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2008 Solid Waste Data Update on the *Beyond 2000 Solid Waste Master Plan*

April 2010

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Introduction

In the *Beyond 2000 Solid Waste Master Plan (Master Plan)* and the *Master Plan 2006 Revision*, the Executive Office of Energy and Environmental Affairs (EEA) and the Massachusetts Department of Environmental Protection (MassDEP) established a plan and vision for how Massachusetts will manage its solid waste for the 2001-2010 timeframe. To assist in implementing the *Master Plan*, MassDEP annually collects and analyzes solid waste management system data. The data are used to track progress in meeting waste reduction milestones and to evaluate solid waste management capacity needs. MassDEP has updated the solid waste data for calendar year 2008 and revised waste management capacity projections through 2015 based on the 2008 data. This report includes an update on waste reduction and recycling rates and an overview of solid waste management for calendar year 2008.

MassDEP continues to implement a wide range of program initiatives to reduce waste and increase recycling and composting, while also ensuring that remaining waste is managed and disposed of safely. In the meantime, MassDEP has begun to develop a new Solid Waste Master Plan that will provide a new framework for the next decade, replacing the *Beyond 2000 Solid Waste Master Plan*. MassDEP has held extensive public meetings and workgroup meetings to obtain input into a new Solid Waste Master Plan and expects to issue a draft new Solid Waste Master Plan shortly. Therefore, this will be the last data update on the *Beyond 2000 Solid Waste Master Plan*.

Summary of Waste Reduction and Recycling Rate Methodology

MassDEP calculates the following waste reduction rates for municipal solid waste (MSW) and Non-MSW solid waste:

Waste Reduction Rates		Equation
Total Waste Reduction Rate	=	$\frac{(\text{MSW Recycling}^1 + \text{MSW Source Reduction}^2) + (\text{C\&D Recycling} + \text{Other C\&D Diversion} + \text{Non-MSW Source Reduction})}{\text{Total Potential Generation}^3}$
MSW Waste Reduction Rate	=	$\frac{\text{MSW Recycling} + \text{MSW Source Reduction}}{\text{MSW Potential Generation}}$
Non-MSW Waste Reduction Rate	=	$\frac{\text{C\&D Recycling} + \text{Other C\&D Diversion} + \text{Non-MSW Other Diversion} + \text{Non-MSW Source Reduction}}{\text{Non-MSW Potential Generation}}$

¹ MSW recycling includes both recycling and off-site composting, but does not include home composting, which is considered source reduction.

² Source reduction refers to the difference between potential generation and actual generation.

³ Potential generation refers to what generation would have been without source reduction and is an estimate of the amount of waste expected based on economic activity. MassDEP uses Massachusetts Gross Domestic Product (GDP) (formerly referred to as 'gross state product' or GSP) as the economic "driver" to estimate potential generation.

MassDEP calculates the following recycling rates for municipal solid waste (MSW) and construction and demolition (C&D) waste:

Recycling Rates		Equation
MSW Recycling Rate	=	$\frac{\text{MSW Recycling}}{\text{MSW Actual Generation} + \text{MSW Disposal}}$
C&D Recycling Rate	=	$\frac{\text{C\&D Recycling}}{\text{C\&D Actual Generation} + \text{C\&D Other Diversion} + \text{C\&D Disposal}}$

Progress in Meeting Waste Reduction Milestones

In the *Beyond 2000 Plan*, MassDEP established a vision to dispose of the “irreducible minimum” amount of waste through waste reduction efforts. The *Beyond 2000 Plan* included a goal of 70 percent waste reduction by 2010. MassDEP believes that a waste reduction goal that measures source reduction and recycling is a better measure than recycling alone; however, MassDEP has found that a recycling goal is simpler and easier to explain. Therefore, MassDEP also established a recycling goal of 56 percent in the 2006 Master Plan Revision.

Table 1 summarizes waste reduction rates from 2006 through 2008. Waste Reduction rates are based on Potential Generation, which includes Source Reduction. Total waste reduction rose from 59% in 2007 to 61% in 2008. Municipal solid waste (MSW) waste reduction increased from 47% in 2007 to 50% in 2008, and non-municipal solid waste (Non-MSW) waste reduction decreased from 82% in 2007 to 81% in 2008.

