



Advancing Sustainable Materials Management: 2016 and 2017 Tables and Figures

Assessing Trends in Material Generation, Recycling,
Composting, Combustion with Energy Recovery and
Landfilling in the United States

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List of Tables

	Page
Table 1. Materials Generated* in the Municipal Waste Stream, 1960 to 2017	1
Table 2. Materials Recycled and Composted* in Municipal Solid Waste, 1960 to 2017	2
Table 3. Materials Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2017	3
Table 4. Materials Landfilled* in the Municipal Waste Stream, 1960 to 2017.....	4
Table 5A. Paper and Paperboard Products In MSW, 2016	5
Table 5B. Paper and Paperboard Products In MSW, 2017	6
Table 6A. Glass Products in MSW, 2016	7
Table 6B. Glass Products in MSW, 2017	7
Table 7A. Metal Products in MSW, 2016	8
Table 7B. Metal Products in MSW, 2017	9
Table 8A. Plastics in Products In MSW, 2016	10
Table 8B. Plastics in Products In MSW, 2017	13
Table 9A. Rubber and Leather Products In MSW, 2016	16
Table 9B. Rubber and Leather Products In MSW, 2017	16
Table 10. Products Generated* in the Municipal Waste Stream, 1960 to 2017	17
Table 11. Products Recycled and Composted* in the Municipal Waste Stream, 1960 to 2017.....	18
Table 12. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2017	19
Table 13. Products Landfilled* in the Municipal Waste Stream, 1960 to 2017.....	20
Table 14. Products Generated* in the Municipal Waste Stream, 1960 to 2017 (With Detail On Durable Goods)	21
Table 15. Products Recycled and Composted* in the Municipal Waste Stream, 1960 to 2017 (With Detail On Durable Goods).....	22
Table 16. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2017 (With Detail On Durable Goods)	23
Table 17. Products Landfilled* in the Municipal Waste Stream, 1960 to 2017 (With Detail On Durable Goods)	25
Table 18. Products Generated* in the Municipal Waste Stream, 1960 to 2017 (With Detail on Nondurable Goods).....	26
Table 19. Products Recycled and Composted* in Municipal Solid Waste, 1960 to 2017 (With Detail on Nondurable Goods).....	28
Table 20. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2017 (With Detail on Nondurable Goods)	30

List of Tables (Continued)

	Page
Table 21. Products Landfilled* in Municipal Solid Waste, 1960 to 2017 (With Detail on Nondurable Goods).....	32
Table 22. Products Generated* in the Municipal Waste Stream, 1960 to 2017 (With Detail on Containers and Packaging)	34
Table 23. Products Generated* in the Municipal Waste Stream, 1960 to 2017 (With Detail on Containers and Packaging)	36
Table 24. Products Recycled and Composted* in Municipal Solid Waste, 1960 to 2017 (With Detail on Containers and Packaging)	38
Table 25. Products Recycled and Composted* in Municipal Solid Waste, 1960 to 2017 (With Detail on Containers and Packaging)	40
Table 26. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2017 (With Detail on Containers and Packaging)	42
Table 27. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2017 (With Detail on Containers and Packaging)	44
Table 28. Products Landfilled* in Municipal Solid Waste, 1960 to 2017 (With Detail on Containers and Packaging)	46
Table 29. Products Landfilled* in Municipal Solid Waste, 1960 to 2017 (With Detail on Containers and Packaging)	47
Table 30. Selected Examples of Source Reduction Practices.....	48
Table 31A. Households with Residential Food Collection Programs in the U.S., 2016	50
Table 31B. Households with Residential Food Collection Programs in the U.S., 2017	51
Table 32A. Material Recovery Facilities (MRF), 2016*	52
Table 32B. Material Recovery Facilities (MRF), 2017*	52
Table 33A. Municipal Waste-To-Energy Projects, 2016.....	53
Table 33B. Municipal Waste-To-Energy Projects, 2017.....	53
Table 34A. Landfill Facilities, 2016.....	54
Table 34B. Landfill Facilities, 2017.....	54
Table 35. Generation, Recycling, Composting, Combustion with Energy Recovery and Landfilling of Municipal Solid Waste, 1960 to 2017	55

List of Figures

	Page
Figure 1. Municipal Solid Waste in the Universe of Subtitle D Wastes	56
Figure 2. Definition of Terms.....	57
Figure 3A. Paper and Paperboard Products Generated in MSW, 2016.....	58
Figure 3B. Paper and Paperboard Products Generated in MSW, 2017.....	58
Figure 4. Paper and Paperboard Generation and Recycling, 1960 to 2017.....	59
Figure 5A. Glass Products Generated in MSW, 2016.....	60
Figure 5B. Glass Products Generated in MSW, 2017.....	60
Figure 6. Glass Generation and Recycling, 1960 to 2017	61
Figure 7A. Metal Products Generated in MSW, 2016	62
Figure 7B. Metal Products Generated in MSW, 2017.....	62
Figure 8. Metals Generation and Recycling, 1960 to 2017	63
Figure 9A. Plastics Products Generated in MSW, 2016	64
Figure 9B. Plastics Products Generated in MSW, 2017	64
Figure 10. Plastics Generation and Recycling, 1960 to 2017	65
Figure 11. Generation of Materials in MSW, 1960 to 2017	66
Figure 12. Recycling, Composting, Combustion with Energy Recovery and Landfilling of Materials in MSW, 1960 to 2017.....	66
Figure 13A. Materials Recycling and Composting in MSW,* 2016	67
Figure 13B. Materials Recycling and Composting in MSW,* 2017.....	68
Figure 14A. Materials Generated, Combusted with Energy Recovery and Landfilled in MSW, 2016	69
Figure 14B. Materials Generated, Combusted with Energy Recovery and Landfilled in MSW, 2017	70
Figure 15. Generation of Products in MSW, 1960 to 2017.....	71
Figure 16A. Nondurable Goods Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2016	72
Figure 16B. Nondurable Goods Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2017	73
Figure 17A. Containers and Packaging Materials Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2016	74
Figure 17B. Containers and Packaging Materials Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2017	75
Figure 18A. Containers and Packaging Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2016	76

List of Figures (Continued)

	Page
Figure 18B. Containers and Packaging Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2017	77
Figure 19. Diagram of Solid Waste Management	78
Figure 20. States with Bottle Deposit Rules	78
Figure 21A. Estimated MRF Throughput, 2016*	79
Figure 21B. Estimated MRF Throughput, 2017*	80
Figure 22A. Mixed Waste Processing Estimated Throughput, 2016*	81
Figure 22B. Mixed Waste Processing Estimated Throughput, 2017*	82
Figure 23A. MSW Composting Throughput, 2016*	83
Figure 23B. MSW Composting Throughput, 2017*	84
Figure 24A. Yard Trimmings Composting Facilities, 2016.....	85
Figure 24B. Yard Trimmings Composting Facilities, 2017	86
Figure 25A. Municipal Waste-To-Energy Capacity, 2016.....	87
Figure 25B. Municipal Waste-To-Energy Capacity, 2017	88
Figure 26A. Number of Landfills in the U.S., 2016.....	89
Figure 26B. Number of Landfills in the U.S., 2017.....	90

Table 1. Materials Generated* in the Municipal Waste Stream, 1960 to 2017
(In thousands of tons and percent of total generation)

Materials	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard	29,990	44,310	55,160	72,730	87,740	84,840	71,310	68,050	67,480	67,010
Glass	6,720	12,740	15,130	13,100	12,770	12,540	11,520	11,470	11,480	11,380
Metals										
Ferrous	10,300	12,360	12,620	12,640	14,150	15,210	16,920	18,190	18,690	18,890
Aluminum	340	800	1,730	2,810	3,190	3,330	3,510	3,670	3,770	3,830
Other Nonferrous	180	670	1,160	1,100	1,600	1,860	2,020	2,010	2,140	2,330
<i>Total Metals</i>	<i>10,820</i>	<i>13,830</i>	<i>15,510</i>	<i>16,550</i>	<i>18,940</i>	<i>20,400</i>	<i>22,450</i>	<i>23,870</i>	<i>24,600</i>	<i>25,050</i>
Plastics	390	2,900	6,830	17,130	25,550	29,380	31,400	34,480	34,870	35,370
Rubber and Leather	1,840	2,970	4,200	5,790	6,670	7,290	7,750	8,560	9,200	9,110
Textiles	1,760	2,040	2,530	5,810	9,480	11,510	13,220	16,060	16,880	16,890
Wood	3,030	3,720	7,010	12,210	13,570	14,790	15,710	16,300	18,050	17,990
Other **	70	770	2,520	3,190	4,000	4,290	4,710	4,880	4,980	5,100
Total Materials in Products	54,620	83,280	108,890	146,510	178,720	185,040	178,070	183,670	187,540	187,900
Other Wastes										
Food	12,200	12,800	13,000	23,860	30,700	32,930	35,740	39,730	40,310	40,670
Yard Trimmings	20,000	23,200	27,500	35,000	30,530	32,070	33,400	34,720	34,950	35,180
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,690	3,840	3,990	4,020	4,040
<i>Total Other Wastes</i>	<i>33,500</i>	<i>37,780</i>	<i>42,750</i>	<i>61,760</i>	<i>64,730</i>	<i>68,690</i>	<i>72,980</i>	<i>78,440</i>	<i>79,280</i>	<i>79,890</i>
Total MSW Generated - Weight	88,120	121,060	151,640	208,270	243,450	253,730	251,050	262,110	266,820	267,790
Materials	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard	34.0%	36.6%	36.4%	34.9%	36.0%	33.4%	28.4%	26.0%	25.3%	25.0%
Glass	7.6%	10.5%	10.0%	6.3%	5.2%	4.9%	4.6%	4.4%	4.3%	4.2%
Metals										
Ferrous	11.7%	10.2%	8.3%	6.1%	5.8%	6.0%	6.7%	6.9%	7.0%	7.1%
Aluminum	0.4%	0.7%	1.1%	1.3%	1.3%	1.3%	1.4%	1.4%	1.4%	1.4%
Other Nonferrous	0.2%	0.6%	0.8%	0.5%	0.7%	0.7%	0.8%	0.8%	0.8%	0.9%
<i>Total Metals</i>	<i>12.3%</i>	<i>11.4%</i>	<i>10.2%</i>	<i>7.9%</i>	<i>7.8%</i>	<i>8.0%</i>	<i>8.9%</i>	<i>9.1%</i>	<i>9.2%</i>	<i>9.4%</i>
Plastics	0.4%	2.4%	4.5%	8.2%	10.5%	11.6%	12.5%	13.2%	13.1%	13.2%
Rubber and Leather	2.1%	2.5%	2.8%	2.8%	2.7%	2.9%	3.1%	3.3%	3.4%	3.4%
Textiles	2.0%	1.7%	1.7%	2.8%	3.9%	4.5%	5.3%	6.1%	6.3%	6.3%
Wood	3.4%	3.1%	4.6%	5.9%	5.6%	5.8%	6.3%	6.2%	6.8%	6.7%
Other **	0.1%	0.6%	1.7%	1.5%	1.6%	1.7%	1.9%	1.8%	1.9%	2.0%
Total Materials in Products	62.0%	68.8%	71.8%	70.3%	73.4%	72.9%	70.9%	70.1%	70.3%	70.2%
Other Wastes										
Food	13.8%	10.6%	8.6%	11.5%	12.6%	13.0%	14.2%	15.2%	15.1%	15.2%
Yard Trimmings	22.7%	19.2%	18.1%	16.8%	12.5%	12.6%	13.3%	13.2%	13.1%	13.1%
Miscellaneous Inorganic Wastes	1.5%	1.5%	1.5%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
<i>Total Other Wastes</i>	<i>38.0%</i>	<i>31.2%</i>	<i>28.2%</i>	<i>29.7%</i>	<i>26.6%</i>	<i>27.1%</i>	<i>29.1%</i>	<i>29.9%</i>	<i>29.7%</i>	<i>29.8%</i>
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recycling, composting, combustion with energy recovery or landfilling. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Includes electrolytes in batteries and fluff pulp, feces and urine in disposable diapers.

**Table 2. Materials Recycled and Composted* in Municipal Solid Waste,
1960 to 2017**

(In thousands of tons and percent of generation of each material)

Materials	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard	5,080	6,770	11,740	20,230	37,560	41,960	44,570	45,320	45,520	44,170
Glass	100	160	750	2,630	2,880	2,590	3,130	3,190	3,160	3,030
Metals										
Ferrous	50	150	370	2,230	4,680	5,020	5,800	6,070	6,170	6,170
Aluminum	Neg.	10	310	1,010	860	690	680	670	620	620
Other Nonferrous	Neg.	320	540	730	1,060	1,280	1,440	1,290	1,390	1,540
<i>Total Metals</i>	<i>50</i>	<i>480</i>	<i>1,220</i>	<i>3,970</i>	<i>6,600</i>	<i>6,990</i>	<i>7,920</i>	<i>8,030</i>	<i>8,180</i>	<i>8,330</i>
Plastics	Neg.	Neg.	20	370	1,480	1,780	2,500	3,120	3,240	2,960
Rubber and Leather	330	250	130	370	820	1,050	1,440	1,550	1,760	1,670
Textiles	50	60	160	660	1,320	1,830	2,050	2,460	2,510	2,570
Wood	Neg.	Neg.	Neg.	130	1,370	1,830	2,280	2,660	2,940	3,000
Other **	Neg.	300	500	680	980	1,210	1,370	1,230	1,320	1,450
Total Materials in Products	5,610	8,020	14,520	29,040	53,010	59,240	65,260	67,560	68,630	67,180
Other Wastes										
Food^	Neg.	Neg.	Neg.	Neg.	680	690	970	2,100	2,150	2,570
Yard Trimmings	Neg.	Neg.	Neg.	4,200	15,770	19,860	19,200	21,290	22,960	24,420
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	4,200	16,450	20,550	20,170	23,390	25,110	26,990
Total MSW Recycled and Composted - Weight	5,610	8,020	14,520	33,240	69,460	79,790	85,430	90,950	93,740	94,170
Materials	Percent of Generation of Each Material									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard	16.9%	15.3%	21.3%	27.8%	42.8%	49.5%	62.5%	66.6%	67.5%	65.9%
Glass	1.5%	1.3%	5.0%	20.1%	22.6%	20.7%	27.2%	27.8%	27.5%	26.6%
Metals										
Ferrous	0.5%	1.2%	2.9%	17.6%	33.1%	33.0%	34.3%	33.4%	33.0%	32.7%
Aluminum	Neg.	1.3%	17.9%	35.9%	27.0%	20.7%	19.4%	18.3%	16.4%	16.2%
Other Nonferrous	Neg.	47.8%	46.6%	66.4%	66.3%	68.8%	71.3%	64.2%	65.0%	66.1%
<i>Total Metals</i>	<i>0.5%</i>	<i>3.5%</i>	<i>7.9%</i>	<i>24.0%</i>	<i>34.8%</i>	<i>34.3%</i>	<i>35.3%</i>	<i>33.6%</i>	<i>33.3%</i>	<i>33.3%</i>
Plastics	Neg.	Neg.	0.3%	2.2%	5.8%	6.1%	8.0%	9.0%	9.3%	8.4%
Rubber and Leather	17.9%	8.4%	3.1%	6.4%	12.3%	14.4%	18.6%	18.1%	19.1%	18.3%
Textiles	2.8%	2.9%	6.3%	11.4%	13.9%	15.9%	15.5%	15.3%	14.9%	15.2%
Wood	Neg.	Neg.	Neg.	1.1%	10.1%	12.4%	14.5%	16.3%	16.3%	16.7%
Other **	Neg.	39.0%	19.8%	21.3%	24.5%	28.2%	29.1%	25.2%	26.5%	28.4%
Total Materials in Products	10.3%	9.6%	13.3%	19.8%	29.7%	32.0%	36.6%	36.8%	36.6%	35.8%
Other Wastes										
Food^	Neg.	Neg.	Neg.	Neg.	2.2%	2.1%	2.7%	5.3%	5.3%	6.3%
Yard Trimmings	Neg.	Neg.	Neg.	12.0%	51.7%	61.9%	57.5%	61.3%	65.7%	69.4%
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	6.8%	25.4%	29.9%	27.6%	29.8%	31.7%	33.8%
Total MSW Recycled and Composted - %	6.4%	6.6%	9.6%	16.0%	28.5%	31.4%	34.0%	34.7%	35.1%	35.2%

* Recycling and composting of postconsumer wastes; does not include converting/fabrication scrap. Details may not add to totals due to rounding.

** Collection of electrolytes in batteries; probably not recycled.

Neg = Less than 5,000 tons or 0.05 percent.

^ Includes collection of other MSW organics for composting.

Table 3. Materials Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2017
(In thousands of tons and percent of total combusted)

Materials	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard		150	860	8,930	9,730	7,800	4,740	4,450	4,300	4,490
Glass		60	300	1,810	1,790	1,660	1,360	1,440	1,440	1,480
Metals										
Ferrous		60	250	1,690	1,610	1,640	1,810	2,150	2,210	2,290
Aluminum		0	30	300	390	410	440	510	510	560
Other Nonferrous		0	20	60	50	50	60	60	60	70
<i>Total Metals</i>	<i>60</i>	<i>300</i>	<i>2,050</i>	<i>2,050</i>	<i>2,100</i>	<i>2,310</i>	<i>2,720</i>	<i>2,780</i>	<i>2,920</i>	
Plastics		0	140	2,980	4,120	4,330	4,530	5,330	5,340	5,590
Rubber and Leather		10	70	830	1,970	2,110	1,910	2,520	2,650	2,490
Textiles		10	50	880	1,880	2,110	2,270	3,060	3,240	3,170
Wood		10	150	2,080	2,290	2,270	2,310	2,570	2,860	2,850
Other **		0	30	410	540	510	540	670	670	670
<i>Total Materials in Products</i>	<i>300</i>	<i>1,900</i>	<i>19,970</i>	<i>24,370</i>	<i>22,890</i>	<i>19,970</i>	<i>22,760</i>	<i>23,280</i>	<i>23,660</i>	
Other Wastes										
Food		50	260	4,060	5,820	5,870	6,150	7,380	7,480	7,470
Yard Trimmings		90	550	5,240	2,860	2,220	2,510	2,630	2,350	2,110
Miscellaneous Inorganic Wastes		10	50	490	680	670	680	780	790	790
<i>Total Other Wastes</i>	<i>150</i>	<i>860</i>	<i>9,790</i>	<i>9,360</i>	<i>8,760</i>	<i>9,340</i>	<i>10,790</i>	<i>10,620</i>	<i>10,370</i>	
<i>Total MSW Combusted - Weight</i>	<i>450</i>	<i>2,760</i>	<i>29,760</i>	<i>33,730</i>	<i>31,650</i>	<i>29,310</i>	<i>33,550</i>	<i>33,900</i>	<i>34,030</i>	
Materials	Percent of Total Combusted									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard		33.3%	31.2%	30.0%	28.8%	24.6%	16.2%	13.3%	12.7%	13.2%
Glass		13.3%	10.9%	6.1%	5.3%	5.2%	4.6%	4.3%	4.2%	4.3%
Metals										
Ferrous		13.3%	9.0%	5.7%	4.8%	5.2%	6.2%	6.4%	6.5%	6.7%
Aluminum		0.0%	1.1%	1.0%	1.2%	1.3%	1.5%	1.5%	1.5%	1.7%
Other Nonferrous		0.0%	0.7%	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%
<i>Total Metals</i>	<i>13.3%</i>	<i>10.8%</i>	<i>6.9%</i>	<i>6.1%</i>	<i>6.6%</i>	<i>7.9%</i>	<i>8.1%</i>	<i>8.2%</i>	<i>8.6%</i>	
Plastics		Neg.	5.1%	10.0%	12.2%	13.7%	15.5%	15.9%	15.8%	16.4%
Rubber and Leather		2.2%	2.5%	2.8%	5.9%	6.7%	6.5%	7.5%	7.8%	7.3%
Textiles		2.2%	1.8%	2.9%	5.6%	6.7%	7.7%	9.1%	9.6%	9.3%
Wood		2.2%	5.4%	7.0%	6.8%	7.2%	7.9%	7.7%	8.4%	8.4%
Other **		Neg.	1.1%	1.4%	1.6%	1.6%	1.8%	2.0%	2.0%	2.0%
<i>Total Materials in Products</i>	<i>66.6%</i>	<i>68.8%</i>	<i>67.1%</i>	<i>72.3%</i>	<i>72.3%</i>	<i>68.1%</i>	<i>67.9%</i>	<i>68.7%</i>	<i>69.5%</i>	
Other Wastes										
Food		11.1%	9.4%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings		20.0%	20.0%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes		2.3%	1.8%	1.7%	1.9%	2.1%	2.3%	2.3%	2.3%	2.3%
<i>Total Other Wastes</i>	<i>33.4%</i>	<i>31.2%</i>	<i>32.9%</i>	<i>27.7%</i>	<i>27.7%</i>	<i>31.9%</i>	<i>32.1%</i>	<i>31.3%</i>	<i>30.5%</i>	
<i>Total MSW Combusted with Energy Recovery- %</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>

* Products and materials combusted with energy recovery estimated at percentage total MSW after recycling and composting. In 2016 and 2017, 19.6 percent of MSW after recycling and composting was combusted with energy recovery except for major appliances, tires and lead-acid batteries (see Table 16). No combustion with energy recovery in 1960 (see Table 35). Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Includes electrolytes in batteries and fluff pulp, feces and urine in disposable diapers.

Table 4. Materials Landfilled* in the Municipal Waste Stream, 1960 to 2017
(In thousands of tons and percent of total landfilled)

Materials	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard	24,910	37,390	42,560	43,570	40,450	35,080	22,000	18,280	17,660	18,350
Glass	6,620	12,520	14,080	8,660	8,100	8,290	7,030	6,840	6,880	6,870
Metals										
Ferrous	10,250	12,150	12,000	8,720	7,860	8,550	9,310	9,970	10,310	10,430
Aluminum	340	790	1,390	1,500	1,940	2,230	2,390	2,490	2,640	2,650
Other Nonferrous	180	350	600	310	490	530	520	660	690	720
<i>Total Metals</i>	<i>10,770</i>	<i>13,290</i>	<i>13,990</i>	<i>10,530</i>	<i>10,290</i>	<i>11,310</i>	<i>12,220</i>	<i>13,120</i>	<i>13,640</i>	<i>13,800</i>
Plastics	390	2,900	6,670	13,780	19,950	23,270	24,370	26,030	26,290	26,820
Rubber and Leather	1,510	2,710	4,000	4,590	3,880	4,130	4,400	4,490	4,790	4,950
Textiles	1,710	1,970	2,320	4,270	6,280	7,570	8,900	10,540	11,130	11,150
Wood	3,030	3,710	6,860	10,000	9,910	10,690	11,120	11,070	12,250	12,140
Other **	70	470	1,990	2,100	2,480	2,570	2,800	2,980	2,990	2,980
Total Materials in Products	49,010	74,960	92,470	97,500	101,340	102,910	92,840	93,350	95,630	97,060
Other Wastes										
Food	12,200	12,750	12,740	19,800	24,200	26,370	28,620	30,250	30,680	30,630
Yard Trimmings	20,000	23,110	26,950	25,560	11,900	9,990	11,690	10,800	9,640	8,650
Miscellaneous Inorganic Wastes	1,300	1,770	2,200	2,410	2,820	3,020	3,160	3,210	3,230	3,250
<i>Total Other Wastes</i>	<i>33,500</i>	<i>37,630</i>	<i>41,890</i>	<i>47,770</i>	<i>38,920</i>	<i>39,380</i>	<i>43,470</i>	<i>44,260</i>	<i>43,550</i>	<i>42,530</i>
Total MSW Landfilled - Weight	82,510	112,590	134,360	145,270	140,260	142,290	136,310	137,610	139,180	139,590
Materials	Percent of Total Landfilled									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Paper and Paperboard	30.2%	33.2%	31.7%	30.0%	28.8%	24.7%	16.1%	13.3%	12.7%	13.1%
Glass	8.0%	11.1%	10.5%	6.0%	5.8%	5.8%	5.1%	5.0%	4.9%	4.9%
Metals										
Ferrous	12.4%	10.8%	8.9%	6.0%	5.6%	6.0%	6.8%	7.2%	7.4%	7.5%
Aluminum	0.4%	0.7%	1.0%	1.0%	1.4%	1.6%	1.8%	1.8%	1.9%	1.9%
Other Nonferrous	0.2%	0.3%	0.4%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.5%
<i>Total Metals</i>	<i>13.0%</i>	<i>11.8%</i>	<i>10.3%</i>	<i>7.2%</i>	<i>7.3%</i>	<i>7.9%</i>	<i>9.0%</i>	<i>9.5%</i>	<i>9.8%</i>	<i>9.9%</i>
Plastics	0.5%	2.6%	5.0%	9.5%	14.2%	16.4%	17.9%	18.9%	18.9%	19.2%
Rubber and Leather	1.8%	2.4%	3.0%	3.2%	2.8%	2.9%	3.2%	3.3%	3.4%	3.5%
Textiles	2.1%	1.7%	1.7%	2.9%	4.5%	5.3%	6.5%	7.7%	8.0%	8.0%
Wood	3.7%	3.3%	5.1%	6.9%	7.1%	7.5%	8.2%	8.0%	8.8%	8.7%
Other **	0.1%	0.4%	1.5%	1.4%	1.8%	1.8%	2.1%	2.2%	2.2%	2.2%
Total Materials in Products	59.4%	66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%
Other Wastes										
Food	14.8%	11.3%	9.5%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings	24.2%	20.5%	20.1%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	1.9%	2.2%	2.3%	2.3%	2.3%	2.3%
<i>Total Other Wastes</i>	<i>40.6%</i>	<i>33.4%</i>	<i>31.2%</i>	<i>32.9%</i>	<i>27.7%</i>	<i>27.7%</i>	<i>31.9%</i>	<i>32.1%</i>	<i>31.3%</i>	<i>30.5%</i>
Total MSW Landfilled - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Landfilling after recycling, composting and combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Includes electrolytes in batteries and fluff pulp, feces and urine in disposable diapers.

Table 5A. Paper and Paperboard Products In MSW, 2016
 (In thousands of tons and percent of generation)

Product Category	Generation (Thousand tons)	Recycled		Combusted with Energy Recovery (Thousand tons)	Landfilled (Thousand tons)
		(Thousand tons)	(Percent of generation)		
Nondurable Goods					
Newspapers/Mechanical Papers†	6,260	4,490	71.7%	350	1,420
Books	760				
Magazines	1,120				
Office-type Papers*	4,270				
Marketing Mail**	3,980				
Other Commercial Printing	2,080				
Tissue Paper and Towels	3,770				
Paper Plates and Cups	1,430				
Other Nonpackaging Paper***	3,820				
<i>Subtotal Nondurable Goods</i>	<i>21,230</i>	<i>10,200</i>	<i>48.0%</i>	<i>2,160</i>	<i>8,870</i>
Total Paper and Paperboard Nondurable Goods	27,490	14,690	53.4%	2,510	10,290
Containers and Packaging					
Corrugated Boxes	31,520	29,150	92.5%	460	1,910
Gable Top/Aseptic Cartons‡	600				
Folding Cartons	5,300				
Other Paperboard Packaging	80				
Bags and Sacks	1,090				
Other Paper Packaging	1,400				
<i>Subtotal Containers and Packaging excluding Corrugated Boxes§</i>	<i>8,470</i>	<i>1,680</i>	<i>19.8%</i>	<i>1,330</i>	<i>5,460</i>
Total Paper and Paperboard Containers and Packaging	39,990	30,830	77.1%	1,790	7,370
Total Paper and Paperboard	67,480	45,520	67.5%	4,300	17,660

† Starting in 2010, newsprint and groundwood inserts expanded to include directories and other mechanical papers previously counted as Other Commercial Printing.

* High-grade papers such as copy paper and printer paper; both residential and commercial.

** Formerly called Third Class Mail and Standard Mail by the U.S. Postal Service.

*** Includes paper in games and novelties, cards, etc.

§ Valid default values for separating out paper and paperboard sub-categories for recycling, combustion with energy recovery and landfilling from subtotal mixed paper were not available.

‡ Includes milk, juice, and other products packaged in gable top cartons and liquid food aseptic cartons.

Neg. = Less than 5,000 tons or 0.05 percent.

Table 5B. Paper and Paperboard Products In MSW, 2017
 (In thousands of tons and percent of generation)

Product Category	Generation	Recycled		Combusted with Energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Nondurable Goods					
Newspapers/Mechanical Papers†	5,440	4,180	76.8%	250	1,010
Books	700				
Magazines	1,020				
Office-type Papers*	3,970				
Marketing Mail**	3,790				
Other Commercial Printing	1,960				
Tissue Paper and Towels	3,750				
Paper Plates and Cups	1,440				
Other Nonpackaging Paper***	3,880				
<i>Subtotal Nondurable Goods excluding Newspaper/Mechanical Papers§</i>	20,510	9,910	48.3%	2,080	8,520
Total Paper and Paperboard Nondurable Goods	25,950	14,090	54.3%	2,330	9,530
Containers and Packaging					
Corrugated Boxes	32,540	28,780	88.4%	740	3,020
Gable Top/Aseptic Cartons‡	590				
Folding Cartons	5,330				
Other Paperboard Packaging	50				
Bags and Sacks	1,100				
Other Paper Packaging	1,450				
<i>Subtotal Containers and Packaging excluding Corrugated Boxes§</i>	8,520	1,300	15.3%	1,420	5,800
Total Paper and Paperboard Containers and Packaging	41,060	30,080	73.3%	2,160	8,820
Total Paper and Paperboard	67,010	44,170	65.9%	4,490	18,350

† Starting in 2010, newsprint and groundwood inserts expanded to include directories and other mechanical papers previously counted as Other Commercial Printing.

* High-grade papers such as copy paper and printer paper; both residential and commercial.

** Formerly called Third Class Mail and Standard Mail by the U.S. Postal Service.

*** Includes paper in games and novelties, cards, etc.

§ Valid default values for separating out paper and paperboard sub-categories for recycling, combustion with energy recovery and landfilling from subtotal mixed paper were not available.

‡ Includes milk, juice, and other products packaged in gable top cartons and liquid food aseptic cartons.

Neg. = Less than 5,000 tons or 0.05 percent.

Table 6A. Glass Products in MSW, 2016
 (In thousands of tons and percent of generation)

Product Category	Generation	Recycled		Combusted with Energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods*	2,390	Neg.	Neg.	280	2,110
Containers and Packaging					
Beer and Soft Drink Bottles**	5,400	2,230	41.3%	620	2,550
Wine and Liquor Bottles	1,780	640	36.0%	220	920
Other Bottles and Jars	1,910	290	15.2%	320	1,300
Total Glass Containers	9,090	3,160	34.8%	1,160	4,770
Total Glass	11,480	3,160	27.5%	1,440	6,880

* Glass as a component of appliances, furniture, consumer electronics, etc.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

Neg. = Less than 5,000 tons or 0.05 percent.

Details may not add to totals due to rounding.

Table 6B. Glass Products in MSW, 2017
 (In thousands of tons and percent of generation)

Product Category	Generation	Recycled		Combusted with Energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods*	2,450	Neg.	Neg.	320	2,130
Containers and Packaging					
Beer and Soft Drink Bottles**	5,270	2,060	39.1%	630	2,580
Wine and Liquor Bottles	1,740	680	39.1%	210	850
Other Bottles and Jars	1,920	290	15.1%	320	1,310
Total Glass Containers	8,930	3,030	33.9%	1,160	4,740
Total Glass	11,380	3,030	26.6%	1,480	6,870

* Glass as a component of appliances, furniture, consumer electronics, etc.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

Neg. = Less than 5,000 tons or 0.05 percent.

Details may not add to totals due to rounding.

Table 7A. Metal Products in MSW, 2016
 (In thousands of tons and percent of generation)

Product Category	Generation	Recycled		Combusted with Energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods					
Ferrous Metals*	16,550	4,620	27.9%	2,090	9,840
Aluminum**	1,650	NA	NA	230	1,420
Lead†	1,400	1,390	99.3%		10
Other Nonferrous Metals‡	740	Neg.	Neg.	60	680
Total Metals in Durable Goods	20,340	6,010	29.5%	2,380	11,950
Nondurable Goods					
Aluminum	220	NA	NA	40	180
Containers and Packaging					
Steel					
Cans	1,710	1,210	70.8%	100	400
Other Steel Packaging	430	340	79.1%	20	70
Total Steel Packaging	2,140	1,550	72.4%	120	470
Aluminum					
Beer and Soft Drink Cans§	1,250	620	49.6%	120	510
Other Cans	120	NA	NA	20	100
Foil and Closures	530	NA	NA	100	430
Total Aluminum Packaging	1,900	620	32.6%	240	1,040
Total Metals in Containers and Packaging	4,040	2,170	53.7%	360	1,510
Total Metals	24,600	8,180	33.3%	2,780	13,640
Ferrous	18,690	6,170	33.0%	2,210	10,310
Aluminum	3,770	620	16.4%	510	2,640
Other nonferrous	2,140	1,390	65.0%	60	690

* Ferrous metals (iron and steel) in appliances, furniture, tires and miscellaneous durables.

** Aluminum in appliances, furniture and miscellaneous durables.

† Lead in lead-acid batteries.

