Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

2011 Solid Waste Data Update

January 2014

Introduction

In the *2010-2020 Solid Waste Master Plan* (*Master Plan*) 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 2011-2020 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 2011 and revised waste management capacity projections through 2020 based on the 2011 data.

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. These initiatives are described in the *Master Plan*.

Goals and Methodology Summary

In the *Master Plan*, the primary quantitative goal is to reduce the amount of annual waste disposal by 30 percent from 2008 – 2020, from 6,550,000 tons of disposal in 2008 to 4,550,000 tons of disposal in 2020. MassDEP also will continue to calculate recycling rates as a point of information, although Massachusetts does not have a recycling rate goal. The methodology for the disposal reduction calculation and recycling rates is summarized in the table below.

Table 1 Methodology Summary

Waste Reduction Rates		Equation
Disposal Tonnage	=	In State Disposal (Landfill & Municipal Waste Combustor) + Export for Disposal – Import for Disposal
Disposal Tonnage Reduction	=	2008 Disposal – Current Year [2011] Disposal
% Disposal Reduction	=	$\frac{\text{2008 Disposal – Current Year [2011] Disposal}}{\text{2008 Disposal}}$
MSW Recycling Rate	=	$\frac{\text{MSW Recycling + Composting}}{\text{MSW Generation}}$ (MSW Recycling + Composting + MSW Disposal)
C&D Recycling Rate	=	$\frac{\text{C\&D Recycling}}{\text{C\&D Generation}}$ (C&D Recycling + C&D Other Diversion + C&D Disposal)

Progress in Meeting Disposal Reduction Milestone

In the *Master Plan*, MassDEP established a vision to maximize the diversion of materials from disposal by 2020. The *Master Plan* establishes a specific goal to reduce annual disposal by 2 million tons, or 30 percent, from 2008 to 2020. This is a change from the previous Master Plan, which expressed our waste reduction goals in terms of a waste reduction rate. MassDEP now believes that disposal reduction is a simpler, more direct, and more effective metric for evaluating waste reduction and diversion progress, including source reduction, recycling, composting, and other forms of diversion. Therefore, the *2010-2020 Plan* has shifted from a waste reduction rate to a disposal reduction target as our primary goal for measuring progress. MassDEP will measure disposal reduction by comparing the total disposal in a future year against disposal in 2008 as a baseline year. Because many people continue to rely on recycling rates as an indicator of progress, MassDEP also will continue to measure and evaluate the Commonwealth's recycling rate.

Total disposal in 2011 was 5,610,000 tons, a decrease of 0.9 million tons, or 14 percent, from 2008. This decrease was due to reduced solid waste generation from 2008 to 2011. It is not clear how much of the change was due to economic changes versus source reduction activities, such as container or newspaper light-weighting or changes in consumption practices. The real gross domestic product by state for Massachusetts by year is shown below, in millions of chained 2005 dollars for 2008-2011[1]. The Massachusetts real GDP by state increased approximately 2 percent from 2010 to 2011, and was at the highest level over the past four years in 2011. The real GDP increased by 8 percent from 2008-2011, suggesting that true source reduction is occurring.

Gross Domestic Product by State (millions of chained 2005 dollars)

2008	$327,739
2009	$340,159
2010	$345,961
2011	$353,717

Environmental and Economic Benefits of Recycling

In 2011 alone, Massachusetts prevented the disposal of more than 5 million tons of waste through recycling, composting and other diversion; eliminating the need for the equivalent of over 12 landfills the size of the state's largest (about 400,000 tons per year). In addition to saving landfill space, waste reduction conserves natural resources, saves energy, prevents pollution, and reduces greenhouse gas emissions. In 2011, Massachusetts is estimated[2] to have:

- Reduced greenhouse gas emissions by nearly 5.1 million tons of carbon dioxide equivalent per year;

[1] Real GDP by state is published by the United States Bureau of Economic Affairs and is available at www.bea.gov. The real GDP by state is an inflation adjusted value.
[2] Source: *Environmental Benefits Calculator*, Northeast Recycling Council, April 2009.

- Conserved 55 trillion BTUs of energy, equivalent to the annual energy consumption of more than 10 million barrels of oil or nearly 570 million gallons of gasoline; and
- Saved the equivalent of 500 thousand households' annual energy usage.