	2006	2007	2008	2010 Milestone
Total Waste Reduction Rate	59%	59%	61%	70%
MSW Waste Reduction Rate	45%	47%	50%	60%
Non-MSW Waste Reduction Rate	86%	82%	81%	88%

The Total Waste Reduction rate includes source reduction (preventing waste from being generated), recycling (including off-site composting), and other C&D diversion.⁵ The Source Reduction tonnage estimate is based on economic data from the United States Bureau of Economic Analysis (BEA). On an annual basis the BEA releases Gross Domestic Product (GDP) by State⁶ data that quantifies economic growth rates for each state in the United States. MassDEP uses the GDP figure in conjunction with reported generation data to estimate what generation would be if waste generation increased at the same rate as GDP (i.e., “potential generation.”) The difference between actual generation and estimated potential generation is considered to be source reduction. This estimate of tons source reduced is used to

⁴ Potential Generation refers to what generation would have been without source reduction and is an estimate of the amount of waste expected based on economic activity.

⁵ For a discussion of how MassDEP measures waste reduction, see pages 3-6 and 3-7 of the *Beyond 2000 Solid Waste Master Plan*.

⁶ MassDEP uses Massachusetts Gross Domestic Product (GDP) by State, formerly identified as gross state product (GSP), as the economic “driver” to estimate potential generation.

calculate the total waste reduction rate. As a point of reference, the BEA GDP data for the past three years are listed in Table 2 in millions of chained dollars.

Year	Millions of Dollars⁷
2006	\$300,753
2007	\$306,503
2008	\$312,476

Environmental and Economic Benefits of Recycling

In 2008 alone, Massachusetts prevented the disposal of more than 10 million tons of waste through a combination of recycling, composting and other waste reduction strategies, eliminating the need for the equivalent of 25 landfills the size of the state’s largest (400,000 tons per year). In addition to saving landfill space, waste reduction conserves natural resources, saving energy, prevents pollution, and reduces greenhouse gas emissions. In 2008, Massachusetts is estimated⁸ to have:

- Reduced greenhouse gas emissions by more than 2.1 million tons of carbon equivalent per year;
- Saved nearly 90 trillion BTUs of energy, equivalent to the annual energy consumption of 15 million barrels of oil, or 700 million gallons of gasoline; and
- Saved over 1.3 million tons of iron ore, coal, limestone and other natural resources.

Recycling also bolsters the state’s economy. Recycling, reuse, and remanufacturing directly support an estimated 14,000 jobs in Massachusetts, maintain a payroll of nearly \$500 million, and bring in annual revenues of \$3.2 billion⁹.

Solid Waste Management Overview

Table 4 presents a comprehensive picture of solid waste management in Massachusetts for calendar years 2002-2008. Table 5 highlights how solid waste management changed from 2007 to 2008, including the tonnage and percent change.

In 2008, 12.6 million tons of solid waste was generated in Massachusetts, down slightly from 12.7 million tons in 2007. Of this amount, 8.4 million tons were municipal solid waste (MSW) (66%) and 4.2 million tons were non-MSW (34%)¹⁰. Of the 12.6 million tons generated, 6.0 million tons (48%) were diverted (includes recycling, composting, and other diversion) and 6.6 million tons (52%) were disposed.

⁷ Bureau of Economic Analysis, US Department of Commerce 2008 GDP News Release – see <http://www.bea.gov/regional/gsp/action.cfm>. Data listed is in millions of 2000 chained dollars.

⁸ Source: *Environmental Benefits Calculator*, Northeast Recycling Council, April 2009.

⁹ *U.S. Recycling Information Study*, prepared for the Northeast Recycling Council, February 2009.

¹⁰ Percentages may not add exactly due to rounding.

