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Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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2010 Solid Waste Data Update

November 2011

Introduction

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

Goals and Methodology Summary

In the *Draft 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 [2010] Disposal
% Disposal Reduction	=	$\frac{2008 \text{ Disposal} - \text{Current Year [2010] Disposal}}{2008 \text{ Disposal}}$
MSW Recycling Rate	=	$\frac{\text{MSW Recycling} + \text{Composting}}{\text{MSW Actual Generation} + (\text{MSW Recycling} + \text{Composting} + \text{MSW Disposal})}$
C&D Recycling Rate	=	$\frac{\text{C\&D Recycling}}{\text{C\&D Actual Generation} + (\text{C\&D Recycling} + \text{C\&D Other Diversion} + \text{C\&D Disposal})}$

Progress in Meeting Disposal Reduction Milestone

In the *Draft Master Plan*, MassDEP established a vision to maximize the diversion of materials from disposal by 2020. The *Draft 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 *Draft 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 2010 was 5,430,000 tons, a decrease of 1,120,000 tons, or 17 percent, from 2008. This decrease was due to combination of increased recycling and reduced solid waste generation. Although MassDEP believes that the economic slowdown may have been a factor in the reduced waste generation from 2008 to 2010, it is not clear how much of the change was due to the slow economy 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 2007-2010¹. The Massachusetts real GDP by state increased approximately 4 percent from 2009 to 2010, and was at the highest level over the past four years in 2010.

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

2007	\$334,848
2008	\$338,814
2009	\$333,413
2010	\$342,123

Environmental and Economic Benefits of Recycling

In 2010 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 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 2010, Massachusetts is estimated² to have:

- Reduced greenhouse gas emissions by nearly 1.9 million tons of carbon 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.

- Saved 80 trillion BTUs of energy, equivalent to the annual energy consumption of more than 14 million barrels of oil or nearly 650 million gallons of gasoline; and
- Avoided the use of 1.2 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 billion³.

Solid Waste Management Overview

Table 2 presents a comprehensive picture of solid waste management in Massachusetts for calendar years 2003-2010. Table 3 highlights how solid waste management changed from 2009 to 2010, 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 2003-2010

		2003	2004	2005	2006	2007	2008	2009	2010
Total Generation		13,210,000	13,930,000	14,490,000	13,260,000	12,690,000	12,600,000	10,680,000	10,550,000
MSW		8,460,000	8,720,000	9,310,000	8,710,000	8,370,000	8,360,000	7,610,000	7,520,000
Non-MSW		4,750,000	5,210,000	5,190,000	4,550,000	4,320,000	4,240,000	3,080,000	3,040,000
	C&D	4,720,000	5,160,000	5,100,000	4,460,000	3,940,000	3,800,000	2,870,000	2,700,000
	Other	30,000	50,000	90,000	90,000	380,000	440,000	210,000	340,000
Diversion		6,860,000	7,580,000	7,750,000	6,710,000	6,010,000	6,050,000	4,880,000	5,120,000
MSW		2,870,000	3,070,000	3,300,000	2,970,000	2,740,000	2,980,000	2,620,000	2,810,000
	Recycling	2,200,000	2,420,000	2,540,000	2,220,000	1,990,000	2,300,000	1,970,000	2,150,000
	Composting	680,000	650,000	760,000	740,000	740,000	680,000	650,000	660,000
Non-MSW		3,990,000	4,500,000	4,450,000	3,740,000	3,270,000	3,070,000	2,270,000	2,310,000
	C&D Recycling	3,360,000	3,650,000	3,530,000	3,070,000	2,750,000	2,520,000	1,850,000	1,830,000
	Other C&D Diversion	630,000	860,000	930,000	670,000	510,000	520,000	380,000	440,000
	Other Non-MSW Diversion						30,000	30,000	30,000
Disposal		6,340,000	6,360,000	6,750,000	6,550,000	6,680,000	6,550,000	5,800,000	5,430,000
	Landfill	1,710,000	1,720,000	2,070,000	2,080,000	1,900,000	1,740,000	1,500,000	1,560,000
	MSW	1,310,000	1,430,000	1,760,000	1,880,000	1,760,000	1,560,000	1,330,000	1,280,000
	C&D	370,000	270,000	240,000	130,000	60,000	130,000	120,000	120,000
	Other	20,000	30,000	70,000	70,000	70,000	50,000	60,000	170,000
	Combustion	3,130,000	3,080,000	3,090,000	3,100,000	2,970,000	3,230,000	3,180,000	3,180,000
	MSW	3,120,000	3,070,000	3,080,000	3,090,000	2,960,000	3,210,000	3,180,000	3,170,000
	Non-MSW	*0	*0	10,000	10,000	10,000	10,000	10,000	10,000
	Net Exports	1,510,000	1,560,000	1,580,000	1,370,000	1,820,000	1,580,000	1,120,000	690,000
	Exports	1,790,000	1,840,000	1,820,000	1,620,000	2,060,000	1,850,000	1,590,000	1,270,000
	MSW	1,370,000	1,370,000	1,360,000	1,000,000	1,090,000	840,000	900,000	690,000
	Non-MSW	420,000	460,000	460,000	620,000	970,000	1,010,000	680,000	580,000
	Imports	280,000	280,000	250,000	250,000	240,000	270,000	470,000	580,000
	MSW	200,000	220,000	200,000	230,000	180,000	240,000	420,000	440,000
	Non-MSW	70,000	60,000	50,000	30,000	60,000	30,000	50,000	140,000