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 billion[3].

Solid Waste Management Overview

Table 2 presents a comprehensive picture of solid waste management in Massachusetts for calendar years 2004-2011. Table 3 highlights how solid waste management changed from 2010 to 2011, including the tonnage and percent change.

[3] *U.S. Recycling Information Study*, prepared for the Northeast Recycling Council, February 2009.

Table 2 Integrated Solid Waste Management System 2004-2011 (all data in tons)

	2004	2005	2006	2007	2008	2009	2010	2011
Total Generation	**13,930,000**	**14,490,000**	**13,260,000**	**12,690,000**	**12,600,000**	**10,710,000**	**10,550,000**	**10,860,000**
MSW	8,720,000	9,310,000	8,710,000	8,370,000	8,360,000	7,630,000	7,520,000	7,850,000
Non-MSW	5,210,000	5,190,000	4,550,000	4,320,000	4,240,000	3,080,000	3,040,000	3,000,000
C&D	5,160,000	5,100,000	4,460,000	3,940,000	3,800,000	2,870,000	2,700,000	2,690,000
Other	50,000	90,000	90,000	380,000	440,000	210,000	340,000	310,000
Diversion	**7,580,000**	**7,750,000**	**6,710,000**	**6,010,000**	**6,050,000**	**4,900,000**	**5,120,000**	**5,250,000**
MSW	3,070,000	3,300,000	2,970,000	2,740,000	2,980,000	2,640,000	2,810,000	2,980,000
Recycling	2,420,000	2,540,000	2,220,000	1,990,000	2,300,000	1,990,000	2,150,000	2,230,000
Composting	650,000	760,000	740,000	740,000	680,000	650,000	660,000	750,000
Non-MSW	4,500,000	4,450,000	3,740,000	3,270,000	3,070,000	2,270,000	2,310,000	2,270,000
C&D Recycling	3,650,000	3,530,000	3,070,000	2,750,000	2,520,000	1,850,000	1,830,000	1,870,000
Other C&D Diversion	860,000	930,000	670,000	510,000	520,000	380,000	440,000	380,000
Other Non-MSW Diversion					30,000	30,000	30,000	30,000
Disposal	**6,360,000**	**6,750,000**	**6,550,000**	**6,680,000**	**6,550,000**	**5,800,000**	**5,430,000**	**5,610,000**
Landfill	1,720,000	2,070,000	2,080,000	1,900,000	1,740,000	1,500,000	1,560,000	1,650,000
MSW	1,430,000	1,760,000	1,880,000	1,760,000	1,560,000	1,330,000	1,280,000	1,390,000
C&D	270,000	240,000	130,000	60,000	130,000	120,000	120,000	70,000
Other	30,000	70,000	70,000	70,000	50,000	60,000	170,000	190,000
Combustion	3,080,000	3,090,000	3,100,000	2,970,000	3,230,000	3,180,000	3,180,000	3,260,000
MSW	3,070,000	3,080,000	3,090,000	2,960,000	3,210,000	3,180,000	3,170,000	3,250,000
Non-MSW	*0	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Net Exports	1,560,000	1,580,000	1,370,000	1,820,000	1,580,000	1,120,000	690,000	700,000
Exports	1,840,000	1,820,000	1,620,000	2,060,000	1,850,000	1,590,000	1,270,000	1,340,000
MSW	1,370,000	1,360,000	1,000,000	1,090,000	840,000	900,000	690,000	630,000
Non-MSW	460,000	460,000	620,000	970,000	1,010,000	680,000	580,000	710,000
Imports	280,000	250,000	250,000	240,000	270,000	470,000	580,000	640,000
MSW	220,000	200,000	230,000	180,000	240,000	420,000	440,000	390,000
Non-MSW	60,000	50,000	30,000	60,000	30,000	50,000	140,000	240,000

Amounts may not add exactly due to rounding.

