your Story?

We want to hear about your PAYT program! E-mail us at PAYT@icfi.com to let us know what you have found to be successful. You may read about your story in the next issue of this E-bulletin!

PAYT Q&A

We understand that there are questions about PAYT including the various aspects and benefits of the program. Please submit your questions to us and we can address any concerns or questions you may have.

Q. *Will unit pricing require us to completely reinvent our solid waste agency?*

A. **"It does require a significant review of your agency's goals and structure. But this examination of new needs and existing employees could lead to the discovery of some previously untapped skills in your agency."**

WORKSHOP GROUP

Q. *How did you conduct your outreach for Pay-As-You-Throw?*

A. **"The way we introduced the program (this takes a lot of leg work but is extremely important) is that we contacted neighborhood and civic associations, as well as our recycling block leaders.... We produced an 8-minute video on unit pricing and played the video at the neighborhood meetings. We had real people talking about what was about to happen. We got a lot of feedback by showing that tape. We carried out two focus group surveys, including one on larger families, an issue that many people want to hear more about. We [also] experimented with soliciting feedback [using] a telephone voicemail system."**

AUSTIN, TX

"...It is absolutely key to put yourself on the firing line with the customers. They pay the fees. When we went to the community we assured them, 'We're not taking anything away from you. We are giving you the opportunity to have more control over your costs. You cut your trash down, you cut your trash bill down.' You need to listen.... Once the people actually experience the program, they become converts, they don't want to go back. Either you take the time up front to educate, or you take it later with operational difficulties once the program is under way."

PASADENA, CA

Q. *What are some effective enforcement strategies?*

A. **"Enforcement efforts can be made more cost effective through publicity. It only takes one enforcement instance along with a lot of big publicity to send a loud message to people who might be thinking about illegally dumping. In Maine, we had a very large investigation of private haulers who were hauling to other municipal landfills with lower fees. The investigation was blown up in the press, with nightly TV coverage. It stopped a lot of the illegal dumping in other communities."**

STATE OF MAINE

Mark Your Calendar!

Don't miss the 2008 WasteWise & NPEP Annual Conference - October 29-30, 2008 at the Doubletree Hotel Crystal City, Virginia. More details about the agenda and registration will be coming soon on-line at ***http://www.epa.gov/wastewise/conf.htm***.