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: 2009 - 2010

			2009	2010	Tons Change	% Change
Generation			10,680,000	10,550,000	(130,000)	-1.2%
MSW			7,610,000	7,520,000	(90,000)	-1.2%
Non-MSW			3,080,000	3,040,000	(40,000)	-1.3%
		C&D	2,870,000	2,700,000	(170,000)	-5.9%
		Other	210,000	340,000	130,000	61.9%
Diversion			4,880,000	5,120,000	240,000	4.9%
MSW			2,620,000	2,810,000	190,000	7.3%
		Recycling	1,970,000	2,150,000	180,000	9.1%
		Composting	650,000	660,000	10,000	1.5%
Non-MSW			2,270,000	2,310,000	40,000	1.8%
		C&D Recycling	1,850,000	1,830,000	(20,000)	-1.1%
		Other C&D Diversion	380,000	440,000	60,000	15.8%
		Other Non-MSW Diversion	30,000	30,000	0	0.0%
Disposal (Incl. Net Exports)			5,800,000	5,430,000	(370,000)	-6.4%
In-State Disposal			4,680,000	4,740,000	60,000	1.3%
	Landfill		1,500,000	1,560,000	60,000	4.0%
		MSW	1,330,000	1,280,000	(50,000)	-3.8%
		C&D	120,000	120,000	0	0.0%
		Other	60,000	170,000	110,000	183.3%
	Combustion		3,180,000	3,180,000	0	0.0%
		MSW	3,180,000	3,170,000	(10,000)	-0.3%
		Non-MSW	10,000	10,000	0	0.0%
Net Exports			1,120,000	690,000	(430,000)	-38.4%
	Exports		1,590,000	1,270,000	(320,000)	-20.1%
		MSW	900,000	690,000	(210,000)	-23.3%
		Non-MSW	680,000	580,000	(100,000)	-14.7%
	Imports		470,000	580,000	110,000	23.4%
		MSW	420,000	440,000	20,000	4.8%
		Non-MSW	50,000	140,000	90,000	180.0%

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

Amounts may not add exactly due to rounding.

In 2010, 10.5 million tons of solid waste was generated in Massachusetts, down 1.5 % from 10.7 million tons in 2009. Of this amount, 7.5 million tons were municipal solid waste (MSW) (71%) and 3.0 million tons were non-MSW (29%). Of the 10.5 million tons generated, 5.1 million tons (48%) were diverted (includes recycling, composting, and other diversion) and 5.4 million tons (52%) were disposed.

