

Garbage And Recycling In Massachusetts: *The Facts, The Present, And The Future*

The Facts

In 2010, the state Department of Environmental Protection (DEP) will issue the next 10 year plan for dealing with the Commonwealth's waste. Already, some are talking about the "need for more capacity," which means more landfilling and incineration. But in fact, we are vastly underutilizing immediate opportunities to reduce, reuse, and recycle; and thinking ahead, as is required by the DEP plan, we need to be creating even more of those opportunities. We should reject the false choice of more bury and burn, and embrace the three Rs: Reduce, Reuse, Recycle—which can move us closer to Zero Waste.

- Massachusetts generates 13.9 million tons of waste annually, of which 9.2 million tons are household and commercial waste, or municipal solid waste (MSW).
- Of the 13.9 million tons of waste generated annually, 52% (7.2 million tons) is recycled or diverted.
- Of the 9.2 million tons of MSW generated each year, 37% (3.4 million tons) is recycled.
- That means 6.6 million tons of material are burned or buried every year, most of which is MSW.¹
- Of those 6.6 million tons, 3.9 million tons, or 58%, could be recycled immediately.

Material	Annual generation	Recycled or diverted	Burned or buried	Immediate potential for increased diversion/recycling (in tons)	Immediate potential reduction in Massachusetts' disposal rate.
Total	13,890,000	52% ²	48%	3,894,066	58.41%
Paper & Cardboard	3,523,969	46%	54%	1,902,943	28.54%
Organics	1,173,020	2.5%	97.5%	- ³	- ³
Yard Waste	1,139,053	65%	35%	398,669	5.98%
Plastics	697,444	5.4%	94.6%	659,782	9.9%
Wood	573,000	21%	79%	452,670	6.79%
Scrap Metal	569,765	52%	48%	273,487	4.1%
Glass	516,288	60%	40%	206,515	3.1%

Compiled from *Assessment of Materials Management Options for the Massachusetts Solid Waste Master Plan Review*, December 2008⁴

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What We Can Do Now

Massachusetts could immediately cut its disposal rate in half by taking a few simple steps:

- 1) Enforcing the Waste Bans:** In 1999, the DEP adopted regulations banning a number of materials, including paper and yard waste, from landfills and incinerators. Enforcing these bans would divert 2.3 million tons of waste annually from landfills and incinerators, reducing the disposal rate by 34.5%.⁴
- 2) Updating the Bottle Bill:** Since 1983, the Bottle Bill has diverted millions of tons of recyclable bottles and cans from landfills. Passing an updated version to expand the program to dozens of new beverage container types would divert 130,000 tons of waste annually from landfills and incinerators, reducing disposal by 2%. This bill would play a key role in extending the life of existing landfills, because bottles take up a disproportionately large volume of space in landfills.⁵
- 3) Extending Curbside Recycling Programs:** Almost one-third of the 351 cities and towns in Massachusetts still do not have curbside recycling programs. These programs usually increase city recycling rates by 20-30%. If every city and town had a curbside program, Massachusetts' disposal rates would drop between 5-10%, or 330,000 to 660,000 tons.^{6,7}
- 4) Extending Pay As You Throw (PAYT) Programs:** Only about one-third of Massachusetts' cities and towns have PAYT programs. These programs, which encourage recycling and discourage disposal by charging individuals for the bags of trash they put out for pickup, reduce cities' and towns' waste disposal rates between 10-20%. That means if every city and town instituted a PAYT program, the amount of waste burned and buried annually would decrease at least 6%, or about 400,000 tons.⁸

Opportunities For The Future

There are also a variety of new approaches to waste reduction that are based around a Zero Waste model. Two examples include:

- 1) Anaerobic Digestion:** This is the composting of the future. Organic materials are collected and processed just like recyclables are now. Anaerobic digestion differs from composting in that the material is processed in an enclosed chamber, where it is fermented for approximately 30 days. In that time the material is transformed into several products; including methane, which can be used as an energy source, and a solid and liquid "digestate," both of which can be used as fertilizer, among other things. Anaerobic digestion has the potential to divert almost all the organic waste currently generated, which represents about 17% of everything we currently dispose of.^{9,10}
- 2) Extended Producer Responsibility (EPR):** The idea behind EPR is that producers and/or importers of goods take responsibility for the waste from their products. This would not only ease the burden of waste collection and disposal, but would provide incentive for companies to produce less wasteful products and packaging. EPR can be applied to a variety of products, but has so far been successful mainly in targeting electronics and, in Europe, packaging materials. This is particularly exciting as a method of reducing waste disposal because about one-third of everything in U.S. landfills is packaging.^{11,12}

According to the DEP's data for 2007 disposal and recycling rates, the town of Nantucket has reached a 90% recycling rate. The towns of Needham and Foxborough have reached a 65% recycling rate. We can, and must, change our path from bury and burn to reduce, reuse, and recycle in a much more ambitious plan.

1 2006 Solid Waste Data Update. February 2008. <<http://www.mass.gov/dep/recycle/priorities/06swdata.doc>> 2/13/09

2 52% includes construction and demolition debris (C&D) diversion rates. Diversion is measured as anything that is not explicitly garbage, meaning that diversion can include C&D that is being burned or ground up and used to cover landfills. The recycling rate for MSW (commercial and household waste) is only 37%.

3 The current infrastructure is not capable of diverting a significant portion of the organic waste generated each year.

4 Tellus Report, p45. December 2008. <<http://www.mass.gov/dep/recycle/priorities/tellusmmr.doc>> 2/13/09

5 Understanding Beverage Container Recovery. 2002. <<http://www.container-recycling.org/assets/pdfs/reports/bear/2002-1-ExecSum.pdf>> 3/5/09

6 2007 Municipal Solid Waste & Recycling Program Summary. 2007. <<http://www.mass.gov/dep/recycle/priorities/municipgm.xls>> 2/13/09

7 Beatty, Timothy K.M.; Berck, Peter; Shimshack, Jay P. Curbside recycling in the presence of alternatives. October 1, 2007 <http://www.accessmylibrary.com/coms2/summary_0286-33375280_ITM> 3/2/09

8 Pay-As-You-Throw in Massachusetts. March 2007 <www.town.dartmouth.ma.us/PAYT%2520MA2007.pdf> 2/27/09

9 Anaerobic Digestion. 2001. <[http://www.waste.nl/content/download/472/3779/file/WB89-InfoSheet\(Anaerobic%20Digestion\).pdf](http://www.waste.nl/content/download/472/3779/file/WB89-InfoSheet(Anaerobic%20Digestion).pdf)> 2/19/09

10 MBT: A Guide for Decision Makers – Processes, Policies & Markets. 2005 <http://www.wastereports.com/free_downloads/MBT%20report.zip> 2/24/09

11 Extended Producer Responsibility: EPR. 2006 <<http://www.ilsr.org/recycling/epr/index.html>> 3/12/09

12 Packaging and the EU Directive On Waste: Q&A. 2008. <<http://www.pro-e.org/files/2009%20Q&A%20Packaging%20and%20EU%20Directive%20on%20waste-questions%20and%20answers.pdf>> 3/14/09

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