*Non-MSW combustion was less than 5,000 tons

Table 3 Solid Waste Tonnage and Percent Change Summary: 2010 - 2011

	2010	2011	Tons Change	% Change
Generation	**10,550,000**	**10,860,000**	**310,000**	**2.9%**
MSW	7,520,000	7,850,000	330,000	4.4%
Non-MSW	3,040,000	3,000,000	(40,000)	-1.3%
C&D	2,700,000	2,690,000	(10,000)	-0.4%
Other	340,000	310,000	(30,000)	-8.8%
Diversion	**5,120,000**	**5,250,000**	**130,000**	**2.5%**
MSW	2,810,000	2,980,000	170,000	6.0%
Recycling	2,150,000	2,230,000	80,000	3.7%
Composting	660,000	750,000	90,000	13.6%
Non-MSW	2,310,000	2,270,000	(40,000)	-1.7%
C&D Recycling	1,830,000	1,870,000	40,000	2.2%
Other C&D Diversion	440,000	380,000	(60,000)	-13.6%
Other Non-MSW Diversion	30,000	30,000	0	0.0%
Disposal (Incl. Net Exports)	**5,430,000**	**5,610,000**	**180,000**	**3.3%**
In-State Disposal	**4,740,000**	**4,910,000**	**170,000**	**3.6%**
Landfill	1,560,000	1,650,000	90,000	5.8%
MSW	1,280,000	1,390,000	110,000	8.6%
C&D	120,000	70,000	(50,000)	-41.7%
Other	170,000	190,000	20,000	11.8%
Combustion	3,180,000	3,260,000	80,000	2.5%
MSW	3,170,000	3,250,000	80,000	2.5%
Non-MSW	10,000	10,000	0	0.0%
Net Exports	**690,000**	**700,000**	**10,000**	**1.4%**
Exports	1,270,000	1,340,000	70,000	5.5%
MSW	690,000	630,000	(60,000)	-8.7%
Non-MSW	580,000	710,000	130,000	22.4%
Imports	580,000	640,000	60,000	10.3%
MSW	440,000	390,000	(50,000)	-11.4%
Non-MSW	140,000	240,000	100,000	71.4%

Note: % Change is calculated based on the rounded amounts in this table.
Percentages may not add exactly to 100% due to rounding.

In 2011, 10.9 million tons of solid waste was generated in Massachusetts, up 2.9% from 10.6 million tons in 2010. Of this amount, 7.9 million tons were municipal solid waste (MSW) (72%) and 3.0 million tons were non-MSW (28%). Of the 10.9 million tons generated, 5.3 million tons (48%) were diverted (includes recycling, composting, and other diversion) and 5.6 million tons (52%) were disposed.