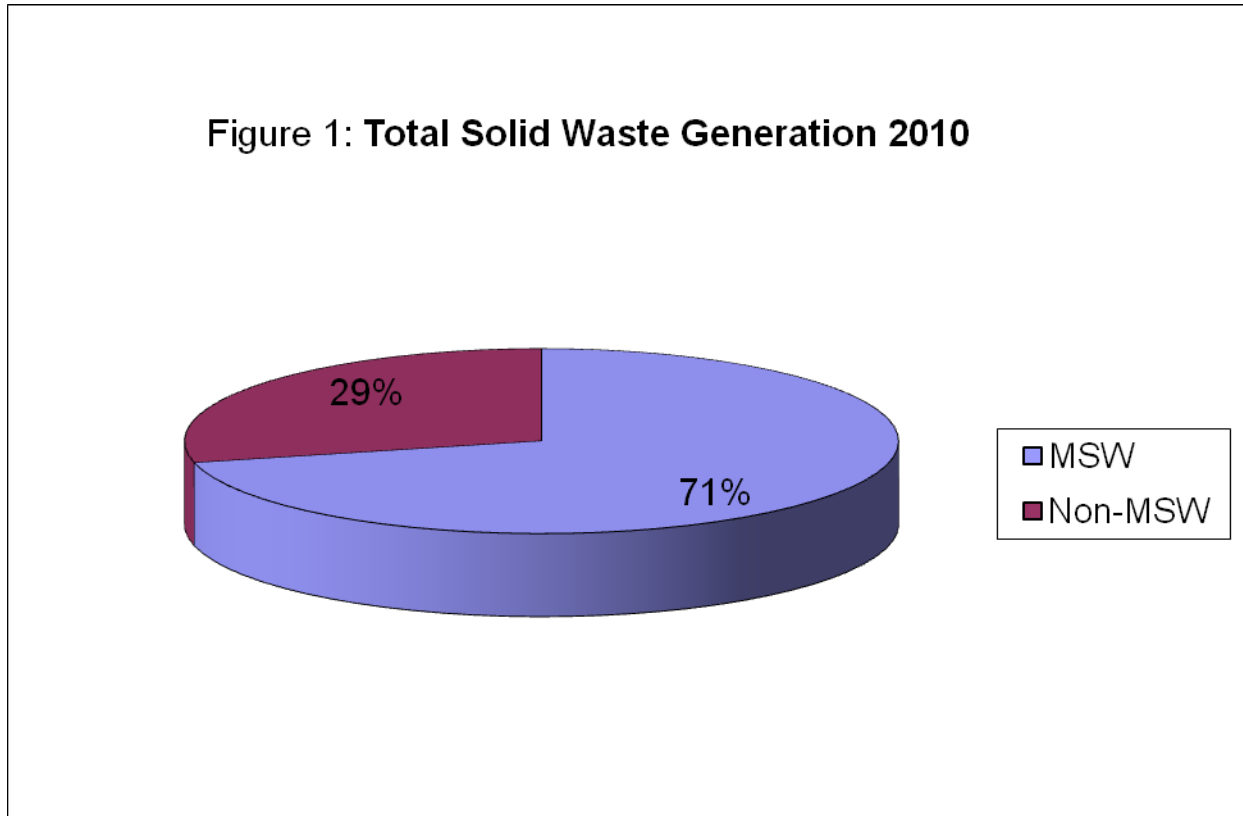


Table 4 shows recycling rates for overall waste (MSW and non-MSW combined), MSW only, and construction and demolition (C&D) materials only. Of the total waste that was generated in 2010, 44% was recycled, up from 42 % in 2009. The MSW recycling rate increased from 34% in 2008 to 37% in 2008. The C&D recycling rate increased from 65 % to 68%.

Table 4				
Recycling Rates Based on Actual Generation				
	2007	2008	2009	2010
Overall Recycling	43%	44%	42%	44%
MSW Recycling	33%	36%	34%	37%
C&D Recycling	70%	66%	65%	68%

From 2008 to 2010 total disposal decreased by 17 %. Of the total waste that required disposal, 4.7 million tons (87%) were disposed in-state, of which 1.6 million tons were landfilled and 3.2 million tons were combusted. Massachusetts exported 1.3 million tons for disposal and imported 0.6 million tons, and thus

was a net exporter of about 0.7 million tons (13%) of waste requiring disposal. See Table 9 for a more detailed picture of disposal import and export data by state.