‡ Other nonferrous metals in appliances and miscellaneous durables.

§ Aluminum can recycling does not include used beverage cans imported to produce new beverage cans.

NA = Not Available

Details may not add to totals due to rounding.

Table 7B. Metal Products in MSW, 2017
 (In thousands of tons and percent of generation)

Product Category	Generation	Recycled		Combusted with Energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods					
Ferrous Metals*	16,880	4,700	27.8%	2,190	9,990
Aluminum**	1,720	NA	NA	260	1,460
Lead†	1,550	1,540	99.4%		10
Other Nonferrous Metals‡	780	Neg.	Neg.	70	710
Total Metals in Durable Goods	20,930	6,240	29.8%	2,520	12,170
Nondurable Goods					
Aluminum	220	NA	NA	40	180
Containers and Packaging					
Steel					
Cans	1,480	1,050	70.9%	80	350
Other Steel Packaging	530	420	79.2%	20	90
Total Steel Packaging	2,010	1,470	73.1%	100	440
Aluminum					
Beer and Soft Drink Cans§	1,260	620	49.2%	130	510
Other Cans	130	NA	NA	30	100
Foil and Closures	500	NA	NA	100	400
Total Aluminum Packaging	1,890	620	32.8%	260	1,010
Total Metals in Containers and Packaging	3,900	2,090	53.6%	360	1,450
Total Metals	25,050	8,330	33.3%	2,920	13,800
Ferrous	18,890	6,170	32.7%	2,290	10,430
Aluminum	3,830	620	16.2%	560	2,650
Other nonferrous	2,330	1,540	66.1%	70	720

* Ferrous metals (iron and steel) in appliances, furniture, tires and miscellaneous durables.

** Aluminum in appliances, furniture and miscellaneous durables.

† Lead in lead-acid batteries.

‡ Other nonferrous metals in appliances and miscellaneous durables.

§ Aluminum can recycling does not include used beverage cans imported to produce new beverage cans.

NA = Not Available

Details may not add to totals due to rounding.

Table 8A. Plastics in Products In MSW, 2016
(In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods					
PET	530				
HDPE	1,470				
PVC	200				
LDPE/LLDPE	1,930				
PP	4,360				
PS	750				
Other resins	3,770				
Total Plastics in Durable Goods	13,010	870	6.7%	1,520	10,620
Nondurable Goods[*]					
Plastic Plates and Cups [§]					
LDPE/LLDPE	20				
PLA	30				
PP	160				
PS	860				
Subtotal Plastic Plates and Cups	1,070	Neg.	Neg.	210	860
Trash Bags					
HDPE	210				
LDPE/LLDPE	910				
Subtotal Trash Bags	1,120			220	900
All other nondurables*					
PET	720				
HDPE	580				
PVC	300				
LDPE/LLDPE	1,240				
PLA	40				
PP	1,500				
PS	170				
Other resins	610				
Subtotal All Other Nondurables	5,160	240	4.7%	960	3,960
Total Plastics in Nondurable Goods, by resin					
PET	720				
HDPE	790				
PVC	300				
LDPE/LLDPE	2,170				
PLA	70				
PP	1,660				
PS	1,030				
Other resins	610				
Total Plastics in Nondurable Goods	7,350	240	3.3%	1,390	5,720

Table 8A. Plastics in Products In MSW, 2016
(In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Plastic Containers & Packaging					
Bottles and Jars**					
PET	3,080	880	28.6%	430	1,770
Natural Bottles†					
HDPE	770	230	29.9%	110	430
Other plastic containers					
HDPE	1,570	330	21.0%		
PVC	20	Neg.			
LDPE/LLDPE	40	Neg.			
PP	250	20	8.0%		
PS	90	Neg.			
Subtotal Other Containers	1,970	350	17.8%	320	1,300
Bags, sacks and wraps					
HDPE	680	40	5.9%		
PVC	70				
LDPE/LLDPE	2,660	480	18.0%		
PP	540				
PS	140				
Subtotal Bags, Sacks and Wraps	4,090	520	12.7%	700	2,870
Other Plastics Packaging‡					
PET	690	50	7.2%		
HDPE	730	20	2.7%		
PVC	340	Neg.			
LDPE/LLDPE	1,130	Neg.			
PLA	20	Neg.			
PP	990	50	5.1%		
PS	340	30	8.8%		
Other resins	360	Neg.			
Subtotal Other Packaging	4,600	150	3.3%	870	3,580
Total Plastics in Containers & Packaging, by resin					
PET	3,770	930	24.7%		
HDPE	3,750	620	16.5%		
PVC	430	Neg.			
LDPE/LLDPE	3,830	480	12.5%		
PLA	20	Neg.			
PP	1,780	70	3.9%		
PS	570	30	5.3%		
Other resins	360	Neg.			
Total Plastics in Containers & Packaging	14,510	2,130	14.7%	2,430	9,950

Table 8A. Plastics in Products In MSW, 2016
(In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Total Plastics in MSW, by resin					
PET	5,020	930	18.5%		
HDPE	6,010	620	10.3%		
PVC	930	Neg.			
LDPE/LLDPE	7,930	480	6.1%		
PLA	90	Neg.			
PP	7,800	70	1.0%		
PS	2,350	30	1.3%		
Other resins	4,740	1,110	23.4%		
Total Plastics in MSW	34,870	3,240	9.3%	5,340	26,290

‡ Nondurable goods other than containers and packaging.

§ Due to source data aggregation, PET cups are included in "Other Plastic Packaging".

* All other nondurables include plastics in disposable diapers, clothing, footwear, etc.

** Injection stretch blow molded PET containers as identified in *Report on Postconsumer PET Container Recycling Activity in 2016*. National Association for PET Container Resources. Recycling includes caps, lids and other material collected with PET bottles and jars.

† White translucent homopolymer bottles as defined in the *2016 United States National Postconsumer Plastics Bottles Recycling Report*. American Chemistry Council and the Association of Postconsumer Plastic Recyclers.

Neg. = negligible, less than 5,000 tons

HDPE = High density polyethylene

PET = Polyethylene terephthalate

PS = Polystyrene

LDPE = Low density polyethylene

PP = Polypropylene

PVC = Polyvinyl chloride

LLDPE = Linear low density polyethylene

PLA = Polylactide

‡ Other plastic packaging includes coatings, closures, lids, caps, clamshells, egg cartons, produce baskets, trays, shapes, loose fill, etc.

PP and HDPE caps and lids recycled with PET bottles and jars are included in the recycling estimate for PET bottles and jars.

Other resins include commingled/undefined plastic packaging recycling.

Some detail of recycling by resin omitted due to lack of data.

Table 8B. Plastics in Products In MSW, 2017
 (In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods					
PET	620				
HDPE	1,540				
PVC	240				
LDPE/LLDPE	2,010				
PP	4,520				
PS	770				
Other resins	3,760				
Total Plastics in Durable Goods	13,460	850	6.3%	1,720	10,890
Nondurable Goods[*]					
Plastic Plates and Cups [§]					
LDPE/LLDPE	20				
PLA	30				
PP	170				
PS	860				
Subtotal Plastic Plates and Cups	1,080	Neg.	Neg.	210	870
Trash Bags					
HDPE	220				
LDPE/LLDPE	920				
Subtotal Trash Bags	1,140			220	920
All other nondurables*					
PET	740				
HDPE	650				
PVC	290				
LDPE/LLDPE	1,250				
PLA	40				
PP	1,470				
PS	150				
Other resins	610				
Subtotal All Other Nondurables	5,200	220	4.2%	970	4,010
Total Plastics in Nondurable Goods, by resin					
PET	740				
HDPE	870				
PVC	290				
LDPE/LLDPE	2,190				
PLA	70				
PP	1,640				
PS	1,010				
Other resins	610				
Total Plastics in Nondurable Goods	7,420	220	3.0%	1,400	5,800

Table 8B. Plastics in Products In MSW, 2017
 (In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Plastic Containers & Packaging					
Bottles and Jars**					
PET	2,960	860	29.1%	410	1,690
Natural Bottles†					
HDPE	770	240	31.2%	100	430
Other plastic containers					
HDPE	1,590	280	17.6%		
PVC	10	Neg.			
LDPE/LLDPE	40	Neg.			
PP	260	20	7.7%		
PS	90	Neg.			
Subtotal Other Containers	1,990	300	15.1%	330	1,360
Bags, sacks and wraps					
HDPE	660	50	7.6%		
PVC	70				
LDPE/LLDPE	2,730	340	12.5%		
PP	540				
PS	140				
Subtotal Bags, Sacks and Wraps	4,140	390	9.4%	740	3,010
Other Plastics Packaging‡					
PET	690	50	7.2%		
HDPE	720	10	1.4%		
PVC	350	Neg.			
LDPE/LLDPE	1,110	Neg.			
PLA	20	Neg.			
PP	1,040	30	2.9%		
PS	340	10	2.9%		
Other resins	360	Neg.			
Subtotal Other Packaging	4,630	100	2.2%	890	3,640
Total Plastics in Containers & Packaging, by resin					
PET	3,650	910	24.9%		
HDPE	3,740	580	15.5%		
PVC	430	Neg.			
LDPE/LLDPE	3,880	340	8.8%		
PLA	20	Neg.			
PP	1,840	50	2.7%		
PS	570	10	1.8%		
Other resins	360	Neg.			
Total Plastics in Containers & Packaging	14,490	1,890	13.0%	2,470	10,130

Table 8B. Plastics in Products In MSW, 2017
(In thousands of tons and percent of generation by resin)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Total Plastics in MSW, by resin					
PET	5,010	910	18.2%		
HDPE	6,150	580	9.4%		
PVC	960	Neg.			
LDPE/LLDPE	8,080	340	4.2%		
PLA	90	Neg.			
PP	8,000	50	0.6%		
PS	2,350	10	0.4%		
Other resins	4,730	1,070	22.6%		
Total Plastics in MSW	35,370	2,960	8.4%	5,590	26,820

‡ Nondurable goods other than containers and packaging.

§ Due to source data aggregation, PET cups are included in "Other Plastic Packaging".

* All other nondurables include plastics in disposable diapers, clothing, footwear, etc.

** Injection stretch blow molded PET containers as identified in *Report on Postconsumer PET Container Recycling Activity in 2017*. National Association for PET Container Resources. Recycling includes caps, lids and other material collected with PET bottles and jars.

† White translucent homopolymer bottles as defined in the *2017 United States National Postconsumer Plastics Bottles Recycling Report*. American Chemistry Council and the Association of Postconsumer Plastic Recyclers.

Neg. = negligible, less than 5,000 tons

HDPE = High density polyethylene

PET = Polyethylene terephthalate

PS = Polystyrene

LDPE = Low density polyethylene

PP = Polypropylene

PVC = Polyvinyl chloride

LLDPE = Linear low density polyethylene

PLA = Polylactide

‡ Other plastic packaging includes coatings, closures, lids, caps, clamshells, egg cartons, produce baskets, trays, shapes, loose fill, etc.

PP and HDPE caps and lids recycled with PET bottles and jars are included in the recycling estimate for PET bottles and jars.

Other resins include commingled/undefined plastic packaging recycling.

Some detail of recycling by resin omitted due to lack of data.

Table 9A. Rubber and Leather Products In MSW, 2016
 (In thousands of tons and percent of generation)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods					
Rubber in Tires*	4,370	1,760	40.3%	1,950	660
Other Durables**	3,680	Neg.	Neg.	480	3,200
Total Rubber and Leather					
Durable Goods	8,050	1,760	21.9%	2,430	3,860
Nondurable Goods					
Clothing and Footwear	880	Neg.	Neg.	170	710
Other Nondurables	270	Neg.	Neg.	50	220
Total Rubber and Leather					
Nondurable Goods	1,150	Neg.	Neg.	220	930
Total Rubber and Leather	9,200	1,760	19.1%	2,650	4,790

* Automobile and truck tires. Does not include other materials in tires.

** Includes carpets and rugs and other miscellaneous durables.

Neg. = Less than 5,000 tons or 0.05 percent.

Details may not add to totals due to rounding.

Table 9B. Rubber and Leather Products In MSW, 2017
 (In thousands of tons and percent of generation)

Product Category	Generation	Recycled		Combusted with energy Recovery	Landfilled
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)	(Thousand tons)
Durable Goods					
Rubber in Tires*	4,190	1,670	39.9%	1,740	780
Other Durables**	3,750	Neg.	Neg.	530	3,220
Total Rubber and Leather					
Durable Goods	7,940	1,670	21.0%	2,270	4,000
Nondurable Goods					
Clothing and Footwear	890	Neg.	Neg.	170	720
Other Nondurables	280	Neg.	Neg.	50	230
Total Rubber and Leather					
Nondurable Goods	1,170	Neg.	Neg.	220	950
Total Rubber and Leather	9,110	1,670	18.3%	2,490	4,950

* Automobile and truck tires. Does not include other materials in tires.

** Includes carpets and rugs and other miscellaneous durables.

Neg. = Less than 5,000 tons or 0.05 percent.

Details may not add to totals due to rounding.

Table 10. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(In thousands of tons and percent of total generation)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	9,920	14,660	21,800	29,810	38,870	45,060	49,350	53,940	56,090	57,120
(Detail in Table 14)										
Nondurable Goods	17,330	25,060	34,420	52,170	64,010	63,650	53,250	51,810	52,020	50,700
(Detail in Table 18)										
Containers and Packaging	27,370	43,560	52,670	64,530	75,840	76,330	75,470	77,920	79,430	80,080
(Detail in Table 22)										
Total Product** Wastes	54,620	83,280	108,890	146,510	178,720	185,040	178,070	183,670	187,540	187,900
Other Wastes										
Food	12,200	12,800	13,000	23,860	30,700	32,930	35,740	39,730	40,310	40,670
Yard Trimmings	20,000	23,200	27,500	35,000	30,530	32,070	33,400	34,720	34,950	35,180
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,690	3,840	3,990	4,020	4,040
Total Other Wastes	33,500	37,780	42,750	61,760	64,730	68,690	72,980	78,440	79,280	79,890
Total MSW Generated - Weight	88,120	121,060	151,640	208,270	243,450	253,730	251,050	262,110	266,820	267,790
Products	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	11.3%	12.1%	14.4%	14.3%	16.0%	17.8%	19.7%	20.6%	21.0%	21.4%
(Detail in Table 14)										
Nondurable Goods	19.7%	20.7%	22.7%	25.0%	26.3%	25.1%	21.2%	19.8%	19.5%	18.9%
(Detail in Table 18)										
Containers and Packaging	31.1%	36.0%	34.7%	31.0%	31.2%	30.1%	30.1%	29.7%	29.8%	29.9%
(Detail in Table 23)										
Total Product** Wastes	62.0%	68.8%	71.8%	70.3%	73.4%	72.9%	70.9%	70.1%	70.3%	70.2%
Other Wastes										
Food	13.8%	10.6%	8.6%	11.5%	12.6%	13.0%	14.2%	15.2%	15.1%	15.2%
Yard Trimmings	22.7%	19.2%	18.1%	16.8%	12.5%	12.6%	13.3%	13.2%	13.1%	13.1%
Miscellaneous Inorganic Wastes	1.5%	1.5%	1.5%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Total Other Wastes	38.0%	31.2%	28.2%	29.7%	26.6%	27.1%	29.1%	29.9%	29.7%	29.8%
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recycling, composting, combustion with energy recovery or landfilling. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Other than food products.

Table 11. Products Recycled and Composted* in the Municipal Waste Stream, 1960 to 2017

(In thousands of tons and percent of generation of each product)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	350	940	1,360	3,460	6,580	7,970	9,390	9,880	10,580	10,800
(Detail in Table 15)										
Nondurable Goods	2,390	3,730	4,670	8,800	17,560	19,770	19,190	16,190	16,820	16,290
(Detail in Table 19)										
Containers and Packaging	2,870	3,350	8,490	16,780	28,870	31,500	36,680	41,490	41,230	40,090
Detail in Table 24)										
Total Product** Wastes	5,610	8,020	14,520	29,040	53,010	59,240	65,260	67,560	68,630	67,180
Other Wastes										
Food^	Neg.	Neg.	Neg.	Neg.	680	690	970	2,100	2,150	2,570
Yard Trimmings	Neg.	Neg.	Neg.	4,200	15,770	19,860	19,200	21,290	22,960	24,420
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	4,200	16,450	20,550	20,170	23,390	25,110	26,990
Total MSW Recycled and Composted - Weight	5,610	8,020	14,520	33,240	69,460	79,790	85,430	90,950	93,740	94,170
Products	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	3.5%	6.4%	6.2%	11.6%	16.9%	17.7%	19.0%	18.3%	18.9%	18.9%
(Detail in Table 15)										
Nondurable Goods	13.8%	14.9%	13.6%	16.9%	27.4%	31.1%	36.0%	31.2%	32.3%	32.1%
(Detail in Table 19)										
Containers and Packaging	10.5%	7.7%	16.1%	26.0%	38.1%	41.3%	48.6%	53.2%	51.9%	50.1%
Detail in Table 25)										
Total Product** Wastes	10.3%	9.6%	13.3%	19.8%	29.7%	32.0%	36.6%	36.8%	36.6%	35.8%
Other Wastes										
Food^	Neg.	Neg.	Neg.	Neg.	2.2%	2.1%	2.7%	5.3%	5.3%	6.3%
Yard Trimmings	Neg.	Neg.	Neg.	12.0%	51.7%	61.9%	57.5%	61.3%	65.7%	69.4%
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	6.8%	25.4%	29.9%	27.6%	29.8%	31.7%	33.8%
Total MSW Recycled and Composted - %	6.4%	6.6%	9.6%	16.0%	28.5%	31.4%	34.0%	34.7%	35.1%	35.2%

* Recycling and composting of postconsumer wastes; does not include converting/fabrication scrap. Details may not add to totals due to rounding.

** Other than food products.

^ Includes collection of other MSW organics for composting.

Neg. = Less than 5,000 tons or 0.05 percent.

Table 12. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2017
(In thousands of tons and percent of total combusted)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods		60	440	4,480	6,260	6,750	7,070	8,640	8,920	9,080
(Detail in Table 16)										
Nondurable Goods		90	580	7,380	9,000	7,980	6,030	6,960	6,880	6,720
(Detail in Table 20)										
Containers and Packaging		150	880	8,110	9,110	8,160	6,870	7,160	7,480	7,860
Detail in Table 26)										
Total Product** Wastes		300	1,900	19,970	24,370	22,890	19,970	22,760	23,280	23,660
Other Wastes										
Food		50	260	4,060	5,820	5,870	6,150	7,380	7,480	7,470
Yard Trimmings		90	550	5,240	2,860	2,220	2,510	2,630	2,350	2,110
Miscellaneous Inorganic Wastes		10	50	490	680	670	680	780	790	790
Total Other Wastes		150	860	9,790	9,360	8,760	9,340	10,790	10,620	10,370
Total MSW Combusted with Energy Recovery - Weight		450	2,760	29,760	33,730	31,650	29,310	33,550	33,900	34,030
Products	Percent of Total Combusted									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods		13.3%	15.9%	15.1%	18.6%	21.3%	24.1%	25.8%	26.3%	26.7%
(Detail in Table 16)										
Nondurable Goods		19.9%	21.0%	24.8%	26.7%	25.2%	20.6%	20.7%	20.4%	19.8%
(Detail in Table 20)										
Containers and Packaging		33.3%	31.9%	27.3%	27.0%	25.8%	23.4%	21.4%	22.0%	23.0%
Detail in Table 27)										
Total Product** Wastes		66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%
Other Wastes										
Food		11.1%	9.4%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings		20.0%	20.0%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes		2.3%	1.8%	1.7%	1.9%	2.1%	2.3%	2.3%	2.3%	2.3%
Total Other Wastes		33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Combusted with Energy Recovery - %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Products and materials combusted with energy recovery estimated at percentage total MSW after recycling and composting. In 2016 and 2017, 19.6 percent of MSW after recycling and composting was combusted with energy recovery. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent.

Table 13. Products Landfilled* in the Municipal Waste Stream, 1960 to 2017
 (In thousands of tons and percent of total landfilled)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	9,570	13,660	20,000	21,870	26,030	30,340	32,890	35,420	36,590	37,240
(Detail in Table 17)										
Nondurable Goods	14,940	21,240	29,170	35,990	37,450	35,900	28,030	28,660	28,320	27,690
(Detail in Table 21)										
Containers and Packaging	24,500	40,060	43,300	39,640	37,860	36,670	31,920	29,270	30,720	32,130
Detail in Table 28)										
Total Product** Wastes	49,010	74,960	92,470	97,500	101,340	102,910	92,840	93,350	95,630	97,060
Other Wastes										
Food	12,200	12,750	12,740	19,800	24,200	26,370	28,620	30,250	30,680	30,630
Yard Trimmings	20,000	23,110	26,950	25,560	11,900	9,990	11,690	10,800	9,640	8,650
Miscellaneous Inorganic Wastes	1,300	1,770	2,200	2,410	2,820	3,020	3,160	3,210	3,230	3,250
Total Other Wastes	33,500	37,630	41,890	47,770	38,920	39,380	43,470	44,260	43,550	42,530
Total MSW Landfilled - Weight	82,510	112,590	134,360	145,270	140,260	142,290	136,310	137,610	139,180	139,590
Products	Percent of Total Landfilled									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	11.6%	12.1%	14.9%	15.0%	18.6%	21.3%	24.1%	25.7%	26.3%	26.7%
(Detail in Table 17)										
Nondurable Goods	18.1%	18.9%	21.7%	24.8%	26.7%	25.2%	20.6%	20.8%	20.3%	19.8%
(Detail in Table 21)										
Containers and Packaging	29.7%	35.6%	32.2%	27.3%	27.0%	25.8%	23.4%	21.4%	22.1%	23.0%
Detail in Table 29)										
Total Product** Wastes	59.4%	66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%
Other Wastes										
Food	14.8%	11.3%	9.5%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings	24.2%	20.5%	20.1%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	1.9%	2.2%	2.3%	2.3%	2.3%	2.3%
Total Other Wastes	40.6%	33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Landfilled - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Landfilling after recycling, composting and combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 14. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(With Detail On Durable Goods)**
(In thousands of tons and percent of total generation)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods										
Major Appliances	1,630	2,170	2,950	3,310	3,640	3,610	4,020	4,860	5,030	5,160
Small Appliances**				460	1,040	1,180	1,830	2,050	2,090	2,120
Furniture and Furnishings	2,150	2,830	4,760	6,790	8,120	9,340	10,820	12,050	12,210	12,210
Carpets and Rugs**				1,660	2,460	2,960	3,720	3,630	3,510	3,390
Rubber Tires	1,120	1,890	2,720	3,610	4,930	4,910	5,130	5,970	6,830	6,540
Batteries, Lead-Acid	Neg.	820	1,490	1,510	2,280	2,750	3,020	2,700	2,880	3,190
Miscellaneous Durables										
Selected Consumer Electronics***					1,900	2,630	3,120	3,100	2,990	2,840
Other Miscellaneous Durables					14,500	17,680	17,690	19,580	20,550	21,670
Total Miscellaneous Durables	5,020	6,950	9,880	12,470	16,400	20,310	20,810	22,680	23,540	24,510
Total Durable Goods	9,920	14,660	21,800	29,810	38,870	45,060	49,350	53,940	56,090	57,120
Nondurable Goods	17,330	25,060	34,420	52,170	64,010	63,650	53,250	51,810	52,020	50,700
(Detail in Table 18)										
Containers and Packaging	27,370	43,560	52,670	64,530	75,840	76,330	75,470	77,920	79,430	80,080
(Detail in Table 22)										
Total Product Wastes†	54,620	83,280	108,890	146,510	178,720	185,040	178,070	183,670	187,540	187,900
Other Wastes										
Food	12,200	12,800	13,000	23,860	30,700	32,930	35,740	39,730	40,310	40,670
Yard Trimmings	20,000	23,200	27,500	35,000	30,530	32,070	33,400	34,720	34,950	35,180
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,690	3,840	3,990	4,020	4,040
Total Other Wastes	33,500	37,780	42,750	61,760	64,730	68,690	72,980	78,440	79,280	79,890
Total MSW Generated - Weight	88,120	121,060	151,640	208,270	243,450	253,730	251,050	262,110	266,820	267,790
Products	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods										
Major Appliances	1.8%	1.8%	1.9%	1.6%	1.5%	1.4%	1.6%	1.9%	1.8%	1.9%
Small Appliances**					0.2%	0.4%	0.5%	0.7%	0.8%	0.8%
Furniture and Furnishings	2.4%	2.3%	3.1%	3.3%	3.3%	3.7%	4.3%	4.6%	4.6%	4.6%
Carpets and Rugs**				0.8%	1.0%	1.2%	1.5%	1.4%	1.3%	1.3%
Rubber Tires	1.3%	1.6%	1.8%	1.7%	2.0%	1.9%	2.0%	2.3%	2.6%	2.4%
Batteries, Lead-Acid	Neg.	0.7%	1.0%	0.7%	0.9%	1.1%	1.2%	1.0%	1.1%	1.2%
Miscellaneous Durables										
Selected Consumer Electronics***					0.8%	1.0%	1.2%	1.2%	1.1%	1.1%
Other Miscellaneous Durables					6.0%	7.0%	7.0%	7.5%	7.7%	8.1%
Total Miscellaneous Durables	5.7%	5.7%	6.5%	6.0%	6.7%	8.0%	8.3%	8.7%	8.8%	9.2%
Total Durable Goods	11.3%	12.1%	14.4%	14.3%	16.0%	17.8%	19.7%	20.6%	21.0%	21.4%
Nondurable Goods	19.7%	20.7%	22.7%	25.0%	26.3%	25.1%	21.2%	19.8%	19.5%	18.9%
(Detail in Table 18)										
Containers and Packaging	31.1%	36.0%	34.7%	31.0%	31.2%	30.1%	30.1%	29.7%	29.8%	29.9%
(Detail in Table 23)										
Total Product Wastes†	62.0%	68.8%	71.8%	70.3%	73.4%	72.9%	70.9%	70.1%	70.3%	70.2%
Other Wastes										
Food	13.8%	10.6%	8.6%	11.5%	12.6%	13.0%	14.2%	15.2%	15.1%	15.2%
Yard Trimmings	22.7%	19.2%	18.1%	16.8%	12.5%	12.6%	13.3%	13.2%	13.1%	13.1%
Miscellaneous Inorganic Wastes	1.5%	1.5%	1.5%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Total Other Wastes	38.0%	31.2%	28.2%	29.7%	26.6%	27.1%	29.1%	29.9%	29.7%	29.8%
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recycling, composting, combustion with energy recovery or landfilling. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Not estimated separately prior to 1990. † Other than food products. Neg. = Less than 5,000 tons or 0.05 percent.

*** Not estimated separately prior to 2000.

**Table 15. Products Recycled and Composted* in the Municipal Waste Stream,
1960 to 2017
(With Detail On Durable Goods)**
(In thousands of tons and percent of generation of each product)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods										
Major Appliances	10	50	130	1,070	2,000	2,420	2,610	3,000	3,060	3,110
Small Appliances**				10	20	20	120	120	120	120
Furniture and Furnishings	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	10	10	30	40
Carpets and Rugs**				Neg.	190	250	270	190	230	280
Rubber Tires	330	250	150	440	1,290	1,640	2,270	2,410	2,750	2,610
Batteries, Lead-Acid	Neg.	620	1,040	1,470	2,130	2,640	2,980	2,670	2,860	3,160
Miscellaneous Durables										
Selected Consumer Electronics***					190	360	650	1,230	1,070	1,020
Other Miscellaneous Durables					760	640	480	250	460	460
<i>Total Miscellaneous Durables</i>	<i>10</i>	<i>20</i>	<i>40</i>	<i>470</i>	<i>950</i>	<i>1,000</i>	<i>1,130</i>	<i>1,480</i>	<i>1,530</i>	<i>1,480</i>
Total Durable Goods	350	940	1,360	3,460	6,580	7,970	9,390	9,880	10,580	10,800
Nondurable Goods	2,390	3,730	4,670	8,800	17,560	19,770	19,190	16,190	16,820	16,290
(Detail in Table 19)										
Containers and Packaging	2,870	3,350	8,490	16,780	28,870	31,500	36,680	41,490	41,230	40,090
(Detail in Table 24)										
Total Product Wastes†	5,610	8,020	14,520	29,040	53,010	59,240	65,260	67,560	68,630	67,180
Other Wastes										
Food^	Neg.	Neg.	Neg.	Neg.	680	690	970	2,100	2,150	2,570
Yard Trimmings	Neg.	Neg.	Neg.	4,200	15,770	19,860	19,200	21,290	22,960	24,420
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
<i>Total Other Wastes</i>	<i>Neg.</i>	<i>Neg.</i>	<i>Neg.</i>	<i>4,200</i>	<i>16,450</i>	<i>20,550</i>	<i>20,170</i>	<i>23,390</i>	<i>25,110</i>	<i>26,990</i>
Total MSW Recycled and Composted - Weight	5,610	8,020	14,520	33,240	69,460	79,790	85,430	90,950	93,740	94,170
Products	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods										
Major Appliances	0.6%	2.3%	4.4%	32.3%	54.9%	67.0%	64.9%	61.7%	60.8%	60.3%
Small Appliances**				2.2%	1.9%	1.7%	6.6%	5.9%	5.7%	5.7%
Furniture and Furnishings	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	0.1%	0.1%	0.2%	0.3%
Carpets and Rugs**				Neg.	7.7%	8.4%	7.3%	5.2%	6.6%	8.3%
Rubber Tires	29.5%	13.2%	5.5%	12.2%	26.2%	33.4%	44.2%	40.4%	40.3%	39.9%
Batteries, Lead-Acid	Neg.	75.6%	69.8%	97.4%	93.4%	96.0%	98.7%	98.9%	99.3%	99.1%
Miscellaneous Durables										
Selected Consumer Electronics***					10.0%	13.7%	20.8%	39.7%	35.8%	35.9%
Other Miscellaneous Durables					5.2%	3.6%	2.7%	1.3%	2.2%	2.1%
<i>Total Miscellaneous Durables</i>	<i>0.2%</i>	<i>0.3%</i>	<i>0.4%</i>	<i>3.8%</i>	<i>5.8%</i>	<i>4.9%</i>	<i>5.4%</i>	<i>6.5%</i>	<i>6.5%</i>	<i>6.0%</i>
Total Durable Goods	3.5%	6.4%	6.2%	11.6%	16.9%	17.7%	19.0%	18.3%	18.9%	18.9%
Nondurable Goods	13.8%	14.9%	13.6%	16.9%	27.4%	31.1%	36.0%	31.2%	32.3%	32.1%
(Detail in Table 19)										
Containers and Packaging	10.5%	7.7%	16.1%	26.0%	38.1%	41.3%	48.6%	53.2%	51.9%	50.1%
(Detail in Table 25)										
Total Product Wastes†	10.3%	9.6%	13.3%	19.8%	29.7%	32.0%	36.6%	36.8%	36.6%	35.8%
Other Wastes										
Food^	Neg.	Neg.	Neg.	Neg.	2.2%	2.1%	2.7%	5.3%	5.3%	6.3%
Yard Trimmings	Neg.	Neg.	Neg.	12.0%	51.7%	61.9%	57.5%	61.3%	65.7%	69.4%
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
<i>Total Other Wastes</i>	<i>Neg.</i>	<i>Neg.</i>	<i>Neg.</i>	<i>6.8%</i>	<i>25.4%</i>	<i>29.9%</i>	<i>27.6%</i>	<i>29.8%</i>	<i>31.7%</i>	<i>33.8%</i>
Total MSW Recycled and Composted - %	6.4%	6.6%	9.6%	16.0%	28.5%	31.4%	34.0%	34.7%	35.1%	35.2%

* Recycling and composting of postconsumer wastes; does not include converting/fabrication scrap. Details may not add to totals due to rounding.