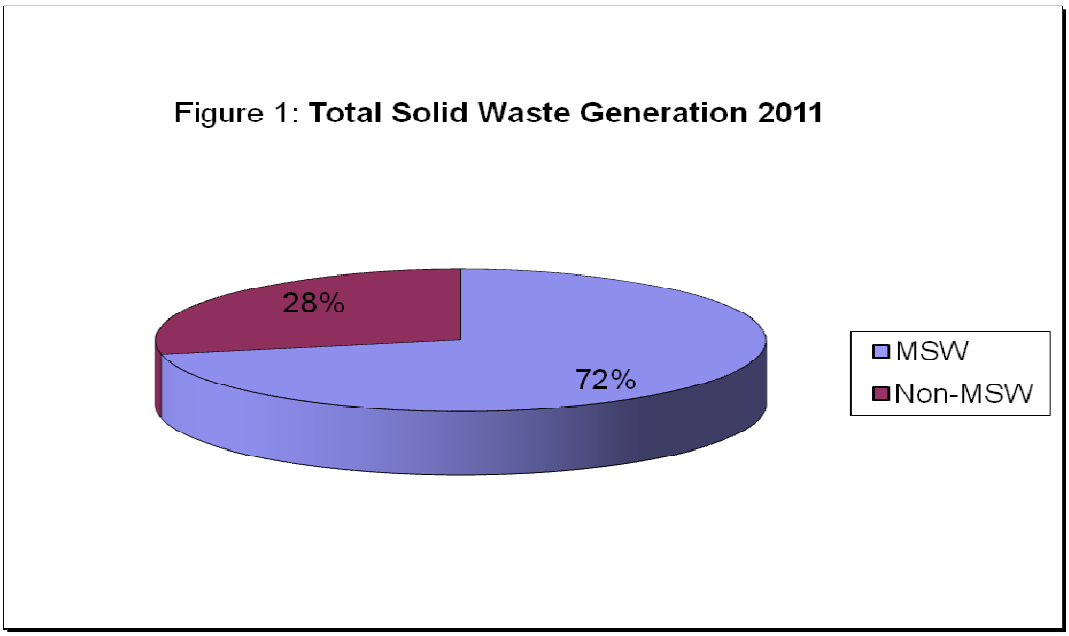


Table 4 shows recycling rates for overall waste (MSW and non-MSW combined), MSW only, and construction and demolition (C&D) materials only. Of the total waste that was generated in 2011, 45% was recycled, up from 44% in 2010. The MSW recycling rate increased from 37% in 2010 to 38% in 2011. Overall MSW recycling and composting tonnage increased by 170,000 tons from 2010 to 2011. The C&D recycling rate increased from 68% to 69%.

Table 4
Recycling Rates Based on Actual Generation

	2008	2009	2010	2011
Overall Recycling	44%	42%	44%	45%
MSW Recycling	36%	34%	37%	38%
C&D Recycling	66%	65%	68%	69%

From 2010 to 2011 total disposal increasing by 3.0%. Of the total waste that required disposal, 4.9 million tons (88%) were disposed in-state, of which 1.7 million tons were land filled and 3.3 million tons were combusted. Massachusetts exported 1.3 million tons for disposal and imported 0.64 million tons, and thus was a net exporter of about 0.70 million tons (12%) of waste requiring disposal. See Table 9 for a more detailed picture of disposal import and export data by state.

Municipal Solid Waste Management

In 2011, 7.9 million tons of MSW were generated in Massachusetts. Of this amount, 38% was recycled or composted, up from 37% in 2010. From 2010 to 2011:

- MSW generation increased 4% from 7.5 million tons to 7.8 million tons.
- MSW recycling and composting tonnage increased 6%, from 2.8 million tons to 3 million tons.
- MSW disposal (disposal in-state and net export out of state for disposal) increased from 4.7 million tons to 4.9 million tons.
- MSW net exports for disposal decreased from 300 thousand tons to 200 thousand tons.

