



Worcester, Massachusetts

54% Residential Waste Reduction



Overview

In the early 1990s, Worcester faced looming state landfill bans for recoverable materials, and the city needed to transfer trash costs from its tax base to user fees. In 1993, the city implemented curbside recycling and a pay-as-you-throw (PAYT) trash system. The per-bag trash fees offer financial incentives for residents to reduce trash disposal, recycle at curbside, and deliver their yard trimmings to one of the city's three yard debris drop-off sites. Per-bag trash fees combined with a city ordinance that prohibits the disposal of recyclables and yard debris with trash resulted in the city nearly tripling its residential waste reduction rate from 15% in 1992 to 44% in 1994. In 1996, Worcester switched from biweekly to weekly recycling collection and the residential waste reduction rate further increased to 54% (27% through recycling and 27% through composting).

Keys to High Waste Reduction

The variety of materials collected at curbside, pay-as-you-throw trash fees, a state bottle bill, and diversion of yard debris all contribute to the city's high diversion rate. Worcester's weekly curbside recycling program collects up to 18 types of recyclables (including mixed paper, all plastic containers, and milk and juice cartons). Residents can also recycle large items,

such as appliances, through a special bulky items collection

program. Residents must place trash in special yellow bags or city trash crews will not collect it. A 30-gallon bag costs 50¢ and a 15-gallon bag costs 25¢.

Massachusetts' container deposit law requires consumers to pay a 5¢ deposit on many beverage containers. In 1996, approximately 4% of Worcester's residential waste stream was recovered through the deposit system.

Worcester provides fall leaf collection and operates drop-off sites

DEMOGRAPHICS

POPULATION: 171,226
(1995), 169,759
(1996)

HOUSEHOLDS: 63,588
(1996); 22,500 single-family households (one unit per building), 41,088 multi-family units

RESIDENTIAL PROGRAM SUMMARY

	1992	1996
Tons Per Year	53,087	57,573
Percent Diverted	15%	54%
Recycled	7%	27%
Composted	8%	27%
Average lbs./HH/day	5.84	6.20
Net Program Costs/HH	NA	\$75.34
Disposal Services	NA	\$48.15
Diversion Services	NA	\$27.19

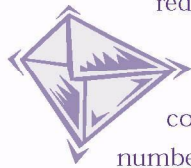
Notes: 49,824 households served in 1992; 50,868 in 1996. 1992 dollars adjusted to 1996 dollars using the GDP deflator. Numbers may not add to total due to rounding.

Source: Institute for Local Self-Reliance, 1999.

for other yard debris from April through November. Residents can deliver their yard debris to these facilities at no charge. In 1996, more than one-quarter of the city's residential waste was composted in the city's yard debris collection and processing program.

Cost-Effectiveness

In 1996, the city spent \$3.8 million for trash, recycling, and yard debris services — about \$75 per household served. Of this, 64% was spent on trash collection and disposal, 20% was spent on recycling, and 16% was spent on yard debris collection and recovery. On a per-ton basis, trash cost \$96, while waste



reduction cost \$47 (\$54 for recycling and \$40 for yard debris recovery). The city has contained costs by reducing the number of trash crews and the number of workers on the crews in response to decreasing trash disposal. Since recycling began, trash crews service the same number of houses but do so for one-third less labor costs. The number of city Solid Waste Management program employees dropped from 58 in 1993 to 46 in 1996.



Source: Institute for Local Self-Reliance, 1999.

Tips for Replication

Implement a pay-as-you-throw trash system.

Collect as wide a variety of materials as possible.

Make program participation convenient.

Avoid adding a material to the recycling program and then taking it away, especially in a pay-as-you-throw system. Residents do not like to be told they have to pay to dispose of something that had been free.

MATERIALS RECOVERED

CURBSIDE:

newspaper, magazines and catalogs, corrugated cardboard
mixed paper (mail, office paper, paperboard, paper bags, and phonebooks)
milk and juice cartons and boxes
glass containers
scrap metal
aluminum cans, trays, and tins
steel food and beverage containers
all plastic containers (except motor oil and antifreeze containers and pails or buckets)
white goods
leaves

DROP-OFF:

leaves, grass clippings, brush, Christmas trees, and other yard and garden debris



Contact

Robert Fiore
Assistant to the Commissioner
Department of Public Works
20 E. Worcester Street
Worcester, MA 01604
PHONE: 508-799-1430
FAX: 508-799-1448
WEB SITE: <http://www.ci.worcester.ma.us/services/dpw/index.html>