** Not estimated separately prior to 1990. † Other than food products.

*** Not estimated separately prior to 2000.

^ Includes collection of other MSW organics for composting.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 16. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2017
(With Detail On Durable Goods)**
(In thousands of tons and percent of total combusted)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods										
Major Appliances ^{‡\$}		0	0	0	0	0	0	0	0	0
Small Appliances**				90	200	200	310	380	380	390
Furniture and Furnishings		Neg.	90	1,150	1,570	1,700	1,910	2,350	2,380	2,380
Carpets and Rugs**				290	440	490	610	670	640	610
Rubber Tires [§]		Neg.	30	400	2,260	2,390	2,000	2,840	3,040	2,710
Batteries, Lead-Acid [‡]		0	0	0	0	0	0	0	0	0
Miscellaneous Durables										
Selected Consumer Electronics										
Other Miscellaneous Durables										
Total Miscellaneous Durables[§]		60	320	2,550	1,790	1,970	2,240	2,400	2,480	2,990
Total Durable Goods		60	440	4,480	6,260	6,750	7,070	8,640	8,920	9,080
Nondurable Goods		90	580	7,380	9,000	7,980	6,030	6,960	6,880	6,720
(Detail in Table 20)										
Containers and Packaging		150	880	8,110	9,110	8,160	6,870	7,160	7,480	7,860
(Detail in Table 26)										
Total Product Wastes†		300	1,900	19,970	24,370	22,890	19,970	22,760	23,280	23,660
Other Wastes										
Food		50	260	4,060	5,820	5,870	6,150	7,380	7,480	7,470
Yard Trimmings		90	550	5,240	2,860	2,220	2,510	2,630	2,350	2,110
Miscellaneous Inorganic Wastes		10	50	490	680	670	680	780	790	790
Total Other Wastes		150	860	9,790	9,360	8,760	9,340	10,790	10,620	10,370
Total MSW Combusted with Energy Recovery - Weight		450	2,760	29,760	33,730	31,650	29,310	33,550	33,900	34,030
Products	Percent of Total Combusted									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods										
Major Appliances ^{‡\$}		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Small Appliances**				0.3%	0.6%	0.6%	1.1%	1.1%	1.1%	1.1%
Furniture and Furnishings		Neg.	3.3%	3.9%	4.7%	5.4%	6.5%	7.0%	7.0%	7.0%
Carpets and Rugs**				1.0%	1.3%	1.5%	2.1%	2.0%	1.9%	1.8%
Rubber Tires [§]		Neg.	1.1%	1.3%	6.7%	7.6%	6.8%	8.5%	9.0%	8.0%
Batteries, Lead-Acid [‡]		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous Durables										
Selected Consumer Electronics										
Other Miscellaneous Durables										
Total Miscellaneous Durables[§]		13.3%	11.6%	8.6%	5.3%	6.2%	7.6%	7.2%	7.3%	8.8%
Total Durable Goods		13.3%	15.9%	15.1%	18.6%	21.3%	24.1%	25.8%	26.3%	26.7%
Nondurable Goods		19.9%	21.0%	24.8%	26.7%	25.2%	20.6%	20.7%	20.4%	19.8%
(Detail in Table 20)										
Containers and Packaging		33.3%	31.9%	27.3%	27.0%	25.8%	23.4%	21.4%	22.0%	23.0%
(Detail in Table 27)										
Total Product Wastes†		66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%

**Table 16. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2017
(With Detail On Durable Goods)**

(In thousands of tons and percent of total combusted)

Products		Percent of Total Combusted								
		1960	1970	1980	1990	2000	2005	2010	2015	2017
Other Wastes										
Food		11.1%	9.4%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings		20.0%	20.0%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes		2.3%	1.8%	1.7%	1.9%	2.1%	2.3%	2.3%	2.3%	2.3%
Total Other Wastes		33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Combusted with Energy Recovery - %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Products and materials combusted with energy recovery estimated at percentage total MSW after recovery for recycling and composting. In 2016 and 2017, 19.6 percent of MSW after recycling and composting was combusted with energy recovery except for major appliances, tires and lead-acid batteries. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Not estimated separately prior to 1990.

† Other than food products.

§ Tires: tires to fuel based on industry percentage estimates applied to tire generation. *Total Miscellaneous Durables*: calculated as difference between total durable goods going to combustion and individual durable goods shown. The amounts of consumer electronics going to combustion with energy recovery are not available and are included in *Total Miscellaneous Durables*.

± Energy Recovery Council, 2016. Major appliances and lead-acid batteries are not accepted at waste-to-energy facilities.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 17. Products Landfilled* in the Municipal Waste Stream, 1960 to 2017
(With Detail On Durable Goods)**
(In thousands of tons and percent of total landfilled)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Major Appliances	1,620	2,120	2,820	2,240	1,640	1,190	1,410	1,860	1,970	2,050
Small Appliances**				360	820	960	1,400	1,550	1,590	1,610
Furniture and Furnishings	2,150	2,830	4,670	5,640	6,550	7,640	8,900	9,690	9,800	9,790
Carpets and Rugs**				1,370	1,830	2,220	2,840	2,770	2,640	2,500
Rubber Tires	790	1,640	2,540	2,770	1,380	880	860	720	1,040	1,220
Batteries, Lead-Acid		200	450	40	150	110	40	30	20	30
Miscellaneous Durables										
Selected Consumer Electronics***										
Other Miscellaneous Durables										
Total Miscellaneous Durables	5,010	6,870	9,520	9,450	13,660	17,340	17,440	18,800	19,530	20,040
Total Durable Goods	9,570	13,660	20,000	21,870	26,030	30,340	32,890	35,420	36,590	37,240
Nondurable Goods	14,940	21,240	29,170	35,990	37,450	35,900	28,030	28,660	28,320	27,690
(Detail in Table 21)										
Containers and Packaging	24,500	40,060	43,300	39,640	37,860	36,670	31,920	29,270	30,720	32,130
(Detail in Table 28)										
Total Product Wastes†	49,010	74,960	92,470	97,500	101,340	102,910	92,840	93,350	95,630	97,060
Other Wastes										
Food	12,200	12,750	12,740	19,800	24,200	26,370	28,620	30,250	30,680	30,630
Yard Trimmings	20,000	23,110	26,950	25,560	11,900	9,990	11,690	10,800	9,640	8,650
Miscellaneous Inorganic Wastes	1,300	1,770	2,200	2,410	2,820	3,020	3,160	3,210	3,230	3,250
Total Other Wastes	33,500	37,630	41,890	47,770	38,920	39,380	43,470	44,260	43,550	42,530
Products										
Percent of Total Landfilled										
Major Appliances	2.0%	1.9%	2.1%	1.5%	1.2%	0.8%	1.0%	1.4%	1.4%	1.5%
Small Appliances**				0.2%	0.6%	0.7%	1.0%	1.1%	1.1%	1.2%
Furniture and Furnishings	2.6%	2.5%	3.5%	3.9%	4.7%	5.4%	6.5%	7.0%	7.0%	7.0%
Carpets and Rugs**				0.9%	1.3%	1.5%	2.1%	2.0%	1.9%	1.8%
Rubber Tires	1.0%	1.5%	1.9%	1.9%	1.0%	0.6%	0.6%	0.5%	0.7%	0.9%
Batteries, Lead-Acid	Neg.	0.2%	0.3%	0.1%	0.1%	0.1%	0.1%	Neg.	Neg.	Neg.
Miscellaneous Durables										
Selected Consumer Electronics***										
Other Miscellaneous Durables										
Total Miscellaneous Durables	6.1%	6.1%	7.1%	6.5%	9.7%	12.2%	12.8%	13.7%	14.0%	14.4%
Total Durable Goods	11.6%	12.1%	14.9%	15.0%	18.6%	21.3%	24.1%	25.7%	26.3%	26.7%
(Detail in Table 21)										
Containers and Packaging	29.7%	35.6%	32.2%	27.3%	27.0%	25.8%	23.4%	21.4%	22.1%	23.0%
(Detail in Table 29)										
Total Product Wastes†	59.4%	66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%
Other Wastes										
Food	14.8%	11.3%	9.5%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings	24.2%	20.5%	20.1%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	1.9%	2.2%	2.3%	2.3%	2.3%	2.3%
Total Other Wastes	40.6%	33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Landfilled - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Landfilling after recycling, composting and combustion with energy recovery. Details may not add to totals due to rounding.

** Not estimated separately prior to 1990.

*** The amount of consumer electronics going to combustion with energy recovery versus landfilling are not available. These products are included in Total Miscellaneous Durables.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 18. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(With Detail on Nondurable Goods)**
(In thousands of tons and percent of generation of each product)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	9,920	14,660	21,800	29,810	38,870	45,060	49,350	53,940	56,090	57,120
<i>(Detail in Table 14)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†	7,110	9,510	11,050	13,430	14,790	12,790	9,880	6,730	6,260	5,440
Directories†**				610	680	660	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines	1,920	2,470	3,390							
Books**				970	1,240	1,100	990	800	760	700
Magazines**				2,830	2,230	2,580	1,590	1,190	1,120	1,020
Office-Type Papers***	1,520	2,650	4,000	6,410	7,420	6,620	5,260	4,530	4,270	3,970
Marketing Mail§				3,820	5,570	5,830	4,340	4,050	3,980	3,790
Other Commercial Printing†	1,260	2,130	3,120	4,460	7,380	6,440	2,480	2,080	2,080	1,960
Tissue Paper and Towels	1,090	2,080	2,300	2,960	3,220	3,460	3,490	3,680	3,770	3,750
Paper Plates and Cups	270	420	630	650	960	1,160	1,350	1,360	1,430	1,440
Other Nonpackaging Paper	2,700	3,630	4,230	3,840	4,250	4,490	4,190	3,700	3,820	3,880
Total Other Paper Nondurable Goods							23,690	21,390	21,230	20,510
Disposable Diapers	Neg.	350	1,930	2,700	3,230	3,410	3,700	4,170	4,180	4,150
Plastic Plates and Cups¥			190	650	870	930	890	1,050	1,070	1,080
Trash Bags**				780	850	1,060	980	1,130	1,120	1,140
Clothing and Footwear	1,360	1,620	2,170	4,010	6,470	7,890	9,100	11,940	12,680	12,800
Towels, Sheets and Pillowcases**				710	820	980	1,290	1,350	1,400	1,470
Other Miscellaneous Nondurables	100	200	1,410	3,340	4,030	4,250	3,720	4,050	4,080	4,110
Total Nondurable Goods	17,330	25,060	34,420	52,170	64,010	63,650	53,250	51,810	52,020	50,700
Containers and Packaging	27,370	43,560	52,670	64,530	75,840	76,330	75,470	77,920	79,430	80,080
<i>(Detail in Table 22)</i>										
Total Product Wastes‡	54,620	83,280	108,890	146,510	178,720	185,040	178,070	183,670	187,540	187,900
Other Wastes	33,500	37,780	42,750	61,760	64,730	68,690	72,980	78,440	79,280	79,890
Total MSW Generated - Weight	88,120	121,060	151,640	208,270	243,450	253,730	251,050	262,110	266,820	267,790
Products	Percent of Generation of Each Product									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	11.3%	12.1%	14.4%	14.3%	16.0%	17.8%	19.7%	20.6%	21.0%	21.4%
<i>(Detail in Table 14)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†	8.1%	7.9%	7.3%	6.4%	6.1%	5.0%	3.9%	2.6%	2.3%	2.0%
Directories†**				0.3%	0.3%	0.3%	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines	2.2%	2.0%	2.2%							
Books**				0.5%	0.5%	0.4%	0.4%	0.3%	0.3%	0.3%
Magazines**				1.4%	0.9%	1.0%	0.6%	0.5%	0.4%	0.4%
Office-Type Papers***	1.7%	2.2%	2.6%	3.1%	3.0%	2.6%	2.1%	1.8%	1.6%	1.6%
Marketing Mail§				1.8%	2.3%	2.3%	1.7%	1.5%	1.5%	1.4%
Other Commercial Printing†	1.4%	1.8%	2.1%	2.1%	3.0%	2.5%	1.0%	0.8%	0.8%	0.7%
Tissue Paper and Towels	1.2%	1.7%	1.5%	1.4%	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%
Paper Plates and Cups	0.3%	0.3%	0.4%	0.3%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%
Other Nonpackaging Paper	3.1%	3.0%	2.8%	1.8%	1.7%	1.8%	1.7%	1.4%	1.5%	1.5%
Total Other Paper Nondurable Goods							9.4%	8.2%	8.0%	7.8%
Disposable Diapers	Neg.	0.3%	1.3%	1.3%	1.3%	1.3%	1.5%	1.6%	1.6%	1.5%
Plastic Plates and Cups¥			0.1%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Trash Bags**				0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%

Table 18. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(With Detail on Nondurable Goods)
(In thousands of tons and percent of generation of each product)

Products	Percent of Generation of Each Product									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Clothing and Footwear	1.5%	1.3%	1.4%	1.9%	2.7%	3.1%	3.6%	4.6%	4.8%	4.8%
Towels, Sheets and Pillowcases**				0.3%	0.3%	0.4%	0.5%	0.5%	0.5%	0.5%
Other Miscellaneous Nondurables	0.1%	0.2%	0.9%	1.6%	1.7%	1.7%	1.5%	1.5%	1.5%	1.5%
Total Nondurables	19.7%	20.7%	22.7%	25.0%	26.3%	25.1%	21.2%	19.8%	19.5%	18.9%
Containers and Packaging	31.1%	36.0%	34.7%	31.0%	31.2%	30.1%	30.1%	29.7%	29.8%	29.9%
(Detail in Table 23)										
Total Product Wastes‡	62.0%	68.8%	71.8%	70.3%	73.4%	72.9%	70.9%	70.1%	70.3%	70.2%
Other Wastes	38.0%	31.2%	28.2%	29.7%	26.6%	27.1%	29.1%	29.9%	29.7%	29.8%
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recycling, composting, combustion with energy recovery or landfilling. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

† Starting in 2010, newsprint and groundwood inserts expanded to include directories and other mechanical papers previously counted as Other Commercial Printing.

** Not estimated separately prior to 1990.

*** High-grade paper such as printer paper; generated in both commercial and residential sources.

§ Marketing Mail: Not estimated separately prior to 1990. Formerly called Third Class Mail and Standard Mail by the U.S. Postal Service.

¥ Plastic Plates and Cups: Not estimated separately prior to 1980.

‡ Other than food products.

- Detailed data not available.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 19. Products Recycled and Composted* in Municipal Solid Waste,
1960 to 2017
(With Detail on Nondurable Goods)**

(In thousands of tons and percent of generation of each product)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	350	940	1,360	3,460	6,580	7,970	9,390	9,880	10,580	10,800
<i>(Detail in Table 15)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†	1,820	2,250	3,020	5,110	8,720	9,360	7,070	4,790	4,490	4,180
Directories†**				50	120	120	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines	100	260	280							
Books**				100	240	270	-	-	-	-
Magazines**				300	710	960	-	-	-	-
Office-Type Papers***	250	710	870	1,700	4,090	4,110	-	-	-	-
Marketing Mail§				200	1,830	2,090	-	-	-	-
Other Commercial Printing†	130	340	350	700	810	1,440	-	-	-	-
Tissue Paper and Towels	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	-	-	-	-
Paper Plates and Cups	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	-	-	-	-
Other Nonpackaging Paper	40	110	Neg.	Neg.	Neg.	Neg.	-	-	-	-
Total Other Paper Nondurable Goods							10,650	9,330	10,200	9,910
Disposable Diapers				Neg.						
Plastic Plates and Cups¥				Neg.						
Trash Bags**				Neg.						
Clothing and Footwear	50	60	150	520	900	1,250	1,250	1,690	1,670	1,740
Towels, Sheets and Pillowcases**				120	140	170	220	220	220	240
Other Miscellaneous Nondurables	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	160	240	220
Total Nondurable Goods	2,390	3,730	4,670	8,800	17,560	19,770	19,190	16,190	16,820	16,290
Containers and Packaging	2,870	3,350	8,490	16,780	28,870	31,500	36,680	41,490	41,230	40,090
<i>(Detail in Table 24)</i>										
Total Product Wastes‡	5,610	8,020	14,520	29,040	53,010	59,240	65,260	67,560	68,630	67,180
Other Wastes		Neg.	Neg.	Neg.	4,200	16,450	20,550	20,170	23,390	25,110
Total MSW Recycled and Composted - Weight	5,610	8,020	14,520	33,240	69,460	79,790	85,430	90,950	93,740	94,170
Products	Percent of Generation of Each Product									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	3.5%	6.4%	6.2%	11.6%	16.9%	17.7%	19.0%	18.3%	18.9%	18.9%
<i>(Detail in Table 15)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†	25.6%	23.7%	27.3%	38.0%	59.0%	73.2%	71.6%	71.2%	71.7%	76.8%
Directories†**				8.2%	17.6%	18.2%	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines	5.2%	10.5%	8.3%							
Books**				10.3%	19.4%	24.5%	-	-	-	-
Magazines**				10.6%	31.8%	37.2%	-	-	-	-
Office-Type Papers***	16.4%	26.8%	21.8%	26.5%	55.1%	62.1%	-	-	-	-
Marketing Mail§				5.2%	32.9%	35.8%	-	-	-	-
Other Commercial Printing†	10.3%	16.0%	11.2%	15.7%	11.0%	22.4%	-	-	-	-
Tissue Paper and Towels	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	-	-	-	-
Paper Plates and Cups	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	-	-	-	-
Other Nonpackaging Paper	1.5%	3.0%	Neg.	Neg.	Neg.	Neg.	-	-	-	-
Total Other Paper Nondurable Goods							45.0%	43.6%	48.0%	48.3%

**Table 19. Products Recycled and Composted* in Municipal Solid Waste,
1960 to 2017**
(With Detail on Nondurable Goods)
(In thousands of tons and percent of generation of each product)

Products	Percent of Generation of Each Product									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Disposable Diapers				Neg.						
Plastic Plates and Cups¥			Neg.							
Trash Bags**				Neg.						
Clothing and Footwear	Neg.	Neg.	Neg.	13.0%	13.9%	15.8%	13.7%	14.2%	13.2%	13.6%
Towels, Sheets and Pillowcases**				16.9%	17.1%	17.3%	17.1%	16.3%	15.7%	16.3%
Other Miscellaneous Nondurables	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	4.0%	5.9%	5.4%
Total Nondurables	13.8%	14.9%	13.6%	16.9%	27.4%	31.1%	36.0%	31.2%	32.3%	32.1%
Containers and Packaging	10.5%	7.7%	16.1%	26.0%	38.1%	41.3%	48.6%	53.2%	51.9%	50.1%
(Detail in Table 25)										
Total Product Wastes‡	10.3%	9.6%	13.3%	19.8%	29.7%	32.0%	36.6%	36.8%	36.6%	35.8%
Other Wastes	Neg.	Neg.	Neg.	6.8%	25.4%	29.9%	27.6%	29.8%	31.7%	33.8%
Total MSW Recycled and Composted - %	6.4%	6.6%	9.6%	16.0%	28.5%	31.4%	34.0%	34.7%	35.1%	35.2%

* Recycling and composting of postconsumer wastes; does not include converting/fabrication scrap. Details may not add to totals due to rounding.

† Starting in 2010, newsprint and groundwood inserts expanded to include directories and other mechanical papers previously counted as Other Commercial Printing.

** Not estimated separately prior to 1990.

*** High-grade paper such as printer paper; generated in both commercial and residential sources.

§ Marketing Mail: Not estimated separately prior to 1990. Formerly called Third Class Mail and Standard Mail by the U.S. Postal Service.

¥ Plastic Plates and Cups: Not estimated separately prior to 1980.

‡ Other than food products.

- Detailed data not available.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 20. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2017
(With Detail on Nondurable Goods)**
(In thousands of tons and percent of total combusted)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	0	60	440	4,480	6,260	6,750	7,070	8,640	8,920	9,080
<i>(Detail in Table 16)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†	0	30	160	1,420	1,180	620	500	380	350	250
Directories†**				100	110	100	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines	0	10	60							
Books**				150	190	150	-	-	-	-
Magazines**				430	290	290	-	-	-	-
Office-Type Papers***	0	10	60	800	650	460	-	-	-	-
Marketing Mail§				620	730	680	-	-	-	-
Other Commercial Printing†	0	10	60	640	1,270	910	-	-	-	-
Tissue Paper and Towels	0	10	50	500	620	630	-	-	-	-
Paper Plates and Cups	0	Neg.	10	110	190	210	-	-	-	-
Other Nonpackaging Paper	0	10	80	650	820	820	-	-	-	-
Total Other Paper Nondurable Goods							2,310	2,360	2,160	2,080
Disposable Diapers		Neg.	30	460	630	620	650	810	810	810
Plastic Plates and Cups¥			Neg.	110	170	170	160	210	210	210
Trash Bags**				130	160	190	170	220	220	220
Clothing and Footwear	0	10	50	590	1,080	1,210	1,390	2,010	2,160	2,160
Towels, Sheets and Pillowcases**				100	130	150	190	220	230	240
Other Miscellaneous Nondurables	0	Neg.	20	570	780	770	660	750	740	750
Total Nondurables	0	90	580	7,380	9,000	7,980	6,030	6,960	6,880	6,720
Containers and Packaging	0	150	880	8,110	9,110	8,160	6,870	7,160	7,480	7,860
<i>(Detail in Table 26)</i>										
Total Product Wastes‡	0	300	1,900	19,970	24,370	22,890	19,970	22,760	23,280	23,660
Other Wastes	0	150	860	9,790	9,360	8,760	9,340	10,790	10,620	10,370
Total MSW Combusted with Energy Recovery - Weight	0	450	2,760	29,760	33,730	31,650	29,310	33,550	33,900	34,030
Products	Percent of Total Combusted									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods		13.3%	15.9%	15.1%	18.6%	21.3%	24.1%	25.8%	26.3%	26.7%
<i>(Detail in Table 16)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†		6.7%	5.8%	4.8%	3.5%	2.0%	1.7%	1.1%	1.0%	0.7%
Directories†**				0.3%	0.3%	0.3%	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines		2.2%	2.2%							
Books**				0.5%	0.6%	0.5%	-	-	-	-
Magazines**				1.4%	0.9%	0.9%	-	-	-	-
Office-Type Papers***		2.2%	2.2%	2.7%	1.8%	1.4%	-	-	-	-
Marketing Mail§				2.1%	2.2%	2.1%	-	-	-	-
Other Commercial Printing†		2.2%	2.2%	2.2%	3.8%	2.9%	-	-	-	-

Table 20. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2017
(With Detail on Nondurable Goods)
(In thousands of tons and percent of total combusted)

Products	Percent of Total Combusted									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Tissue Paper and Towels		2.2%	1.8%	1.7%	1.8%	2.0%	-	-	-	-
Paper Plates and Cups		Neg.	0.4%	0.4%	0.6%	0.7%	-	-	-	-
Other Nonpackaging Paper		2.2%	2.8%	2.2%	2.4%	2.6%	-	-	-	-
Total Other Paper Nondurable Goods							7.9%	7.0%	6.4%	6.1%
Disposable Diapers		Neg.	1.1%	1.5%	1.9%	2.0%	2.2%	2.4%	2.4%	2.4%
Plastic Plates and Cups [¥]			Neg.	0.4%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%
Trash Bags**				0.4%	0.5%	0.6%	0.6%	0.7%	0.6%	0.6%
Clothing and Footwear		2.2%	1.8%	2.0%	3.2%	3.8%	4.7%	6.0%	6.4%	6.3%
Towels, Sheets and Pillowcases**				0.3%	0.4%	0.5%	0.7%	0.7%	0.7%	0.7%
Other Miscellaneous Nondurables		Neg.	0.7%	1.9%	2.3%	2.4%	2.3%	2.2%	2.3%	2.3%
Total Nondurables		19.9%	21.0%	24.8%	26.7%	25.2%	20.6%	20.7%	20.4%	19.8%
Containers and Packaging		33.3%	31.9%	27.3%	27.0%	25.8%	23.4%	21.4%	22.0%	23.0%
<i>(Detail in Table 27)</i>										
Total Product Wastes†		66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%
Other Wastes		33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Combusted with Energy Recovery - %		100.0%								

* Products and materials combusted with energy recovery estimated at percentage total MSW after recovery for recycling and composting. In 2016 and 2017, 19.6 percent of MSW after recycling and composting was combusted with energy recovery. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

† Starting in 2010, newsprint and groundwood inserts expanded to include directories and other mechanical papers previously counted as Other Commercial Printing.

** Not estimated separately prior to 1990.

*** High-grade paper such as printer paper; generated in both commercial and residential sources.

§ Marketing Mail: Not estimated separately prior to 1990. Formerly called Third Class Mail and Standard Mail by the U.S. Postal Service.

¥ Plastic Plates and Cups: Not estimated separately prior to 1980.

‡ Other than food products.

- Detailed data not available.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 21. Products Landfilled* in Municipal Solid Waste, 1960 to 2017
(With Detail on Nondurable Goods)**
(In thousands of tons and percent of total landfilled)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	9,570	13,660	20,000	21,870	26,030	30,340	32,890	35,420	36,590	37,240
<i>(Detail in Table 17)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†	5,290	7,230	7,870	6,900	4,890	2,810	2,310	1,560	1,420	1,010
Directories†**				460	450	440	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines	1,820	2,200	3,050							
Books**				720	810	680	-	-	-	-
Magazines**				2,100	1,230	1,330	-	-	-	-
Office-Type Papers***	1,270	1,930	3,070	3,910	2,680	2,050	-	-	-	-
Marketing Mail§				3,000	3,010	3,060	-	-	-	-
Other Commercial Printing†	1,130	1,780	2,710	3,120	5,300	4,090	-	-	-	-
Tissue Paper and Towels	1,090	2,070	2,250	2,460	2,600	2,830	-	-	-	-
Paper Plates and Cups	270	420	620	540	770	950	-	-	-	-
Other Nonpackaging Paper	2,660	3,510	4,150	3,190	3,430	3,670	-	-	-	-
Total Other Paper Nondurable Goods							10,730	9,700	8,870	8,520
Disposable Diapers		350	1,900	2,240	2,600	2,790	3,050	3,360	3,370	3,340
Plastic Plates and Cups¥			190	540	700	760	730	840	860	870
Trash Bags**				650	690	870	810	910	900	920
Clothing and Footwear	1,310	1,550	1,970	2,900	4,490	5,430	6,460	8,240	8,850	8,900
Towels, Sheets and Pillowcases**				490	550	660	880	910	950	990
Other Miscellaneous Nondurables	100	200	1,390	2,770	3,250	3,480	3,060	3,140	3,100	3,140
Total Nondurables	14,940	21,240	29,170	35,990	37,450	35,900	28,030	28,660	28,320	27,690
Containers and Packaging	24,500	40,060	43,300	39,640	37,860	36,670	31,920	29,270	30,720	32,130
<i>(Detail in Table 28)</i>										
Total Product Wastes‡	49,010	74,960	92,470	97,500	101,340	102,910	92,840	93,350	95,630	97,060
Other Wastes	33,500	37,630	41,890	47,770	38,920	39,380	43,470	44,260	43,550	42,530
Total MSW Landfilled - Weight	82,510	112,590	134,360	145,270	140,260	142,290	136,310	137,610	139,180	139,590
Products	Percent of Total Landfilled									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	11.6%	12.1%	14.9%	15.1%	18.6%	21.3%	24.1%	25.7%	26.3%	26.7%
<i>(Detail in Table 17)</i>										
Nondurable Goods										
Newspapers/Mechanical Papers†	6.4%	6.4%	5.9%	4.7%	3.5%	2.0%	1.7%	1.1%	1.0%	0.7%
Directories†**				0.3%	0.3%	0.3%	-	-	-	-
Other Paper Nondurable Goods										
Books and Magazines	2.2%	2.0%	2.3%							
Books**				0.5%	0.6%	0.5%	-	-	-	-
Magazines**				1.4%	0.9%	0.9%	-	-	-	-
Office-Type Papers***	1.5%	1.7%	2.3%	2.7%	1.9%	1.4%	-	-	-	-
Marketing Mail§				2.1%	2.1%	2.1%	-	-	-	-
Other Commercial Printing	1.4%	1.6%	2.0%	2.1%	3.8%	2.9%	-	-	-	-
Tissue Paper and Towels	1.3%	1.8%	1.7%	1.7%	1.9%	2.0%	-	-	-	-
Paper Plates and Cups	0.3%	0.4%	0.5%	0.4%	0.5%	0.7%	-	-	-	-
Other Nonpackaging Paper	3.2%	3.1%	3.1%	2.2%	2.4%	2.6%	-	-	-	-
Total Other Paper Nondurable Goods							7.9%	7.0%	6.4%	6.1%

**Table 21. Products Landfilled* in Municipal Solid Waste, 1960 to 2017
(With Detail on Nondurable Goods)
(In thousands of tons and percent of total landfilled)**

Products	Percent of Total Landfilled									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Disposable Diapers	Neg.	0.3%	1.4%	1.5%	1.9%	2.0%	2.2%	2.4%	2.4%	2.4%
Plastic Plates and Cups¥			0.1%	0.4%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%
Trash Bags**				0.4%	0.5%	0.6%	0.6%	0.7%	0.6%	0.7%
Clothing and Footwear	1.6%	1.4%	1.5%	2.0%	3.2%	3.8%	4.7%	6.0%	6.4%	6.4%
Towels, Sheets and Pillowcases**				0.3%	0.4%	0.5%	0.6%	0.7%	0.7%	0.7%
Other Miscellaneous Nondurables	0.1%	0.2%	1.0%	1.9%	2.3%	2.4%	2.3%	2.3%	2.2%	2.2%
Total Nondurables	18.1%	18.9%	21.7%	24.8%	26.7%	25.2%	20.6%	20.8%	20.3%	19.8%
Containers and Packaging	29.7%	35.6%	32.2%	27.3%	27.0%	25.8%	23.4%	21.4%	22.1%	23.0%
(Detail in Table 29)										
Total Product Wastes‡	59.4%	66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%
Other Wastes	40.6%	33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Landfilled - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Landfilling after recycling, composting and combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

† Starting in 2010, newsprint and groundwood inserts expanded to include directories and other mechanical papers previously counted as Other Commercial Printing.

** Not estimated separately prior to 1990.

*** High-grade paper such as printer paper; generated in both commercial and residential sources.

§ Marketing Mail: Not estimated separately prior to 1990. Formerly called Third Class Mail and Standard Mail by the U.S. Postal Service.

¥ Plastic Plates and Cups: Not estimated separately prior to 1980.

‡ Other than food products.

- Detailed data not available.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 22. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(With Detail on Containers and Packaging)**
(In thousands of tons)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	9,920	14,660	21,800	29,810	38,870	45,060	49,350	53,940	56,090	57,120
(Detail in Table 14)										
Nondurable Goods	17,330	25,060	34,420	52,170	64,010	63,650	53,250	51,810	52,020	50,700
(Detail in Table 18)										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**	1,400	5,580	6,740	5,640	5,710	6,540	5,670	5,320	5,400	5,270
Wine and Liquor Bottles	1,080	1,900	2,450	2,030	1,910	1,630	1,700	1,810	1,780	1,740
Other Bottles & Jars	3,710	4,440	4,780	4,160	3,420	2,290	1,990	1,990	1,910	1,920
Total Glass Packaging	6,190	11,920	13,970	11,830	11,040	10,460	9,360	9,120	9,090	8,930
Steel Packaging										
Beer and Soft Drink Cans	640	1,570	520	150	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans	3,760	3,540	2,850	2,540	2,630	2,130	2,300	1,740	1,710	1,480
Other Steel Packaging	260	270	240	200	240	240	440	480	430	530
Total Steel Packaging	4,660	5,380	3,610	2,890	2,870	2,370	2,740	2,220	2,140	2,010
Aluminum Packaging										
Beer and Soft Drink Cans	Neg.	100	850	1,550	1,520	1,450	1,370	1,220	1,250	1,260
Other Cans	Neg.	60	40	20	50	80	70	130	120	130
Foil and Closures	170	410	380	330	380	400	460	490	530	500
Total Aluminum Packaging	170	570	1,270	1,900	1,950	1,930	1,900	1,840	1,900	1,890
Paper & Paperboard Pkg										
Corrugated Boxes	7,330	12,760	17,080	24,010	30,210	30,930	29,050	31,330	31,520	32,540
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons‡			790	510	550	500	540	590	600	590
Folding Cartons			3,820	4,300	5,820	5,530	5,470	5,380	5,300	5,330
Other Paperboard Packaging	3,840	4,830	230	290	200	160	90	70	80	50
Bags and Sacks			3,380	2,440	1,490	1,120	1,040	930	1,090	1,100
Wrapping Papers			200	110	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	2,940	3,810	850	1,020	1,670	1,400	1,490	1,620	1,400	1,450
Subtotal Other Paper & Paperboard Pkg	6,780	8,640	9,270	8,670	9,730	8,710	8,630	8,590	8,470	8,520
Total Paper & Board Pkg	14,110	21,400	26,350	32,680	39,940	39,640	37,680	39,920	39,990	41,060
Plastics Packaging										
PET Bottles and Jars			260	430	1,720	2,540	2,670	2,980	3,080	2,960
HDPE Natural Bottles			230	530	690	800	800	760	770	770
Other Containers	60	910	890	1,430	1,740	1,420	1,830	1,940	1,970	1,990
Bags and Sacks			390	940	1,650	1,640	770	-	-	-
Wraps			840	1,530	2,550	2,810	3,160	-	-	-
Subtotal Bags, Sacks and Wraps			1,230	2,470	4,200	4,450	3,930	4,130	4,090	4,140
Other Plastics Packaging	60	1,180	790	2,040	2,840	3,210	4,450	4,870	4,600	4,630
Total Plastics Packaging	120	2,090	3,400	6,900	11,190	12,420	13,680	14,680	14,510	14,490
Other Packaging										
Wood Packaging	2,000	2,070	3,940	8,180	8,610	9,230	9,770	9,770	11,450	11,350
Other Misc. Packaging	120	130	130	150	240	280	340	370	350	350
Total Containers & Pkg	27,370	43,560	52,670	64,530	75,840	76,330	75,470	77,920	79,430	80,080
Total Product Wastes†	54,620	83,280	108,890	146,510	178,720	185,040	178,070	183,670	187,540	187,900

**Table 22. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(With Detail on Containers and Packaging)**
(In thousands of tons)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Other Wastes										
Food	12,200	12,800	13,000	23,860	30,700	32,930	35,740	39,730	40,310	40,670
Yard Trimmings	20,000	23,200	27,500	35,000	30,530	32,070	33,400	34,720	34,950	35,180
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,690	3,840	3,990	4,020	4,040
Total Other Wastes	33,500	37,780	42,750	61,760	64,730	68,690	72,980	78,440	79,280	79,890
Total MSW Generated - Weight	88,120	121,060	151,640	208,270	243,450	253,730	251,050	262,110	266,820	267,790

* Generation before materials recycling, composting, combustion with energy recovery or landfilling. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

‡ Includes milk, juice and other products packaged in gable top cartons and liquid food aseptic cartons.