Figure 1: Solid Waste Generation 2008
Total = 12.6 million tons

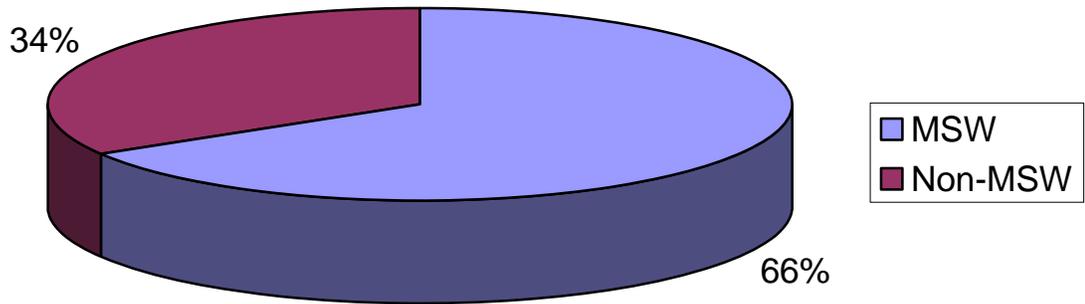


Table 3 shows recycling rates for overall waste (MSW and C&D combined), MSW, and C&D debris. Of the total waste that was generated in 2008, 44% was recycled, up slightly from 2007. The MSW recycling rate increased from 33% in 2007 to 36% in 2008. The C&D recycling rate decreased from 70% in 2007 to 66% in 2008.

Table 3			
Recycling Rates Based on Actual Generation			
	2006	2007	2008
Overall Recycling	46%	43%	44%
MSW Recycling *	34%	33%	36%
C&D Recycling	69%	70%	66%

* includes off-site composting

From 2007 to 2008 total disposal decreased by 2 %. Of the total waste that required disposal, 5.0 million tons (76%) were disposed in-state, of which 1.7 million tons were landfilled and 3.2 million tons were combusted. Massachusetts exported 1.9 million tons for disposal and imported 0.3 million tons, and thus was a net exporter of about 1.6 million tons (24%) of waste requiring disposal. See Tables 11 and 12 for a more detailed picture of disposal import and export data by state.

Table 4 Integrated Solid Waste Management System 2002-2008									
			2002	2003	2004	2005	2006	2007	2008
Potential Generation			14,440,000	15,250,000	15,990,000	16,090,000	16,130,000	16,510,000	16,830,000
	MSW		9,260,000	9,800,000	10,280,000	10,350,000	10,370,000	10,570,000	10,780,000
	Non-MSW		5,180,000	5,450,000	5,750,000	5,750,000	#VALUE!	5,940,000	6,050,000
Source Reduction			1,200,000	2,040,000	2,050,000	1,600,000	2,880,000	3,820,000	4,230,000
	MSW		900,000	1,340,000	1,550,000	1,040,000	1,660,000	2,200,000	2,410,000
	Non-MSW		300,000	700,000	500,000	560,000	1,220,000	1,620,000	1,820,000
Total Generation			13,240,000	13,210,000	13,930,000	14,490,000	13,260,000	12,690,000	12,600,000
MSW			8,350,000	8,460,000	8,720,000	9,310,000	8,710,000	8,370,000	8,360,000
		Residential	3,300,000	3,520,000	3,510,000	3,510,000	3,490,000	3,530,000	3,430,000
		Commercial	5,050,000	4,940,000	5,210,000	5,790,000	5,220,000	4,840,000	4,940,000
Non-MSW			4,890,000	4,750,000	5,210,000	5,190,000	4,550,000	4,320,000	4,240,000
		C&D	4,820,000	4,720,000	5,160,000	5,100,000	4,460,000	3,940,000	3,800,000
		Other	70,000	30,000	50,000	90,000	90,000	380,000	440,000
Diversion			6,790,000	6,860,000	7,580,000	7,750,000	6,710,000	6,010,000	6,050,000
MSW			2,610,000	2,870,000	3,070,000	3,300,000	2,970,000	2,740,000	2,980,000
		Residential Recycling	520,000	540,000	540,000	530,000	530,000	580,000	580,000
		Commercial Recycling	1,400,000	1,660,000	1,880,000	2,010,000	1,690,000	1,410,000	1,720,000
		Residential Composting	330,000	350,000	340,000	350,000	360,000	340,000	380,000
		Commercial Composting	360,000	330,000	580,000	410,000	380,000	400,000	300,000
Non-MSW			4,180,000	3,990,000	4,500,000	4,450,000	3,740,000	3,270,000	3,070,000
		C&D Recycling	3,590,000	3,360,000	3,650,000	3,530,000	3,070,000	2,750,000	2,520,000
		Other C&D Diversion	590,000	630,000	860,000	930,000	650,000	490,000	520,000
		**Other Non-MSW Diversion					20,000	20,000	30,000
Disposal			6,450,000	6,340,000	6,360,000	6,750,000	6,550,000	6,680,000	6,550,000
Landfill			1,790,000	1,710,000	1,720,000	2,070,000	2,080,000	1,900,000	1,740,000
		MSW	1,210,000	1,310,000	1,430,000	1,760,000	1,880,000	1,760,000	1,560,000
		C&D	520,000	370,000	270,000	240,000	130,000	60,000	130,000
		Other	60,000	20,000	30,000	70,000	70,000	70,000	50,000
Combustion			3,090,000	3,130,000	3,080,000	3,090,000	3,100,000	2,970,000	3,230,000
		MSW	3,080,000	3,120,000	3,070,000	3,080,000	3,090,000	2,960,000	3,210,000
		Non-MSW	*0	*0	*0	10,000	10,000	10,000	10,000
Net Exports			1,570,000	1,510,000	1,560,000	1,580,000	1,370,000	1,820,000	1,580,000
		Exports	1,830,000	1,790,000	1,840,000	1,820,000	1,620,000	2,060,000	1,850,000
		MSW	1,550,000	1,370,000	1,370,000	1,360,000	1,000,000	1,090,000	840,000
		Non-MSW	280,000	420,000	460,000	460,000	620,000	970,000	1,010,000
Imports			250,000	280,000	280,000	250,000	250,000	240,000	270,000
		MSW	90,000	200,000	220,000	200,000	230,000	180,000	240,000
		Non-MSW	160,000	70,000	60,000	50,000	30,000	60,000	30,000
*Non-MSW combustion was less than 5,000 tons									
**Other Non-MSW diversion includes post-industrial materials prepared as fuel cubes.									