Municipal Solid Waste Management

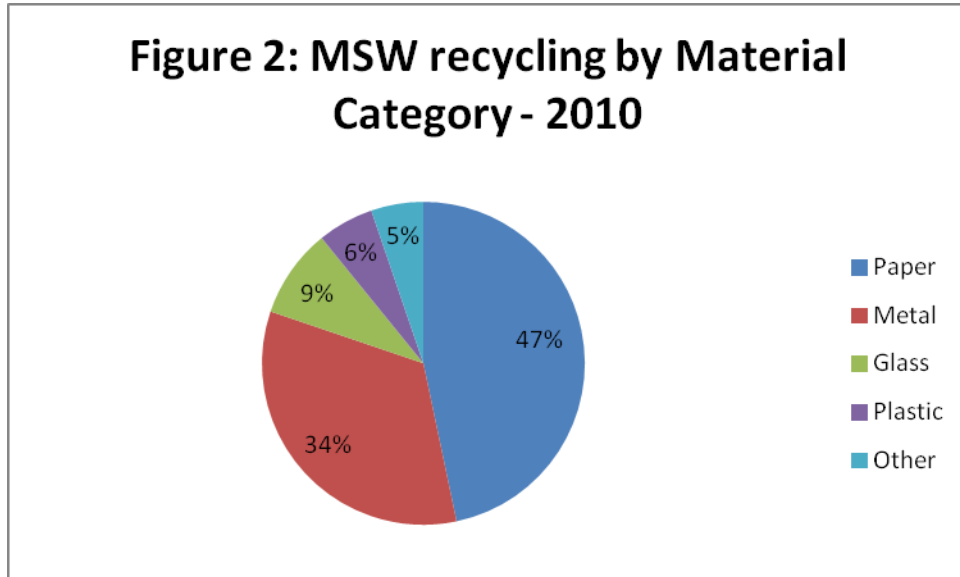
In 2010, 7.5 million tons of MSW were generated in Massachusetts. Of this amount, 37% was recycled or composted, up from 34% in 2009. From 2009 to 2010:

- MSW generation decreased 2 % from 7.6 million tons to 7.5 million tons.
- MSW recycling and composting tonnage increased 6%, from 2.6 million tons to 2.8 million tons.
- MSW disposal (disposal in-state and net export out of state for disposal) decreased 6 % from 5.0 million tons to 4.7 million tons.
- MSW net exports for disposal decreased from 0.5 million tons to 0.3 million tons.

Table 5			
How MSW was Managed from 2008 – 2010*			
	2008	2009	2010
Recycled	36%	34%	37%
Combusted (in state)	38%	42%	42%
Landfilled (in state)	18%	18%	17%
Net Exported for Disposal	7%	6%	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 2010, 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 down 6 percent from 2.9 million tons in 2009. Of the amount generated, 68% was recycled in 2010, up from the 65 % recycling rate in 2009. The bulk of the C&D recycling tonnage was asphalt, brick and concrete (ABC), which decreased slightly from 2009 to 2010. Excluding ABC materials, the C&D recycling rate was 20% in 2010, up from 17% in 2009. Table 6 shows how C&D was managed in 2007-2010.

Table 6: C&D Materials Management				
	2007	2008	2009	2010
Generated	3,940,000	3,800,000	2,870,000	2,700,000
Recycled	2,750,000	2,520,000	1,850,000	1,830,000
ABC	2,550,000	2,330,000	1,650,000	1,610,000
Metal	40,000	40,000	70,000	100,000
Wood Non-Fuel	90,000	70,000	20,000	50,000
Wood Waste	30,000	40,000	40,000	10,000
Other*	40,000	50,000	80,000	50,000
Other Diverted (not recycling)	510,000	520,000	380,000	440,000
Grading and Shaping/LF Cover Material/LF Roads	400,000	390,000	230,000	320,000
C&D Wood for Fuel	110,000	130,000	160,000	120,000
Disposed	670,000	760,000	630,000	420,000
<i>In-state</i>	60,000	130,000	120,000	120,000
<i>Out-of-state</i>	610,000	630,000	520,000	310,000
Other*				
Ceiling Tiles				601
Carpet				1,027
Gypsum Wallboard				4,154
Asphalt Roof Shingles				47,665
				53,447

*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 2010, 180,000 tons of these materials were disposed in-state, including industrial waste, medical waste, wood waste, ash and sludge. Approximately 130,000 tons were disposed of out-of-state on a net basis; 260,000 tons were sent out of state for disposal and 130,000 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.