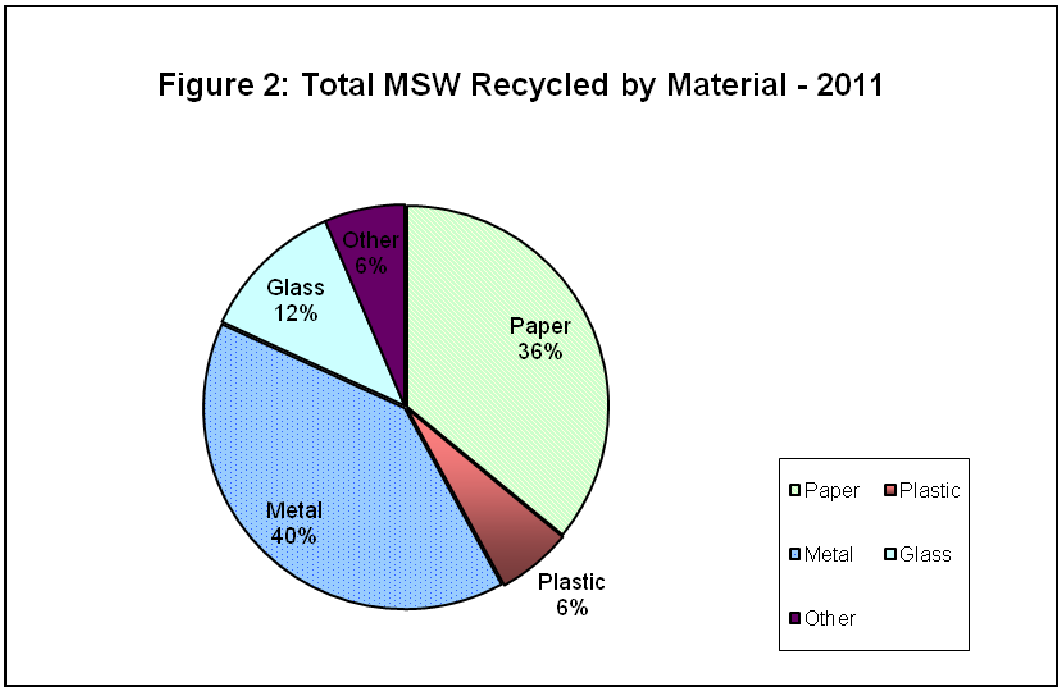
Table 5

How MSW was Managed from 2009 – 2011*

	2009	**2010**	**2011**
Recycled and Composted	34%	37%	38%
Combusted (in state)	42%	42%	41%
Landfilled (in state)	18%	17%	18%
Net Exported for Disposal	6%	3%	3%

*Percentages in this chart are rounded, so that they do not always add up to 100%.

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



Non-MSW Waste Management

In 2011, 3.0 million tons of non-MSW were generated in Massachusetts, 2.7 million tons of which were C&D materials. C&D generation was essentially the same as the 2.7 million tons in 2010. Of the amount generated, 70% was recycled in 2011, up from the 68 % recycling rate in 2010. The bulk of the C&D recycling tonnage was asphalt, brick and concrete (ABC), which increased slightly from 2010 to 2011. Excluding ABC materials, the C&D recycling rate was 22% in 2011, up from 20% in 2010. Table 6 shows how C&D was managed in 2008-2011.

Table 6: C&D Materials Management				
	2008	**2009**	**2010**	**2011**
Generated	**3,800,000**	**2,870,000**	**2,700,000**	**2,690,000**
Recycled	**2,520,000**	**1,850,000**	**1,830,000**	**1,870,000**
ABC	2,330,000	1,650,000	1,610,000	1,630,000
Metal	40,000	70,000	100,000	70,000
Wood Non-Fuel	70,000	20,000	50,000	10,000
Wood Waste	40,000	40,000	10,000	10,000
Other*	50,000	80,000	50,000	50,000
Other Diverted (not recycling)	**520,000**	**380,000**	**440,000**	**380,000**
Grading and Shaping/LF Cover Material/LF Roads	390,000	230,000	320,000	210,000
C&D Wood for Fuel	130,000	160,000	120,000	170,000
Disposed	**760,000**	**630,000**	**420,000**	**450,000**
In-state	130,000	120,000	120,000	70,000
Out-of-state	630,000	520,000	310,000	380,000
Other*				
Ceiling Tiles			601	16
Carpet			1,027	1,257
Gypsum Wallboard			4,154	4,112
Asphalt Roof Shingles			47,665	42,994
			53,447	48,379

*Other materials include ceiling tiles, carpet, gypsum wallboard, and asphalt roofing shingles. Amounts may not add exactly due to rounding.

Other Non-MSW Management

Some 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 2011, 280,000 tons of these materials were disposed in-state, including industrial waste, medical waste, wood waste, ash and sludge. Approximately 90,000 tons were disposed of out-of-state on a net basis; 320,000 tons were sent out of state for disposal and 230,000 were sent from other states to be disposed in Massachusetts. These materials 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 7 shows materials used as daily cover at active landfills in Massachusetts.

Table 7 Reported Daily Cover Material at Active Landfills (in tons)			
	2009	**2010**	**2011**
Auto Shredder Residue	160,000	110,000	170,000
Bottom Ash	150,000	150,000	150,000
Soil/Sand	70,000	180,000	140,000
Contaminated Soils	300,000	300,000	330,000
C&D Fines and Residuals	70,000	140,000	90,000
Other Materials[4]	130,000	80,000	120,000
TOTAL	**880,000**	**980,000**	**1,000,000**

Municipal Waste Combustor Ash

Seven waste-to-energy combustors operated in Massachusetts in 2011. In 2011, these combustors generated approximately 730,000 tons of combustion ash (excluding recovered post-burn metals), 170,000 tons of which was beneficially reused and 560,000 tons of which was disposed. 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 8. MSW combustion ash also was disposed of in several other landfills in addition to those listed here in 2011.