Table 5 Solid Waste Tonnage and Percent Change Summary: 2007 - 2008

			2007	2008	Tons Change	% Change
Potential Generation			16,510,000	16,830,000	320,000	1.9%
	MSW		10,570,000	10,780,000	210,000	2.0%
	Non-MSW		5,940,000	6,050,000	110,000	1.9%
Source Reduction			3,820,000	4,230,000	410,000	10.7%
	MSW		2,200,000	2,410,000	210,000	9.5%
	Non-MSW		1,620,000	1,820,000	200,000	12.3%
Generation			12,690,000	12,600,000	(90,000)	-0.7%
MSW			8,370,000	8,360,000	(10,000)	-0.1%
		Residential	3,530,000	3,430,000	(100,000)	-2.8%
		Commercial	4,840,000	4,940,000	100,000	2.1%
Non-MSW			4,320,000	4,240,000	(80,000)	-1.9%
		C&D	3,940,000	3,800,000	(140,000)	-3.6%
		Other	380,000	440,000	60,000	15.8%
Diversion			6,010,000	6,050,000	40,000	0.7%
MSW			2,740,000	2,980,000	240,000	8.8%
		Residential Recycling	580,000	580,000	0	0.0%
		Commercial Recycling	1,410,000	1,720,000	310,000	22.0%
		Residential Off Site Composting	340,000	380,000	40,000	11.8%
		Commercial Composting	400,000	300,000	(100,000)	-25.0%
Non-MSW			3,270,000	3,070,000	(200,000)	-6.1%
		C&D Recycling	2,750,000	2,520,000	(230,000)	-8.4%
		Other C&D Diversion	490,000	520,000	30,000	6.1%
		Other Non-MSW Diversion	20,000	30,000	10,000	50.0%
Disposal (Incl. Net Exports)			6,680,000	6,550,000	(130,000)	-1.9%
In-State Disposal			4,860,000	4,970,000	110,000	2.3%
	Landfill		1,900,000	1,740,000	(160,000)	-8.4%
		MSW	1,760,000	1,560,000	(200,000)	-11.4%
		C&D	60,000	130,000	70,000	116.7%
		Other	70,000	50,000	(20,000)	-28.6%
		Combustion	2,970,000	3,230,000	260,000	8.8%
		MSW	2,960,000	3,210,000	250,000	8.4%
		Non-MSW	10,000	10,000	0	0.0%
Net Exports			1,820,000	1,580,000	(240,000)	-13.2%
	Exports		2,060,000	1,850,000	(210,000)	-10.2%
		MSW	1,090,000	840,000	(250,000)	-22.9%
		Non-MSW	970,000	1,010,000	40,000	4.1%
	Imports		240,000	270,000	30,000	12.5%
		MSW	180,000	240,000	60,000	33.3%
		Non-MSW	60,000	30,000	(30,000)	-50.0%