	2008	2009	2010
Auto Shredder Residue	100,000	160,000	110,000
Soil/Sand	80,000	70,000	180,000
Contaminated Soils	410,000	300,000	300,000
C&D Fines and Residuals	150,000	70,000	140,000
Other Materials⁴	370,000	280,000	240,000
TOTAL	1,110,000	880,000	980,000

Municipal Waste Combustor Ash

Seven waste-to-energy combustors operated in Massachusetts in 2010. In 2010, these combustors generated approximately 850,000 tons of combustion ash (excluding recovered post-burn metals), 150,000 tons of which was beneficially reused and 700,000 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 2010.

Municipality	Site Name	Current Permit Expires
Agawam	Bondi's Island Ash Landfill	2022
Carver	CMW Ash Landfill	2012
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 2008-2010

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.

MSW Exported				C&D Exported			
	2008	2009	2010		2008	2009	2010
CT	42,513	20,209	26,620	CT	1,162	9,119	-
ME	231,789	263,398	248,794	ME	251,682	165,313	47,012
MI	14,605	0	0	MI	18,705	-	-
NH	410,466	230,145	225,671	NH	72,338	33,576	27,417
NY	175,252	136,107	189,131	NY	78,217	69,301	2,803
OH	6,745	91,376	1,502	OH	174,038	227,868	197,757
PA	528	0	0	RI	21,126	34,192	38,170
RI	732	22,704	45	VT	-	-	6,495
SC	274,745	138,956	0	CANADA	21,954	-	-
VA	3,063	109	21	TOTAL	639,222	539,369	319,654
TOTAL	1,160,438	903,004	691,784				
MSW Imported				C&D Imported			
	2008	2009	2010		2008	2009	2010
CT	83,061	136,349	121,170	CT	312	2,001	563
ME	1,709	1,637	2,126	ME	47	13	12
NH	44,113	92,581	95,463	NH	6,617	9,379	9,683
NY	7,657	18,579	18,579	NY	13	1	0
RI	88,804	148,035	184,777	RI	330	10,587	2,130
VT	11,226	18,073	17,318	VT	0	18	0
CANADA	1,834	0	0	TOTAL	7,319	21,999	12,388
TOTAL	238,404	415,254	439,433				

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 that waste generation declines slightly through 2011 (1 percent/year) and then increases slightly from 2011-2020 (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 3.2% per year from 2011-2020, 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 2.0 million tons. Under scenario 2, net export for disposal in 2020 is projected to be 700,000 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 2010 tons burned, although this actual amount managed will vary slightly from year to year.

Table 10: Projected Disposal Capacity 2011-2020 (Tons Per Year)														
Municipality	2010 Actual Disposal	2010 Permitted Capacity	End of current permitted capacity	Lifetime of LF	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Active Landfills														
Barre	52907	93,600	2015	2015	93600	93600	93600	93600	93600	0	0	0	0	0
Bourne	173557	219,000	2016	2025	219000	219000	219000	219000	219000	219000	219000	219000	219000	219000
Carver	69283	175,000	2013	2013	175000	175000	175000	0	0	0	0	0	0	0
Chicopee	179851	365,000	2014	2014	365000	365000	365000	365000	0	0	0	0	0	0
Dartmouth	98426	115,000	2014	2021	115000	115000	115000	115000	115000	115000	115000	115000	115000	115000
Fall River	236422	468,000	2012	2012	468000	468000	0	0	0	0	0	0	0	0
Granby	86510	235,000	2012	2012	235000	235000	0	0	0	0	0	0	0	0
Middleborough	32290	39,676	2013	2029	39676	39676	39676	39676	39676	39676	39676	39676	39676	39676
Nantucket	2138	26,000	2020	2020	26000	26000	26000	26000	26000	26000	26000	26000	26000	26000
Northampton	45574	50,000	2012	2012	50000	50000	0	0	0	0	0	0	0	0
South Hadley	103630	156,000	2013	2013	156000	156000	156000	0	0	0	0	0	0	0
Southbridge	167382	180,960	2019	2019	305000	405000	405000	405000	405000	405000	405000	405000	405000	405000
Sturbridge	359	410	2016	2016	410	410	410	410	410	410	0	0	0	0
Taunton	87873	120,120	2015	2015	120120	120120	120120	120120	120120	0	0	0	0	0
Warren	650	2,000	2012	2012	2000	2000	0	0	0	0	0	0	0	0
Westminster	210333	390,000	2013	2021	390000	390000	390000	390000	390000	390000	390000	390000	390000	390000
Municipal Waste Combustors														
Agawam	127,057	130,000			130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000
Haverhill	563,234	570,000			570,000	570,000	570,000	570,000	570,000	570,000	570,000	570,000	570,000	570,000
Millbury	470,040	480,000			480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000
North Andover	444,391	450,000			450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000
Pittsfield	76,025	80,000			80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Rochester	1,092,508	1,100,000			1,100,000	1,100,000	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	401,348	410,000			410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000
	472,1788	5855766												
TOTAL PERMITTED CAPACITY					5,979,806	6,079,806	5,324,806	4,564,130	4,084,130	3,651,410	3,651,000	3,625,000	3,625,000	3,220,000
TOTAL POTENTIAL CAPACITY					5,979,806	6,079,806	5,324,806	4,993,806	4,628,806	4,415,086	4,414,676	4,414,676	4,414,676	4,009,676
KEY:														
Permitted Capacity				Number without shading										
Potential Additional Capacity				Number with shading										
ESTIMATED TOTAL POTENTIAL AVAILABLE CAPACITY					5,317,453	5,393,453	4,819,653	4,568,093	4,290,693	4,128,265	4,127,954	4,127,954	4,127,954	3,820,154
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					2,097,453	2,173,453	1,599,653	1,348,093	1,070,693	908,265	907,954	907,954	907,954	600,154
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: 2011-2020