Table 8 Active MSW Combustion Ash Landfills in Massachusetts[5]		
Municipality	Site Name	Current Permit Expires
Agawam	Bondi's Island Ash Landfill	2022
Carver	CMW Ash Landfill	2016
Haverhill	Ward Hill Neck Ash Landfill	2018
Peabody	Peabody Ash Monofill	2019
Saugus	Wheelabrator Ash Landfill	2015
Shrewsbury	Shrewsbury Ash Landfill	2031

Disposal Import/Export Data for 2009-2011

Table 9 shows MSW and C&D data exported and imported for disposal 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 inclusive estimate of export, the higher number from the two sources was used. For example, if

[4] "Other Materials" includes approximately 20 various materials. The other material used in the largest amount is bottom ash from municipal waste combustors (approximately 150,000 tons).

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

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.

Table 9: Disposal Import/Export Data by State (tons): 2009-2011

MSW Exported			
	2009	**2010**	**2011**
CT	20,209	26,620	14,872
ME	263,398	248,794	233,625
MI	0	0	0
NH	230,145	225,671	199,523
NY	136,107	189,131	181,507
OH	91,376	1,502	0
PA	0	0	0
RI	22,704	45	0
SC	138,956	0	0
VA	109	21	0
TOTAL	**903,004**	**691,784**	**629,527**

C&D Exported			
	2009	**2010**	**2011**
CT	9,119	-	0
ME	165,313	47,012	97,405
MI	-	-	0
NH	33,576	27,417	42,361
NY	69,301	2,803	112
OH	227,868	197,757	244,022
RI	34,192	38,170	1,096
VT	-	6,495	1,802
CANADA	-	-	0
TOTAL	**539,369**	**319,654**	**386,798**

MSW Imported			
	2009	**2010**	**2011**
CT	136,349	121,170	79,431
ME	1,637	2,126	1,927
NH	92,581	95,463	82,971
NY	18,579	18,579	19,612
RI	148,035	184,777	191,625
VT	18,073	17,318	17,832
CANADA	0	0	30
TOTAL	**415,254**	**439,433**	**393,428**

C&D Imported			
	2009	**2010**	**2011**
CT	2,001	563	102
ME	13	12	3
NH	9,379	9,683	10,034
NY	1	0	0
RI	10,587	2,130	155
VT	18	0	42
TOTAL	**21,999**	**12,388**	**10,336**

Waste Management Capacity Projections

Table 11 projects waste management capacity through 2020. These projections are based in part on the disposal capacity projections shown in Table 10. These projections assume generation increases slightly from 2012-2020 (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 4.0% per year from 2012-2020, meeting the goal of reducing disposal tonnage by 30% by 2020.

The projections show projected management capacity and net export through 2020. Under scenario 1, net export for disposal in 2020 is projected to be 2.2 million tons. Under scenario 2, net export for disposal in 2020 is projected to be 0.6 million tons.

The disposal capacity projections in Table 10 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. The combustion capacity is shown as level based on actual 2011 tons burned, although this actual amount managed will vary slightly from year to year.

Table 10: Projected Disposal Capacity 2014-2020 (Tons Per Year)