† Other than food products. Neg. = Less than 5,000 tons or 0.05 percent. NA = Not Available - Detailed data not available.

**Table 23. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(With Detail on Containers and Packaging)**
(In percent of total generation)

Products	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	11.3%	12.1%	14.4%	14.3%	16.0%	17.8%	19.7%	20.6%	21.0%	21.4%
<i>(Detail in Table 14)</i>										
Nondurable Goods	19.7%	20.7%	22.7%	25.0%	26.3%	25.1%	21.2%	19.8%	19.5%	18.9%
<i>(Detail in Table 18)</i>										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**	1.6%	4.6%	4.4%	2.7%	2.3%	2.6%	2.3%	2.0%	2.0%	2.0%
Wine and Liquor Bottles	1.2%	1.6%	1.6%	1.0%	0.8%	0.6%	0.7%	0.7%	0.7%	0.7%
Other Bottles & Jars	4.2%	3.7%	3.2%	2.0%	1.4%	0.9%	0.8%	0.8%	0.7%	0.7%
Total Glass Packaging	7.0%	9.8%	9.2%	5.7%	4.5%	4.1%	3.7%	3.5%	3.4%	3.4%
Steel Packaging										
Beer and Soft Drink Cans	0.7%	1.3%	0.3%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans	4.3%	2.9%	1.9%	1.2%	1.1%	0.8%	0.9%	0.7%	0.6%	0.6%
Other Steel Packaging	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%
Total Steel Packaging	5.3%	4.4%	2.4%	1.4%	1.2%	0.9%	1.1%	0.9%	0.8%	0.8%
Aluminum Packaging										
Beer and Soft Drink Cans	Neg.	0.1%	0.6%	0.7%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%
Other Cans	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	0.03%	0.04%	0.05%	0.05%
Foil and Closures	0.2%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Total Aluminum Packaging	0.2%	0.5%	0.8%	0.9%	0.8%	0.8%	0.8%	0.7%	0.8%	0.8%
Paper & Paperboard Pkg										
Corrugated Boxes	8.3%	10.5%	11.3%	11.5%	12.4%	12.2%	11.6%	12.0%	11.8%	12.2%
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons‡			0.5%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Folding Cartons			2.5%	2.1%	2.4%	2.2%	2.2%	2.1%	2.0%	2.0%
Other Paperboard Packaging	4.4%	4.0%	0.2%	0.1%	0.1%	0.1%	0.0%	Neg.	Neg.	Neg.
Bags and Sacks			2.2%	1.2%	0.6%	0.4%	0.4%	0.4%	0.4%	0.4%
Wrapping Papers			0.1%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	3.3%	3.1%	0.6%	0.5%	0.7%	0.6%	0.6%	0.6%	0.6%	0.5%
Subtotal Other Paper & Paperboard Pkg							3.4%	3.3%	3.2%	3.1%
Total Paper & Board Pkg	16.0%	17.7%	17.4%	15.7%	16.4%	15.6%	15.0%	15.3%	15.0%	15.3%
Plastics Packaging										
PET Bottles and Jars			0.2%	0.2%	0.7%	1.0%	1.1%	1.1%	1.2%	1.1%
HDPE Natural Bottles			0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Other Containers	0.1%	0.8%	0.6%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	0.7%
Bags and Sacks			0.3%	0.5%	0.7%	0.6%	0.3%	-	-	-
Wraps			0.6%	0.7%	1.0%	1.1%	1.3%	-	-	-
Subtotal Bags, Sacks and Wraps			0.8%	1.2%	1.7%	1.8%	1.6%	1.6%	1.5%	1.5%
Other Plastics Packaging	0.1%	1.0%	0.5%	1.0%	1.2%	1.3%	1.8%	1.8%	1.7%	1.7%
Total Plastics Packaging	0.1%	1.7%	2.2%	3.3%	4.6%	4.9%	5.4%	5.5%	5.4%	5.3%
Other Packaging										
Wood Packaging	2.3%	1.7%	2.6%	3.9%	3.5%	3.6%	3.9%	3.7%	4.3%	4.2%
Other Misc. Packaging	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Total Containers & Pkg	31.1%	36.0%	34.7%	31.0%	31.2%	30.1%	30.1%	29.7%	29.8%	29.9%
Total Product Wastes†	62.0%	68.8%	71.8%	70.3%	73.4%	72.9%	70.9%	70.1%	70.3%	70.2%

**Table 23. Products Generated* in the Municipal Waste Stream, 1960 to 2017
(With Detail on Containers and Packaging)
(In percent of total generation)**

Products	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Other Wastes										
Food	13.8%	10.6%	8.6%	11.5%	12.6%	13.0%	14.2%	15.2%	15.1%	15.2%
Yard Trimmings	22.7%	19.2%	18.1%	16.8%	12.5%	12.6%	13.3%	13.2%	13.1%	13.1%
Miscellaneous Inorganic Wastes	1.5%	1.5%	1.5%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Total Other Wastes	38.0%	31.2%	28.2%	29.7%	26.6%	27.1%	29.1%	29.9%	29.7%	29.8%
Total MSW Recycled and Composted - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recycling, composting, combustion with energy recovery or landfilling. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

‡ Includes milk, juice, and other products packaged in gable top cartons and liquid food aseptic cartons.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent.

**Table 24. Products Recycled and Composted* in Municipal Solid Waste,
1960 to 2017**
(With Detail on Containers and Packaging)
(In thousands of tons)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	350	940	1,360	3,460	6,580	7,970	9,390	9,880	10,580	10,800
(Detail in Table 15)										
Nondurable Goods	2,390	3,730	4,670	8,800	17,560	19,770	19,190	16,190	16,820	16,290
(Detail in Table 19)										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**	90	140	730	1,890	1,530	2,000	2,350	2,230	2,230	2,060
Wine and Liquor Bottles	10	10	20	210	430	250	540	660	640	680
Other Bottles & Jars	Neg.	Neg.	Neg.	520	920	340	240	300	290	290
Total Glass Packaging	100	150	750	2,620	2,880	2,590	3,130	3,190	3,160	3,030
Steel Packaging										
Beer and Soft Drink Cans	10	20	50	40	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans	20	60	150	590	1,530	1,340	1,540	1,240	1,210	1,050
Other Steel Packaging	Neg.	Neg.	Neg.	60	160	160	350	380	340	420
Total Steel Packaging	30	80	200	690	1,690	1,500	1,890	1,620	1,550	1,470
Aluminum Packaging										
Beer and Soft Drink Cans	Neg.	10	320	990	830	650	680	670	620	620
Other Cans	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	NA	NA	NA	NA
Foil and Closures	Neg.	Neg.	Neg.	20	30	40	NA	NA	NA	NA
Total Aluminum Pkg	Neg.	10	320	1,010	860	690	680	670	620	620
Paper & Paperboard Pkg										
Corrugated Boxes	2,520	2,760	6,390	11,530	20,330	22,100	24,690	28,930	29,150	28,780
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons‡			Neg.	Neg.	Neg.	Neg.	-	-	-	-
Folding Cartons			520	340	410	1,190	-	-	-	-
Other Paperboard Packaging			Neg.	Neg.	Neg.	Neg.	-	-	-	-
Bags and Sacks			Neg.	200	300	320	-	-	-	-
Wrapping Papers			Neg.	Neg.	Neg.	Neg.	-	-	-	-
Other Paper Packaging	220	350	300	Neg.	Neg.	Neg.	-	-	-	-
Subtotal Other Paper & Paperboard Pkg							2,160	2,270	1,680	1,300
Total Paper & Board Pkg	2,740	3,110	7,210	12,070	21,040	23,610	26,850	31,200	30,830	30,080
Plastics Packaging										
PET Bottles and Jars			10	140	380	590	780	890	880	860
HDPE Natural Bottles			Neg.	20	210	230	220	230	230	240
Other Containers	Neg.	Neg.	Neg.	20	170	140	300	360	350	300
Bags and Sacks										
Wraps										
Subtotal Bags, Sacks and Wraps			Neg.	60	180	230	450	530	520	390
Other Plastics Packaging	Neg.	Neg.	Neg.	20	90	90	100	140	150	100
Total Plastics Packaging	Neg.	Neg.	10	260	1,030	1,280	1,850	2,150	2,130	1,890
Other Packaging										
Wood Packaging	Neg.	Neg.	Neg.	130	1,370	1,830	2,280	2,660	2,940	3,000
Other Misc. Packaging	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Containers & Pkg	2,870	3,350	8,490	16,780	28,870	31,500	36,680	41,490	41,230	40,090
Total Product Wastes†	5,610	8,020	14,520	29,040	53,010	59,240	65,260	67,560	68,630	67,180

**Table 24. Products Recycled and Composted* in Municipal Solid Waste,
1960 to 2017**
(With Detail on Containers and Packaging)
(In thousands of tons)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Other Wastes										
Food [†]	Neg.	Neg.	Neg.	Neg.	680	690	970	2,100	2,150	2,570
Yard Trimmings	Neg.	Neg.	Neg.	4,200	15,770	19,860	19,200	21,290	22,960	24,420
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	4,200	16,450	20,550	20,170	23,390	25,110	26,990
Total MSW Recycled and Composted - Weight	5,610	8,020	14,520	33,240	69,460	79,790	85,430	90,950	93,740	94,170

* Recycling and composting of postconsumer wastes; does not include converting/fabrication scrap. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

† Includes milk, juice and other products packaged in gable top cartons and liquid food aseptic cartons.

‡ Other than food products.

^ Includes collection of other MSW organics for composting.

Neg. = Less than 5,000 tons or 0.05 percent.

NA = Not Available

- Detailed data not available.

**Table 25. Products Recycled and Composted* in Municipal Solid Waste,
1960 to 2017**
(With Detail on Containers and Packaging)
(In percent of generation of each product)

Products	Percent of Generation of Each Product									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	3.5%	6.4%	6.2%	11.6%	16.9%	17.7%	19.0%	18.3%	18.9%	18.9%
(Detail in Table 15)										
Nondurable Goods	13.8%	14.9%	13.6%	16.9%	27.4%	31.1%	36.0%	31.2%	32.3%	32.1%
(Detail in Table 19)										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**	6.4%	2.5%	10.8%	33.5%	26.8%	30.6%	41.4%	41.9%	41.3%	39.1%
Wine and Liquor Bottles	Neg.	Neg.	Neg.	10.3%	22.5%	15.3%	31.8%	36.5%	36.0%	39.1%
Other Bottles & Jars	Neg.	Neg.	Neg.	12.5%	26.9%	14.8%	12.1%	15.1%	15.2%	15.1%
Total Glass Packaging	1.6%	1.3%	5.4%	22.1%	26.1%	24.8%	33.4%	35.0%	34.8%	33.9%
Steel Packaging										
Beer and Soft Drink Cans	1.6%	1.3%	9.6%	26.7%	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans	Neg.	1.7%	5.3%	23.2%	58.2%	62.9%	67.0%	71.3%	70.8%	70.9%
Other Steel Packaging	Neg.	Neg.	Neg.	30.0%	66.7%	66.7%	79.5%	79.2%	79.1%	79.2%
Total Steel Packaging	Neg.	1.5%	5.5%	23.9%	58.9%	63.3%	69.0%	73.0%	72.4%	73.1%
Aluminum Packaging										
Beer and Soft Drink Cans	Neg.	10.0%	37.6%	63.9%	54.6%	44.8%	49.6%	54.9%	49.6%	49.2%
Other Cans	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	NA	NA	NA	NA
Foil and Closures	Neg.	Neg.	Neg.	6.1%	7.9%	10.0%	NA	NA	NA	NA
Total Aluminum Pkg	Neg.	1.8%	25.2%	53.2%	44.1%	35.8%	35.8%	36.4%	32.6%	32.8%
Paper & Paperboard Pkg										
Corrugated Boxes	34.4%	21.6%	37.4%	48.0%	67.3%	71.5%	85.0%	92.3%	92.5%	88.4%
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons‡			Neg.	Neg.	Neg.	Neg.	-	-	-	-
Folding Cartons				Neg.	Neg.	7.0%	21.5%	-	-	-
Other Paperboard Packaging				Neg.	Neg.	Neg.	Neg.	-	-	-
Bags and Sacks				Neg.	Neg.	20.1%	28.6%	-	-	-
Wrapping Papers				Neg.	Neg.	Neg.	Neg.	-	-	-
Other Paper Packaging	7.5%	9.2%	35.3%	Neg.	Neg.	Neg.	-	-	-	-
Subtotal Other Paper & Paperboard Pkg							25.0%	26.4%	19.8%	15.3%
Total Paper & Board Pkg	19.4%	14.5%	27.4%	36.9%	52.7%	59.6%	71.3%	78.2%	77.1%	73.3%
Plastics Packaging										
PET Bottles and Jars			3.8%	32.6%	22.1%	23.2%	29.2%	29.9%	28.6%	29.1%
HDPE Natural Bottles				Neg.	3.8%	30.4%	28.8%	27.5%	30.3%	29.9%
Other Containers	Neg.	Neg.	Neg.	1.4%	9.8%	9.9%	16.4%	18.6%	17.8%	15.1%
Bags and Sacks										
Wraps										
Subtotal Bags, Sacks and Wraps			Neg.	2.4%	4.3%	5.2%	11.5%	12.8%	12.7%	9.4%
Other Plastics Packaging	Neg.	Neg.	Neg.	1.0%	3.2%	2.8%	2.2%	2.9%	3.3%	2.2%
Total Plastics Packaging	Neg.	Neg.	Neg.	3.8%	9.2%	10.3%	13.5%	14.6%	14.7%	13.0%
Other Packaging										
Wood Packaging	Neg.	Neg.	Neg.	1.6%	15.9%	19.8%	23.3%	27.2%	25.7%	26.4%
Other Misc. Packaging	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Containers & Pkg	10.5%	7.7%	16.1%	26.0%	38.1%	41.3%	48.6%	53.2%	51.9%	50.1%
Total Product Wastes†	10.3%	9.6%	13.3%	19.8%	29.7%	32.0%	36.6%	36.8%	36.6%	35.8%

**Table 25. Products Recycled and Composted* in Municipal Solid Waste,
1960 to 2017**
(With Detail on Containers and Packaging)
(In percent of generation of each product)

Products	Percent of Generation of Each Product									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Other Wastes										
Food [^]	Neg.	Neg.	Neg.	Neg.	2.2%	2.1%	2.7%	5.3%	5.3%	6.3%
Yard Trimmings	Neg.	Neg.	Neg.	12.0%	51.7%	61.9%	57.5%	61.3%	65.7%	69.4%
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	6.8%	25.4%	29.9%	27.6%	29.8%	31.7%	33.8%
Total MSW Recycled and Composted - %	6.4%	6.6%	9.6%	16.0%	28.5%	31.4%	34.0%	34.7%	35.1%	35.2%

* Recycling and composting of postconsumer wastes; does not include converting/fabrication scrap. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

Includes milk, juice and other products packaged in gable top cartons and liquid food aseptic cartons.

† Other than food products.

^ Includes collection of other MSW organics for composting.

Neg. = Less than 5,000 tons or 0.05 percent. NA = Not Available - Detailed data not available.

**Table 26. Products Combusted with Energy Recovery* in Municipal Solid Waste,
1960 to 2017**
(With Detail on Containers and Packaging)
(In thousands of tons)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	0	60	440	4,480	6,260	6,750	7,070	8,640	8,920	9,080
<i>(Detail in Table 16)</i>										
Nondurable Goods	0	90	580	7,380	9,000	7,980	6,030	6,960	6,880	6,720
<i>(Detail in Table 20)</i>										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**	0	20	120	640	810	830	590	610	620	630
Wine and Liquor Bottles	0	10	50	310	290	250	210	230	220	210
Other Bottles & Jars	0	20	100	620	490	350	310	330	320	320
Total Glass Packaging	0	50	270	1,570	1,590	1,430	1,110	1,170	1,160	1,160
Steel Packaging										
Beer and Soft Drink Cans	0	10	10	20	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans	0	10	50	330	210	140	130	100	100	80
Other Steel Packaging	0	Neg.	Neg.	20	20	10	20	20	20	20
Total Steel Packaging	0	20	60	370	230	150	150	120	120	100
Aluminum Packaging										
Beer and Soft Drink Cans	0	Neg.	10	100	130	150	120	110	120	130
Other Cans	0	Neg.	Neg.	Neg.	10	10	10	30	20	30
Foil and Closures	0	Neg.	10	50	70	70	80	100	100	100
Total Aluminum Pkg	0	Neg.	20	150	210	230	210	240	240	260
Paper & Paperboard Pkg										
Corrugated Boxes	0	40	210	2,120	1,920	1,610	770	470	460	740
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons‡			20	90	110	90	-	-	-	-
Folding Cartons			70	670	1,050	790	-	-	-	-
Other Paperboard Packaging	0	20	Neg.	50	40	30	-	-	-	-
Bags and Sacks			70	380	230	150	-	-	-	-
Wrapping Papers			Neg.	20	Neg.	Neg.	-	-	-	-
Other Paper Packaging	0	10	10	170	320	250	-	-	-	-
Subtotal Other Paper & Paperboard Pkg							1,150	1,240	1,330	1,420
Total Paper & Board Pkg	0	70	380	3,500	3,670	2,920	1,920	1,710	1,790	2,160
Plastics Packaging										
PET Bottles and Jars			Neg.	50	260	350	330	410	430	410
HDPE Natural Bottles			Neg.	90	90	100	100	100	110	100
Other Containers	0	Neg.	20	240	300	230	270	310	320	330
Bags and Sacks										
Wraps										
Subtotal Bags, Sacks and Wraps			30	410	780	770	620	710	700	740
Other Plastics Packaging	0	Neg.	20	340	530	570	770	930	870	890
Total Plastics Packaging	0	Neg.	70	1,130	1,960	2,020	2,090	2,460	2,430	2,470

**Table 26. Products Combusted with Energy Recovery* in Municipal Solid Waste,
1960 to 2017**
(With Detail on Containers and Packaging)
(In thousands of tons)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Other Packaging										
Wood Packaging	0	10	80	1,370	1,400	1,350	1,330	1,390	1,670	1,640
Other Misc. Packaging	0	Neg.	Neg.	20	50	60	60	70	70	70
Total Containers & Pkg	0	150	880	8,110	9,110	8,160	6,870	7,160	7,480	7,860
Total Product Wastes†	0	300	1,900	19,970	24,370	22,890	19,970	22,760	23,280	23,660
Other Wastes										
Food	0	50	260	4,060	5,820	5,870	6,150	7,380	7,480	7,470
Yard Trimmings	0	90	550	5,240	2,860	2,220	2,510	2,630	2,350	2,110
Miscellaneous Inorganic Wastes	0	10	50	490	680	670	680	780	790	790
Total Other Wastes	0	150	860	9,790	9,360	8,760	9,340	10,790	10,620	10,370
Total MSW Combusted with Energy Recovery - Weight	0	450	2,760	29,760	33,730	31,650	29,310	33,550	33,900	34,030

* Products and materials combusted with energy recovery estimated at percentage total MSW after recovery for recycling and composting. In 2016 and 2017, 19.6 percent of MSW after recycling and composting was combusted with energy recovery. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

‡ Includes milk, juice and other products packaged in gable top cartons and liquid food aseptic cartons.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. NA = Not Available - Detailed data not available.

**Table 27. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2017
(With Detail on Containers and Packaging)**
(In percent of total combusted)

Products	Percent of Total Combusted									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods		13.3%	15.9%	15.1%	18.6%	21.3%	24.1%	25.8%	26.3%	26.7%
<i>(Detail in Table 16)</i>										
Nondurable Goods		19.9%	21.0%	24.8%	26.7%	25.2%	20.6%	20.7%	20.4%	19.8%
<i>(Detail in Table 20)</i>										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**		4.5%	4.3%	2.2%	2.4%	2.6%	2.0%	1.8%	1.8%	1.9%
Wine and Liquor Bottles		2.2%	1.8%	1.0%	0.8%	0.8%	0.7%	0.7%	0.6%	0.6%
Other Bottles & Jars		4.4%	3.6%	2.1%	1.5%	1.1%	1.1%	1.0%	0.9%	0.9%
Total Glass Packaging		11.1%	9.8%	5.3%	4.7%	4.5%	3.8%	3.5%	3.3%	3.4%
Steel Packaging										
Beer and Soft Drink Cans		2.2%	0.4%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans		2.2%	1.8%	1.1%	0.6%	0.5%	0.4%	0.3%	0.3%	0.2%
Other Steel Packaging		Neg.	Neg.	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
Total Steel Packaging		4.4%	2.2%	1.2%	0.7%	0.5%	0.5%	0.4%	0.4%	0.3%
Aluminum Packaging										
Beer and Soft Drink Cans		Neg.	0.4%	0.3%	0.4%	0.5%	0.4%	0.3%	0.3%	0.3%
Other Cans		Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	0.1%	0.1%	0.1%
Foil and Closures		Neg.	0.4%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%
Total Aluminum Pkg		Neg.	0.7%	0.5%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%
Paper & Paperboard Pkg										
Corrugated Boxes		8.9%	7.6%	7.1%	5.7%	5.1%	2.6%	1.4%	1.4%	2.2%
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons†			0.7%	0.3%	0.3%	0.3%	-	-	-	-
Folding Cartons			2.5%	2.3%	3.1%	2.5%	-	-	-	-
Other Paperboard Packaging		4.5%	Neg.	0.2%	0.1%	0.1%	-	-	-	-
Bags and Sacks			2.5%	1.3%	0.7%	0.4%	-	-	-	-
Wrapping Papers			Neg.	0.1%	Neg.	Neg.	-	-	-	-
Other Paper Packaging		2.2%	0.4%	0.6%	1.0%	0.8%	-	-	-	-
<i>Subtotal Other Paper & Paperboard Pkg</i>							3.9%	3.7%	3.9%	4.2%
Total Paper & Board Pkg		15.6%	13.8%	11.8%	10.9%	9.2%	6.6%	5.1%	5.3%	6.3%
Plastics Packaging										
PET Bottles and Jars			Neg.	0.2%	0.8%	1.1%	1.1%	1.3%	1.3%	1.2%
HDPE Natural Bottles			Neg.	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%
Other Containers			Neg.	0.7%	0.8%	0.9%	0.7%	0.9%	0.9%	1.0%
Bags and Sacks										
Wraps										
<i>Subtotal Bags, Sacks and Wraps</i>			1.1%	1.4%	2.3%	2.4%	2.1%	2.1%	2.1%	2.2%
Other Plastics Packaging			Neg.	0.7%	1.1%	1.5%	1.8%	2.6%	2.8%	2.6%
Total Plastics Packaging			Neg.	2.5%	3.8%	5.8%	6.4%	7.1%	7.4%	7.3%
Other Packaging										
Wood Packaging		2.2%	2.9%	4.6%	4.2%	4.3%	4.5%	4.1%	4.9%	4.8%
Other Misc. Packaging		Neg.	Neg.	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
Total Containers & Pkg		33.3%	31.9%	27.3%	27.0%	25.8%	23.4%	21.4%	22.0%	23.0%
Total Product Wastes†		66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%

Table 27. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2017
(With Detail on Containers and Packaging)
(In percent of total combusted)

Products	1960	Percent of Total Combusted								
		1970	1980	1990	2000	2005	2010	2015	2016	2017
Other Wastes										
Food		11.1%	9.4%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings		20.0%	20.0%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes		2.3%	1.8%	1.7%	1.9%	2.1%	2.3%	2.3%	2.3%	2.3%
Total Other Wastes		33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Combusted with Energy Recovery - %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Products and materials combusted with energy recovery estimated at percentage total MSW after recovery for recycling and composting. In 2016 and 2017, 19.6 percent of MSW after recycling and composting was combusted with energy recovery. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

‡ Includes milk, juice and other products packaged in gable top cartons and liquid food aseptic cartons.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. NA = Not Available - Detailed data not available.

**Table 28. Products Landfilled* in Municipal Solid Waste, 1960 to 2017
(With Detail on Containers and Packaging)**
(In thousands of tons)

Products	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	9,570	13,660	20,000	21,870	26,030	30,340	32,890	35,420	36,590	37,240
<i>(Detail in Table 17)</i>										
Nondurable Goods	14,940	21,240	29,170	35,990	37,450	35,900	28,030	28,660	28,320	27,690
<i>(Detail in Table 21)</i>										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**	1,310	5,420	5,890	3,110	3,370	3,710	2,730	2,480	2,550	2,580
Wine and Liquor Bottles	1,070	1,880	2,380	1,510	1,190	1,130	950	920	920	850
Other Bottles & Jars	3,710	4,420	4,680	3,020	2,010	1,600	1,440	1,360	1,300	1,310
Total Glass Packaging	6,090	11,720	12,950	7,640	6,570	6,440	5,120	4,760	4,770	4,740
Steel Packaging										
Beer and Soft Drink Cans	630	1,540	460	90	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans	3,740	3,470	2,650	1,620	890	650	630	400	400	350
Other Steel Packaging	260	270	240	120	60	70	70	80	70	90
Total Steel Packaging	4,630	5,280	3,350	1,830	950	720	700	480	470	440
Aluminum Packaging										
Beer and Soft Drink Cans	Neg.	90	520	460	560	650	570	440	510	510
Other Cans	Neg.	60	40	20	40	70	60	100	100	100
Foil and Closures	170	410	370	260	280	290	380	390	430	400
Total Aluminum Pkg	170	560	930	740	880	1,010	1,010	930	1,040	1,010
Paper & Paperboard Pkg										
Corrugated Boxes	4,810	9,960	10,480	10,360	7,960	7,220	3,590	1,930	1,910	3,020
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons‡			770	420	440	410	-	-	-	-
Folding Cartons			3,230	3,290	4,360	3,550	-	-	-	-
Other Paperboard Packaging	3,840	4,810	230	240	160	130	-	-	-	-
Bags and Sacks			3,310	1,860	960	650	-	-	-	-
Wrapping Papers			200	90	Neg.	Neg.	-	-	-	-
Other Paper Packaging	2,720	3,450	540	850	1,350	1,150	-	-	-	-
Subtotal Other Paper & Paperboard Pkg							5,320	5,080	5,460	5,800
Total Paper & Board Pkg	11,370	18,220	18,760	17,110	15,230	13,110	8,910	7,010	7,370	8,820
Plastics Packaging										
PET Bottles and Jars			250	240	1,080	1,600	1,560	1,680	1,770	1,690
HDPE Natural Bottles			230	420	390	470	480	430	430	430
Other Containers	60	910	870	1,170	1,270	1,050	1,260	1,270	1,300	1,360
Bags and Sacks										
Wraps										
Subtotal Bags, Sacks and Wraps			1,200	2,000	3,240	3,450	2,860	2,890	2,870	3,010
Other Plastics Packaging	60	1,180	770	1,680	2,220	2,550	3,580	3,800	3,580	3,640
Total Plastics Packaging	120	2,090	3,320	5,510	8,200	9,120	9,740	10,070	9,950	10,130
Other Packaging										
Wood Packaging	2,000	2,060	3,860	6,680	5,840	6,050	6,160	5,720	6,840	6,710
Other Misc. Packaging	120	130	130	130	190	220	280	300	280	280
Total Containers & Pkg	24,500	40,060	43,300	39,640	37,860	36,670	31,920	29,270	30,720	32,130
Total Product Wastes†	49,010	74,960	92,470	97,500	101,340	102,910	92,840	93,350	95,630	97,060
Other Wastes										
Food	12,200	12,750	12,740	19,800	24,200	26,370	28,620	30,250	30,680	30,630
Yard Trimmings	20,000	23,110	26,950	25,560	11,900	9,990	11,690	10,800	9,640	8,650
Miscellaneous Inorganic Wastes	1,300	1,770	2,200	2,410	2,820	3,020	3,160	3,210	3,230	3,250
Total Other Wastes	33,500	37,630	41,890	47,770	38,920	39,380	43,470	44,260	43,550	42,530
Total MSW Landfilled - Weight	82,510	112,590	134,360	145,270	140,260	142,290	136,310	137,610	139,180	139,590

* Landfilling after recycling, composting and combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

‡ Includes milk, juice and other products packaged in gable top cartons and liquid food aseptic cartons.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. NA = Not Available - Detailed data not available.

**Table 29. Products Landfilled* in Municipal Solid Waste, 1960 to 2017
(With Detail on Containers and Packaging)**
(In percent of total landfilled)

Products	Percent of Total Landfilled									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Durable Goods	11.6%	12.1%	14.9%	15.0%	18.6%	21.3%	24.1%	25.7%	26.3%	26.7%
(Detail in Table 17)										
Nondurable Goods	18.1%	18.9%	21.7%	24.8%	26.7%	25.2%	20.6%	20.8%	20.3%	19.8%
(Detail in Table 21)										
Containers and Packaging										
Glass Packaging										
Beer and Soft Drink Bottles**	1.6%	4.8%	4.4%	2.1%	2.4%	2.6%	2.0%	1.8%	1.8%	1.8%
Wine and Liquor Bottles	1.3%	1.7%	1.8%	1.0%	0.8%	0.8%	0.7%	0.7%	0.7%	0.6%
Other Bottles & Jars	4.5%	3.9%	3.5%	2.1%	1.5%	1.1%	1.1%	1.0%	0.9%	0.9%
Total Glass Packaging	7.4%	10.4%	9.6%	5.3%	4.7%	4.5%	3.8%	3.5%	3.4%	3.4%
Steel Packaging										
Beer and Soft Drink Cans	0.8%	1.4%	0.3%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Cans	4.5%	3.1%	2.0%	1.1%	0.6%	0.5%	0.5%	0.3%	0.3%	0.3%
Other Steel Packaging	0.3%	0.2%	0.2%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
Total Steel Packaging	5.6%	4.7%	2.5%	1.3%	0.7%	0.5%	0.6%	0.4%	0.4%	0.4%
Aluminum Packaging										
Beer and Soft Drink Cans	Neg.	0.1%	0.4%	0.3%	0.4%	0.5%	0.4%	0.3%	0.4%	0.4%
Other Cans	Neg.	0.1%	0.0%	0.0%	Neg.	Neg.	Neg.	0.1%	0.1%	0.1%
Foil and Closures	0.2%	0.4%	0.3%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%
Total Aluminum Pkg	0.2%	0.5%	0.7%	0.5%	0.6%	0.7%	0.7%	0.7%	0.8%	0.8%
Paper & Paperboard Pkg										
Corrugated Boxes	5.8%	8.8%	7.8%	7.1%	5.7%	5.1%	2.6%	1.4%	1.4%	2.2%
Other Paper & Paperboard Pkg										
Gable Top/Aseptic Cartons‡			0.6%	0.3%	0.3%	0.3%	-	-	-	-
Folding Cartons			2.4%	2.3%	3.1%	2.5%	-	-	-	-
Other Paperboard Packaging	4.7%	4.3%	0.2%	0.2%	0.1%	0.1%	-	-	-	-
Bags and Sacks			2.5%	1.3%	0.7%	0.4%	-	-	-	-
Wrapping Papers			0.1%	0.1%	Neg.	Neg.	-	-	-	-
Other Paper Packaging	3.3%	3.1%	0.4%	0.6%	1.0%	0.8%	-	-	-	-
Subtotal Other Paper & Paperboard Pkg							3.9%	3.7%	3.9%	4.2%
Total Paper & Board Pkg	13.8%	16.2%	14.0%	11.8%	10.9%	9.2%	6.5%	5.1%	5.3%	6.4%
Plastics Packaging										
PET Bottles and Jars			0.2%	0.2%	0.8%	1.1%	1.1%	1.2%	1.3%	1.2%
HDPE Natural Bottles			0.2%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%
Other Containers	0.1%	0.8%	0.6%	0.8%	0.9%	0.7%	0.9%	0.9%	0.9%	1.0%
Bags and Sacks										
Wraps										
Subtotal Bags, Sacks and Wraps			0.9%	1.4%	2.3%	2.4%	2.1%	2.1%	2.1%	2.2%
Other Plastics Packaging	0.1%	1.0%	0.6%	1.2%	1.5%	1.8%	2.6%	2.8%	2.5%	2.6%
Total Plastics Packaging	0.1%	1.9%	2.5%	3.8%	5.8%	6.4%	7.1%	7.3%	7.1%	7.3%
Other Packaging										
Wood Packaging	2.4%	1.8%	2.9%	4.6%	4.2%	4.3%	4.5%	4.2%	4.9%	4.8%
Other Misc. Packaging	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
Total Containers & Pkg	29.7%	35.6%	32.2%	27.3%	27.0%	25.8%	23.4%	21.4%	22.1%	23.0%
Total Product Wastes†	59.4%	66.6%	68.8%	67.1%	72.3%	72.3%	68.1%	67.9%	68.7%	69.5%
Other Wastes										
Food	14.8%	11.3%	9.5%	13.6%	17.3%	18.5%	21.0%	22.0%	22.1%	22.0%
Yard Trimmings	24.2%	20.5%	20.1%	17.6%	8.5%	7.0%	8.6%	7.8%	6.9%	6.2%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	1.9%	2.2%	2.3%	2.3%	2.3%	2.3%
Total Other Wastes	40.6%	33.4%	31.2%	32.9%	27.7%	27.7%	31.9%	32.1%	31.3%	30.5%
Total MSW Landfilled - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Landfilling after recycling, composting and combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

** Includes carbonated drinks and non-carbonated water, teas, flavored drinks and ready-to-drink alcoholic coolers and cocktails.