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Generation	10,549,682	10,444,185	10,548,627	10,654,113	10,760,655	10,868,261	10,976,944	11,086,713	11,197,580	11,309,556	11,422,652
Baseline Recycling	4,646,616	4,600,150	4,646,152	4,692,613	4,739,539	4,786,935	4,834,804	4,883,152	4,931,983	4,981,303	5,031,116
Increased Recycling	4,646,616	4,795,308	4,948,758	5,107,118	5,270,546	5,439,203	5,613,258	5,792,882	5,978,254	6,169,558	6,366,984
Non-M SW Other Diversion	472,787	468,059	472,740	477,467	482,242	487,064	491,935	496,854	501,823	506,841	511,909
Combustion Capacity	3,175,230	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000
Potential LF Capacity	1,563,685	2,097,453	2,173,453	1,599,653	1,348,093	1,070,693	908,265	907,954	907,954	907,954	600,154
In-state Capacity (baseline recycling)	9,858,318	10,405,662	10,532,344	10,009,733	9,809,874	9,584,691	9,475,004	9,527,960	9,581,760	9,636,098	9,383,179
In-state Capacity (increased recycling)	9,858,318	10,600,820	10,834,950	10,424,238	10,340,880	10,236,960	10,253,458	10,437,690	10,628,031	10,824,353	10,719,047
Net Disposal Export (baseline recycling)	691,364	38,524	16,283	644,381	950,781	1,283,570	1,501,940	1,558,753	1,615,820	1,673,458	2,039,472
Net Disposal Export (increased recycling)	691,364	-156,634	-286,323	229,876	419,774	631,301	723,486	649,023	569,550	485,203	703,604
Assumptions for Annual Percent Change:											
	2011	2012-2020									
Generation	-1.0%	10%									
Baseline Recycling Tonnage	-1.0%	10%									
Increased Recycling Tonnage	3.2%	3.2%									
Non-M SW Other Diversion	-1.0%	10%									
2010 figures reflect actual 2010 data.											
Baseline recycling assumes recycling changes at the same rate as generation.											
Non-M SW Other Diversion includes fines and residuals for landfill uses and non-M SW 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-M SW Diversion, Combustion Capacity and Potential Landfill Capacity.											
disposal total - increased recycling	NA	5,180,818	5,127,130	5,069,528	5,007,867	4,941,994	4,871,751	4,796,977	4,717,503	4,633,157	4,543,758
disposal total - baseline recycling	5,430,279	5,375,976	5,429,736	5,484,033	5,538,874	5,594,262	5,650,205	5,706,707	5,763,774	5,821,412	5,879,626