Note: % Change is calculated based on the rounded amounts in this table.

Note: Some of the 2007 data in this report has been updated or corrected from that published in the 2007 Solid Waste Data Update.

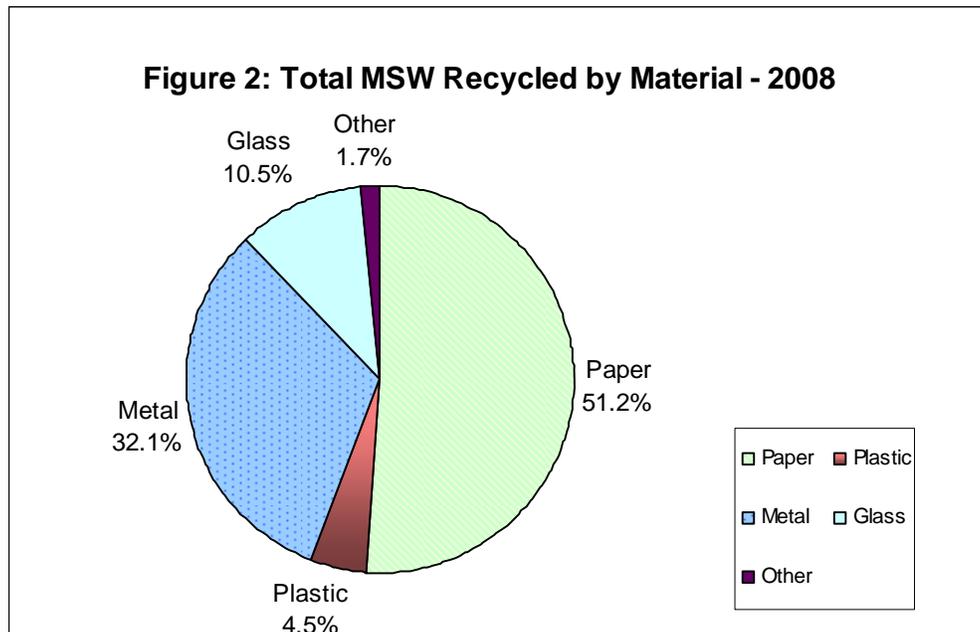
Municipal Solid Waste Management

In 2008, 8.4 million tons of MSW were generated in Massachusetts. Of this amount, 36% was recycled or composted, up from 33% in 2007. From 2007 to 2008:

- MSW generation remained the same at 8.4 million tons.
- Residential MSW generation decreased from 3.5 million tons to 3.4 million tons. Commercial MSW generation increased from 4.8 million tons to 4.9 million tons.
- MSW recycling (including off-site composting) increased 9%, from 2.7 million tons to 3.0 million tons, driven largely by an increase in commercial recycling tonnage.
- MSW disposal (disposal in-state and net export out of state for disposal) decreased from 5.6 million tons to 5.4 million tons.
- MSW net exports for disposal decreased from 0.9 million tons to 0.6 million tons.

Table 6			
How MSW was Managed from 2006 - 2008			
	2006	2007	2008
Recycled	34%	33%	36%
Combusted (in state)	35%	35%	38%
Landfilled (in state)	22%	21%	18%
Net Exported for Disposal	9%	11%	7%

Figure 2 shows the breakdown of MSW recycling by material category, excluding compost.