Municipality	2011 Actual Disposal	2011 Permitted Capacity	End of current permitted capacity	Lifetime of LF	2014	2015	2016	2017	2018	2019	2020
Active Landfills											
Barre	56,240	93,600	2015	**2015**	93,600	93,600	0	0	0	0	0
Bourne	178,415	219,000	2016	**2025**	219,000	219,000	219,000	219,000	219,000	219,000	219,000
Carver	96,347	175,000	2016	**2016**	175,000	175,000	175,000	175,000	175,000	175,000	175,000
Chicopee	192,822	365,000	2017	**2017**	365,000	365,000	365,000	365,000	0	0	0
Dartmouth	78,658	115,000	2014	**2021**	115,000	115,000	115,000	115,000	115,000	115,000	115,000
Fall River	276,758	468,000	2014	**2014**	468,000	0	0	0	0	0	0
Middleborough	28,316	39,676	2017	**2031**	39,676	39,676	39,676	39,676	39,676	39,676	39,676
Nantucket	2,101	26,000	2020	**2020**	26,000	26,000	26,000	26,000	26,000	26,000	26,000
Southbridge	173,353	305,000	2019	**2019**	405,600	405,600	405,600	405,600	405,600	405,600	0
Sturbridge	563	410	2016	**2016**	410	410	410	0	0	0	0
Taunton	76,321	120,120	2015	**2015**	120,120	120,120	0	0	0	0	0
Westminster	231,666	390,000	2015	**2022**	390,000	390,000	390,000	390,000	390,000	390,000	390,000
Municipal Waste Combustors											
Agawam	125,622	130,000			130,000	130,000	130,000	130,000	130,000	130,000	130,000
Haverhill	584,558	570,000			570,000	570,000	570,000	570,000	570,000	570,000	570,000
Millbury	489,165	480,000			480,000	480,000	480,000	480,000	480,000	480,000	480,000
North Andover	459,922	450,000			450,000	450,000	450,000	450,000	450,000	450,000	450,000
Pittsfield	79,788	80,000			80,000	80,000	80,000	80,000	80,000	80,000	80,000
Rochester	1,116,419	1,100,000			1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000
Saugus	400,234	410,000			410,000	410,000	410,000	410,000	410,000	410,000	410,000
	4869008	*5929806*									
TOTAL PERMITTED CAPACITY					**5,637,406**	**5,054,406**	**4,450,686**	**4,056,276**	**3,625,600**	**3,625,600**	**3,220,000**
TOTAL POTENTIAL CAPACITY					**5,637,406**	**5,169,406**	**4,955,686**	**4,955,276**	**4,590,276**	**4,590,276**	**4,184,676**
KEY:											
Permitted Capacity	Number without shading										
Potential Additional Capacity	Number with shading										
ESTIMATED TOTAL POTENTIAL AVAILABLE CAPACITY					**5,057,229**	**4,701,549**	**4,539,121**	**4,538,810**	**4,261,410**	**4,261,410**	**3,953,154**
76% of potential for LFs and 100 % of combustion capacity											
based on 2010 tons burned, rounded up to the next 10,000 tons											
actual combustion amount will vary slightly year to year											
		Total Potential LF Capacity			1,837,229	1,481,549	1,319,121	1,318,810	1,041,410	1,041,410	733,154

Actual 2010 disposal for MWCs is actual tonnage burned minus post combustion metal recovery.

MWC disposal capacity is not a fixed tonnage amount, but rather a function of the facility's air permit and may vary slightly.

Table 11: Waste Management Capacity Projections: 2014-2020

	2014	2015	2016	2017	2018	2019	2020
Generation	11,184,840	11,296,689	11,409,656	11,523,752	11,638,990	11,755,380	11,872,933
Baseline Recycling	4,993,867	5,043,805	5,094,243	5,145,186	5,196,638	5,248,604	5,301,090
Increased Recycling	5,452,213	5,670,302	5,897,114	6,132,998	6,378,318	6,633,451	6,898,789
Non-MSW Other Diversion	414,593	418,739	422,926	427,156	431,427	435,742	440,099
Combustion Capacity	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000
Potential LF Capacity	1,837,229	1,481,549	1,319,121	1,318,810	1,041,410	1,041,410	733,154
In-state Capacity (baseline recycling)	10,485,688	10,184,093	10,076,291	10,131,151	9,909,475	9,965,755	9,714,343
In-state Capacity (increased recycling)	10,944,035	10,810,589	10,879,162	11,118,964	11,091,155	11,350,602	11,312,042
Net Disposal Export (baseline recycling)	699,152	1,112,596	1,333,364	1,392,601	1,729,515	1,789,624	2,158,591
Net Disposal Export (increased recycling)	240,805	486,099	530,494	404,788	547,834	404,777	560,891
Assumptions for Annual Percent Change:	**2014-2020**						
Generation	10%						
Baseline Recycling Tonnage	10%						
Increased Recycling Tonnage	4.0%						
Non-MSW Other Diversion	10%						
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 2011 through 2020 based on 2010 tonnage accepted.							
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.							
disposal total - increased recycling	5,318,034	5,207,648	5,089,615	4,963,598	4,829,244	4,686,187	4,534,045
disposal total - baseline recycling	5,776,380	5,834,144	5,892,486	5,951,411	6,010,925	6,071,034	6,131,744