‡ Includes milk, juice and other products packaged in gable top cartons and liquid food aseptic cartons.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. NA = Not Available - Detailed data not available.

Table 30. Selected Examples of Source Reduction Practices

Source Reduction Practice	MSW Product Categories			
	Durable Goods	Nondurable Goods	Containers & Packaging	Organics (Wood, Yard Waste, Food, etc.)
Product or Packaging Redesign				
Materials reduction	<ul style="list-style-type: none"> ▪ Downgauge metals in appliances ▪ Use fewer materials in electronics 	<ul style="list-style-type: none"> ▪ Use paperless purchase orders ▪ Use concentrated products 	<ul style="list-style-type: none"> ▪ Implement container lightweighting ▪ Use right size packaging ▪ Eliminate unnecessary layers of packaging ▪ Use refillable/reusable containers, including use of flexible pouches for refills for rigid containers 	<ul style="list-style-type: none"> ▪ Implement xeriscaping ▪ Use just in time ordering / inventory control ▪ Adjust menus to reduce frequently uneaten or wasted items
Materials substitution	<ul style="list-style-type: none"> ▪ Use of composites in appliances and electronic circuitry 		<ul style="list-style-type: none"> ▪ Replace rigid or heavy packaging with lighter or more compact options, e.g., cereal in bags, coffee in brick packs ▪ Use life cycle data to choose material with lower lifecycle impact 	
Lengthen product lifespan	<ul style="list-style-type: none"> ▪ Use high mileage tires ▪ Design for upgrades (e.g., add computer memory or processing capacity, battery upgrades) 	<ul style="list-style-type: none"> ▪ Perform regular servicing ▪ Consider purchasing warranties to make repair more affordable ▪ Extend warranties 	<ul style="list-style-type: none"> ▪ Design for secondary use ▪ Use Reusable packaging 	<ul style="list-style-type: none"> ▪ Clearer label information on food expiration date ▪ Avoid spoilage by changing: <ul style="list-style-type: none"> — Packaging — Storage and transportation — Supply chain management
Consumer Practices				
	<ul style="list-style-type: none"> ▪ Purchase long-lived products ▪ Perform regular servicing ▪ Perform repair ▪ Buy fewer items 	<ul style="list-style-type: none"> ▪ Perform repair ▪ Use duplex printing ▪ Share products ▪ Reduce unwanted mail ▪ Purchase concentrated products ▪ Buy fewer items 	<ul style="list-style-type: none"> ▪ Purchase products in bulk (less packaging) ▪ Use reusable bags and containers ▪ Buy fewer items 	<ul style="list-style-type: none"> ▪ Donate food ▪ Avoid spoilage by monitoring and tracking food and purchases and use ▪ Reduce over-purchasing ▪ Perform proper food storage and preparation ▪ Repurpose (e.g., older bread can be made into croutons) ▪ Perform backyard composting, vermicomposting and grasscycling
Reuse				
By Design	<ul style="list-style-type: none"> ▪ Document materials and methods for disassembly/repair/reuse ▪ Use materials and systems that exhibit modularity, and standardization to facilitate reuse and repair <ul style="list-style-type: none"> — Minimize connections between parts and/or make connections more accessible for ease of repair and 	<ul style="list-style-type: none"> ▪ Use reusable shipping or mailing envelopes 	<ul style="list-style-type: none"> ▪ Use reusable pallets ▪ Use returnable secondary packaging ▪ Use reusable/refillable dispensers for cleaning products ▪ Use reusable service ware in food service ▪ Use durable reusable water bottles instead of disposable bottles 	

Table 30. Selected Examples of Source Reduction Practices

Source Reduction Practice	MSW Product Categories			
	Durable Goods	Nondurable Goods	Containers & Packaging	Organics (Wood, Yard Waste, Food, etc.)
	<ul style="list-style-type: none"> - replacement of parts - Use mechanical connections with bolts and screws instead of glues, to facilitate repair - Minimize connections to increase ease of repair or part replacement - Provide adequate tolerances to allow for removal and replacement or repair of parts without affecting adjacent components 			
Secondary	<ul style="list-style-type: none"> ▪ Borrow or rent for temporary use ▪ Give to charity ▪ Buy or sell at garage sales 	<ul style="list-style-type: none"> ▪ Donate clothing, books ▪ Waste paper scratch pads 	<ul style="list-style-type: none"> ▪ Use reusable grocery sacks ▪ Reuse glass and plastic bottles and jars 	

Table 31A. Households with Residential Food Collection Programs in the U.S., 2016

State	Curbside Households with Access	Drop off Households with Access
Alaska	—	500
California	2,709,408	41,730
Colorado	293,325	601,295
Connecticut	—	28,364
Illinois	107,243	207,000
Iowa	68,101	—
Maine	—	11,191
Maryland	18,225	—
Massachusetts	45,319	412,103
Michigan	47,419	—
Minnesota	186,044	1,056,443
New Hampshire	—	5,244
New Jersey	21,521	—
New York	790,000	3,153,535
North Carolina	—	509,000
Ohio	443	—
Oregon	186,341	—
Pennsylvania	3,600	—
Texas	52,000	—
Vermont	19,767	93,840
Virginia	—	20,000
Washington	980,578	253,622
Wisconsin	23,076	—
Households with Access to Collection	5,552,410	6,393,867
Total U.S. Households	125,819,000	125,819,000
	4.41%	5.08%

Source: Streeter, V.; Platt B. 2017. Residential Food Waste Collection Access in the U.S. BioCycle December. Supplemented with additional Internet research. U.S. Census Bureau (2018) Historical Household Tables, Table HH-1. Households by Type: 1940 to Present.

Table 31B. Households with Residential Food Collection Programs in the U.S., 2017

State	Curbside Households with Access	Drop off Households with Access
Alaska	—	500
California	2,752,008	41,730
Colorado	293,325	601,295
Connecticut	—	28,364
District of Columbia	—	255,000
Idaho	73,738	—
Illinois	148,448	207,000
Iowa	83,601	—
Maine	926	23,012
Maryland	18,425	—
Massachusetts	45,319	412,103
Michigan	47,419	—
Minnesota	186,828	1,087,016
New Hampshire	—	5,244
New Jersey	21,521	—
New York	790,090	3,159,035
North Carolina	—	509,000
Ohio	443	—
Oregon	188,441	—
Pennsylvania	3,600	—
Texas	403,000	—
Vermont	19,767	93,840
Virginia	3,025	25,166
Washington	980,578	253,622
Wisconsin	23,176	—
Households with Access to Collection	6,083,678	6,701,927
Total U.S. Households	126,224,000	126,224,000
	4.82%	5.31%

Source: Streeter, V.; Platt B. 2017. Residential Food Waste Collection Access in the U.S. BioCycle December. Supplemented with additional Internet research. U.S. Census Bureau (2018) Historical Household Tables, Table HH-1. Households by Type: 1940 to Present.

Table 32A. Material Recovery Facilities (MRF), 2016*

Region	Number	Estimated Throughput (tons per day)
NORTHEAST	128	22,528
SOUTH	142	23,718
MIDWEST	139	18,016
WEST	123	26,867
U.S. Total	532	91,129

*Number of facilities and throughput include bale and ship operations receiving fiber, mainly old corrugated cardboard (OCC), that bale and ship with no additional processing. Throughput is the tons of waste processed by the facility.

Source: Governmental Advisory Associates, Inc. Data provided August 2019.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Table 32B. Material Recovery Facilities (MRF), 2017*

Region	Number	Estimated Throughput (tons per day)
NORTHEAST	128	22,528
SOUTH	142	23,718
MIDWEST	139	18,016
WEST	123	26,867
U.S. Total	532	91,129

*Number of facilities and throughput include bale and ship operations receiving fiber, mainly old corrugated cardboard (OCC), that bale and ship with no additional processing. Throughput is the tons of waste processed by the facility.

Source: Governmental Advisory Associates, Inc. Data provided August 2019.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Table 33A. Municipal Waste-To-Energy Projects, 2016

Region	Number Operational	Design Capacity (tons per day)
NORTHEAST	37	43,995
SOUTH	19	32,194
MIDWEST	14	11,524
WEST	7	7,310
U.S. Total*	77	95,023

*WTE includes mass burn, modular and refuse-derived fuel combustion facilities.

Source: "The 2016 ERC Directory of Waste-to-Energy Facilities." Energy Recovery Council (ERC). 2016.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Table 33B. Municipal Waste-To-Energy Projects, 2017

Region	Number Operational	Design Capacity (tons per day)
NORTHEAST	37	43,995
SOUTH	19	32,194
MIDWEST	14	11,524
WEST	7	7,310
U.S. Total*	77	95,023

*WTE includes mass burn, modular and refuse-derived fuel combustion facilities.

Source: "The 2016 ERC Directory of Waste-to-Energy Facilities." Energy Recovery Council (ERC). 2016.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Table 34A. Landfill Facilities, 2016

Region	Number of Landfills
NORTHEAST	105
SOUTH	490
MIDWEST	345
WEST	327
U.S. Total	1,267

Source: U.S. EPA. Landfill Methane Outreach Program (LMOP) Facility-level database. Data represents MSW landfills open July 2019 excluding landfills opening in 2017.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Table 34B. Landfill Facilities, 2017

Region	Number of Landfills
NORTHEAST	105
SOUTH	491
MIDWEST	345
WEST	328
U.S. Total	1,269

Source: U.S. EPA. Landfill Methane Outreach Program (LMOP) Facility-level database. Data represents MSW landfills open July 2019.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Table 35. Generation, Recycling, Composting, Combustion with Energy Recovery and Landfilling of Municipal Solid Waste, 1960 to 2017
 (In thousands of tons and percent of total generation)

	Thousands of Tons									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Generation	88,120	121,060	151,640	208,270	243,450	253,730	251,050	262,110	266,820	267,790
Recycling	5,610	8,020	14,520	29,040	53,010	59,240	65,260	67,560	68,630	67,180
Composting*	Neg.	Neg.	Neg.	4,200	16,450	20,550	20,170	23,390	25,110	26,990
Combustion with energy recovery**	0	450	2,760	29,760	33,730	31,650	29,310	33,550	33,900	34,030
Discards to landfill, other disposal†	82,510	112,590	134,360	145,270	140,260	142,290	136,310	137,610	139,180	139,590
	Pounds per Person per Day									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Generation	2.68	3.25	3.66	4.57	4.74	4.69	4.45	4.48	4.53	4.51
Recycling	0.17	0.22	0.35	0.64	1.03	1.10	1.16	1.15	1.16	1.13
Composting*	Neg.	Neg.	Neg.	0.09	0.32	0.38	0.36	0.40	0.43	0.45
Combustion with energy recovery**	0.00	0.01	0.07	0.65	0.66	0.59	0.52	0.57	0.57	0.57
Discards to landfill, other disposal†	2.51	3.02	3.24	3.19	2.73	2.62	2.41	2.36	2.37	2.36
Population (thousands)	179,979	203,984	227,255	249,907	281,422	296,410	309,051	320,897	323,071	325,147
	Percent of Total Generation									
	1960	1970	1980	1990	2000	2005	2010	2015	2016	2017
Generation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Recycling	6.4%	6.6%	9.6%	14.0%	21.8%	23.3%	26.0%	25.8%	25.7%	25.1%
Composting*	Neg.	Neg.	Neg.	2.0%	6.7%	8.1%	8.0%	8.9%	9.4%	10.1%
Combustion with energy recovery**	0.0%	0.3%	1.8%	14.2%	13.9%	12.5%	11.7%	12.8%	12.7%	12.7%
Landfilling and other disposal†	93.6%	93.1%	88.6%	69.8%	57.6%	56.1%	54.3%	52.5%	52.2%	52.1%

* Composting of yard trimmings, food and other MSW organic material. Does not include backyard composting.

** Includes combustion with energy recovery of MSW in mass burn or refuse-derived fuel form and combustion with energy recovery of source separated materials in MSW (e.g., wood pallets and tire-derived fuel). 2016 includes 30,300 MSW, 560 wood, and 3,040 tires (1,000 tons) and 2017 includes 30,760 MSW, 560 wood, and 2,710 tires (1,000 tons)

† Landfilling after recycling and composting minus combustion with energy recovery. Includes combustion without energy recovery.

Details may not add to totals due to rounding.

Source population: U.S. Census Bureau Population Division (NST-EST2016-01) December 2018.

Figure 1. Municipal Solid Waste in the Universe of Subtitle D Wastes

Subtitle D Wastes

The Subtitle D Waste included in this report as Municipal Solid Waste (MSW), which includes:

- Containers and packaging such as soft drink bottles and corrugated boxes
- Durable goods such as furniture and appliances
- Nondurable goods such as newspapers, trash bags and clothing
- Other wastes such as food and yard trimmings.

Subtitle D Wastes not included as MSW in this report are:

- Municipal sludges
- Industrial nonhazardous process wastes
- Construction and demolition debris*
- Land clearing debris
- Transportation parts and equipment
- Agricultural wastes
- Oil and gas wastes
- Mining wastes
- Auto bodies
- Fats, grease and oils

*Construction and demolition debris are included in this report, but are outside of the scope of MSW.

Figure 2. Definition of Terms

The materials flow methodology produces an estimate of total municipal solid waste (MSW) generation in the United States, by material categories and by product categories.

Generation refers to the weight of materials and products as they enter the waste management system from residential, commercial and institutional sources and before recycling, composting, combustion or landfilling take place. Preconsumer (industrial) scrap is not included in the generation estimate. Source reduction activities, such as backyard composting of yard trimmings, take place ahead of generation.

Source reduction as used in this report refers to activities that reduce the amount of wastes before they enter the municipal solid waste management system. Reuse is a source reduction activity involving the recovery or reapplication of a package, used product or material in a manner that retains its original form or identity. Reuse of products such as refillable glass bottles and reusable plastic food storage containers is considered to be source reduction, not recycling.

Recycling is defined as the recovery of useful materials, such as paper, glass, plastic and metals, from the MSW stream, along with the transformation of the materials, to make new products to reduce the amount of virgin raw materials needed to meet consumer demands.

Composting is the decomposition of organic materials by aerobic microorganisms. Composting facilities manage the amount of moisture and oxygen and mixture of organic materials for optimal composting conditions. The composting process emits heat, water vapor and biogenic carbon dioxide, reducing the raw organic materials in mass and volume to create compost.¹

Combustion with energy recovery is often called “waste-to-energy,” and as used in this report refers to confined and controlled burning with energy recovery, which not only decreases the volume of solid waste destined for landfills, but can also recover energy from the waste burning process.

Landfilling refers to the MSW remaining after recycling, composting and combustion with energy recovery. These materials presumably would be landfilled in a discrete area of land or excavation that receives household waste. Some MSW, however, is littered, stored or disposed onsite; or burned onsite, particularly in rural areas. There are no good estimates for these other disposal practices available, but the total amounts of MSW involved are assumed to be small.

For the analysis of municipal solid waste in this report, products are divided into three basic categories: durable goods, nondurable goods and containers and packaging. The durable goods and nondurable goods categories generally follow the definitions of the U.S. Department of Commerce.

Durable goods are those products that last three years or more. Products in this category include major and small appliances, furniture and furnishings, carpets and rugs, tires, lead-acid batteries, consumer electronics and other miscellaneous durables.

Nondurable goods are those products that last less than three years. Products in this category include newspapers, books, magazines, office papers, directories, mail, other commercial printing, tissue paper and towels, paper and plastic plates and cups, trash bags, disposable diapers, clothing and footwear, towels, sheets and pillowcases, other nonpackaging paper and other miscellaneous nondurables.

Containers and packaging are assumed to be discarded the same year the products they contain are purchased. Products in this category include bottles, containers, corrugated boxes, milk cartons, folding cartons, bags, sacks, and wraps, wood packaging and other miscellaneous packaging.

¹ Platt, B., Goldstein, N. 2014. State of Composting in the U.S. *BioCycle* 55(6): 19. <http://www.biocycle.net/2014/07/16/state-of-composting-in-the-us/>.

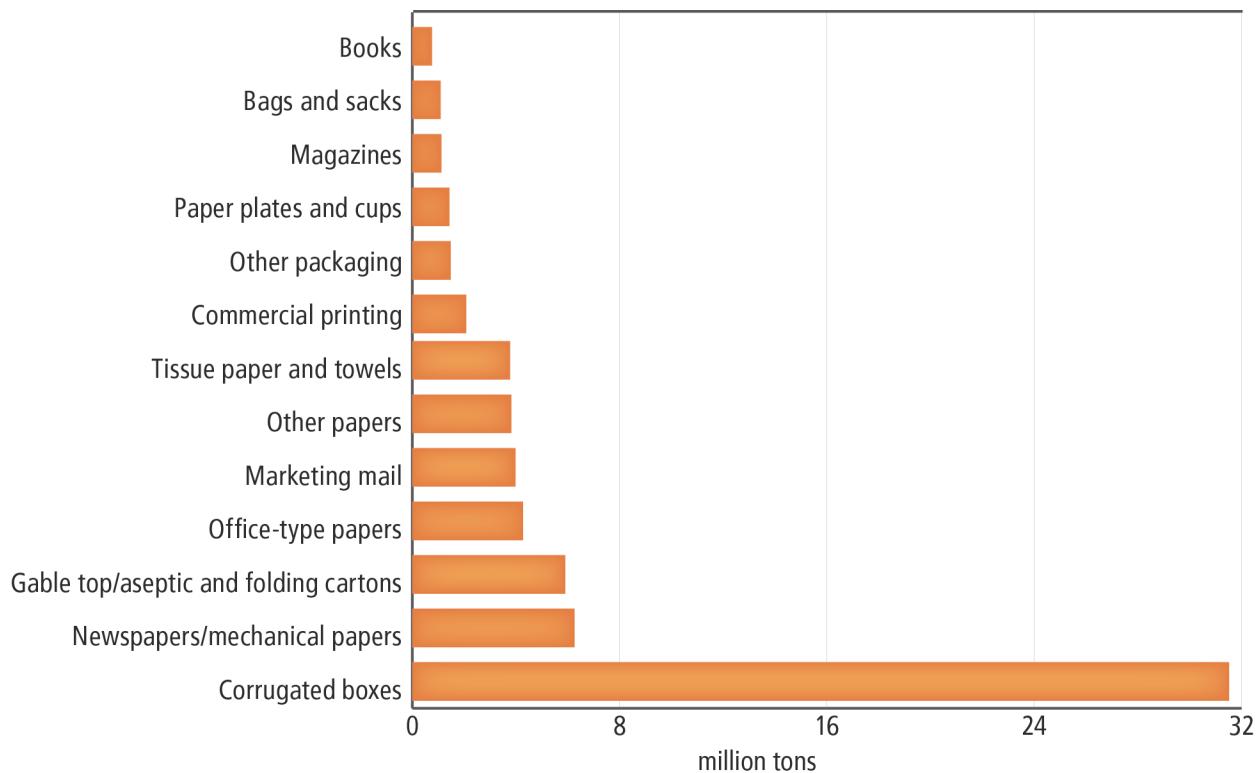
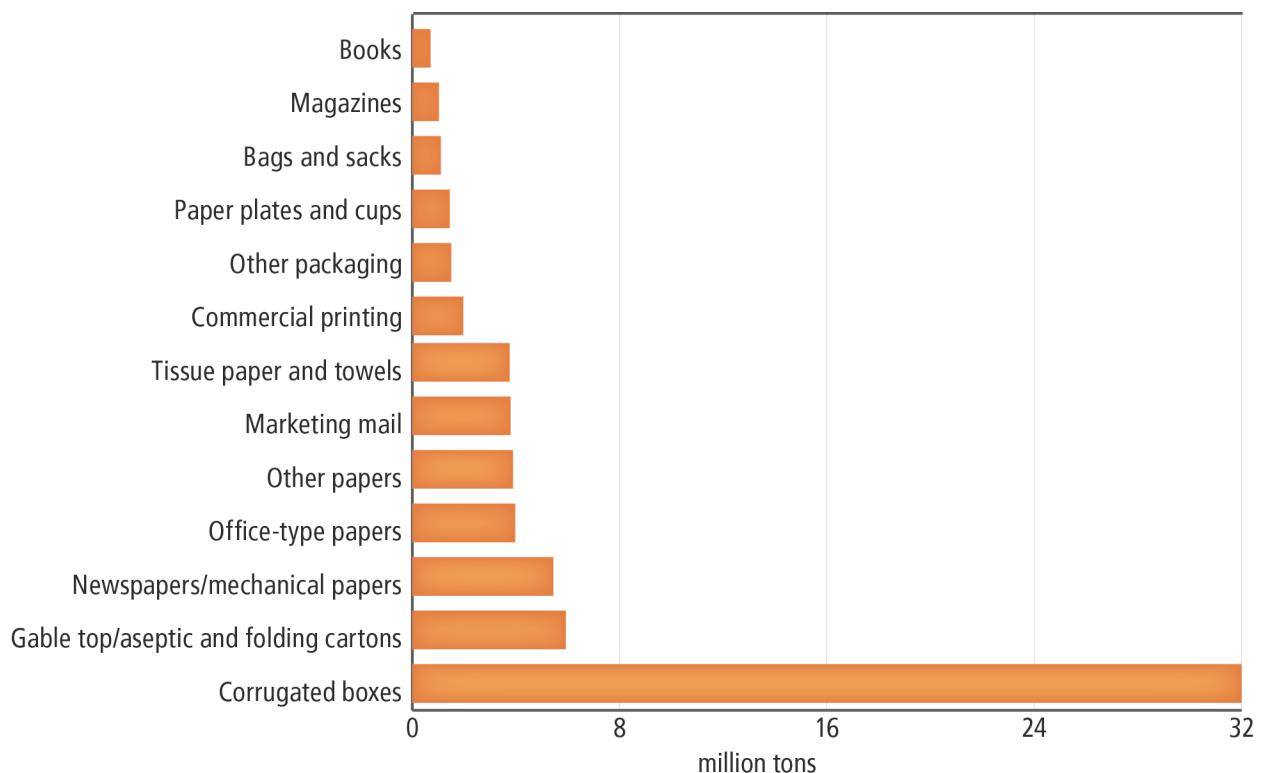
Figure 3A. Paper and Paperboard Products Generated in MSW, 2016**Figure 3B. Paper and Paperboard Products Generated in MSW, 2017**