The distribution of residential recycling rates by municipality by year is shown in Table 7. The number of municipalities with recycling rates of 30% or greater increased from 147 in 2007 to 163 in 2008.

Municipalities Achieving:	CY2004	CY2005	CY2006	CY2007	CY2008
30% or greater	156	159	163	147	163
20-29%	78	84	86	96	85
10-19%	41	55	46	58	49
4-9%	8	10	13	15	11
Not included due to incomplete or missing data	68	43	43	35	43

Non-MSW Waste Management

In 2008, 3.8 million tons of C&D were generated in Massachusetts, down from 3.9 million tons in 2007 and 4.5 million tons in 2006. Of the amount generated, 66% was recycled in 2008, down from 70% in 2007. The bulk of the C&D recycling tonnage was asphalt, brick and concrete (ABC), which decreased in both 2007 and 2008. Table 8 shows how C&D was managed in 2006-2008.

	2006	2007	2008
Generated	4,460,000	3,940,000	3,800,000
Disposed	720,000	670,000	760,000
<i>In-state</i>	130,000	60,000	130,000
<i>Out-of-state</i>	590,000	610,000	630,000
Diverted	3,740,000	3,270,000	3,040,000
<i>Recycled</i>	<i>3,070,000</i>	<i>2,750,000</i>	<i>2,520,000</i>
ABC	2,840,000	2,550,000	2,330,000
Metal	90,000	40,000	40,000
Wood Non-Fuel	50,000	90,000	70,000
Wood Waste	50,000	30,000	40,000
Other*	40,000	40,000	50,000
<i>C&D Other Diversion</i>	<i>670,000</i>	<i>490,000</i>	<i>520,000</i>
C&D Fines/Residuals	580,000	400,000	390,000
C&D Wood for Fuel	90,000	90,000	130,000

*Other materials include ceiling tiles, carpet, gypsum wallboard, and asphalt roofing shingles.

Other Non-MSW Management

Non-MSW materials other than C&D are disposed in Massachusetts landfills and combustion facilities or sent out of state for disposal each year. In 2008, 50,000 tons of these materials were disposed in-state, including industrial waste, medical waste, wood waste, ash and sludge.

Approximately 370,000 tons were disposed of out-of-state, primarily in New Hampshire (310,000 tons) and New York (50,000 tons). These materials disposed of out of state include asbestos-containing materials, sludge, and contaminated soils.

In addition, a significant amount of other non-MSW materials are managed each year in management systems that are tracked separately from the primary MSW/C&D waste management system. These include MSW combustion ash disposal, use of materials as alternative daily cover at landfills (both active and inactive), and other beneficial uses of materials in non-landfill applications. Table 9 shows materials used as daily cover at active landfills in Massachusetts.

	2006	2007	2008
Auto Shredder Residue	130,000	110,000	100,000
Soil/Sand	180,000	130,000	80,000
Contaminated Soils	310,000	320,000	410,000
C&D Fines and Residuals	230,000	190,000	150,000
Other Materials¹¹	420,000	330,000	370,000
TOTAL	1,270,000	1,080,000	1,110,000

Municipal Waste Combustor Ash

Seven waste-to-energy combustors operated in Massachusetts in 2008. In 2008, these combustors generated approximately 880,000 tons of combustion ash (excluding recovered post-burn metals), 150,000 of which was beneficially reused and 740,000 tons of which was disposed. A number of landfills in Massachusetts that accept combustion ash are nearing their capacity, and efforts are underway by a number of combustors to expand landfill capacity for managing ash. Recent regulatory changes have eliminated the requirement to manage ash in a mono-fill facility, so that ash disposal locations may shift over time. The status of existing ash landfills is summarized in Table 10.

Municipality	Site Name	Current Permit Expires
Agawam	Bondi's Island Ash Landfill	2011
Saugus	Wheelabrator Ash Landfill	2015
Haverhill	Ward Hill Neck Ash Landfill	2015
Shrewsbury	Shrewsbury Ash Landfill	2011
Carver	CMW Ash Landfill	2015

Disposal Import/Export Data for 2006-2008 for MSW and C&D

Tables 11 and 12 show MSW and C&D data exported and imported by state. The export and import data for Massachusetts was collected from annual facility reports (AFR) submitted to MassDEP and from direct correspondence with other states. In some instances, the export data provided in the AFR differed from that reported from other states. In order to make the most conservative estimate of export, the higher number from the two sources was used. For example, if an AFR reported that Massachusetts sent Connecticut 10,000 tons of MSW, and Connecticut reported receiving 29,000 tons of MSW from Massachusetts, 29,000 tons of export was used.

¹¹ "Other Materials" includes approximately 20 various materials such as ground asphalt and DPW wastes.

¹² Although these landfills generally accept MSW combustion ash only, they may at times accept other materials for disposal.

Table 11a			
Tons of MSW Exported by Massachusetts to Other States: 2006 - 2008			
	2006	2007	2008
CT	29,493	60,108	42,513
ME	207,627	218,445	231,789
MI	3,879	10,270	14,605
NH	171,570	162,707	88,856
NY	191,616	198,061	175,252
OH	12,255	67,307	6,745
PA	722	0	528
RI	5,684	0	732
SC	380,266	366,054	274,745
VA	1,554	8,100	3,063
VT	0	2,145	0
CANADA	90	383	0
TOTAL	1,004,756	1,093,580	838,828

Table 11b			
Tons of MSW Imported by Massachusetts from Other States: 2006 - 2008			
	2006	2007	2008
CT	114,363	69,291	83,061
ME	1,779	1,779	1,709
NH	42,475	34,579	44,113
NY	7,483	17,735	7,657
RI	31,547	38,941	88,804
VT	26,171	19,862	11,226
CANADA	1,677	1,278	1,834
TOTAL	225,495	183,465	238,404

	2006	2007	2008
CT	1,642	4,071	1,162
ME	192,129	224,873	251,682
MI		2,460	18,705
NH	73,248	121,987	72,338
NJ	0	8,360	0
NY	16,588	10,452	78,217
OH	279,046	224,534	174,038
RI	40,745	51,537	21,126
SC	67	0	0
VA	0	65	0
VT	0	273	0
CANADA	0	7,828	21,954
TOTAL	603,465	656,440	639,222

	2006	2007	2008
CT	13,883	39,151	312
ME	0	0	47
NH	2,741	2,756	6,617
NY	0	23	13
RI	450	5,890	330
VT	140	70	0
TOTAL	17,214	47,890	7,319

Waste Management Capacity Projections

Table 14 projects waste management capacity through 2015. These projections are based in part on the landfill capacity projections shown in Table 13. These projections assume that waste generation declines slightly through 2010 (1 percent/year) and then increases slightly from 2011-2015 (1 percent/year). These projections also assume that 76% of potential landfill disposal capacity is utilized (based on recent historical capacity utilization rates). The waste management capacity projections estimate two different scenarios:

- 1) baseline recycling remains level with generation (i.e., the recycling rate remains the same), and
- 2) recycling tonnage increases 2% per year from 2008-2010 and 5% per year from 2011-2015 to reach the 56% recycling goal by 2015.

The projections show projected management capacity and net export through 2015. Under scenario 1, net export for disposal in 2015 is projected to be 2.6 million tons. Under scenario 2, net export for disposal in 2015 is projected to be just under 1 million tons.

The landfill capacity projections in Table 13 reflect either actual permitted capacity or approved capacity contingent on receiving permits. However, in some cases, landfills may take in less than their permitted tonnage in a particular year. In these cases, capacity for a particular landfill may last beyond the date shown in these projections. MassDEP attempts to take this factor into account by projecting only 76% of potential landfill capacity in showing waste management capacity projections in future years.