Figure 4. Paper and Paperboard Generation and Recycling, 1960 to 2017

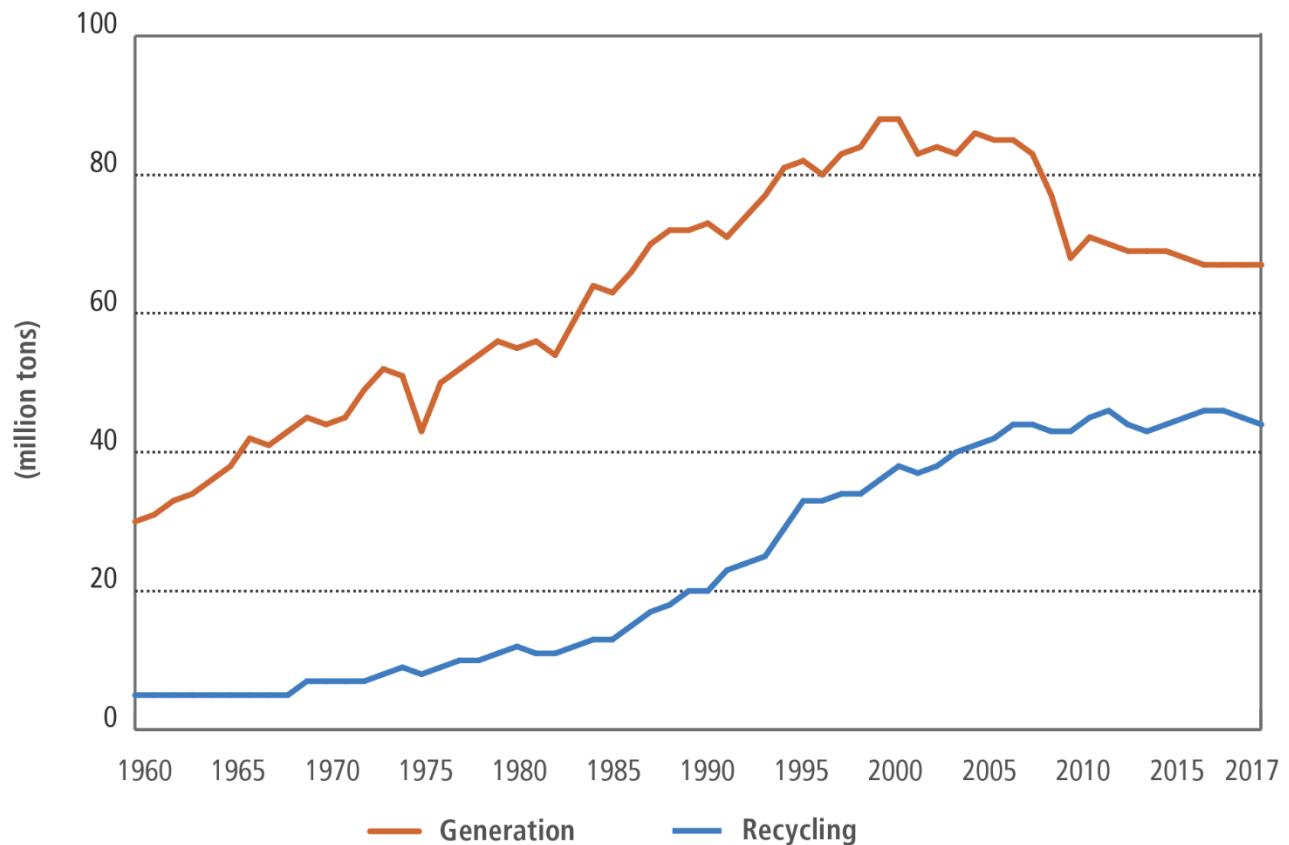


Figure 5A. Glass Products Generated in MSW, 2016

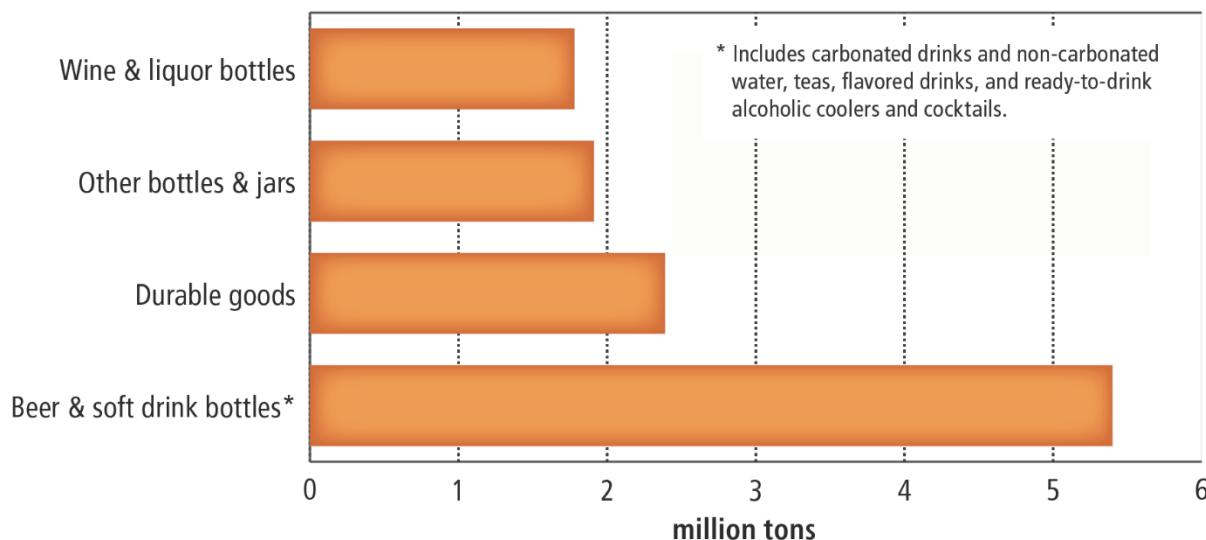


Figure 5B. Glass Products Generated in MSW, 2017

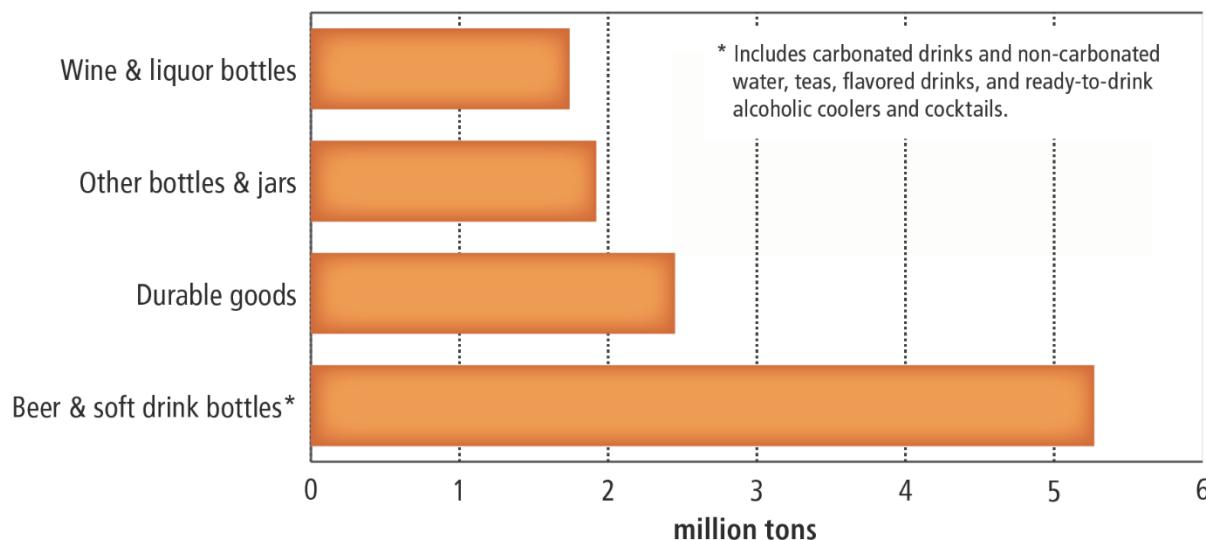


Figure 6. Glass Generation and Recycling, 1960 to 2017

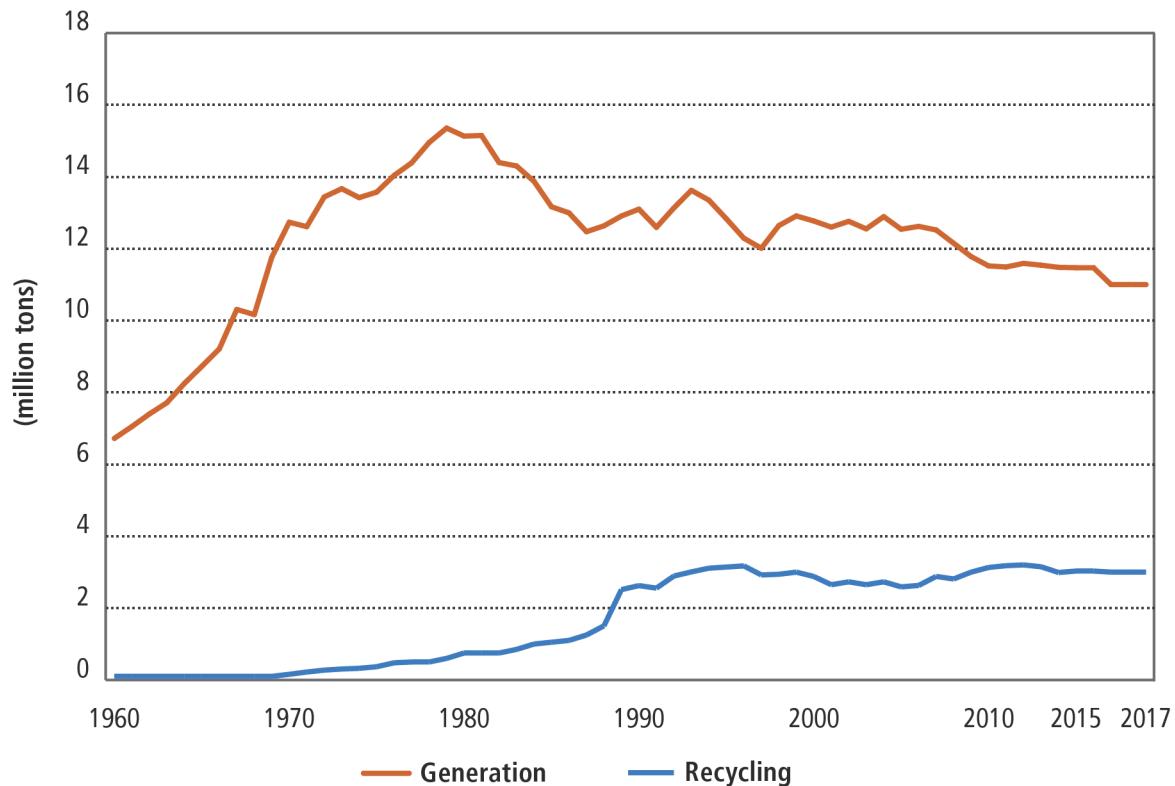


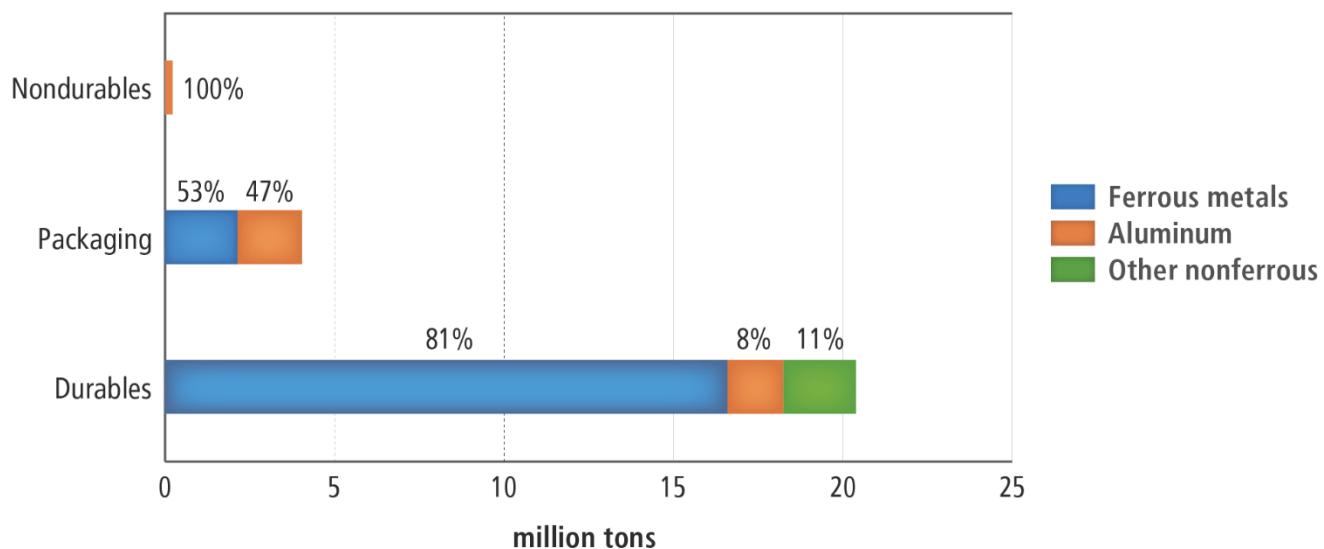
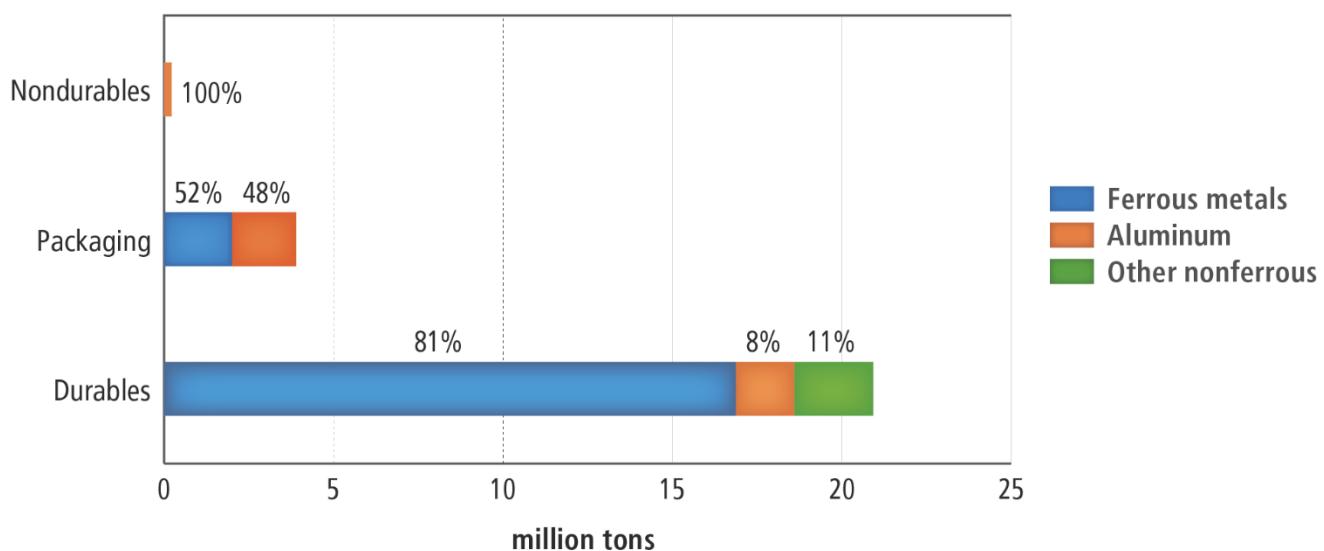
Figure 7A. Metal Products Generated in MSW, 2016**Figure 7B. Metal Products Generated in MSW, 2017**

Figure 8. Metals Generation and Recycling, 1960 to 2017

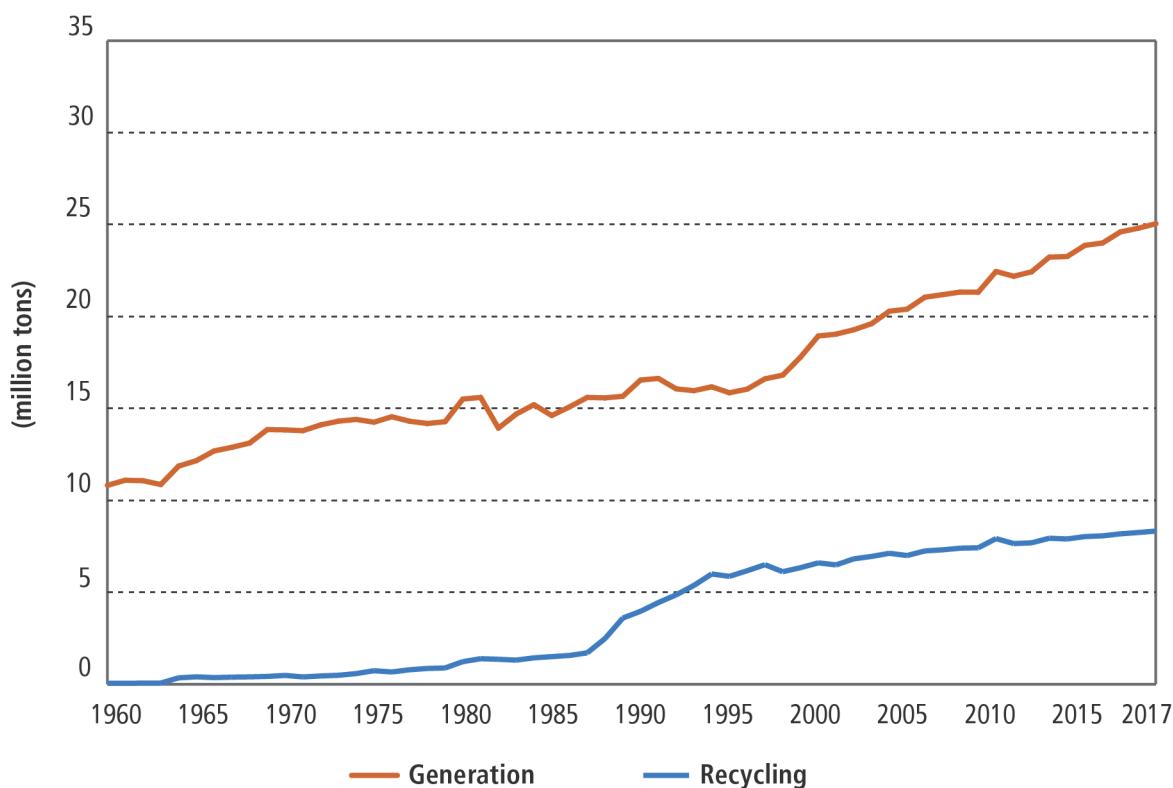


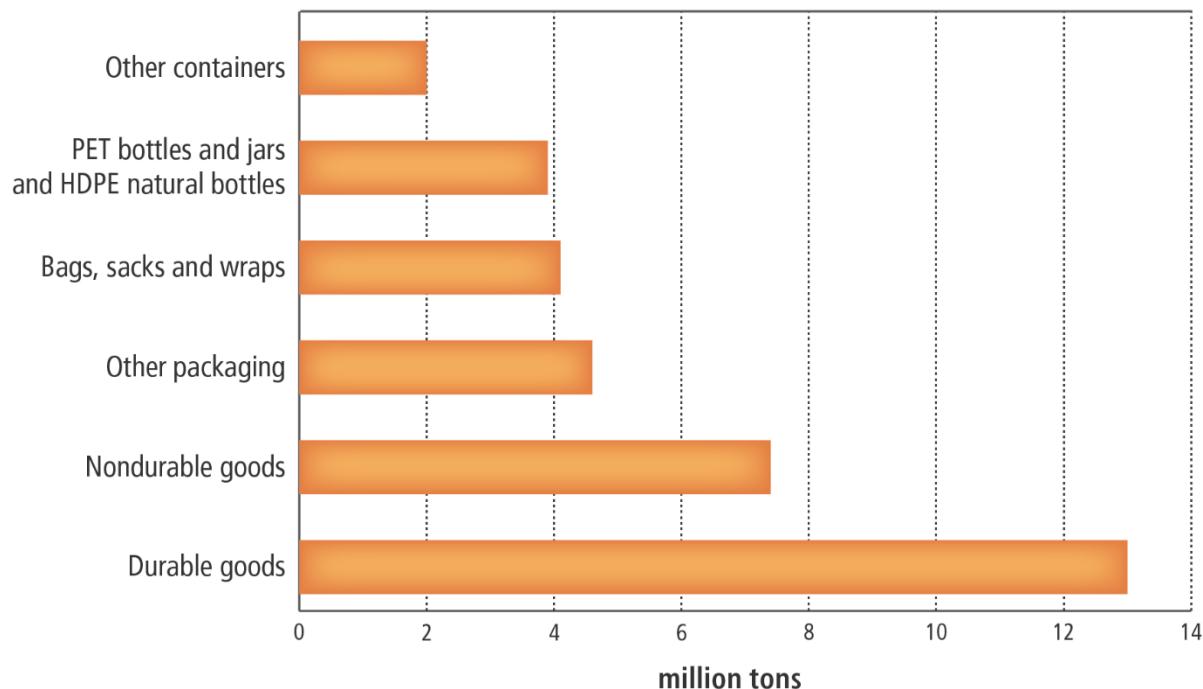
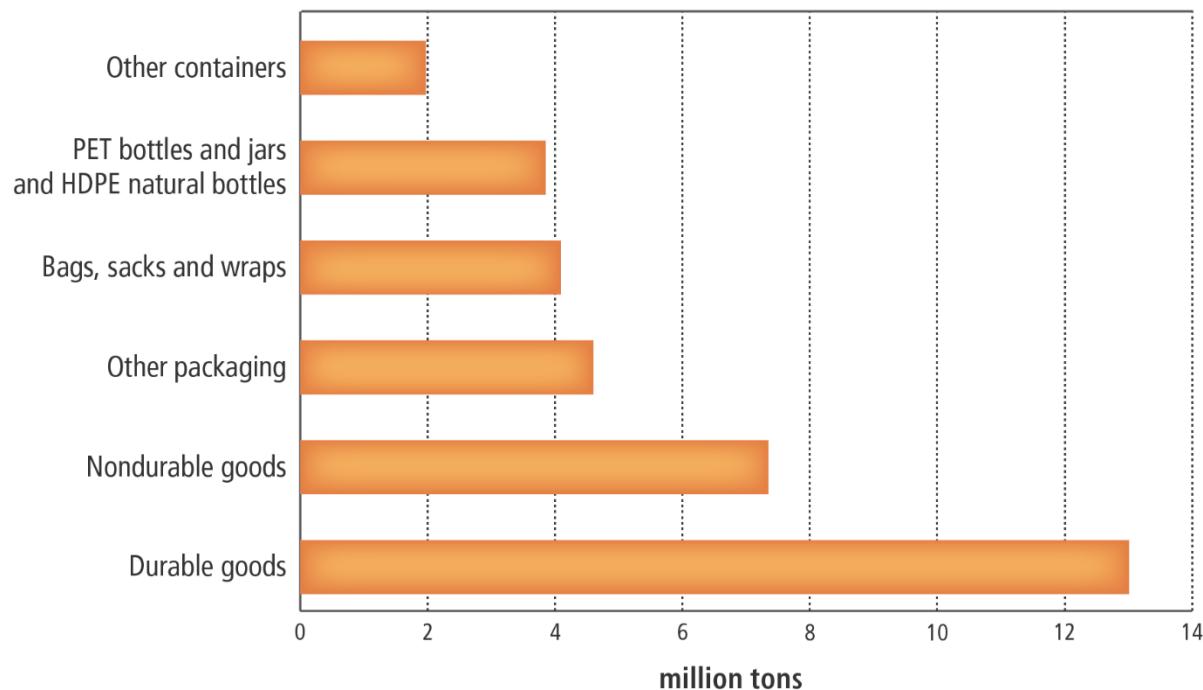
Figure 9A. Plastics Products Generated in MSW, 2016**Figure 9B. Plastics Products Generated in MSW, 2017**

Figure 10. Plastics Generation and Recycling, 1960 to 2017

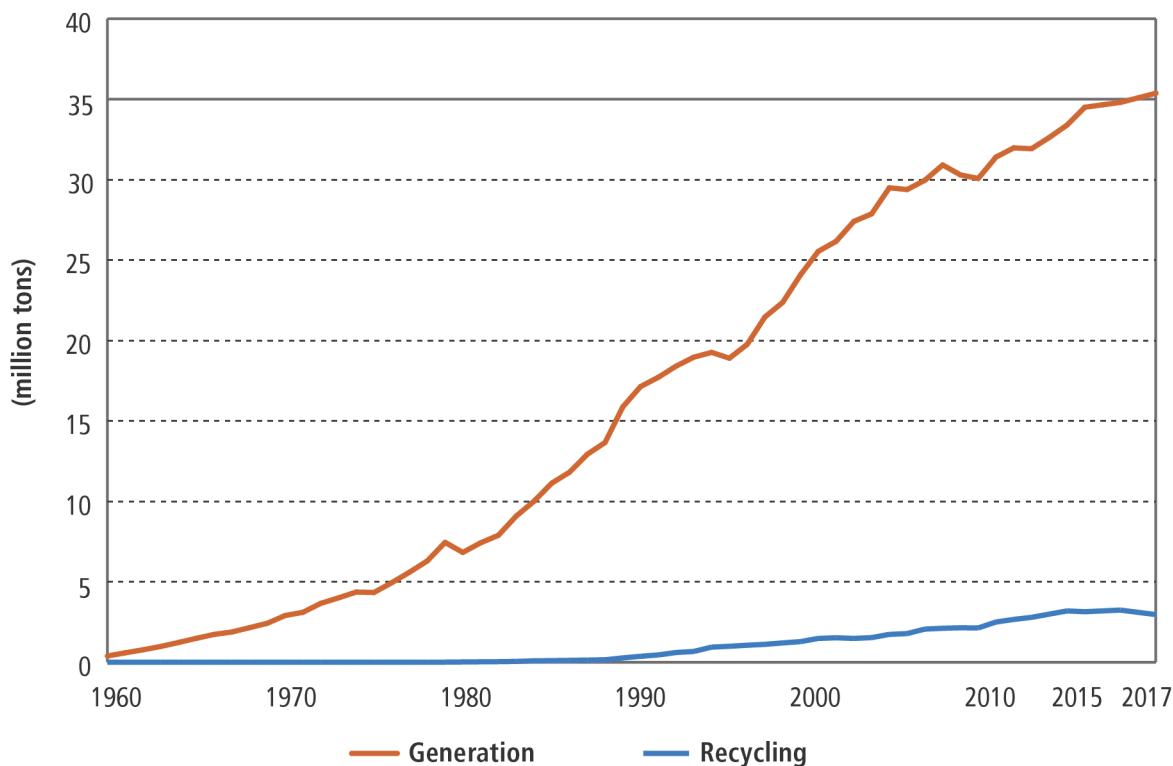
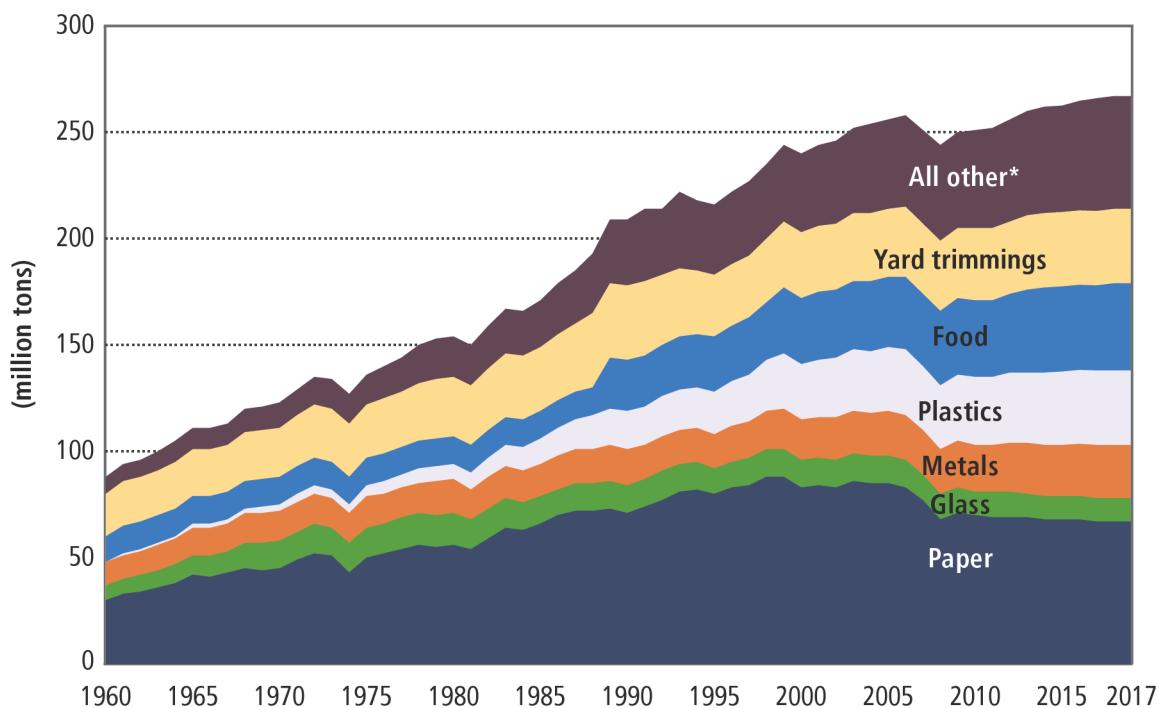
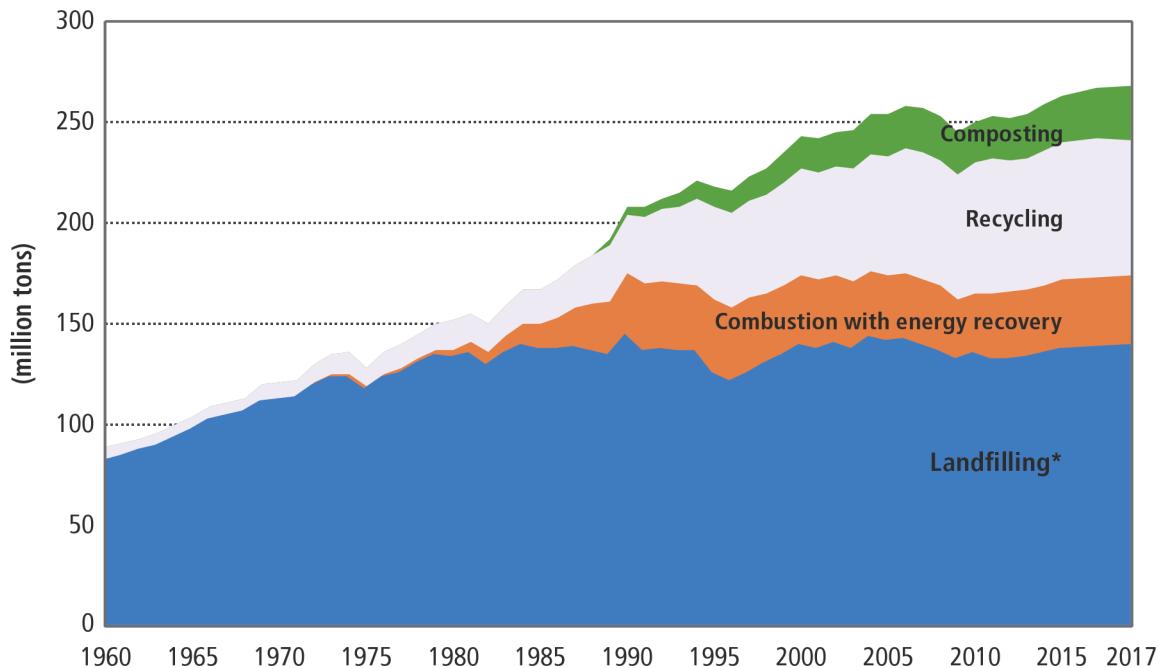


Figure 11. Generation of Materials in MSW, 1960 to 2017



* "All other" includes primarily wood, rubber and leather, and textiles.

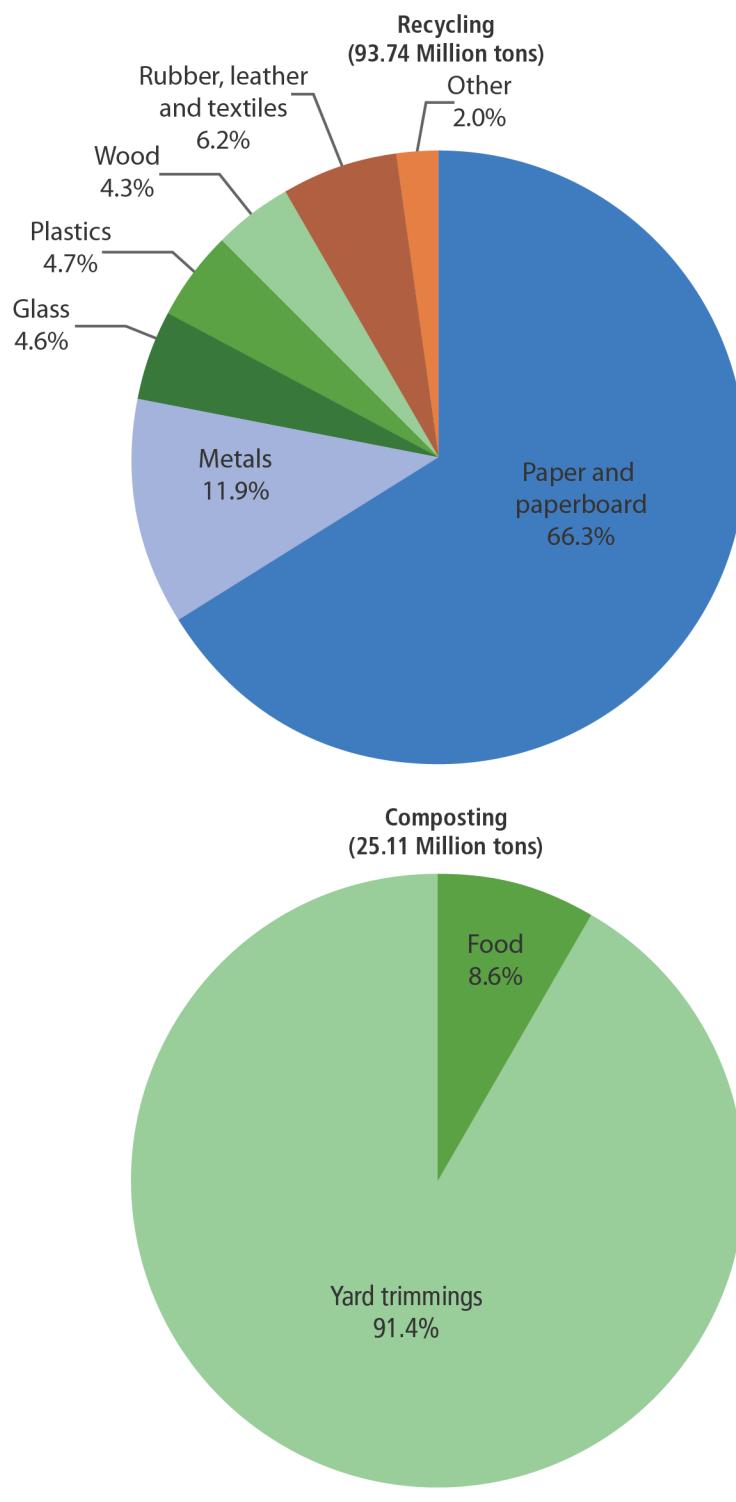
Figure 12. Recycling, Composting, Combustion with Energy Recovery and Landfilling of Materials in MSW, 1960 to 2017



*Landfilling after composting, recycling and combustion with energy recovery. Includes combustion without energy recovery.

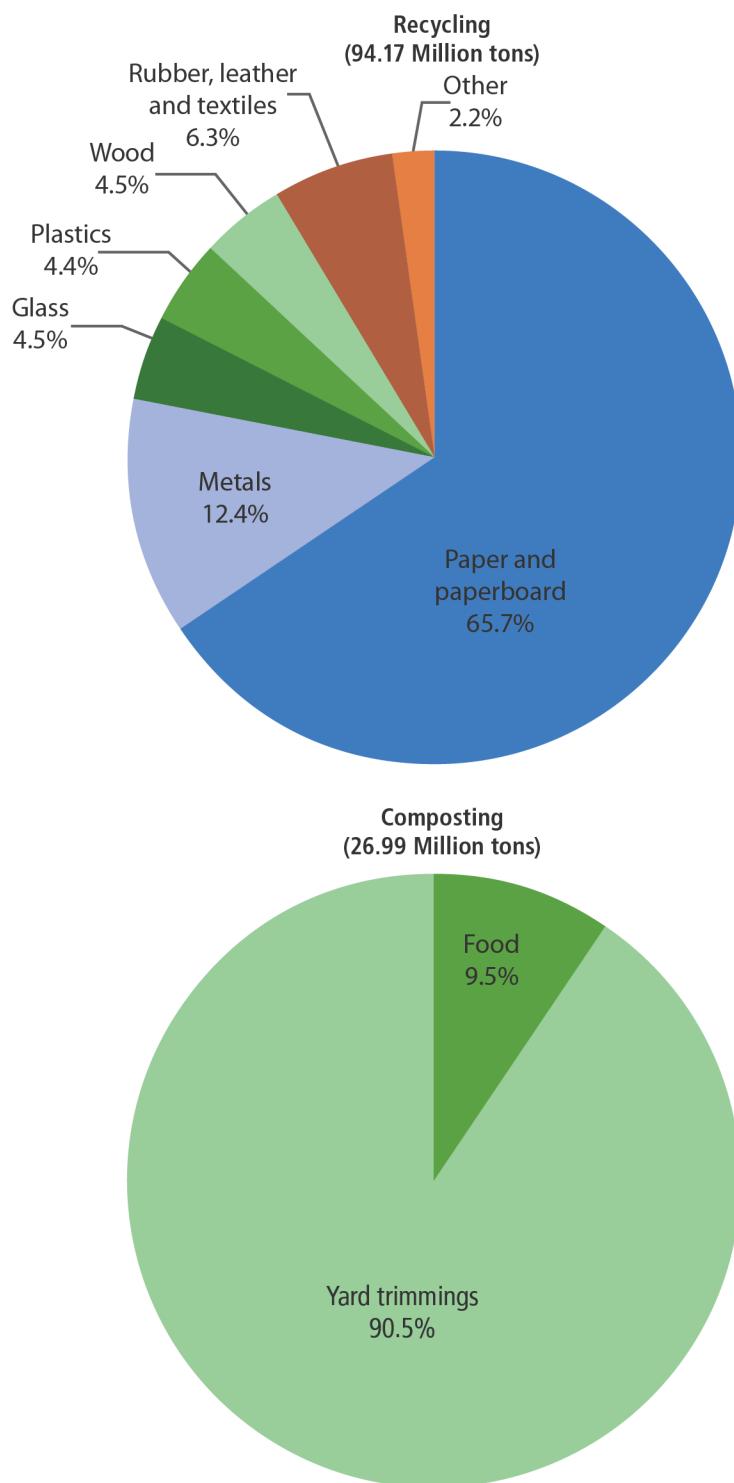
The top line measures generation, because generation = recycling + composting + combustion with energy recovery + landfilling.