Table 13 Projected Landfill Capacity (Tons Per Year)

Municipality	2008 Permitted Capacity	End of current permitted capacity	Lifetime of LF	2009	2010	2011	2012	2013	2014	2015
Active Landfills										
Barre	93600	2010	2013	93600	93600	93600	93600	93600	0	0
Bourne	219000	2014	2025	219000	219000	219000	219000	219000	219000	219000
Carver	175000	2013	2013	175000	175000	175000	175000	175000	0	0
Chicopee	365000	2011	2014	365000	365000	365000	365000	365000	365000	0
Dartmouth	115000	2012	2021	115000	115000	115000	115000	115000	115000	115000
Fall River	376000	2010	2012	376000	376000	376000	376000	0	0	0
Granby	235000	2011	2011	235000	235000	235000	0	0	0	0
Middleborough	39676	2013	2029	39676	39676	39676	39676	39676	39676	39676
Nantucket	26000	2010	2020	26000	26000	26000	26000	26000	26000	26000
Northampton	50000	2010	2010	50000	50000	0	0	0	0	0
South Hadley	156000	2013	2013	156000	156000	156000	156000	156000	0	0
Southbridge	180960	2019	2019	180960	180960	305000	405000	405000	405000	405000
Sturbridge	410	2016	2016	410	410	410	410	410	410	410
Taunton	120120	2012	2014	120120	120120	120120	120120	120120	120120	0
Warren	2000	2012	2012	2000	2000	2000	2000	0	0	0
Westminster	390000	2010	2021	390000	390000	390000	390000	390000	390000	390000
TOTAL PERMITTED CAPACITY				2,543,766	2,543,766	1,608,166	1,008,166	771,046	400,370	181,370
TOTAL POTENTIAL CAPACITY				2,543,766	2,543,766	2,617,806	2,482,806	2,104,806	1,680,206	1,195,086
KEY:										
Permitted Capacity				Number without shading						
Potential Additional Capacity				Number with shading						
TOTAL POTENTIAL CAPACITY WMCP (76% of potential)				1,933,262	1,933,262	1,989,533	1,886,933	1,599,653	1,276,957	908,265

Table 14 Waste Management Capacity Projections

	2008	2009	2010	2011	2012	2013	2014	2015
Generation	12,599,579	12,473,584	12,348,848	12,472,336	12,597,060	12,723,030	12,850,260	12,978,763
Baseline Recycling	5,506,132	5,451,071	5,396,560	5,450,526	5,505,031	5,560,082	5,615,682	5,671,839
Increased Recycling	5,506,132	5,616,255	5,728,580	6,015,009	6,315,760	6,631,548	6,963,125	7,311,281
Increased Recycling Rate	43.7%	45.0%	46.4%	48.2%	50.1%	52.1%	54.2%	56.3%
Non-MSW Other Diversion	546,995	541,525	536,110	541,471	546,886	552,354	557,878	563,457
Combustion Capacity	3,228,033	3,228,033	3,228,033	3,228,033	3,228,033	3,228,033	3,228,033	3,228,033
Potential LF Capacity	1,737,929	1,933,262	1,933,262	1,989,533	1,886,933	1,599,653	1,276,957	908,265
In-state Capacity (baseline recycling)	11,019,089	11,153,891	11,093,965	11,209,562	11,166,882	10,940,122	10,678,550	10,371,594
In-state Capacity (increased recycling)	11,019,089	11,319,075	11,425,985	11,774,046	11,977,611	12,011,588	12,025,993	12,011,036
Net Export (baseline recycling)	1,580,490	1,319,692	1,254,882	1,262,774	1,430,177	1,782,909	2,171,711	2,607,169
Net Export (increased recycling)	1,580,490	1,154,508	922,863	698,291	619,449	711,443	824,268	967,727

Assumptions for Annual Percent Change:	2008-2010	2011-2015
Generation	-1.0%	1.0%
Baseline Recycling Tonnage	-1.0%	1.0%
Increased Recycling Tonnage	2.0%	5.0%
Non-MSW Other Diversion	-1.0%	1.0%

2008 figures reflect actual 2008 data.

Baseline recycling assumes recycling changes at the same rate as generation.

Non-MSW Other Diversion includes fines and residuals for landfill uses and non-MSW for fuel.

Combustion Capacity is projected to remain level from 2009 through 2015 based on 2008 tonnage.

Future landfill capacity is calculated to be 76% of total potential based on historical disposal patterns.

Net export is calculated by subtracting In-State Management Capacity from Generation.

In-State Management Capacity is the sum of Recycling, other Non-MSW Diversion, Combustion Capacity and Potential Landfill Capacity.