Figure 13A. Materials Recycling and Composting in MSW,* 2016



* In percent by weight of total recycling and composting

Figure 13B. Materials Recycling and Composting in MSW,* 2017



* In percent by weight of total recycling and composting

Figure 14A. Materials Generated, Combusted with Energy Recovery and Landfilled in MSW, 2016

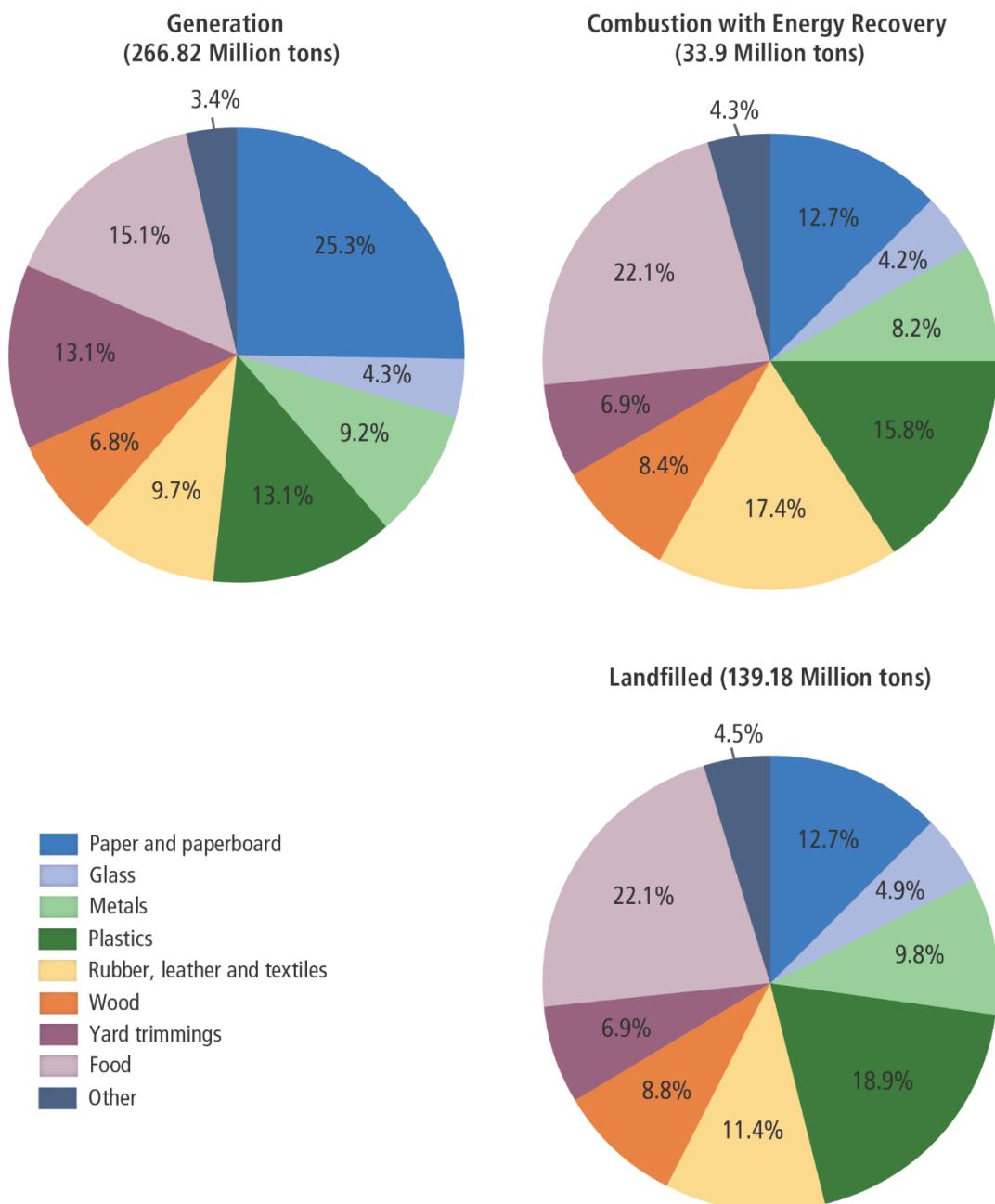


Figure 14B. Materials Generated, Combusted with Energy Recovery and Landfilled in MSW, 2017

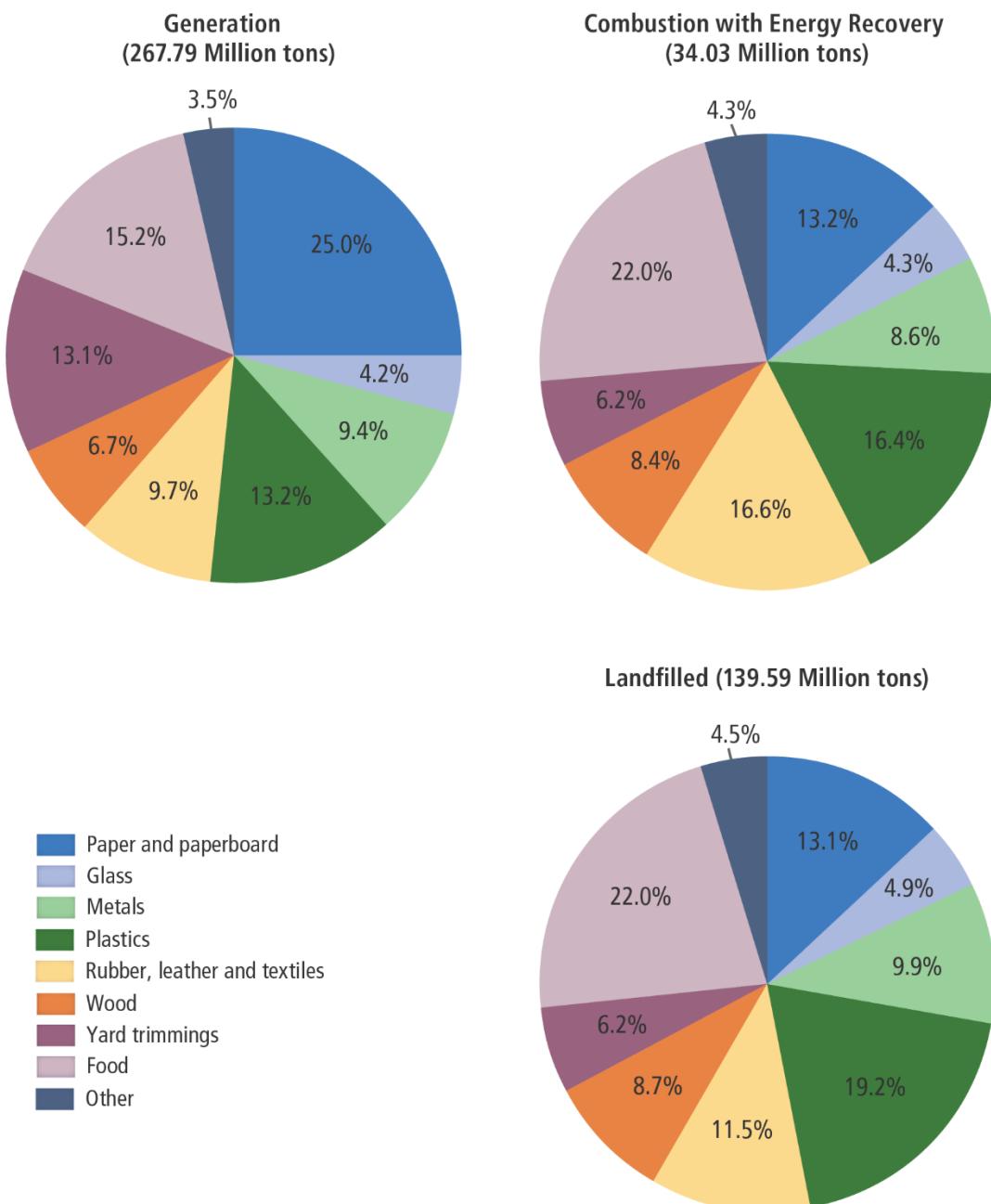


Figure 15. Generation of Products in MSW, 1960 to 2017

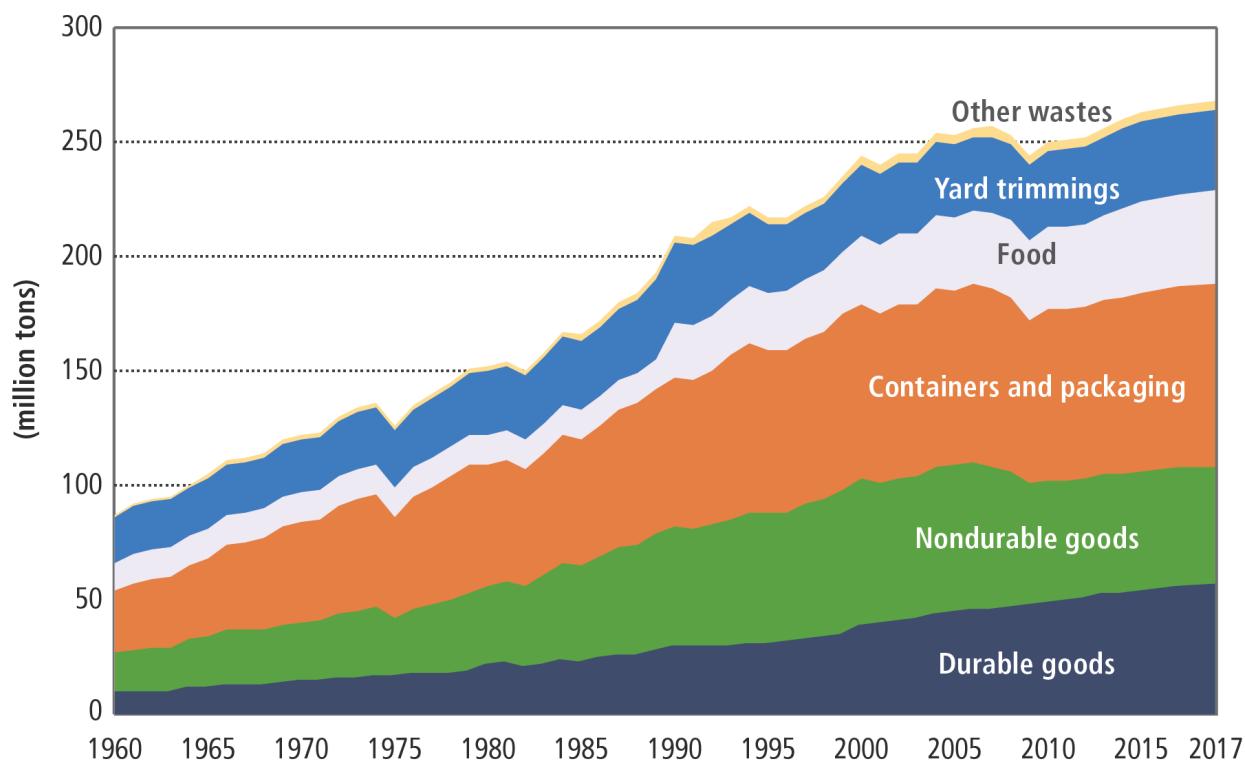


Figure 16A. Nondurable Goods Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2016

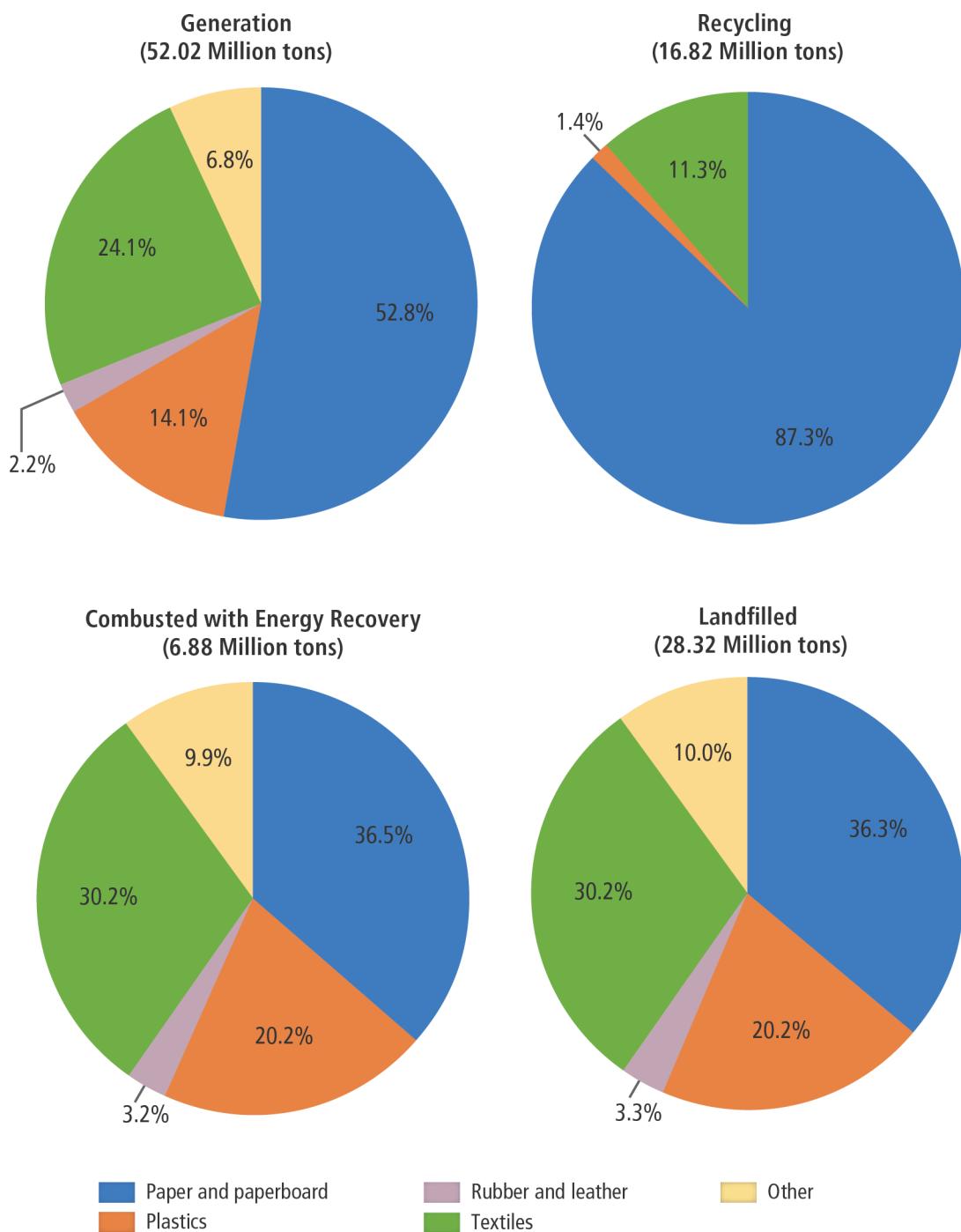


Figure 16B. Nondurable Goods Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2017

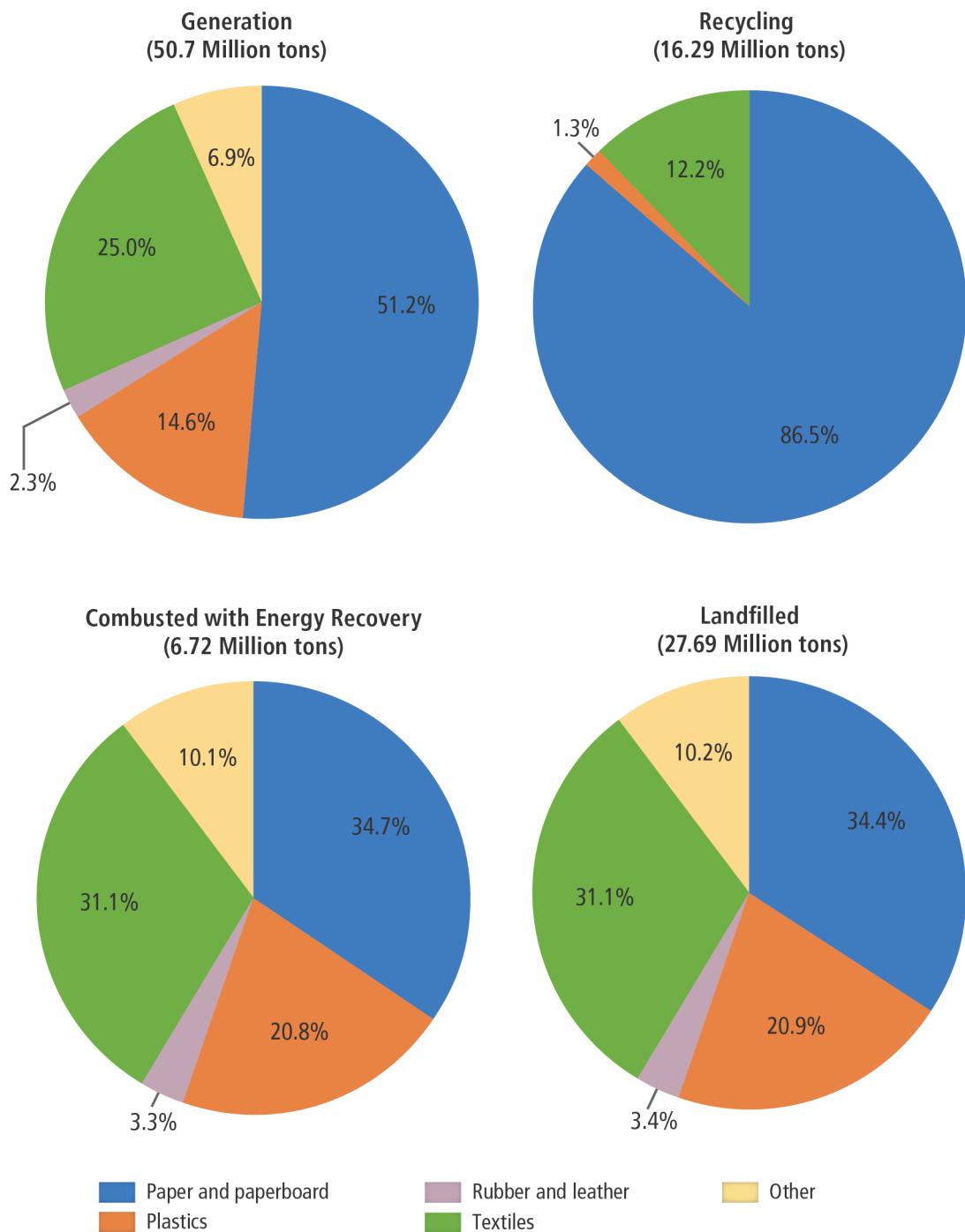
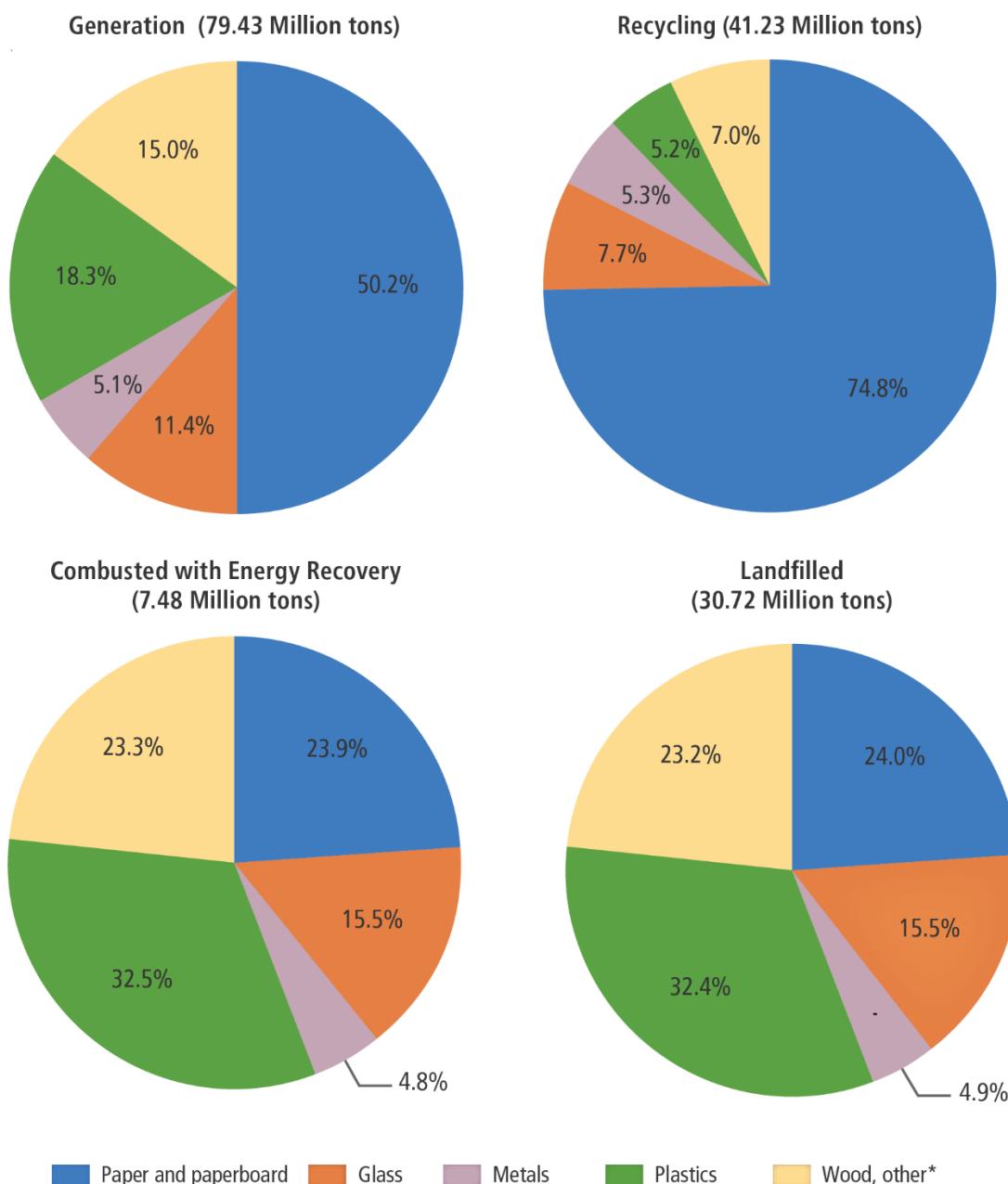
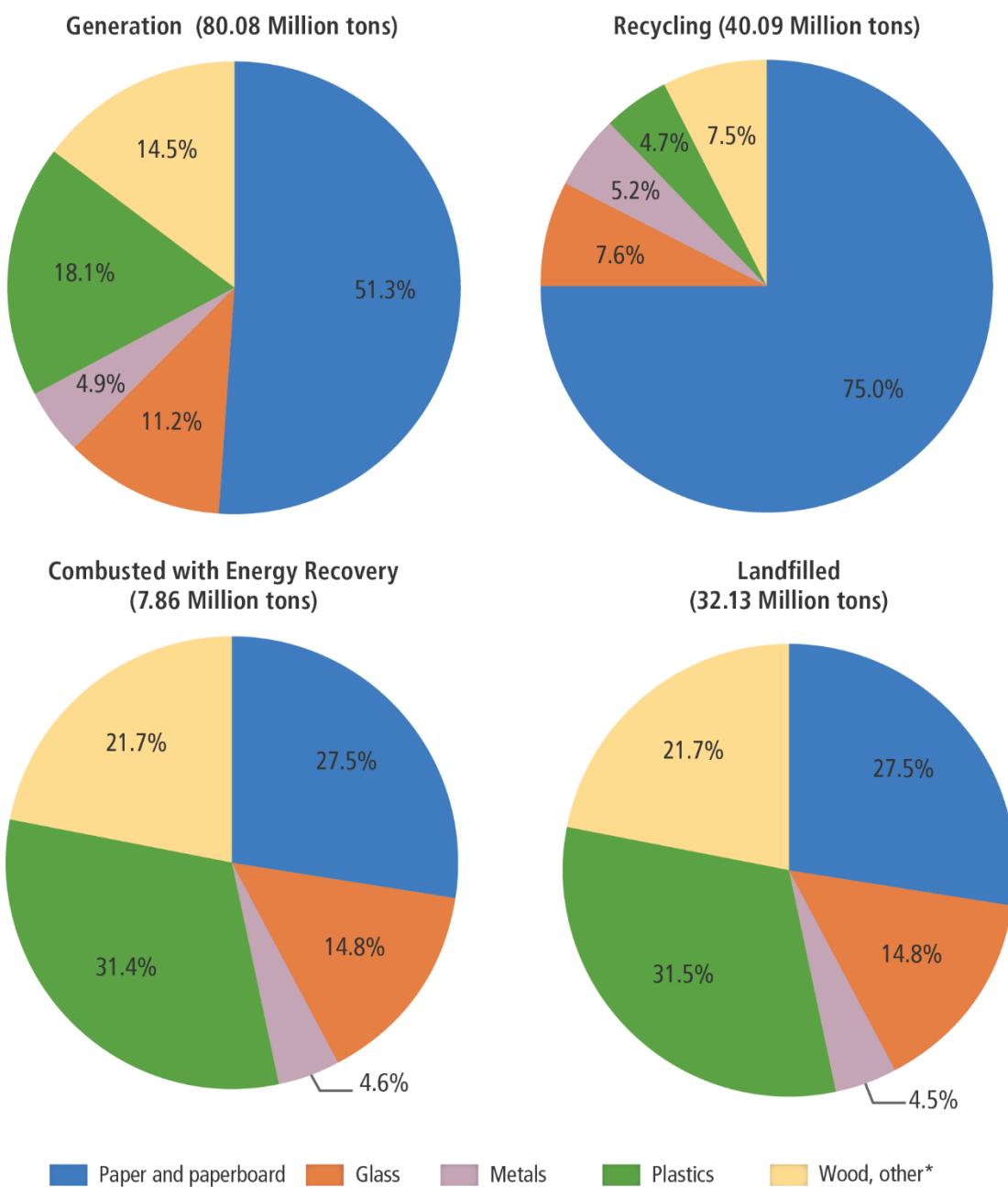


Figure 17A. Containers and Packaging Materials Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2016



*Primarily wood, with less than 1% textiles.

Figure 17B. Containers and Packaging Materials Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2017



*Primarily wood, with less than 1% textiles.

Figure 18A. Containers and Packaging Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2016

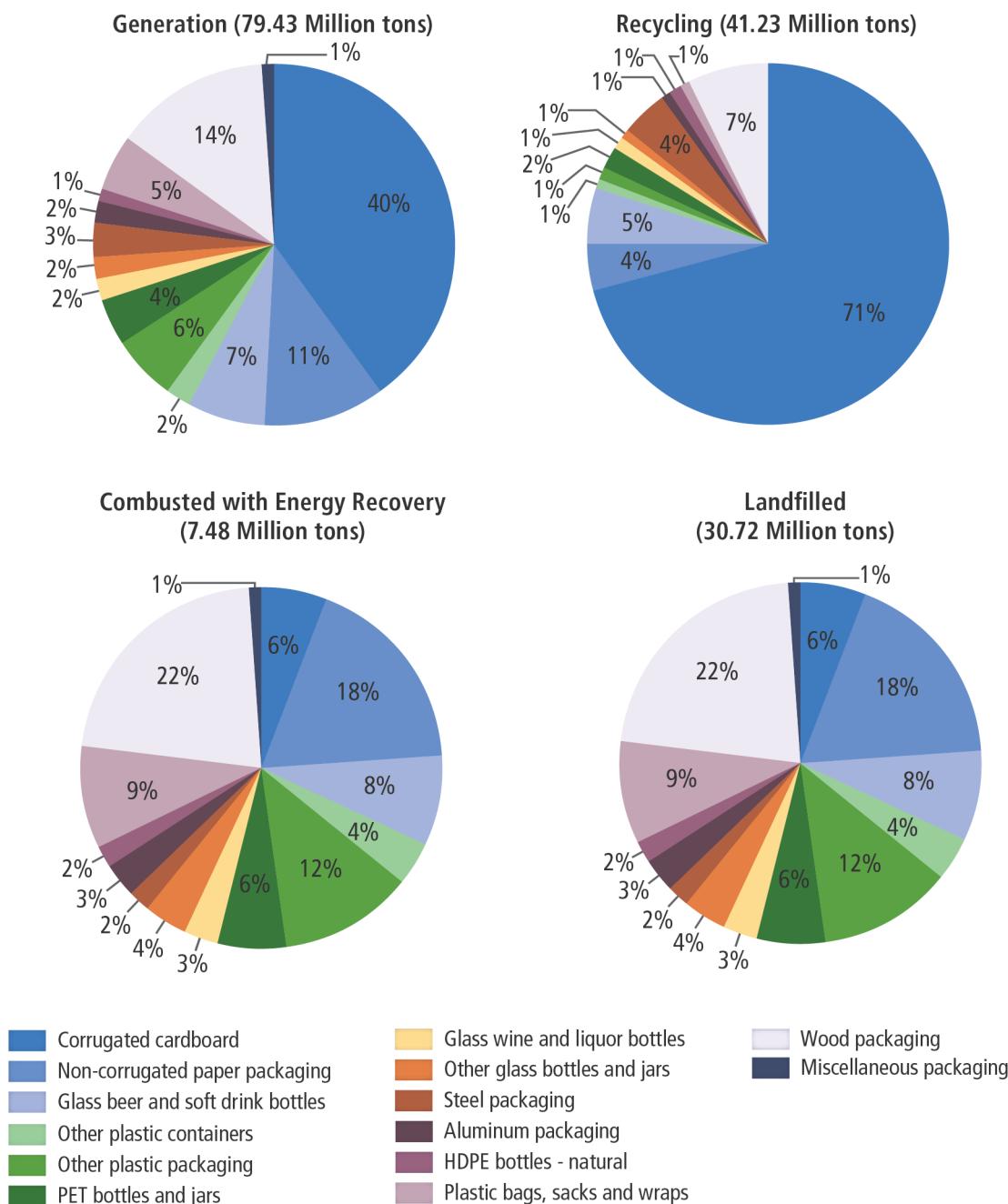


Figure 18B. Containers and Packaging Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2017

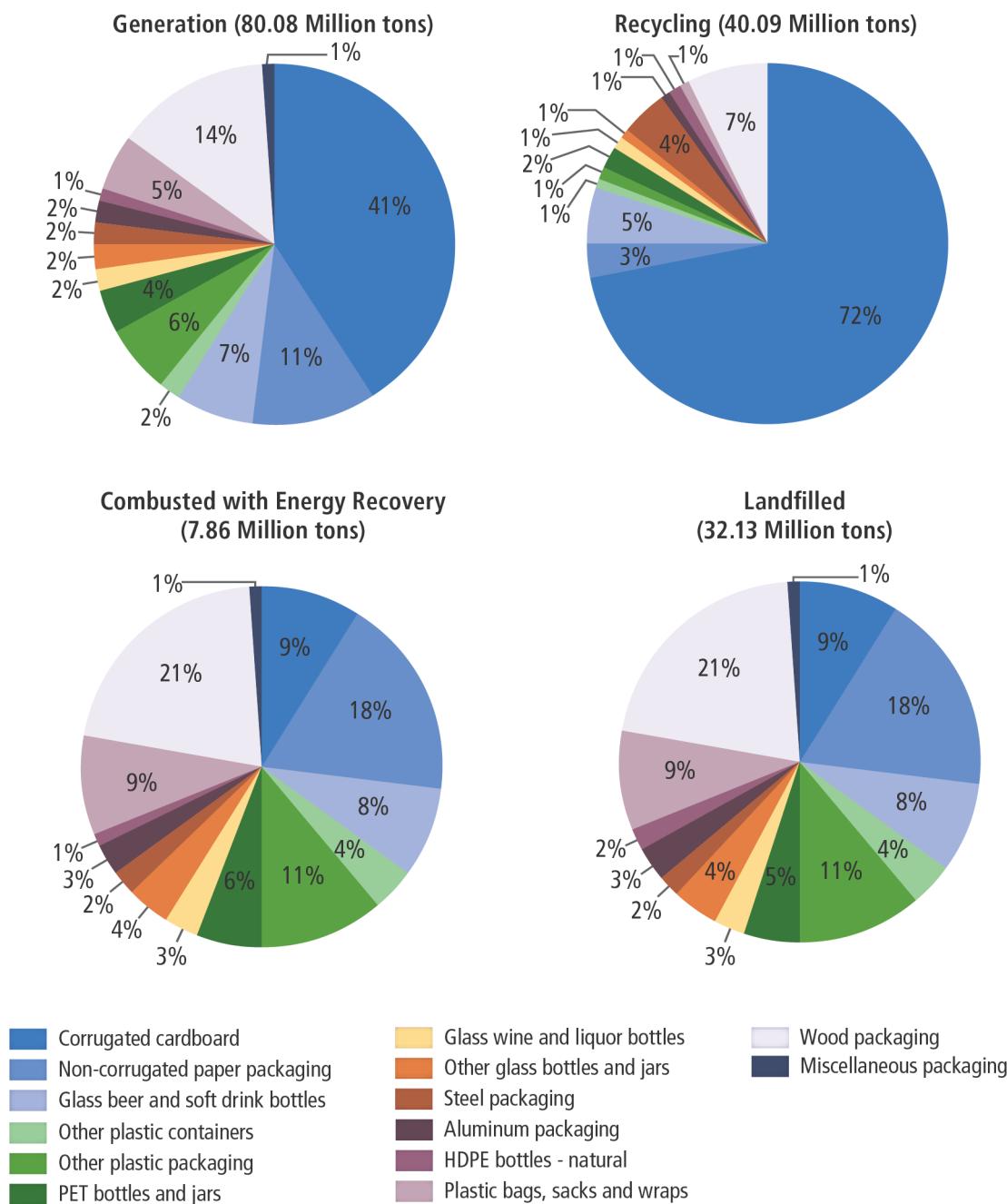


Figure 19. Diagram of Solid Waste Management

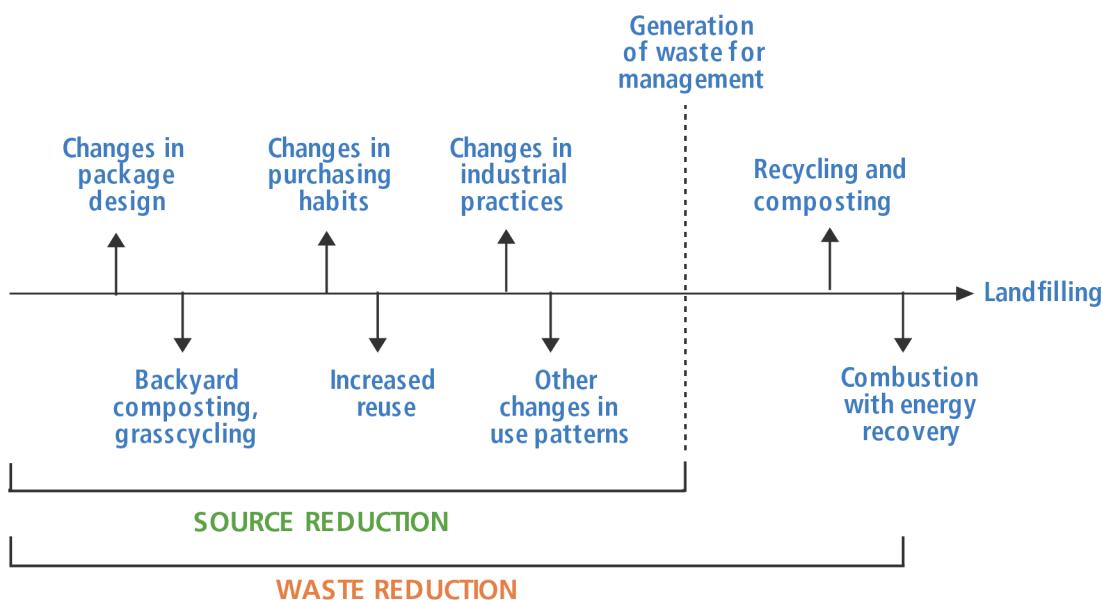


Figure 20. States with Bottle Deposit Rules

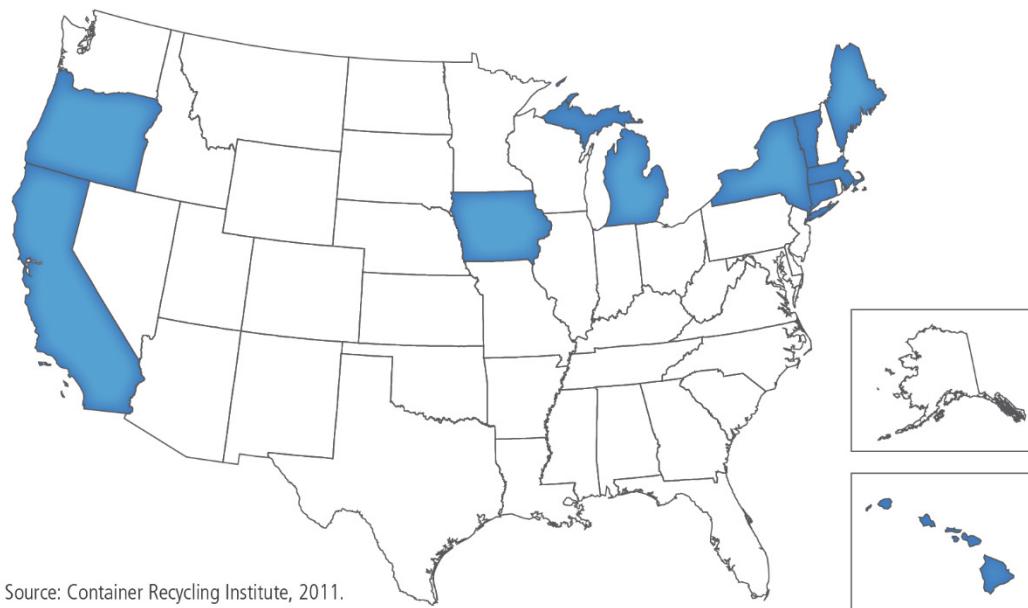
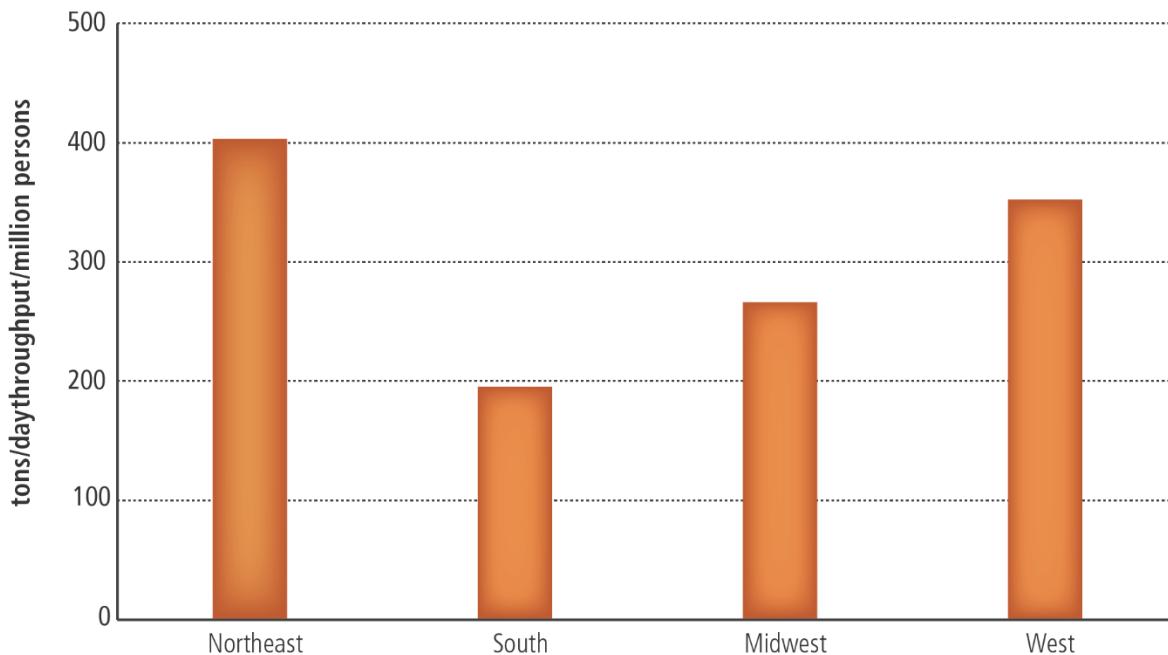


Figure 21A. Estimated MRF Throughput, 2016*
(Tons per day per million persons)



*Throughput is the tons of waste processed.

Source: U.S. Census Bureau, Governmental Advisory Associates, Inc. Data provided August 2019

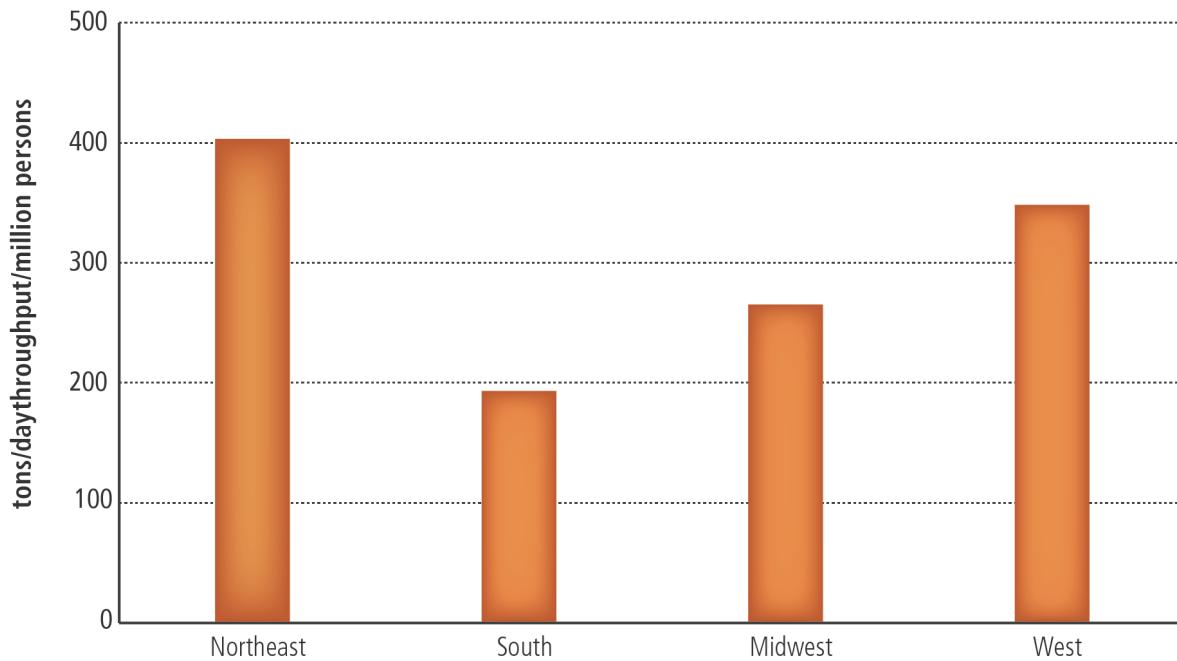
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 21B. Estimated MRF Throughput, 2017*
(Tons per day per million persons)



*Throughput is the tons of waste processed.

Source: U.S. Census Bureau, Governmental Advisory Associates, Inc. Data provided August 2019

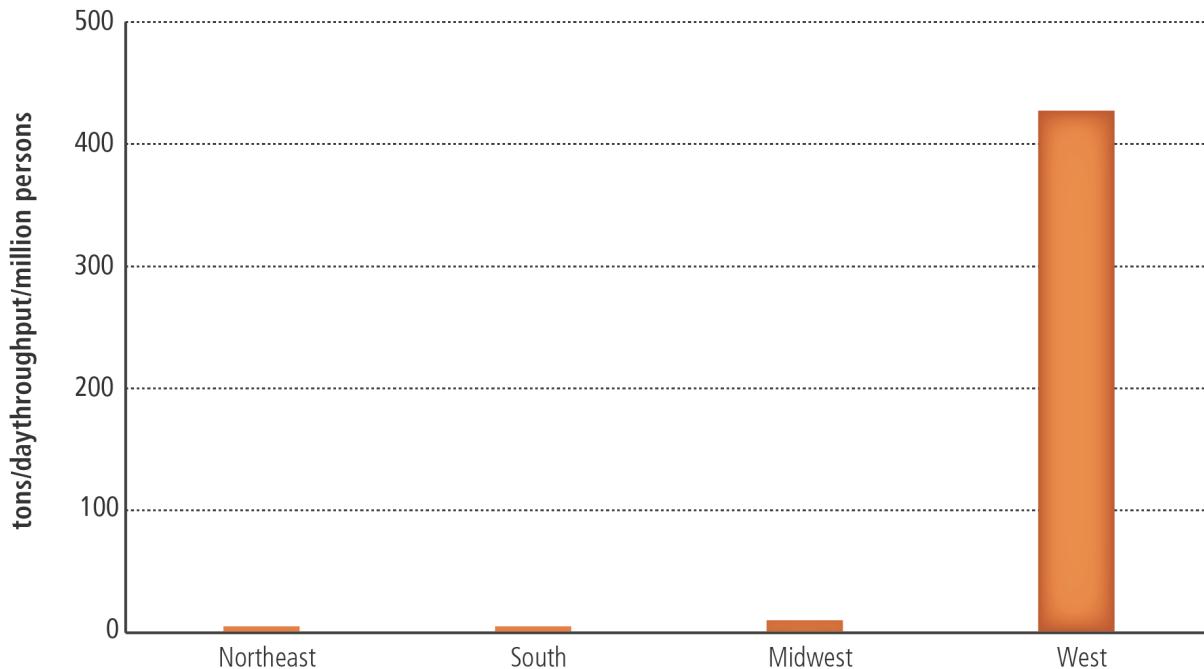
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 22A. Mixed Waste Processing Estimated Throughput, 2016*
(Tons per day per million persons)



*Throughput is the tons of waste processed.

Source: U.S. Census Bureau; Governmental Advisory Associates, Inc. Data provided August 2019.

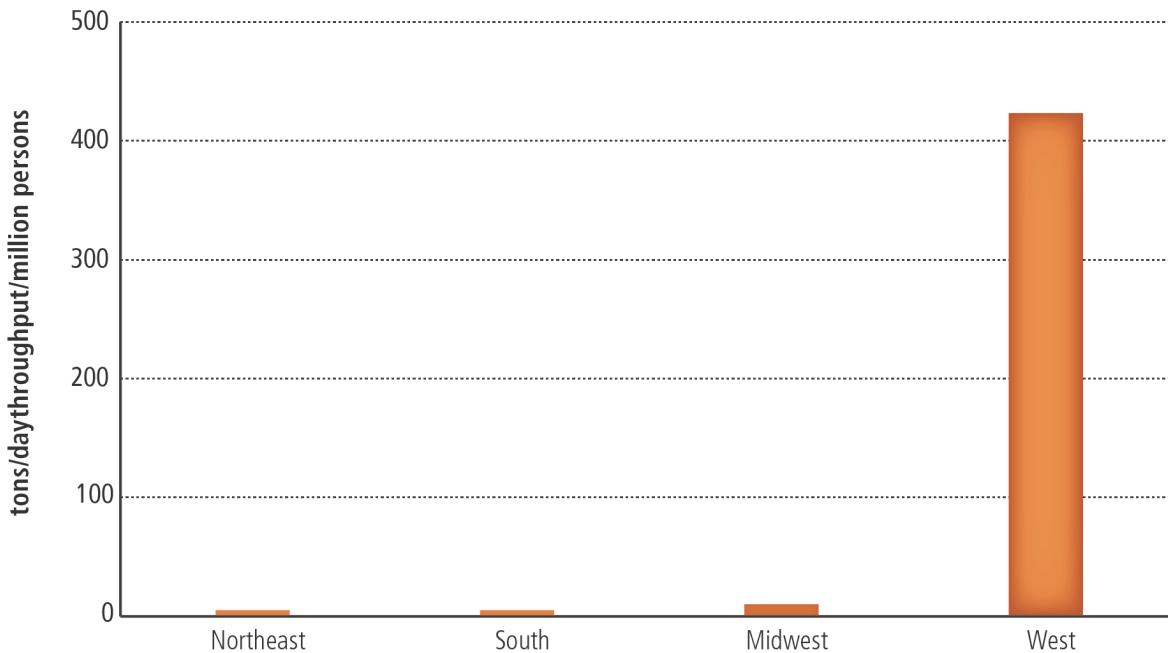
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 22B. Mixed Waste Processing Estimated Throughput, 2017*
(Tons per day per million persons)



*Throughput is the tons of waste processed.

Source: U.S. Census Bureau; Governmental Advisory Associates, Inc. Data provided August 2019.

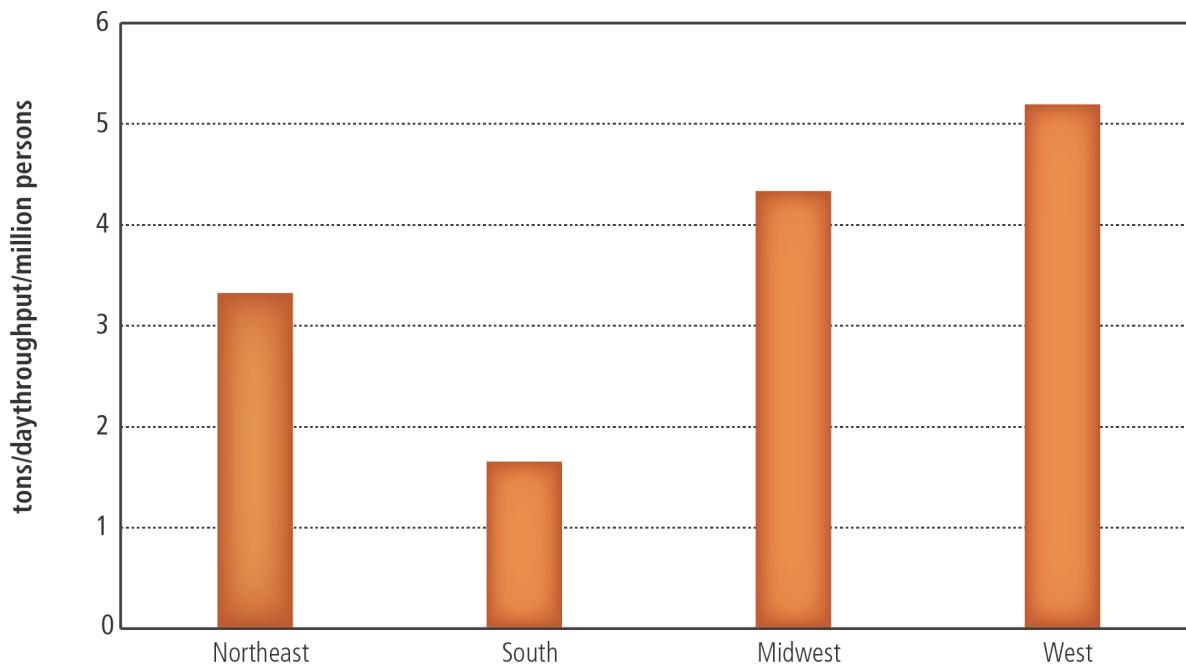
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 23A. MSW Composting Throughput, 2016*
(Tons per day per million persons)



*Throughput is the tons of waste processed.

Source: U.S. Census Bureau; BioCycle, November 2011, BioCycle October 2017, Mariposa County, California; Gallatin County, Montana; Delaware County, New York; and Medina County, Ohio websites.

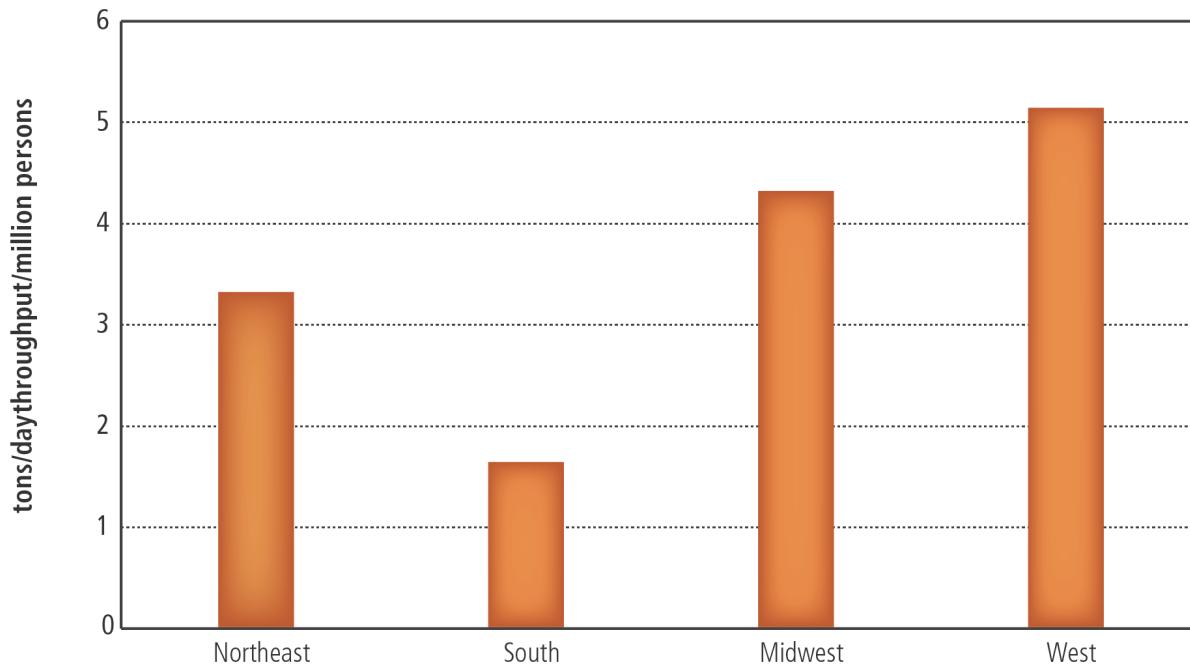
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 23B. MSW Composting Throughput, 2017*
(Tons per day per million persons)



*Throughput is the tons of waste processed.

Source: U.S. Census Bureau; BioCycle, November 2011, BioCycle October 2017, Mariposa County, California; Gallatin County, Montana; Delaware County, New York; and Medina County, Ohio websites.

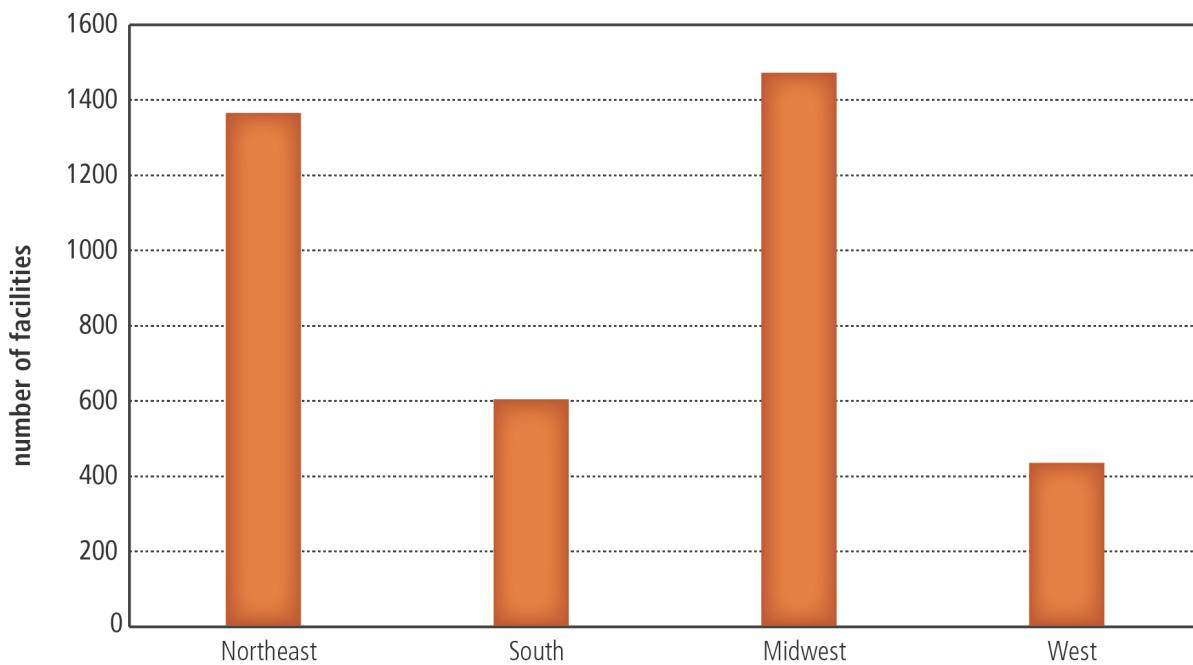
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 24A. Yard Trimmings Composting Facilities, 2016
 (In number of facilities)



Source: Goldstein, N. "The State of Organics" BioCycle, October 2017. United States composting facilities data reported for 2015-2017. Facilities composting yard trimmings, yard trimmings and food waste, and mixed organics. Excludes 740 facilities composting manure, biosolids, mixed MSW, or not defined.

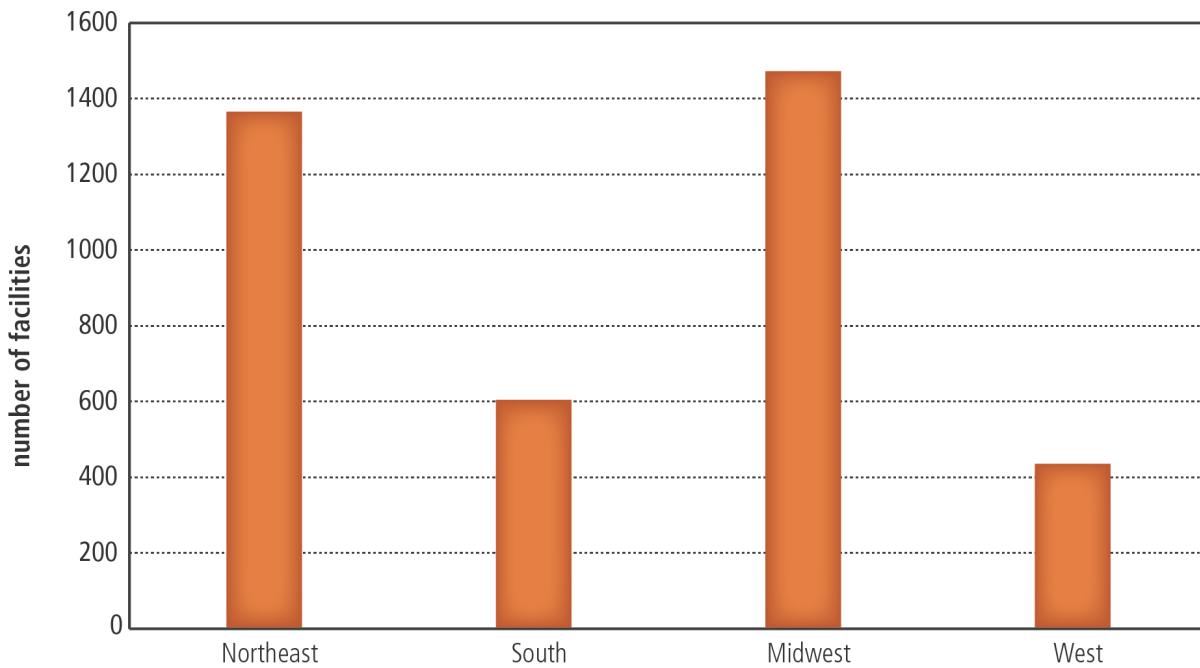
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 24B. Yard Trimmings Composting Facilities, 2017
 (In number of facilities)



Source: Goldstein, N. "The State of Organics" BioCycle, October 2017. United States composting facilities data reported for 2015-2017. Facilities composting yard trimmings, yard trimmings and food waste, and mixed organics. Excludes 740 facilities composting manure, biosolids, mixed MSW, or not defined.

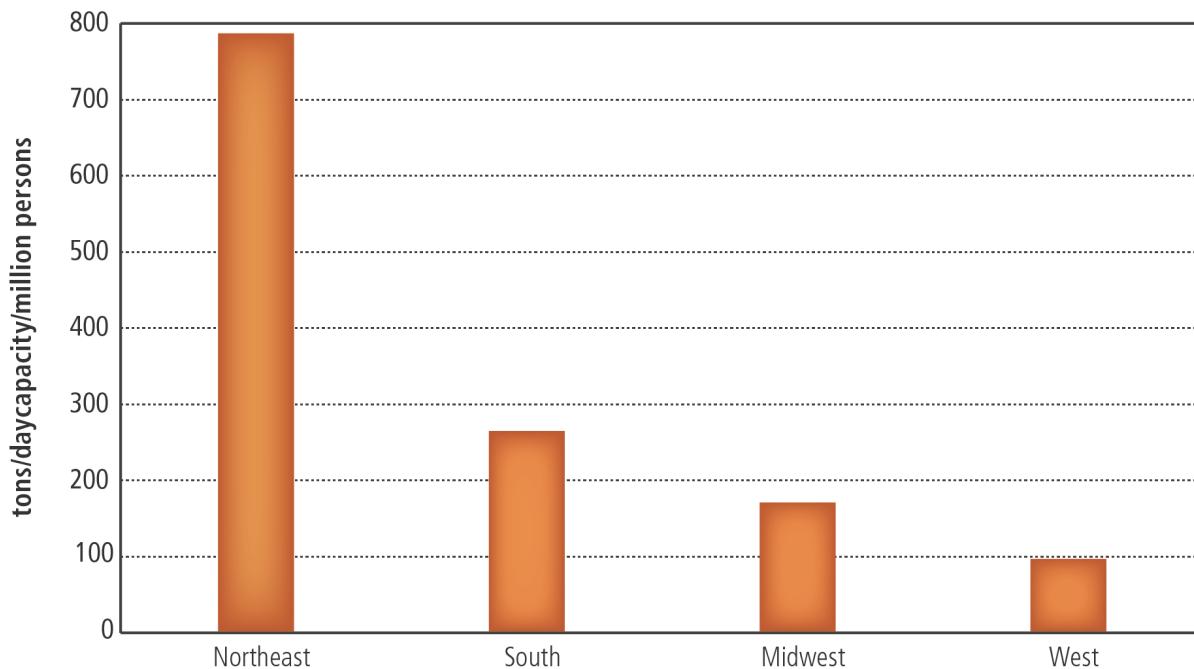
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 25A. Municipal Waste-To-Energy Capacity, 2016
(Tons per day per million persons)



Source: U.S. Census Bureau, Energy Recovery Council (ERC). 2016.

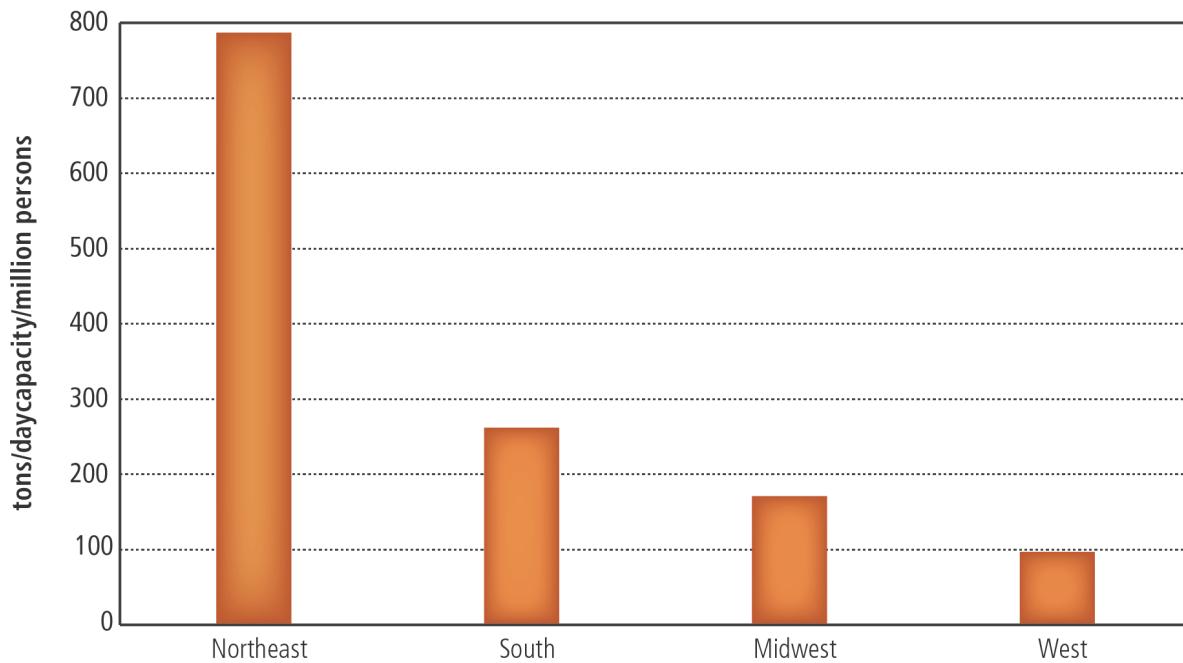
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 25B. Municipal Waste-To-Energy Capacity, 2017
(Tons per day per million persons)



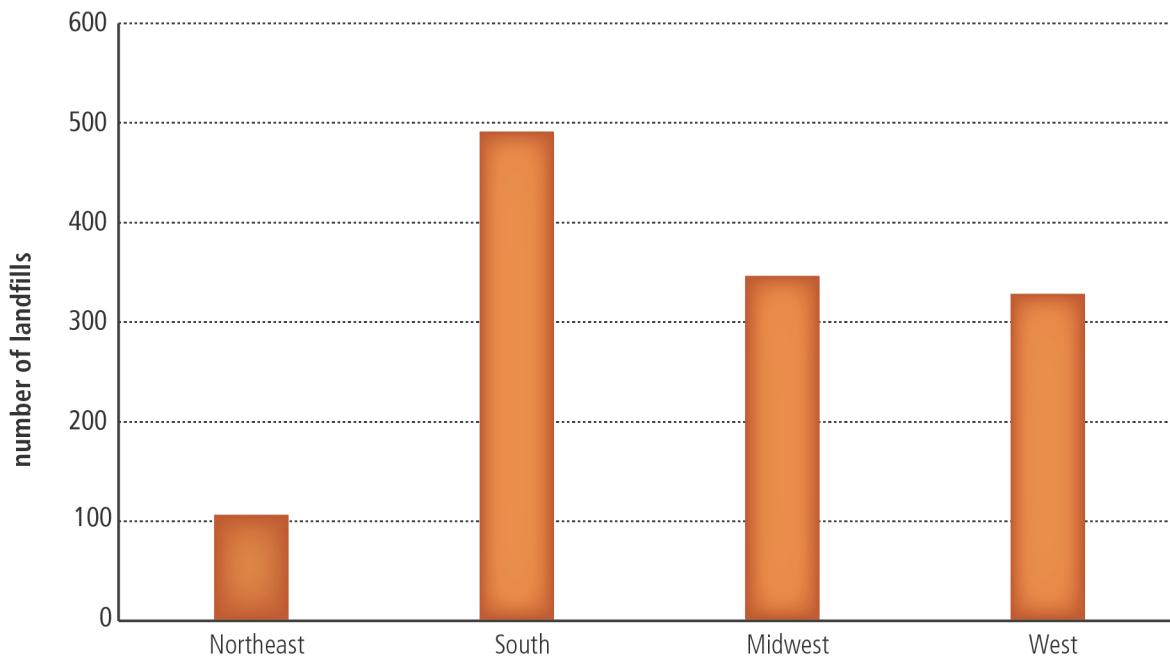
Source: U.S. Census Bureau, Energy Recovery Council (ERC). 2016.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 26A. Number of Landfills in the U.S., 2016

Source: U.S. EPA. Landfill Methane Outreach Program (LMOP) Facility-level database. Data represents MSW landfills open July 2019 excluding landfills opening in 2017.

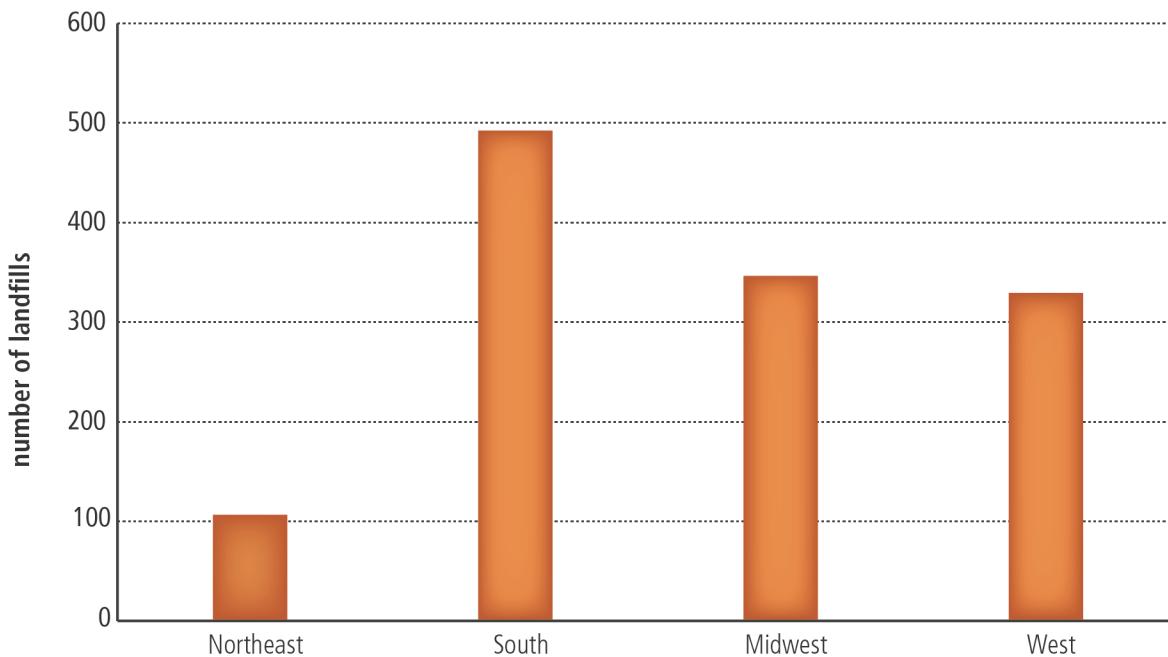
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Figure 26B. Number of Landfills in the U.S., 2017



Source: U.S. EPA. Landfill Methane Outreach Program (LMOP) Facility-level database. Data represents MSW landfills open July 2019.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming