

US EPA ARCHIVE DOCUMENT

**Municipal Solid Waste Generation, Recycling, and Disposal in the United States
Detailed Tables and Figures for 2008**

U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery

November 2009



Table 1

MATERIALS GENERATED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(In thousands of tons and percent of total generation)

	Thousands of Tons									
Materials	1960	1970	1980	1990	2000	2003	2005	2007	2008	
Paper and Paperboard	29,990	44,310	55,160	72,730	87,740	83,160	84,840	82,530	77,420	
Glass	6,720	12,740	15,130	13,100	12,760	12,550	12,540	12,520	12,150	
Metals										
Ferrous	10,300	12,360	12,620	12,640	14,110	14,750	14,990	15,640	15,680	
Aluminum	340	800	1,730	2,810	3,200	3,240	3,330	3,360	3,410	
Other Nonferrous	180	670	1,160	1,100	1,600	1,620	1,740	1,780	1,760	
<i>Total Metals</i>	<i>10,820</i>	<i>13,830</i>	<i>15,510</i>	<i>16,550</i>	<i>18,910</i>	<i>19,610</i>	<i>20,060</i>	<i>20,780</i>	<i>20,850</i>	
Plastics	390	2,900	6,830	17,130	25,540	27,870	29,240	30,740	30,050	
Rubber and Leather	1,840	2,970	4,200	5,790	6,710	7,070	7,360	7,540	7,410	
Textiles	1,760	2,040	2,530	5,810	9,440	10,670	11,380	11,940	12,370	
Wood	3,030	3,720	7,010	12,210	13,110	13,670	14,080	16,070	16,390	
Other **	70	770	2,520	3,190	4,000	4,030	4,170	4,440	4,500	
Total Materials in Products	54,620	83,280	108,890	146,510	178,210	178,630	183,670	186,560	181,140	
Other Wastes										
Food Scraps	12,200	12,800	13,000	20,800	26,810	28,510	30,220	31,650	31,790	
Yard Trimmings	20,000	23,200	27,500	35,000	30,530	31,470	32,070	32,630	32,900	
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,620	3,690	3,750	3,780	
Total Other Wastes	33,500	37,780	42,750	58,700	60,840	63,600	65,980	68,030	68,470	
Total MSW Generated - Weight	88,120	121,060	151,640	205,210	239,050	242,230	249,650	254,590	249,610	
	Percent of Total Generation									
Materials	1960	1970	1980	1990	2000	2003	2005	2007	2008	
Paper and Paperboard	34.0%	36.6%	36.4%	35.4%	36.7%	34.3%	34.0%	32.4%	31.0%	
Glass	7.6%	10.5%	10.0%	6.4%	5.3%	5.2%	5.0%	4.9%	4.9%	
Metals										
Ferrous	11.7%	10.2%	8.3%	6.2%	5.9%	6.1%	6.0%	6.1%	6.3%	
Aluminum	0.4%	0.7%	1.1%	1.4%	1.3%	1.3%	1.3%	1.3%	1.4%	
Other Nonferrous	0.2%	0.6%	0.8%	0.5%	0.7%	0.7%	0.7%	0.7%	0.7%	
<i>Total Metals</i>	<i>12.3%</i>	<i>11.4%</i>	<i>10.2%</i>	<i>8.1%</i>	<i>7.9%</i>	<i>8.1%</i>	<i>8.0%</i>	<i>8.2%</i>	<i>8.4%</i>	
Plastics	0.4%	2.4%	4.5%	8.3%	10.7%	11.5%	11.7%	12.1%	12.0%	
Rubber and Leather	2.1%	2.5%	2.8%	2.8%	2.8%	2.9%	2.9%	3.0%	3.0%	
Textiles	2.0%	1.7%	1.7%	2.8%	3.9%	4.4%	4.6%	4.7%	5.0%	
Wood	3.4%	3.1%	4.6%	6.0%	5.5%	5.6%	5.6%	6.3%	6.6%	
Other **	0.1%	0.6%	1.7%	1.6%	1.7%	1.7%	1.7%	1.7%	1.8%	
Total Materials in Products	62.0%	68.8%	71.8%	71.4%	74.5%	73.7%	73.6%	73.3%	72.6%	
Other Wastes										
Food Scraps	13.8%	10.6%	8.6%	10.1%	11.2%	11.8%	12.1%	12.4%	12.7%	
Yard Trimmings	22.7%	19.2%	18.1%	17.1%	12.8%	13.0%	12.8%	12.8%	13.2%	
Miscellaneous Inorganic Wastes	1.5%	1.5%	1.5%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%	
Total Other Wastes	38.0%	31.2%	28.2%	28.6%	25.5%	26.3%	26.4%	26.7%	27.4%	
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

* Generation before materials recovery or combustion. Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

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

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 2
RECOVERY* OF MUNICIPAL SOLID WASTE, 1960 TO 2008
(In thousands of tons and percent of generation of each material)

Materials	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Paper and Paperboard	5,080	6,770	11,740	20,230	37,560	39,610	41,960	44,480	42,940
Glass	100	160	750	2,630	2,880	2,650	2,590	2,880	2,810
Metals									
Ferrous	50	150	370	2,230	4,680	5,210	5,030	5,280	5,290
Aluminum	Neg.	10	310	1,010	860	690	690	730	720
Other Nonferrous	Neg.	320	540	730	1,060	1,050	1,200	1,240	1,210
<i>Total Metals</i>	50	480	1,220	3,970	6,600	6,950	6,920	7,250	7,220
Plastics	Neg.	Neg.	20	370	1,480	1,530	1,760	2,100	2,120
Rubber and Leather	330	250	130	370	820	1,100	1,100	1,140	1,060
Textiles	50	60	160	660	1,320	1,560	1,850	1,920	1,890
Wood	Neg.	Neg.	Neg.	130	1,240	1,280	1,310	1,540	1,580
Other **	Neg.	300	500	680	980	980	1,140	1,170	1,150
Total Materials in Products	5,610	8,020	14,520	29,040	52,880	55,660	58,630	62,480	60,770
Other Wastes									
Food Scraps	Neg.	Neg.	Neg.	Neg.	680	750	690	810	800
Yard Trimmings	Neg.	Neg.	Neg.	4,200	15,770	18,330	19,860	20,900	21,300
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	4,200	16,450	19,080	20,550	21,710	22,100
Total MSW Recovered - Weight	5,610	8,020	14,520	33,240	69,330	74,740	79,180	84,190	82,870
Materials	Percent of Generation of Each Material								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Paper and Paperboard	16.9%	15.3%	21.3%	27.8%	42.8%	47.6%	49.5%	53.9%	55.5%
Glass	1.5%	1.3%	5.0%	20.1%	22.6%	21.1%	20.7%	23.0%	23.1%
Metals									
Ferrous	0.5%	1.2%	2.9%	17.6%	33.2%	35.3%	33.6%	33.8%	33.7%
Aluminum	Neg.	1.3%	17.9%	35.9%	26.9%	21.3%	20.7%	21.7%	21.1%
Other Nonferrous	Neg.	47.8%	46.6%	66.4%	66.3%	64.8%	69.0%	69.7%	68.8%
<i>Total Metals</i>	0.5%	3.5%	7.9%	24.0%	34.9%	35.4%	34.5%	34.9%	34.6%
Plastics	Neg.	Neg.	0.3%	2.2%	5.8%	5.5%	6.0%	6.8%	7.1%
Rubber and Leather	17.9%	8.4%	3.1%	6.4%	12.2%	15.6%	14.9%	15.1%	14.3%
Textiles	2.8%	2.9%	6.3%	11.4%	14.0%	14.6%	16.3%	16.1%	15.3%
Wood	Neg.	Neg.	Neg.	1.1%	9.5%	9.4%	9.3%	9.6%	9.6%
Other **	Neg.	39.0%	19.8%	21.3%	24.5%	24.3%	27.3%	26.4%	25.6%
Total Materials in Products	10.3%	9.6%	13.3%	19.8%	29.7%	31.2%	31.9%	33.5%	33.5%
Other Wastes									
Food, Other [^]	Neg.	Neg.	Neg.	Neg.	2.5%	2.6%	2.3%	2.6%	2.5%
Yard Trimmings	Neg.	Neg.	Neg.	12.0%	51.7%	58.2%	61.9%	64.1%	64.7%
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	7.2%	27.0%	30.0%	31.1%	31.9%	32.3%
Total MSW Recovered - %	6.4%	6.6%	9.6%	16.2%	29.0%	30.9%	31.7%	33.1%	33.2%

* Recovery of postconsumer wastes; does not include converting/fabrication scrap.

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

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

[^] Includes recovery of paper and mixed MSW for composting.

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 3
MATERIALS DISCARDED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(In thousands of tons and percent of total discards)

Materials	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Paper and Paperboard	24,910	37,540	43,420	52,500	50,180	43,550	42,880	38,050	34,480
Glass	6,620	12,580	14,380	10,470	9,880	9,900	9,950	9,640	9,340
Metals									
Ferrous	10,250	12,210	12,250	10,410	9,430	9,540	9,960	10,360	10,390
Aluminum	340	790	1,420	1,800	2,340	2,550	2,640	2,630	2,690
Other Nonferrous	180	350	620	370	540	570	540	540	550
<i>Total Metals</i>	<i>10,770</i>	<i>13,350</i>	<i>14,290</i>	<i>12,580</i>	<i>12,310</i>	<i>12,660</i>	<i>13,140</i>	<i>13,530</i>	<i>13,630</i>
Plastics	390	2,900	6,810	16,760	24,060	26,340	27,480	28,640	27,930
Rubber and Leather	1,510	2,720	4,070	5,420	5,890	5,970	6,260	6,400	6,350
Textiles	1,710	1,980	2,370	5,150	8,120	9,110	9,530	10,020	10,480
Wood	3,030	3,720	7,010	12,080	11,870	12,390	12,770	14,530	14,810
Other **	70	470	2,020	2,510	3,020	3,050	3,030	3,270	3,350
<i>Total Materials in Products</i>	49,010	75,260	94,370	117,470	125,330	122,970	125,040	124,080	120,370
Other Wastes									
Food Scraps	12,200	12,800	13,000	20,800	26,130	27,760	29,530	30,840	30,990
Yard Trimmings	20,000	23,200	27,500	30,800	14,760	13,140	12,210	11,730	11,600
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,620	3,690	3,750	3,780
<i>Total Other Wastes</i>	33,500	37,780	42,750	54,500	44,390	44,520	45,430	46,320	46,370
<i>Total MSW Discarded - Weight</i>	82,510	113,040	137,120	171,970	169,720	167,490	170,470	170,400	166,740
Materials	Percent of Total Discards								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Paper and Paperboard	30.2%	33.2%	31.7%	30.5%	29.6%	26.0%	25.2%	22.3%	20.7%
Glass	8.0%	11.1%	10.5%	6.1%	5.8%	5.9%	5.8%	5.7%	5.6%
Metals									
Ferrous	12.4%	10.8%	8.9%	6.1%	5.6%	5.7%	5.8%	6.1%	6.2%
Aluminum	0.4%	0.7%	1.0%	1.0%	1.4%	1.5%	1.5%	1.5%	1.6%
Other Nonferrous	0.2%	0.3%	0.5%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%
<i>Total Metals</i>	<i>13.1%</i>	<i>11.8%</i>	<i>10.4%</i>	<i>7.3%</i>	<i>7.3%</i>	<i>7.6%</i>	<i>7.7%</i>	<i>7.9%</i>	<i>8.2%</i>
Plastics	0.5%	2.6%	5.0%	9.7%	14.2%	15.7%	16.1%	16.8%	16.8%
Rubber and Leather	1.8%	2.4%	3.0%	3.2%	3.5%	3.6%	3.7%	3.8%	3.8%
Textiles	2.1%	1.8%	1.7%	3.0%	4.8%	5.4%	5.6%	5.9%	6.3%
Wood	3.7%	3.3%	5.1%	7.0%	7.0%	7.4%	7.5%	8.5%	8.9%
Other **	0.1%	0.4%	1.5%	1.5%	1.8%	1.8%	1.8%	1.9%	2.0%
<i>Total Materials in Products</i>	59.4%	66.6%	68.8%	68.3%	73.8%	73.4%	73.4%	72.8%	72.2%
Other Wastes									
Food Scraps	14.8%	11.3%	9.5%	12.1%	15.4%	16.6%	17.3%	18.1%	18.6%
Yard Trimmings	24.2%	20.5%	20.1%	17.9%	8.7%	7.8%	7.2%	6.9%	7.0%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	2.1%	2.2%	2.2%	2.2%	2.3%
<i>Total Other Wastes</i>	40.6%	33.4%	31.2%	31.7%	26.2%	26.6%	26.6%	27.2%	27.8%
<i>Total MSW Discarded - %</i>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Discards after materials and compost recovery. In this table, discards include combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

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

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 4
PAPER AND PAPERBOARD PRODUCTS IN MSW, 2008
(In thousands of tons and percent of generation)

Product Category	Generation	Recovery		Discards
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)
Nondurable Goods				
Newspapers				
Newsprint	6,290	5,510	87.6%	780
Groundwood Inserts	2,510	2,220	88.4%	290
Total Newspapers	<u>8,800</u>	<u>7,730</u>	<u>87.8%</u>	<u>1,070</u>
Books	1,340	400	29.9%	940
Magazines	2,050	820	40.0%	1,230
Office-type Papers*	6,050	4,290	70.9%	1,760
Telephone Directories	840	180	21.4%	660
Standard Mail**	5,510	2,240	40.7%	3,270
Other Commercial Printing	5,130	2,200	42.9%	2,930
Tissue Paper and Towels	3,460	Neg.	Neg.	3,460
Paper Plates and Cups	1,250	Neg.	Neg.	1,250
Other Nonpackaging Paper***	4,690	Neg.	Neg.	4,690
Total Paper and Paperboard Nondurable Goods	<u>39,120</u>	<u>17,860</u>	<u>45.7%</u>	<u>21,260</u>
Containers and Packaging				
Corrugated Boxes	29,710	22,760	76.6%	6,950
Milk Cartons	490	Neg.	Neg.	490
Folding Cartons	5,340	1,880	35.2%	3,460
Other Paperboard Packaging	120	Neg.	Neg.	120
Bags and Sacks	1,170	440	37.6%	730
Other Paper Packaging	1,460	Neg.	Neg.	1,460
Total Paper and Paperboard Containers and Packaging	<u>38,290</u>	<u>25,080</u>	<u>65.5%</u>	<u>13,210</u>
Total Paper and Paperboard[^]	<u>77,410</u>	<u>42,940</u>	<u>55.5%</u>	<u>34,470</u>

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

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

*** Includes tissue in disposable diapers, paper in games and novelties, cards, etc.

[^] Table 4 does not include 10,000 tons of paper used in durable goods (Table 1).

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

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 5
GLASS PRODUCTS IN MSW, 2008
(In thousands of tons and percent of generation)

Product Category	Generation	Recovery		Discards
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)
Durable Goods*	2,100	Neg.	Neg.	2,100
Containers and Packaging				
Beer and Soft Drink Bottles	6,350	2,260	35.6%	4,090
Wine and Liquor Bottles	1,610	240	14.9%	1,370
Food and Other Bottles and Jars	<u>2,090</u>	<u>310</u>	<u>14.8%</u>	<u>1,780</u>
Total Glass Containers	10,050	2,810	28.0%	7,240
Total Glass	<u>12,150</u>	<u>2,810</u>	<u>23.1%</u>	<u>9,340</u>

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

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

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 6
METAL PRODUCTS IN MSW, 2008
(In thousands of tons and percent of generation)

Product Category	Generation	Recovery		Discards
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)
Durable Goods				
Ferrous Metals*	13,130	3,680	28.0%	9,450
Aluminum**	1,310	Neg.	Neg.	1,310
Lead†	1,220	1,210	99.2%	10
Other Nonferrous Metals‡	540	Neg.	Neg.	540
Total Metals in Durable Goods	16,200	4,890	30.2%	11,310
Nondurable Goods				
Aluminum	220	Neg.	Neg.	220
Containers and Packaging				
Steel				
Food and Other Cans	2,310	1,450	62.8%	860
Other Steel Packaging	240	160	66.7%	80
Total Steel Packaging	2,550	1,610	63.1%	940
Aluminum				
Beer and Soft Drink Cans	1,390	670	48.2%	720
Food and Other Cans	70	10	14.3%	60
Foil and Closures	420	40	9.5%	380
Total Aluminum Packaging	1,880	720	38.3%	1,160
Total Metals in Containers and Packaging	4,430	2,330	52.6%	2,100
Total Metals	20,850	7,220	34.6%	13,630
Ferrous	15,680	5,290	33.7%	10,390
Aluminum	3,410	720	21.1%	2,690
Other nonferrous	1,760	1,210	68.8%	550

* 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.

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

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 7
PLASTICS IN PRODUCTS IN MSW, 2008
(In thousands of tons, and percent of generation by resin)

Product Category	Generation	Recovery		Discards
	(Thousand tons)	(Thousand tons)	(Percent of Gen.)	(Thousand tons)
Durable Goods				
PET	610			
HDPE	780			
PVC	630			
LDPE/LLDPE	910			
PP	1,400			
PS	900			
Other resins	5,290			
Total Plastics in Durable Goods	10,520	390	3.7%	10,130
Nondurable Goods				
Plastic Plates and Cups				
LDPE/LLDPE	20			20
PS	760	Neg.		760
Subtotal Plastic Plates and Cups	780			780
Trash Bags				
HDPE	250			250
LDPE/LLDPE	680			680
Subtotal Trash Bags	930			930
All other nondurables*				
PET	240			240
HDPE	430			430
PVC	660			660
LDPE/LLDPE	1,430			1,430
PP	810			810
PS	600			600
Other resins	640			640
Subtotal All Other Nondurables	4,810			4,810
Total Plastics in Nondurable Goods, by resin				
PET	240			240
HDPE	680			680
PVC	660			660
LDPE/LLDPE	2,130			2,130
PP	810			810
PS	1,360			1,360
Other resins	640			640
Total Plastics in Nondurable Goods	6,520	Neg.	Neg.	6,520
Plastic Containers & Packaging				
Bottles and Jars**				
PET	2,680	730	27.2%	1,950
Natural Bottles†				
HDPE	750	220	29.3%	530

HDPE = High density polyethylene

LDPE = Low density polyethylene

LLDPE = Linear low density polyethylene

PET = Polyethylene terephthalate

PP = Polypropylene

Neg. = negligible, less than 5,000 tons or 0.05 percent

PS = Polystyrene

PVC = Polyvinyl chloride

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

** Injection stretch blow molded PET containers as described in the report series titled *Report on Postconsumer PET Container Recycling Activity*. National Association for PET Container Resources.

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

Source: Franklin Associates, A Division of ERG

Table 7 (continued)
PLASTICS IN PRODUCTS IN MSW, 2008
(In thousands of tons, and percent of generation by resin)

Product Category	Generation	Recovery		Discards
	(Thousand tons)	(Thousand tons)	(Percent of Gen.)	(Thousand tons)
Plastic Containers & Packaging, cont.				
Other plastic containers				
HDPE	1,310	260	19.8%	1,050
PVC	40	Neg.		40
LDPE/LLDPE	40	Neg.		40
PP	430	20	4.7%	410
PS	70	Neg.		70
Other resins	10			10
Subtotal Other Containers	1,900	280	14.7%	1,620
Bags, sacks, & wraps				
HDPE	550	60	10.9%	490
PVC	80			80
LDPE/LLDPE	2,350	330	14.0%	2,020
PP	760			760
PS	0			0
Other resins	220			220
Subtotal Bags, Sacks, & Wraps	3,960	390	9.8%	3,570
Other Plastics Packaging‡				
PET	210	NA		210
HDPE	1,280	30	2.3%	1,250
PVC	250	Neg.		250
LDPE/LLDPE	450	Neg.		450
PP	790	50	6.3%	740
PS	290	20	6.9%	270
Other resins	450	10	2.2%	440
Subtotal Other Packaging	3,720	110	3.0%	3,610
Total Plastics in Containers & Packaging, by resin				
PET	2,890	730	25.3%	2,160
HDPE	3,890	570	14.7%	3,320
PVC	370			370
LDPE/LLDPE	2,840	330	11.6%	2,510
PP	1,980	70	3.5%	1,910
PS	360	20	5.6%	340
Other resins	680	10	1.5%	670
Total Plastics in Cont. & Packaging	13,010	1,730	13.3%	11,280
Total Plastics in MSW, by resin				
PET	3,740	730	19.5%	3,010
HDPE	5,350	570	10.7%	4,780
PVC	1,660			1,660
LDPE/LLDPE	5,880	330	5.6%	5,550
PP	4,190	70	1.7%	4,120
PS	2,620	20	0.8%	2,600
Other resins	6,610	400	6.1%	6,210
Total Plastics in MSW	30,050	2,120	7.1%	27,930

HDPE = High density polyethylene

LDPE = Low density polyethylene

LLDPE = Linear low density polyethylene

PET = Polyethylene terephthalate

PP = Polypropylene

NA = Not Available

PS = Polystyrene

PVC = Polyvinyl chloride

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

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

Source: Franklin Associates, A Division of ERG

Table 8
RUBBER AND LEATHER PRODUCTS IN MSW, 2008
(In thousands of tons and percent of generation)

Product Category	Generation	Recovery		Discards
	(Thousand tons)	(Thousand tons)	(Percent of generation)	(Thousand tons)
Durable Goods				
Rubber in Tires*	3,000	1,060	35.3%	1,940
Other Durables**	<u>3,340</u>	<u>Neg.</u>	<u>Neg.</u>	<u>3,340</u>
<i>Total Rubber & Leather Durable Goods</i>	6,340	1,060	16.7%	5,280
Nondurable Goods				
Clothing and Footwear	760	Neg.	Neg.	760
Other Nondurables	<u>280</u>	<u>Neg.</u>	<u>Neg.</u>	<u>280</u>
<i>Total Rubber & Leather Nondurable Goods</i>	1,040	Neg.	Neg.	1,040
Containers and Packaging	30	Neg.	Neg.	30
<i>Total Rubber & Leather</i>	<u>7,410</u>	<u>1,060</u>	<u>14.3%</u>	<u>6,350</u>

* 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.

Source: Franklin Associates, A Division of ERG

Table 9
CATEGORIES OF PRODUCTS GENERATED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(In thousands of tons and percent of total generation)

	Thousands of Tons								
Products	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 12)</i>	9,920	14,660	21,800	29,810	38,850	41,980	44,400	45,550	45,670
Nondurable Goods <i>(Detail in Table 15)</i>	17,330	25,060	34,420	52,170	64,010	62,280	63,650	61,760	58,710
Containers and Packaging <i>(Detail in Table 18)</i>	27,370	43,560	52,670	64,530	75,350	74,370	75,620	79,250	76,760
Total Product** Wastes	54,620	83,280	108,890	146,510	178,210	178,630	183,670	186,560	181,140
Other Wastes									
Food Scraps	12,200	12,800	13,000	20,800	26,810	28,510	30,220	31,650	31,790
Yard Trimmings	20,000	23,200	27,500	35,000	30,530	31,470	32,070	32,630	32,900
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,620	3,690	3,750	3,780
Total Other Wastes	33,500	37,780	42,750	58,700	60,840	63,600	65,980	68,030	68,470
Total MSW Generated - Weight	88,120	121,060	151,640	205,210	239,050	242,230	249,650	254,590	249,610
	Percent of Total Generation								
Products	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 12)</i>	11.3%	12.1%	14.4%	14.5%	16.3%	17.3%	17.8%	17.9%	18.3%
Nondurable Goods <i>(Detail in Table 15)</i>	19.7%	20.7%	22.7%	25.4%	26.8%	25.7%	25.5%	24.3%	23.5%
Containers and Packaging <i>(Detail in Table 19)</i>	31.1%	36.0%	34.7%	31.4%	31.5%	30.7%	30.3%	31.1%	30.8%
Total Product** Wastes	62.0%	68.8%	71.8%	71.4%	74.5%	73.7%	73.6%	73.3%	72.6%
Other Wastes									
Food Scraps	13.8%	10.6%	8.6%	10.1%	11.2%	11.8%	12.1%	12.4%	12.7%
Yard Trimmings	22.7%	19.2%	18.1%	17.1%	12.8%	13.0%	12.8%	12.8%	13.2%
Miscellaneous Inorganic Wastes	1.5%	1.5%	1.5%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Total Other Wastes	38.0%	31.2%	28.2%	28.6%	25.5%	26.3%	26.4%	26.7%	27.4%
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recovery or combustion. Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

** Other than food products.

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 10
RECOVERY* OF MUNICIPAL SOLID WASTE, 1960 TO 2008
(In thousands of tons and percent of generation of each category)

	Thousands of Tons								
Products	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 13)</i>	350	940	1,360	3,460	6,580	7,440	7,880	8,090	7,930
Nondurable Goods <i>(Detail in Table 16)</i>	2,390	3,730	4,670	8,800	17,560	18,920	19,770	20,970	19,310
Containers and Packaging <i>(Detail in Table 20)</i>	2,870	3,350	8,490	16,780	28,740	29,300	30,980	33,420	33,530
Total Product** Wastes	5,610	8,020	14,520	29,040	52,880	55,660	58,630	62,480	60,770
Other Wastes									
Food, Other^	Neg.	Neg.	Neg.	Neg.	680	750	690	810	800
Yard Trimmings	Neg.	Neg.	Neg.	4,200	15,770	18,330	19,860	20,900	21,300
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	4,200	16,450	19,080	20,550	21,710	22,100
Total MSW Recovered - Weight	5,610	8,020	14,520	33,240	69,330	74,740	79,180	84,190	82,870
	Percent of Generation of Each Category								
Products	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 13)</i>	3.5%	6.4%	6.2%	11.6%	16.9%	17.7%	17.7%	17.8%	17.4%
Nondurable Goods <i>(Detail in Table 16)</i>	13.8%	14.9%	13.6%	16.9%	27.4%	30.4%	31.1%	34.0%	32.9%
Containers and Packaging <i>(Detail in Table 21)</i>	10.5%	7.7%	16.1%	26.0%	38.1%	39.4%	41.0%	42.2%	43.7%
Total Product** Wastes	10.3%	9.6%	13.3%	19.8%	29.7%	31.2%	31.9%	33.5%	33.5%
Other Wastes									
Food, Other^	Neg.	Neg.	Neg.	Neg.	2.5%	2.6%	2.3%	2.6%	2.5%
Yard Trimmings	Neg.	Neg.	Neg.	12.0%	51.7%	58.2%	61.9%	64.1%	64.7%
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	7.2%	27.0%	30.0%	31.1%	31.9%	32.3%
Total MSW Recovered - %	6.4%	6.6%	9.6%	16.2%	29.0%	30.9%	31.7%	33.1%	33.2%

* Recovery of postconsumer wastes; does not include converting/fabrication scrap.

** Other than food products.

^ Includes recovery of paper and mixed MSW for composting.

Details may not add to totals due to rounding. Neg. = Less than 5,000 tons or 0.05 percent.

Source: Franklin Associates, A Division of ERG

Table 11
CATEGORIES OF PRODUCTS DISCARDED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(In thousands of tons and percent of total discards)

	Thousands of Tons								
Products	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 14)</i>	9,570	13,720	20,440	26,350	32,270	34,540	36,520	37,460	37,740
Nondurable Goods <i>(Detail in Table 17)</i>	14,940	21,330	29,750	43,370	46,450	43,360	43,880	40,790	39,400
Containers and Packaging <i>(Detail in Table 22)</i>	24,500	40,210	44,180	47,750	46,610	45,070	44,640	45,830	43,230
Total Product** Wastes	49,010	75,260	94,370	117,470	125,330	122,970	125,040	124,080	120,370
Other Wastes									
Food Wastes	12,200	12,800	13,000	20,800	26,130	27,760	29,530	30,840	30,990
Yard Trimmings	20,000	23,200	27,500	30,800	14,760	13,140	12,210	11,730	11,600
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,620	3,690	3,750	3,780
Total Other Wastes	33,500	37,780	42,750	54,500	44,390	44,520	45,430	46,320	46,370
Total MSW Discarded - Weight	82,510	113,040	137,120	171,970	169,720	167,490	170,470	170,400	166,740
	Percent of Total Discards								
Products	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 14)</i>	11.6%	12.1%	14.9%	15.3%	19.0%	20.6%	21.4%	22.0%	22.6%
Nondurable Goods <i>(Detail in Table 17)</i>	18.1%	18.9%	21.7%	25.2%	27.4%	25.9%	25.7%	23.9%	23.6%
Containers and Packaging <i>(Detail in Table 23)</i>	29.7%	35.6%	32.2%	27.8%	27.5%	26.9%	26.2%	26.9%	25.9%
Total Product** Wastes	59.4%	66.6%	68.8%	68.3%	73.8%	73.4%	73.4%	72.8%	72.2%
Other Wastes									
Food Scraps	14.8%	11.3%	9.5%	12.1%	15.4%	16.6%	17.3%	18.1%	18.6%
Yard Trimmings	24.2%	20.5%	20.1%	17.9%	8.7%	7.8%	7.2%	6.9%	7.0%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	2.1%	2.2%	2.2%	2.2%	2.3%
Total Other Wastes	40.6%	33.4%	31.2%	31.7%	26.2%	26.6%	26.6%	27.2%	27.8%
Total MSW Discarded - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Discards after materials and compost recovery. In this table, discards include combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

** Other than food products.

Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 14
PRODUCTS DISCARDED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(WITH DETAIL ON DURABLE GOODS)
(In thousands of tons and percent of total discards)

Products	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods									
Major Appliances	1,620	2,120	2,820	2,240	1,640	1,160	1,190	1,190	1,220
Small Appliances**				450	1,020	1,020	1,160	1,370	1,420
Furniture and Furnishings	2,150	2,830	4,760	6,790	7,990	8,420	8,870	9,340	9,600
Carpets and Rugs**				1,660	2,380	2,670	2,730	2,860	2,960
Rubber Tires	790	1,640	2,570	3,170	3,640	3,060	3,240	3,230	3,030
Batteries, Lead-Acid	Neg.	200	450	40	150	150	20	20	20
Miscellaneous Durables									
Selected Consumer Electronics***					1,710	1,930	2,270	2,600	2,730
Other Miscellaneous Durables					13,740	16,130	17,040	16,850	16,760
<i>Total Miscellaneous Durables</i>	5,010	6,930	9,840	12,000	15,450	18,060	19,310	19,450	19,490
Total Durable Goods	9,570	13,720	20,440	26,350	32,270	34,540	36,520	37,460	37,740
Nondurable Goods <i>(Detail in Table 17)</i>	14,940	21,330	29,750	43,370	46,450	43,360	43,880	40,790	39,400
Containers and Packaging <i>(Detail in Table 22)</i>	24,500	40,210	44,180	47,750	46,610	45,070	44,640	45,830	43,230
Total Product Wastes†	49,010	75,260	94,370	117,470	125,330	122,970	125,040	124,080	120,370
Other Wastes									
Food Scraps	12,200	12,800	13,000	20,800	26,130	27,760	29,530	30,840	30,990
Yard Trimmings	20,000	23,200	27,500	30,800	14,760	13,140	12,210	11,730	11,600
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,620	3,690	3,750	3,780
Total Other Wastes	33,500	37,780	42,750	54,500	44,390	44,520	45,430	46,320	46,370
Total MSW Discarded - Weight	82,510	113,040	137,120	171,970	169,720	167,490	170,470	170,400	166,740
	Percent of Total Discards								
Products	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods									
Major Appliances	2.0%	1.9%	2.1%	1.3%	1.0%	0.7%	0.7%	0.7%	0.7%
Small Appliances**				0.3%	0.6%	0.6%	0.7%	0.8%	0.9%
Furniture and Furnishings	2.6%	2.5%	3.5%	3.9%	4.7%	5.0%	5.2%	5.5%	5.8%
Carpets and Rugs**				1.0%	1.4%	1.6%	1.6%	1.7%	1.8%
Rubber Tires	1.0%	1.5%	1.9%	1.8%	2.1%	1.8%	1.9%	1.9%	1.8%
Batteries, Lead-Acid	Neg.	0.2%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%
Miscellaneous Durables									
Selected Consumer Electronics***					1.0%	1.2%	1.3%	1.5%	1.6%
Other Miscellaneous Durables					8.1%	9.5%	10.0%	9.9%	10.1%
<i>Total Miscellaneous Durables</i>	6.1%	6.1%	7.2%	7.0%	9.1%	10.8%	11.3%	11.4%	11.7%
Total Durable Goods	11.6%	12.1%	14.9%	15.3%	19.0%	20.6%	21.4%	22.0%	22.6%
Nondurable Goods <i>(Detail in Table 17)</i>	18.1%	18.9%	21.7%	25.2%	27.4%	25.9%	25.7%	23.9%	23.6%
Containers and Packaging <i>(Detail in Table 23)</i>	29.7%	35.6%	32.2%	27.8%	27.5%	26.9%	26.2%	26.9%	25.9%
Total Product Wastes†	59.4%	66.6%	68.8%	68.3%	73.8%	73.4%	73.4%	72.8%	72.2%
Other Wastes									
Food Scraps	14.8%	11.3%	9.5%	12.1%	15.4%	16.6%	17.3%	18.1%	18.6%
Yard Trimmings	24.2%	20.5%	20.1%	17.9%	8.7%	7.8%	7.2%	6.9%	7.0%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	2.1%	2.2%	2.2%	2.2%	2.3%
Total Other Wastes	40.6%	33.4%	31.2%	31.7%	26.2%	26.6%	26.6%	27.2%	27.8%
Total MSW Discarded - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Discards after materials and compost recovery. In this table, discards include combustion with energy recovery.

Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

** Not estimated separately prior to 1990.

*** Not estimated separately prior to 1999. Preliminary data; may undergo revision.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 15

PRODUCTS GENERATED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(WITH DETAIL ON NONDURABLE GOODS)
(In thousands of tons and percent of total generation)

Products	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 12)</i>	9,920	14,660	21,800	29,810	38,850	41,980	44,400	45,550	45,670
Nondurable Goods									
Newspapers	7,110	9,510	11,050	13,430	14,790	13,570	12,790	10,780	8,800
Books and Magazines	1,920	2,470	3,390						
Books**				970	1,240	1,030	1,100	1,270	1,340
Magazines**				2,830	2,230	2,270	2,580	2,550	2,050
Office-Type Papers	1,520	2,650	4,000	6,410	7,420	7,130	6,620	6,060	6,050
Directories**				610	680	640	660	760	840
Standard Mail***				3,820	5,570	5,410	5,830	5,910	5,510
Other Commercial Printing	1,260	2,130	3,120	4,460	7,380	6,060	6,440	6,200	5,130
Tissue Paper and Towels	1,090	2,080	2,300	2,960	3,220	3,250	3,460	3,500	3,460
Paper Plates and Cups	270	420	630	650	960	970	1,160	1,230	1,250
Plastic Plates and Cups†			190	650	870	730	930	860	780
Trash Bags**				780	850	1,020	1,060	1,070	930
Disposable Diapers	Neg.	350	1,930	2,700	3,230	3,330	3,410	3,730	3,790
Other Nonpackaging Paper	2,700	3,630	4,230	3,840	4,250	4,180	4,490	4,260	4,630
Clothing and Footwear	1,360	1,620	2,170	4,010	6,470	7,370	7,890	8,320	8,820
Towels, Sheets and Pillowcases**				710	820	940	980	1,100	1,160
Other Miscellaneous Nondurables	100	200	1,410	3,340	4,030	4,380	4,250	4,160	4,170
Total Nondurable Goods	17,330	25,060	34,420	52,170	64,010	62,280	63,650	61,760	58,710
Containers and Packaging <i>(Detail in Table 18)</i>	27,370	43,560	52,670	64,530	75,350	74,370	75,620	79,250	76,760
Total Product Wastes‡	54,620	83,280	108,890	146,510	178,210	178,630	183,670	186,560	181,140
Other Wastes	33,500	37,780	42,750	58,700	60,840	63,600	65,980	68,030	68,470
Total MSW Generated - Weight	88,120	121,060	151,640	205,210	239,050	242,230	249,650	254,590	249,610
Products	Percent of Total Generation								
Durable Goods	1960	1970	1980	1990	2000	2003	2005	2007	2008
<i>(Detail in Table 12)</i>	11.3%	12.1%	14.4%	14.5%	16.3%	17.3%	17.8%	17.9%	18.3%
Nondurable Goods									
Newspapers	8.1%	7.9%	7.3%	6.5%	6.2%	5.6%	5.1%	4.2%	3.5%
Books and Magazines	2.2%	2.0%	2.2%						
Books**				0.5%	0.5%	0.4%	0.4%	0.5%	0.5%
Magazines**				1.4%	0.9%	0.9%	1.0%	1.0%	0.8%
Office-Type Papers***	1.7%	2.2%	2.6%	3.1%	3.1%	2.9%	2.7%	2.4%	2.4%
Directories**				0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Standard Mail§				1.9%	2.3%	2.2%	2.3%	2.3%	2.2%
Other Commercial Printing	1.4%	1.8%	2.1%	2.2%	3.1%	2.5%	2.6%	2.4%	2.1%
Tissue Paper and Towels	1.2%	1.7%	1.5%	1.4%	1.3%	1.3%	1.4%	1.4%	1.4%
Paper Plates and Cups	0.3%	0.3%	0.4%	0.3%	0.4%	0.4%	0.5%	0.5%	0.5%
Plastic Plates and Cups†			0.1%	0.3%	0.4%	0.3%	0.4%	0.3%	0.3%
Trash Bags**				0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Disposable Diapers	Neg.	0.3%	1.3%	1.3%	1.4%	1.4%	1.4%	1.5%	1.5%
Other Nonpackaging Paper	3.1%	3.0%	2.8%	1.9%	1.8%	1.7%	1.8%	1.7%	1.9%
Clothing and Footwear	1.5%	1.3%	1.4%	2.0%	2.7%	3.0%	3.2%	3.3%	3.5%
Towels, Sheets and Pillowcases**				0.3%	0.3%	0.4%	0.4%	0.4%	0.5%
Other Miscellaneous Nondurables	0.1%	0.2%	0.9%	1.6%	1.7%	1.8%	1.7%	1.6%	1.7%
Total Nondurables	19.7%	20.7%	22.7%	25.4%	26.8%	25.7%	25.5%	24.3%	23.5%
Containers and Packaging <i>(Detail in Table 19)</i>	31.1%	36.0%	34.7%	31.4%	31.5%	30.7%	30.3%	31.1%	30.8%
Total Product Wastes‡	62.0%	68.8%	71.8%	71.4%	74.5%	73.7%	73.6%	73.3%	72.6%
Other Wastes	38.0%	31.2%	28.2%	28.6%	25.5%	26.3%	26.4%	26.7%	27.4%
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recovery or combustion. 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.

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

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

† Not estimated separately prior to 1980.

‡ Other than food products.

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

Source: Franklin Associates, A Division of ERG

Table 16

RECOVERY* OF PRODUCTS IN MUNICIPAL SOLID WASTE, 1960 TO 2008
(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	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 13)</i>	350	940	1,360	3,460	6,580	7,440	7,880	8,090	7,930
Nondurable Goods									
Newspapers	1,820	2,250	3,020	5,110	8,720	10,380	9,360	8,550	7,740
Books and Magazines	100	260	280						
Books**				100	240	190	270	360	390
Magazines**				300	710	750	960	1,010	820
Office-Type Papers	250	710	870	1,700	4,090	3,990	4,110	4,300	4,290
Directories**				50	120	100	120	140	180
Standard Mail***				200	1,830	1,750	2,090	2,380	2,240
Other Commercial Printing	130	340	350	700	810	560	1,440	2,790	2,200
Tissue Paper and Towels	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Paper Plates and Cups	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Plastic Plates and Cups†			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Trash Bags**				Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Disposable Diapers				Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Other Nonpackaging Paper	40	110	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Clothing and Footwear	50	60	150	520	900	1,040	1,250	1,250	1,250
Towels, Sheets and Pillowcases**				120	140	160	170	190	200
Other Miscellaneous Nondurables	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Nondurable Goods	2,390	3,730	4,670	8,800	17,560	18,920	19,770	20,970	19,310
Containers and Packaging <i>(Detail in Table 20)</i>	2,870	3,350	8,490	16,780	28,740	29,300	30,980	33,420	33,530
Total Product Wastes‡	5,610	8,020	14,520	29,040	52,880	55,660	58,630	62,480	60,770
Other Wastes	Neg.	Neg.	Neg.	4,200	16,450	19,080	20,550	21,710	22,100
Total MSW Recovered - Weight	5,610	8,020	14,520	33,240	69,330	74,740	79,180	84,190	82,870
Products	Percent of Generation of Each Product								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 13)</i>	3.5%	6.4%	6.2%	11.6%	16.9%	17.7%	17.7%	17.8%	17.4%
Nondurable Goods									
Newspapers	25.6%	23.7%	27.3%	38.0%	59.0%	76.5%	73.2%	79.3%	88.0%
Books and Magazines	5.2%	10.5%	8.3%						
Books**				10.3%	19.4%	18.4%	24.5%	28.3%	29.1%
Magazines**				10.6%	31.8%	33.0%	37.2%	39.6%	40.0%
Office-Type Papers***	16.4%	26.8%	21.8%	26.5%	55.1%	56.0%	62.1%	71.0%	70.9%
Directories**				8.2%	17.6%	15.6%	18.2%	18.4%	21.4%
Standard Mail§				5.2%	32.9%	32.3%	35.8%	40.3%	40.7%
Other Commercial Printing	10.3%	16.0%	11.2%	15.7%	11.0%	9.2%	22.4%	45.0%	42.9%
Tissue Paper and Towels	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Paper Plates and Cups	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Plastic Plates and Cups†			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Trash Bags**				Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Disposable Diapers				Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Other Nonpackaging Paper	1.5%	3.0%	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Clothing and Footwear	Neg.	Neg.	Neg.	13.0%	13.9%	14.1%	15.8%	15.0%	14.2%
Towels, Sheets and Pillowcases**				16.9%	17.1%	17.0%	17.3%	17.3%	17.2%
Other Miscellaneous Nondurables	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Nondurables	13.8%	14.9%	13.6%	16.9%	27.4%	30.4%	31.1%	34.0%	32.9%
Containers and Packaging <i>(Detail in Table 21)</i>	10.5%	7.7%	16.1%	26.0%	38.1%	39.4%	41.0%	42.2%	43.7%
Total Product Wastes‡	10.3%	9.6%	13.3%	19.8%	29.7%	31.2%	31.9%	33.5%	33.5%
Other Wastes	Neg.	Neg.	Neg.	7.2%	27.0%	30.0%	31.1%	31.9%	32.3%
Total MSW Recovered - %	6.4%	6.6%	9.6%	16.2%	29.0%	30.9%	31.7%	33.1%	33.2%

* Recovery of postconsumer wastes; does not include converting/fabrication scrap.

Details may not add to totals due to rounding.

** Not estimated separately prior to 1990.

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

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

† Not estimated separately prior to 1980.

‡ Other than food products.

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

Source: Franklin Associates, A Division of ERG

Table 17

PRODUCTS DISCARDED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(WITH DETAIL ON NONDURABLE GOODS)
(In thousands of tons and percent of total discards)

Products	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods (Detail in Table 14)	9,570	13,720	20,440	26,350	32,270	34,540	36,520	37,460	37,740
Nondurable Goods									
Newspapers	5,290	7,260	8,030	8,320	6,070	3,190	3,430	2,230	1,060
Books and Magazines	1,820	2,210	3,110						
Books**				870	1,000	840	830	910	950
Magazines**				2,530	1,520	1,520	1,620	1,540	1,230
Office-Type Papers	1,270	1,940	3,130	4,710	3,330	3,140	2,510	1,760	1,760
Directories**				560	560	540	540	620	660
Standard Mail***				3,620	3,740	3,660	3,740	3,530	3,270
Other Commercial Printing	1,130	1,790	2,770	3,760	6,570	5,500	5,000	3,410	2,930
Tissue Paper and Towels	1,090	2,080	2,300	2,960	3,220	3,250	3,460	3,500	3,460
Paper Plates and Cups	270	420	630	650	960	970	1,160	1,230	1,250
Plastic Plates and Cups†			190	650	870	730	930	860	780
Trash Bags**				780	850	1,020	1,060	1,070	930
Disposable Diapers	Neg.	350	1,930	2,700	3,230	3,330	3,410	3,730	3,790
Other Nonpackaging Paper	2,660	3,520	4,230	3,840	4,250	4,180	4,490	4,260	4,630
Clothing and Footwear	1,310	1,560	2,020	3,490	5,570	6,330	6,640	7,070	7,570
Towels, Sheets and Pillowcases**				590	680	780	810	910	960
Other Miscellaneous Nondurables	100	200	1,410	3,340	4,030	4,380	4,250	4,160	4,170
Total Nondurable Goods	14,940	21,330	29,750	43,370	46,450	43,360	43,880	40,790	39,400
Containers and Packaging (Detail in Table 22)	24,500	40,210	44,180	47,750	46,610	45,070	44,640	45,830	43,230
Total Product Wastes‡	49,010	75,260	94,370	117,470	125,330	122,970	125,040	124,080	120,370
Other Wastes	33,500	37,780	42,750	54,500	44,390	44,520	45,430	46,320	46,370
Total MSW Discarded - Weight	82,510	113,040	137,120	171,970	169,720	167,490	170,470	170,400	166,740
Products	Percent of Total Discards								
	1960	1970	1980	1990	2000	2003	2005	2007	2007
Durable Goods (Detail in Table 14)	11.6%	12.1%	14.9%	15.3%	19.0%	20.6%	21.4%	22.0%	22.6%
Nondurable Goods									
Newspapers	6.4%	6.4%	5.9%	4.8%	3.6%	1.9%	2.0%	1.3%	0.6%
Books and Magazines	2.2%	2.0%	2.3%						
Books**				0.5%	0.6%	0.5%	0.5%	0.5%	0.6%
Magazines**				1.5%	0.9%	0.9%	1.0%	0.9%	0.7%
Office-Type Papers***	1.5%	1.7%	2.3%	2.7%	2.0%	1.9%	1.5%	1.0%	1.1%
Directories**				0.3%	0.3%	0.3%	0.3%	0.4%	0.4%
Standard Mail§				2.1%	2.2%	2.2%	2.2%	2.1%	2.0%
Other Commercial Printing	1.4%	1.6%	2.0%	2.2%	3.9%	3.3%	2.9%	2.0%	1.8%
Tissue Paper and Towels	1.3%	1.8%	1.7%	1.7%	1.9%	1.9%	2.0%	2.1%	2.1%
Paper Plates and Cups	0.3%	0.4%	0.5%	0.4%	0.6%	0.6%	0.7%	0.7%	0.7%
Plastic Plates and Cups†			0.1%	0.4%	0.5%	0.4%	0.5%	0.5%	0.5%
Trash Bags**				0.5%	0.5%	0.6%	0.6%	0.6%	0.6%
Disposable Diapers	Neg.	0.3%	1.4%	1.6%	1.9%	2.0%	2.0%	2.2%	2.3%
Other Nonpackaging Paper	3.2%	3.1%	3.1%	2.2%	2.5%	2.5%	2.6%	2.5%	2.8%
Clothing and Footwear	1.6%	1.4%	1.5%	2.0%	3.3%	3.8%	3.9%	4.1%	4.5%
Towels, Sheets and Pillowcases**				0.3%	0.4%	0.5%	0.5%	0.5%	0.6%
Other Miscellaneous Nondurables	0.1%	0.2%	1.7%	1.9%	2.4%	2.6%	2.5%	2.4%	2.5%
Total Nondurables	18.1%	18.9%	21.7%	25.2%	27.4%	25.9%	25.7%	23.9%	23.6%
Containers and Packaging (Detail in Table 23)	29.7%	35.6%	32.2%	27.8%	27.5%	26.9%	26.2%	26.9%	25.9%
Total Product Wastes‡	59.4%	66.6%	68.8%	68.3%	73.8%	73.4%	73.4%	72.8%	72.2%
Other Wastes	40.6%	33.4%	31.2%	31.7%	26.2%	26.6%	26.6%	27.2%	27.8%
Total MSW Discarded - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Discards after materials and compost recovery. In this table, discards include combustion with energy recovery.

Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

** Not estimated separately prior to 1990.

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

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

† Not estimated separately prior to 1980.

‡ Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 18
PRODUCTS GENERATED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(WITH DETAIL ON CONTAINERS AND PACKAGING)
(In thousands of tons)

Products	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 12)</i>	9,920	14,660	21,800	29,810	38,850	41,980	44,400	45,550	45,670
Nondurable Goods <i>(Detail in Table 15)</i>	17,330	25,060	34,420	52,170	64,010	62,280	63,650	61,760	58,710
Containers and Packaging									
Glass Packaging									
Beer and Soft Drink Bottles	1,400	5,580	6,740	5,640	5,710	6,840	6,540	6,760	6,350
Wine and Liquor Bottles	1,080	1,900	2,450	2,030	1,910	1,580	1,630	1,620	1,610
Food and Other Bottles & Jars	3,710	4,440	4,780	4,160	3,420	2,150	2,290	2,030	2,090
Total Glass Packaging	6,190	11,920	13,970	11,830	11,040	10,570	10,460	10,410	10,050
Steel Packaging									
Beer and Soft Drink Cans	640	1,570	520	150	Neg.	Neg.	Neg.	Neg.	Neg.
Food and Other Cans	3,760	3,540	2,850	2,540	2,630	2,600	2,130	2,430	2,310
Other Steel Packaging	260	270	240	200	240	240	240	240	240
Total Steel Packaging	4,660	5,380	3,610	2,890	2,870	2,840	2,370	2,670	2,550
Aluminum Packaging									
Beer and Soft Drink Cans	Neg.	100	850	1,550	1,520	1,480	1,450	1,420	1,390
Other Cans	Neg.	60	40	20	50	50	80	30	70
Foil and Closures	170	410	380	330	380	380	400	430	420
Total Aluminum Packaging	170	570	1,270	1,900	1,950	1,910	1,930	1,880	1,880
Paper & Paperboard Pkg									
Corrugated Boxes	7,330	12,760	17,080	24,010	30,210	29,710	30,930	31,230	29,710
Milk Cartons			790	510	550	450	500	500	490
Folding Cartons			3,820	4,300	5,820	5,560	5,530	5,530	5,340
Other Paperboard Packaging	3,840	4,830	230	290	200	180	160	150	120
Bags and Sacks			3,380	2,440	1,490	1,240	1,120	1,140	1,170
Wrapping Papers			200	110	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	2,940	3,810	850	1,020	1,670	1,440	1,400	1,390	1,460
Total Paper & Board Pkg	14,110	21,400	26,350	32,680	39,940	38,580	39,640	39,940	38,290
Plastics Packaging									
PET Bottles and Jars			260	430	1,720	2,150	2,540	2,840	2,680
HDPE Natural Bottles			230	530	690	720	800	820	750
Other Containers	60	910	890	1,430	1,740	1,700	1,420	1,910	1,900
Bags and Sacks			390	940	1,650	1,630	1,640	1,010	940
Wraps			840	1,530	2,550	2,750	2,810	3,180	3,020
<i>Subtotal Bags, Sacks, and Wraps</i>			1,230	2,470	4,200	4,380	4,450	4,190	3,960
Other Plastics Packaging	60	1,180	790	2,040	2,840	2,940	3,210	3,870	3,720
Total Plastics Packaging	120	2,090	3,400	6,900	11,190	11,890	12,420	13,630	13,010
Wood Packaging	2,000	2,070	3,940	8,180	8,120	8,330	8,520	10,400	10,670
Other Misc. Packaging	120	130	130	150	240	250	280	320	310
Total Containers & Pkg	27,370	43,560	52,670	64,530	75,350	74,370	75,620	79,250	76,760
Total Product Wastes†	54,620	83,280	108,890	146,510	178,210	178,630	183,670	186,560	181,140
Other Wastes									
Food Scraps	12,200	12,800	13,000	20,800	26,810	28,510	30,220	31,650	31,790
Yard Trimmings	20,000	23,200	27,500	35,000	30,530	31,470	32,070	32,630	32,900
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,620	3,690	3,750	3,780
Total Other Wastes	33,500	37,780	42,750	58,700	60,840	63,600	65,980	68,030	68,470
Total MSW Generated - Weight	88,120	121,060	151,640	205,210	239,050	242,230	249,650	254,590	249,610

* Generation before materials recovery or combustion.
 Details may not add to totals due to rounding.

† Other than food products.

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

Source: Franklin Associates, A Division of ERG

Table 19
PRODUCTS GENERATED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(WITH DETAIL ON CONTAINERS AND PACKAGING)
(In percent of total generation)

Products	Percent of Total Generation								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 12)</i>	11.3%	12.1%	14.4%	14.5%	16.3%	17.3%	17.8%	17.9%	18.3%
Nondurable Goods <i>(Detail in Table 15)</i>	19.7%	20.7%	22.7%	25.4%	26.8%	25.7%	25.5%	24.3%	23.5%
Containers and Packaging									
Glass Packaging									
Beer and Soft Drink Bottles	1.6%	4.6%	4.4%	2.7%	2.4%	2.8%	2.6%	2.7%	2.5%
Wine and Liquor Bottles	1.2%	1.6%	1.6%	1.0%	0.8%	0.7%	0.7%	0.6%	0.6%
Food and Other Bottles & Jars	4.2%	3.7%	3.2%	2.0%	1.4%	0.9%	0.9%	0.8%	0.8%
Total Glass Packaging	7.0%	9.8%	9.2%	5.8%	4.6%	4.4%	4.2%	4.1%	4.0%
Steel Packaging									
Beer and Soft Drink Cans	0.7%	1.3%	0.3%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.
Food and Other Cans	4.3%	2.9%	1.9%	1.2%	1.1%	1.1%	0.9%	1.0%	0.9%
Other Steel Packaging	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Total Steel Packaging	5.3%	4.4%	2.4%	1.4%	1.2%	1.2%	0.9%	1.0%	1.0%
Aluminum Packaging									
Beer and Soft Drink Cans	Neg.	0.1%	0.6%	0.8%	0.6%	0.6%	0.6%	0.6%	0.6%
Other Cans	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	0.01%	0.03%
Foil and Closures	0.2%	0.3%	0.3%	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%
Paper & Paperboard Pkg									
Corrugated Boxes	8.3%	10.5%	11.3%	11.7%	12.6%	12.3%	12.4%	12.3%	11.9%
Milk Cartons			0.5%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Folding Cartons			2.5%	2.1%	2.4%	2.3%	2.2%	2.2%	2.1%
Other Paperboard Packaging	4.4%	4.0%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
Bags and Sacks			2.2%	1.2%	0.6%	0.5%	0.4%	0.4%	0.5%
Wrapping Papers			0.1%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	3.3%	3.1%	0.6%	0.5%	0.7%	0.6%	0.6%	0.5%	0.6%
Total Paper & Board Pkg	16.0%	17.7%	17.4%	15.9%	16.7%	15.9%	15.9%	15.7%	15.3%
Plastics Packaging									
PET Bottles and Jars			0.2%	0.2%	0.7%	0.9%	1.0%	1.1%	1.1%
HDPE Natural Bottles			0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Other Containers	0.1%	0.8%	0.6%	0.7%	0.7%	0.7%	0.6%	0.8%	0.8%
Bags and Sacks			0.3%	0.5%	0.7%	0.7%	0.7%	0.4%	0.4%
Wraps			0.6%	0.7%	1.1%	1.1%	1.1%	1.2%	1.2%
<i>Subtotal Bags, Sacks, and Wraps</i>			0.8%	1.2%	1.8%	1.8%	1.8%	1.6%	1.6%
Other Plastics Packaging	0.1%	1.0%	0.5%	1.0%	1.2%	1.2%	1.3%	1.5%	1.5%
Total Plastics Packaging	0.1%	1.7%	2.2%	3.4%	4.7%	4.9%	5.0%	5.4%	5.2%
Wood Packaging	2.3%	1.7%	2.6%	4.0%	3.4%	3.4%	3.4%	4.1%	4.3%
Other Misc. Packaging	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%	31.4%	31.5%	30.7%	30.3%	31.1%	30.8%
Total Product Wastes†	62.0%	68.8%	71.8%	71.4%	74.5%	73.7%	73.6%	73.3%	72.6%
Other Wastes									
Food Scraps	13.8%	10.6%	8.6%	10.1%	11.2%	11.8%	12.1%	12.4%	12.7%
Yard Trimmings	22.7%	19.2%	18.1%	17.1%	12.8%	13.0%	12.8%	12.8%	13.2%
Miscellaneous Inorganic Wastes	1.5%	1.5%	1.5%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Total Other Wastes	38.0%	31.2%	28.2%	28.6%	25.5%	26.3%	26.4%	26.7%	27.4%
Total MSW Generated - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Generation before materials recovery or combustion.
 Details may not add to totals due to rounding.

† Other than food products.

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

Source: Franklin Associates, A Division of ERG

Table 20
RECOVERY* OF PRODUCTS IN MUNICIPAL SOLID WASTE, 1960 TO 2008
(WITH DETAIL ON CONTAINERS AND PACKAGING)
(In thousands of tons)

Products	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 13)</i>	350	940	1,360	3,460	6,580	7,440	7,880	8,090	7,930
Nondurable Goods <i>(Detail in Table 16)</i>	2,390	3,730	4,670	8,800	17,560	18,920	19,770	20,970	19,310
Containers and Packaging									
Glass Packaging									
Beer and Soft Drink Bottles	90	140	730	1,890	1,530	2,090	2,000	2,340	2,260
Wine and Liquor Bottles	10	10	20	210	430	240	250	240	240
Food and Other Bottles & Jars	Neg.	Neg.	Neg.	520	920	320	340	300	310
Total Glass Packaging	100	150	750	2,620	2,880	2,650	2,590	2,880	2,810
Steel Packaging									
Beer and Soft Drink Cans	10	20	50	40	Neg.	Neg.	Neg.	Neg.	Neg.
Food and Other Cans	20	60	150	590	1,530	1,560	1,340	1,570	1,450
Other Steel Packaging	Neg.	Neg.	Neg.	60	160	160	160	160	160
Total Steel Packaging	30	80	200	690	1,690	1,720	1,500	1,730	1,610
Aluminum Packaging									
Beer and Soft Drink Cans	Neg.	10	320	990	830	650	650	690	670
Other Cans	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	10
Foil and Closures	Neg.	Neg.	Neg.	20	30	40	40	40	40
Total Aluminum Pkg	Neg.	10	320	1,010	860	690	690	730	720
Paper & Paperboard Pkg									
Corrugated Boxes	2,520	2,760	6,390	11,530	20,330	21,180	22,100	22,980	22,760
Milk Cartons			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Folding Cartons			520	340	410	450	1,190	1,550	1,880
Other Paperboard Packaging			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Bags and Sacks			Neg.	200	300	260	320	420	440
Wrapping Papers			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	220	350	300	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Paper & Board Pkg	2,740	3,110	7,210	12,070	21,040	21,890	23,610	24,950	25,080
Plastics Packaging									
PET Bottles and Jars			10	140	380	420	590	700	730
HDPE Natural Bottles			Neg.	20	210	230	230	230	220
Other Containers	Neg.	Neg.	Neg.	20	170	150	140	190	280
Bags and Sacks									
Wraps									
<i>Subtotal Bags, Sacks, and Wraps</i>			Neg.	60	180	180	230	380	390
Other Plastics Packaging	Neg.	Neg.	Neg.	20	90	90	90	90	110
Total Plastics Packaging	Neg.	Neg.	10	260	1,030	1,070	1,280	1,590	1,730
Wood Packaging	Neg.	Neg.	Neg.	130	1,240	1,280	1,310	1,540	1,580
Other Misc. Packaging	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Containers & Pkg	2,870	3,350	8,490	16,780	28,740	29,300	30,980	33,420	33,530
Total Product Wastes†	5,610	8,020	14,520	29,040	52,880	55,660	58,630	62,480	60,770
Other Wastes									
Food Scraps	Neg.	Neg.	Neg.	Neg.	680	750	690	810	800
Yard Trimmings	Neg.	Neg.	Neg.	4,200	15,770	18,330	19,860	20,900	21,300
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	4,200	16,450	19,080	20,550	21,710	22,100
Total MSW Recovered - Weight	5,610	8,020	14,520	33,240	69,330	74,740	79,180	84,190	82,870

* Recovery of postconsumer wastes; does not include converting/fabrication scrap.

† Other than food products.

Details may not add to totals due to rounding.

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

Source: Franklin Associates, A Division of ERG

Table 21
RECOVERY* OF PRODUCTS IN MUNICIPAL SOLID WASTE, 1960 TO 2008
(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	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 13)</i>	3.5%	6.4%	6.2%	11.6%	16.9%	17.7%	17.7%	17.8%	17.4%
Nondurable Goods <i>(Detail in Table 16)</i>	13.8%	14.9%	13.6%	16.9%	27.4%	30.4%	31.1%	34.0%	32.9%
Containers and Packaging									
Glass Packaging									
Beer and Soft Drink Bottles	6.4%	2.5%	10.8%	33.5%	26.8%	30.6%	30.6%	34.6%	35.6%
Wine and Liquor Bottles	Neg.	Neg.	Neg.	10.3%	22.5%	15.2%	15.3%	14.8%	14.9%
Food and Other Bottles & Jars	Neg.	Neg.	Neg.	12.5%	26.9%	14.9%	14.8%	14.8%	14.8%
Total Glass Packaging	1.6%	1.3%	5.4%	22.1%	26.1%	25.1%	24.8%	27.7%	28.0%
Steel Packaging									
Beer and Soft Drink Cans	1.6%	1.3%	9.6%	26.7%	Neg.	Neg.	Neg.	Neg.	Neg.
Food and Other Cans	Neg.	1.7%	5.3%	23.2%	58.2%	60.0%	62.9%	64.6%	62.8%
Other Steel Packaging	Neg.	Neg.	Neg.	30.0%	66.7%	66.7%	66.7%	66.7%	66.7%
Total Steel Packaging	Neg.	1.5%	5.5%	23.9%	58.9%	60.6%	63.3%	64.8%	63.1%
Aluminum Packaging									
Beer and Soft Drink Cans	Neg.	10.0%	37.6%	63.9%	54.6%	43.9%	44.8%	48.6%	48.2%
Other Cans	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	14.3%
Foil and Closures	Neg.	Neg.	Neg.	6.1%	7.9%	10.5%	10.0%	9.3%	9.5%
Total Aluminum Pkg	Neg.	1.8%	25.2%	53.2%	44.1%	36.1%	35.8%	38.8%	38.3%
Paper & Paperboard Pkg									
Corrugated Boxes	34.4%	21.6%	37.4%	48.0%	67.3%	71.3%	71.5%	73.6%	76.6%
Milk Cartons			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Folding Cartons			Neg.	Neg.	7.0%	8.1%	21.5%	28.0%	35.2%
Other Paperboard Packaging			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Bags and Sacks			Neg.	Neg.	20.1%	21.0%	28.6%	36.8%	37.6%
Wrapping Papers			Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	7.5%	9.2%	35.3%	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Paper & Board Pkg	19.4%	14.5%	27.4%	36.9%	52.7%	56.7%	59.6%	62.5%	65.5%
Plastics Packaging									
PET Bottles and Jars			3.8%	32.6%	22.1%	19.5%	23.2%	24.6%	27.2%
HDPE Natural Bottles			Neg.	3.8%	30.4%	31.9%	28.8%	28.0%	29.3%
Other Containers	Neg.	Neg.	Neg.	1.4%	9.8%	8.8%	9.9%	9.9%	14.7%
Bags and Sacks									
Wraps									
<i>Subtotal Bags, Sacks, and Wraps</i>			Neg.	2.4%	4.3%	4.1%	5.2%	9.1%	9.8%
Other Plastics Packaging	Neg.	Neg.	Neg.	1.0%	3.2%	3.1%	2.8%	2.3%	3.0%
Total Plastics Packaging	Neg.	Neg.	Neg.	3.8%	9.2%	9.0%	10.3%	11.7%	13.3%
Wood Packaging	Neg.	Neg.	Neg.	1.6%	15.3%	15.4%	15.4%	14.8%	14.8%
Other Misc. Packaging	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Containers & Pkg	10.5%	7.7%	16.1%	26.0%	38.1%	39.4%	41.0%	42.2%	43.7%
Total Product Wastes†	10.3%	9.6%	13.3%	19.8%	29.7%	31.2%	31.9%	33.5%	33.5%
Other Wastes									
Food Scraps	Neg.	Neg.	Neg.	Neg.	2.5%	2.6%	2.3%	2.6%	2.5%
Yard Trimmings	Neg.	Neg.	Neg.	12.0%	51.7%	58.2%	61.9%	64.1%	64.7%
Miscellaneous Inorganic Wastes	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Total Other Wastes	Neg.	Neg.	Neg.	7.2%	27.0%	30.0%	31.1%	31.9%	32.3%
Total MSW Recovered - %	6.4%	6.6%	9.6%	16.2%	29.0%	30.9%	31.7%	33.1%	33.2%

* Recovery of postconsumer wastes; does not include converting/fabrication scrap.

† Other than food products.

Details may not add to totals due to rounding.

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

Source: Franklin Associates, A Division of ERG

Table 22
PRODUCTS DISCARDED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(WITH DETAIL ON CONTAINERS AND PACKAGING)
(In thousands of tons)

Products	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 14)</i>	9,570	13,720	20,440	26,350	32,270	34,540	36,520	37,460	37,740
Nondurable Goods <i>(Detail in Table 17)</i>	14,940	21,330	29,750	43,370	46,450	43,360	43,880	40,790	39,400
Containers and Packaging									
Glass Packaging									
Beer and Soft Drink Bottles	1,310	5,440	6,010	3,750	4,180	4,750	4,540	4,420	4,090
Wine and Liquor Bottles	1,070	1,890	2,430	1,820	1,480	1,340	1,380	1,380	1,370
Food and Other Bottles & Jars	3,710	4,440	4,780	3,640	2,500	1,830	1,950	1,730	1,780
Total Glass Packaging	6,090	11,770	13,220	9,210	8,160	7,920	7,870	7,530	7,240
Steel Packaging									
Beer and Soft Drink Cans	630	1,550	470	110	Neg.	Neg.	Neg.	Neg.	Neg.
Food and Other Cans	3,740	3,480	2,700	1,950	1,100	1,040	790	860	860
Other Steel Packaging	260	270	240	140	80	80	80	80	80
Total Steel Packaging	4,630	5,300	3,410	2,200	1,180	1,120	870	940	940
Aluminum Packaging									
Beer and Soft Drink Cans	Neg.	90	530	560	690	830	800	730	720
Other Cans	Neg.	60	40	20	50	50	80	30	60
Foil and Closures	170	410	380	310	350	340	360	390	380
Total Aluminum Pkg	170	560	950	890	1,090	1,220	1,240	1,150	1,160
Paper & Paperboard Pkg									
Corrugated Boxes	4,810	10,000	10,690	12,480	9,880	8,530	8,830	8,250	6,950
Milk Cartons			790	510	550	450	500	500	490
Folding Cartons			3,300	3,960	5,410	5,110	4,340	3,980	3,460
Other Paperboard Packaging	3,840	4,830	230	290	200	180	160	150	120
Bags and Sacks			3,380	2,240	1,190	980	800	720	730
Wrapping Papers			200	110	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	2,720	3,460	550	1,020	1,670	1,440	1,400	1,390	1,460
Total Paper & Board Pkg	11,370	18,290	19,140	20,610	18,900	16,690	16,030	14,990	13,210
Plastics Packaging									
PET Bottles and Jars			250	290	1,340	1,730	1,950	2,140	1,950
HDPE Natural Bottles			230	510	480	490	570	590	530
Other Containers	60	910	890	1,410	1,570	1,550	1,280	1,720	1,620
Bags and Sacks									
Wraps									
Subtotal Bags, Sacks, and Wraps			1,230	2,410	4,020	4,200	4,220	3,810	3,570
Other Plastics Packaging	60	1,180	790	2,020	2,750	2,850	3,120	3,780	3,610
Total Plastics Packaging	120	2,090	3,390	6,640	10,160	10,820	11,140	12,040	11,280
Wood Packaging	2,000	2,070	3,940	8,050	6,880	7,050	7,210	8,860	9,090
Other Misc. Packaging	120	130	130	150	240	250	280	320	310
Total Containers & Pkg	24,500	40,210	44,180	47,750	46,610	45,070	44,640	45,830	43,230
Total Product Wastes†	49,010	75,260	94,370	117,470	125,330	122,970	125,040	124,080	120,370
Other Wastes									
Food Scraps	12,200	12,800	13,000	20,800	26,130	27,760	29,530	30,840	30,990
Yard Trimmings	20,000	23,200	27,500	30,800	14,760	13,140	12,210	11,730	11,600
Miscellaneous Inorganic Wastes	1,300	1,780	2,250	2,900	3,500	3,620	3,690	3,750	3,780
Total Other Wastes	33,500	37,780	42,750	54,500	44,390	44,520	45,430	46,320	46,370
Total MSW Discarded - Weight	82,510	113,040	137,120	171,970	169,720	167,490	170,470	170,400	166,740

* Discards after materials and compost recovery. In this table, discards include combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 23
PRODUCTS DISCARDED* IN THE MUNICIPAL WASTE STREAM, 1960 TO 2008
(WITH DETAIL ON CONTAINERS AND PACKAGING)
(In percent of total discards)

Products	Percent of Total Discards								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Durable Goods <i>(Detail in Table 14)</i>	11.6%	12.1%	14.9%	15.3%	19.0%	20.6%	21.4%	22.0%	22.6%
Nondurable Goods <i>(Detail in Table 17)</i>	18.1%	18.9%	21.7%	25.2%	27.4%	25.9%	25.7%	23.9%	23.6%
Containers and Packaging									
Glass Packaging									
Beer and Soft Drink Bottles	1.6%	4.8%	4.4%	2.2%	2.5%	2.8%	2.7%	2.6%	2.5%
Wine and Liquor Bottles	1.3%	1.7%	1.8%	1.1%	0.9%	0.8%	0.8%	0.8%	0.8%
Food and Other Bottles & Jars	4.5%	3.9%	3.5%	2.1%	1.5%	1.1%	1.1%	1.0%	1.1%
Total Glass Packaging	7.4%	10.4%	9.6%	5.4%	4.8%	4.7%	4.6%	4.4%	4.3%
Steel Packaging									
Beer and Soft Drink Cans	0.8%	1.4%	0.3%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.
Food and Other Cans	4.5%	3.1%	2.0%	1.1%	0.6%	0.6%	0.5%	0.5%	0.5%
Other Steel Packaging	0.3%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Steel Packaging	5.6%	4.7%	2.5%	1.3%	0.7%	0.7%	0.5%	0.6%	0.6%
Aluminum Packaging									
Beer and Soft Drink Cans	Neg.	0.1%	0.4%	0.3%	0.4%	0.5%	0.5%	0.4%	0.4%
Other Cans	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Foil and Closures	0.2%	0.4%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Total Aluminum Pkg	0.2%	0.5%	0.7%	0.5%	0.6%	0.7%	0.7%	0.7%	0.7%
Paper & Paperboard Pkg									
Corrugated Boxes	5.8%	8.8%	7.8%	7.3%	5.8%	5.1%	5.2%	4.8%	4.2%
Milk Cartons			0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Folding Cartons			2.4%	2.3%	3.2%	3.1%	2.5%	2.3%	2.1%
Other Paperboard Packaging	4.7%	4.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
Bags and Sacks			2.5%	1.3%	0.7%	0.6%	0.5%	0.4%	0.4%
Wrapping Papers			0.1%	0.1%	Neg.	Neg.	Neg.	Neg.	Neg.
Other Paper Packaging	3.3%	3.1%	0.4%	0.6%	1.0%	0.9%	0.8%	0.8%	0.9%
Total Paper & Board Pkg	13.8%	16.2%	14.0%	12.0%	11.1%	10.0%	9.4%	8.8%	7.9%
Plastics Packaging									
PET Bottles and Jars			0.2%	0.2%	0.8%	1.0%	1.1%	1.3%	1.2%
HDPE Natural Bottles			0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Other Containers	0.1%	0.8%	0.6%	0.8%	0.9%	0.9%	0.8%	1.0%	1.0%
Bags and Sacks									
Wraps									
Subtotal Bags, Sacks, and Wraps			0.9%	1.4%	2.4%	2.5%	2.5%	2.2%	2.1%
Other Plastics Packaging	0.1%	1.0%	0.6%	1.2%	1.6%	1.7%	1.8%	2.2%	2.2%
Total Plastics Packaging	0.1%	1.8%	2.5%	3.9%	6.0%	6.5%	6.5%	7.1%	6.8%
Wood Packaging	2.4%	1.8%	2.9%	4.7%	4.1%	4.2%	4.2%	5.2%	5.5%
Other Misc. Packaging	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%
Total Containers & Pkg	29.7%	35.6%	32.2%	27.8%	27.5%	26.9%	26.2%	26.9%	25.9%
Total Product Wastes†	59.4%	66.6%	68.8%	68.3%	73.8%	73.4%	73.4%	72.8%	72.2%
Other Wastes									
Food Scraps	14.8%	11.3%	9.5%	12.1%	15.4%	16.6%	17.3%	18.1%	18.6%
Yard Trimmings	24.2%	20.5%	20.1%	17.9%	8.7%	7.8%	7.2%	6.9%	7.0%
Miscellaneous Inorganic Wastes	1.6%	1.6%	1.6%	1.7%	2.1%	2.2%	2.2%	2.2%	2.3%
Total Other Wastes	40.6%	33.4%	31.2%	31.7%	26.2%	26.6%	26.6%	27.2%	27.8%
Total MSW Discarded - %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

* Discards after materials and compost recovery. In this table, discards include combustion with energy recovery. Does not include construction & demolition debris, industrial process wastes, or certain other wastes.

† Other than food products.

Neg. = Less than 5,000 tons or 0.05 percent. Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Table 24

SELECTED EXAMPLES OF SOURCE REDUCTION PRACTICES

Source Reduction Practice	MSW Product Categories			
	Durable Goods	Nondurable Goods	Containers & Packaging	Organics
Redesign				
Materials reduction	<ul style="list-style-type: none"> • Downgauge metals in appliances 	<ul style="list-style-type: none"> • Paperless purchase orders 	<ul style="list-style-type: none"> • Concentrates 	<ul style="list-style-type: none"> • Xeriscaping
Materials substitution	<ul style="list-style-type: none"> • Use of composites in appliances and electronic circuitry 		<ul style="list-style-type: none"> • Cereal in bags • Coffee brick • Multi-use products 	
Lengthen life	<ul style="list-style-type: none"> • High mileage tires • Electronic components reduce moving parts 	<ul style="list-style-type: none"> • Regular servicing • Look at warranties • Extend warranties 	<ul style="list-style-type: none"> • Design for secondary uses 	
Consumer Practices				
	<ul style="list-style-type: none"> • Purchase long lived products 	<ul style="list-style-type: none"> • Repair • Duplexing • Sharing • Reduce unwanted mail 	<ul style="list-style-type: none"> • Purchasing: products in bulk, concentrates • Reusable bags 	
Reuse				
By design	<ul style="list-style-type: none"> • Modular design 	<ul style="list-style-type: none"> • Envelopes 	<ul style="list-style-type: none"> • Reusable pallets • Returnable secondary packaging 	
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"> • Clothing • Waste paper scratch pads 	<ul style="list-style-type: none"> • Loosefill • Grocery sacks • Dairy containers • Glass and plastic jars 	
Reduce/Eliminate Toxins				
	<ul style="list-style-type: none"> • Eliminate PCBs 	<ul style="list-style-type: none"> • Soy ink, waterbased • Waterbased solvents • Reduce mercury 	<ul style="list-style-type: none"> • Replace lead foil on wine bottles 	
Reduce Organics				
Food scraps				<ul style="list-style-type: none"> • Backyard composting • Vermi-composting
Yard trimmings				<ul style="list-style-type: none"> • Backyard composting • Grasscycling

Source: Franklin Associates, A Division of ERG

Table 25
NUMBER AND POPULATION SERVED BY
CURBSIDE RECYCLABLES COLLECTION PROGRAMS, 2008

Region	Number of Programs	Population* (in thousands)	Population Served	
			(in thousands)	Percent**
NORTHEAST	3,299	50,803	42,800	84%
SOUTH	797	85,536	25,690	30%
MIDWEST	3,749	46,579	28,300	61%
WEST	814	64,620	49,190	76%
Total	8,659	247,538	145,980	59%
Total U.S. Population		304,060		

* Population in states reporting data

** Percent of population served by curbside programs was calculated using population of states reporting data.

Source: U.S. Census Bureau, *BioCycle* April 2006, California Integrated Waste Management Board, Illinois Recycling Association, www.coloradocurbside.com, Nebraska State Recycling Association, Pennsylvania Department of Environmental Protection

Table 26
MATERIALS RECOVERY FACILITIES, 2008

Region	Number	Estimated Throughput (tpd)
NORTHEAST	145	23,238
SOUTH	152	19,739
MIDWEST	136	19,584
WEST	112	20,123
<i>U.S. Total</i>	<u>545</u>	<u>82,684</u>

Source: Governmental Advisory Associates, Inc.

Table 27

MUNICIPAL WASTE-TO-ENERGY PROJECTS, 2008

Region	Number Operational	Design Capacity (tpd)
NORTHEAST	40	46,537
SOUTH	23	31,131
MIDWEST	16	10,912
WEST	8	6,141
<i>U.S. Total*</i>	<u>87</u>	<u>94,721</u>

* Projects on hold or inactive were not included.

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

Source: "The IWSA Directory of Waste-To-Energy Plants."

Integrated Waste Services Association, 2007.

Table 28
LANDFILL FACILITIES, 2008

Region	Number of Landfills
NORTHEAST	134
SOUTH	726
MIDWEST	416
WEST	536
<i>U.S. Total</i>	1,812

Totals exclude 10 landfills in Hawaii and 300 landfills in Alaska.

Source: BioCycle December 2008.

Revised with data from Alabama Department of Environmental Management, California Integrated Waste Management Board, Colorado Department of Public Health and Environment, Hawaii Department of Health, and Nevada Division of Environmental Protection.

Table 29
GENERATION, MATERIALS RECOVERY, COMPOSTING, COMBUSTION,
AND DISCARDS OF MUNICIPAL SOLID WASTE, 1960 TO 2008
(In thousands of tons and percent of total generation)

	Thousands of Tons								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Generation	88,120	121,060	151,640	205,210	239,050	242,230	249,650	254,590	249,610
Recovery for recycling	5,610	8,020	14,520	29,040	52,880	55,660	58,630	62,480	60,770
Recovery for composting*	Neg.	Neg.	Neg.	4,200	16,450	19,080	20,550	21,710	22,100
Total Materials Recovery	5,610	8,020	14,520	33,240	69,330	74,740	79,180	84,190	82,870
Discards after recovery	82,510	113,040	137,120	171,970	169,720	167,490	170,470	170,400	166,740
Combustion with energy recovery**	0	400	2,700	29,700	33,730	33,100	31,620	31,970	31,550
Discards to landfill, other disposal†	82,510	112,640	134,420	142,270	135,990	134,390	138,850	138,430	135,190

	Pounds per Person per Day								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Generation	2.68	3.25	3.66	4.50	4.65	4.56	4.62	4.63	4.50
Recovery for recycling	0.17	0.22	0.35	0.64	1.03	1.05	1.08	1.14	1.10
Recovery for composting*	Neg.	Neg.	Neg.	0.09	0.32	0.36	0.38	0.39	0.40
Total Materials Recovery	0.17	0.22	0.35	0.73	1.35	1.41	1.46	1.53	1.50
Discards after recovery	2.51	3.03	3.31	3.77	3.30	3.15	3.16	3.10	3.00
Combustion with energy recovery**	0.00	0.01	0.07	0.65	0.66	0.62	0.58	0.58	0.57
Discards to landfill, other disposal†	2.51	3.02	3.24	3.12	2.64	2.53	2.58	2.52	2.43
Population (thousands)	179,979	203,984	227,255	249,907	281,422	290,850	296,410	301,621	304,060

	Percent of Total Generation								
	1960	1970	1980	1990	2000	2003	2005	2007	2008
Generation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Recovery for recycling	6.4%	6.6%	9.6%	14.2%	22.1%	23.0%	23.5%	24.6%	24.3%
Recovery for composting*	Neg.	Neg.	Neg.	2.0%	6.9%	7.9%	8.2%	8.5%	8.9%
Total Materials Recovery	6.4%	6.6%	9.6%	16.2%	29.0%	30.9%	31.7%	33.1%	33.2%
Discards after recovery	93.6%	93.4%	90.4%	83.8%	71.0%	69.1%	68.3%	66.9%	66.8%
Combustion with energy recovery**	0.0%	0.3%	1.8%	14.5%	14.1%	13.7%	12.7%	12.6%	12.6%
Discards to landfill, other disposal†	93.6%	93.1%	88.6%	69.3%	56.9%	55.5%	55.6%	54.3%	54.2%

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

** Includes combustion 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). 2008 includes 28,390 MSW, 620 wood, and 2,535 tires (1,000 tons)

† Discards after recovery minus combustion with energy recovery. Discards include combustion without energy recovery. Details may not add to totals due to rounding.

Source: Franklin Associates, A Division of ERG

Figure 1- B. Definition of terms

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

The term **generation** as used in this report refers to the weight of materials and products as they enter the waste management system from residential, commercial, institutional, and industrial sources and before materials recovery or combustion takes place. Preconsumer (industrial) scrap is not included in the generation estimates. Source reduction activities (e.g., backyard composting of yard trimmings) take place *ahead of* generation.

Source reduction activities reduce the amount or toxicity 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, reusable plastic food storage containers, or refurbished wood pallets is considered to be source reduction, not recycling.

Recovery of materials as estimated in this report includes products and yard trimmings removed from the waste stream for the purpose of recycling (including composting). For recovered products, recovery equals reported purchases of postconsumer recovered material (e.g., glass cullet, old newspapers) plus net exports (if any) of the material. Thus, recovery of old corrugated containers (OCC) is the sum of OCC purchases by paper mills plus net exports of OCC. If recovery as reported by a data source includes converting or fabrication (preconsumer) scrap, the preconsumer scrap is *not* counted towards the recovery estimates in this report. Imported secondary materials are also not counted in recovery estimates in this report. For some materials, additional uses, such as glass used for highway construction or newspapers used to make insulation, are added into the recovery totals.

Combustion of MSW with energy recovery, often called “waste-to-energy,” is estimated in Chapter 3 of this report. Combustion of separated materials—wood and rubber from tires—is included in the estimates of combustion with energy recovery in this report.

Discards include MSW remaining after recovery for recycling (including composting). These discards presumably would be combusted without energy recovery or landfilled, although some MSW is littered, stored or disposed onsite, or burned onsite, particularly in rural areas. No good estimates for these other disposal practices are available, but the total amounts of MSW involved are presumed to be small.

For the analysis of municipal solid waste, 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 3 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 3 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.

Figure 2. Paper and paperboard products generated in MSW, 2008

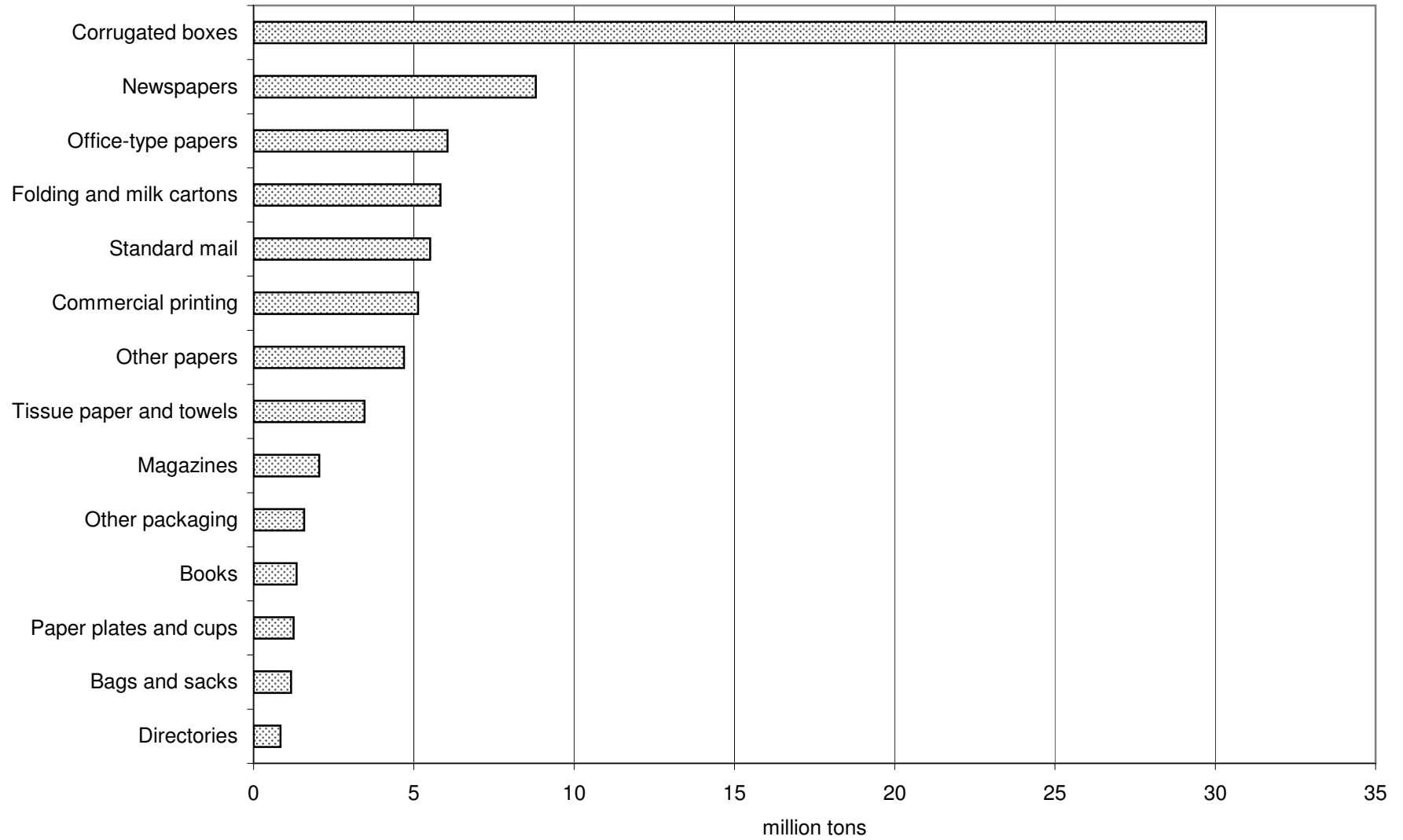


Figure 3. Paper and paperboard generation and recovery, 1960 to 2008

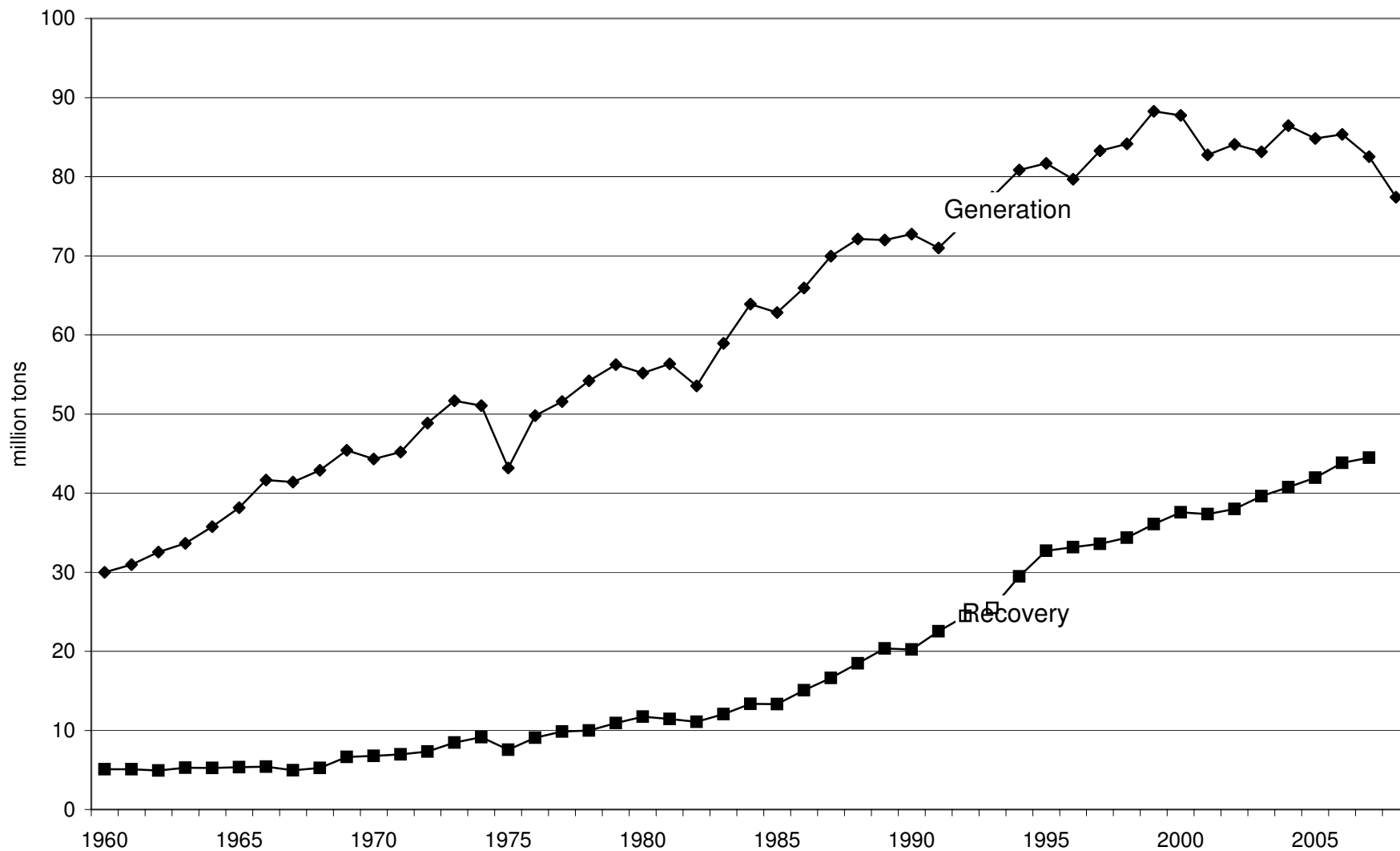


Figure 4. Glass products generated in MSW, 2008

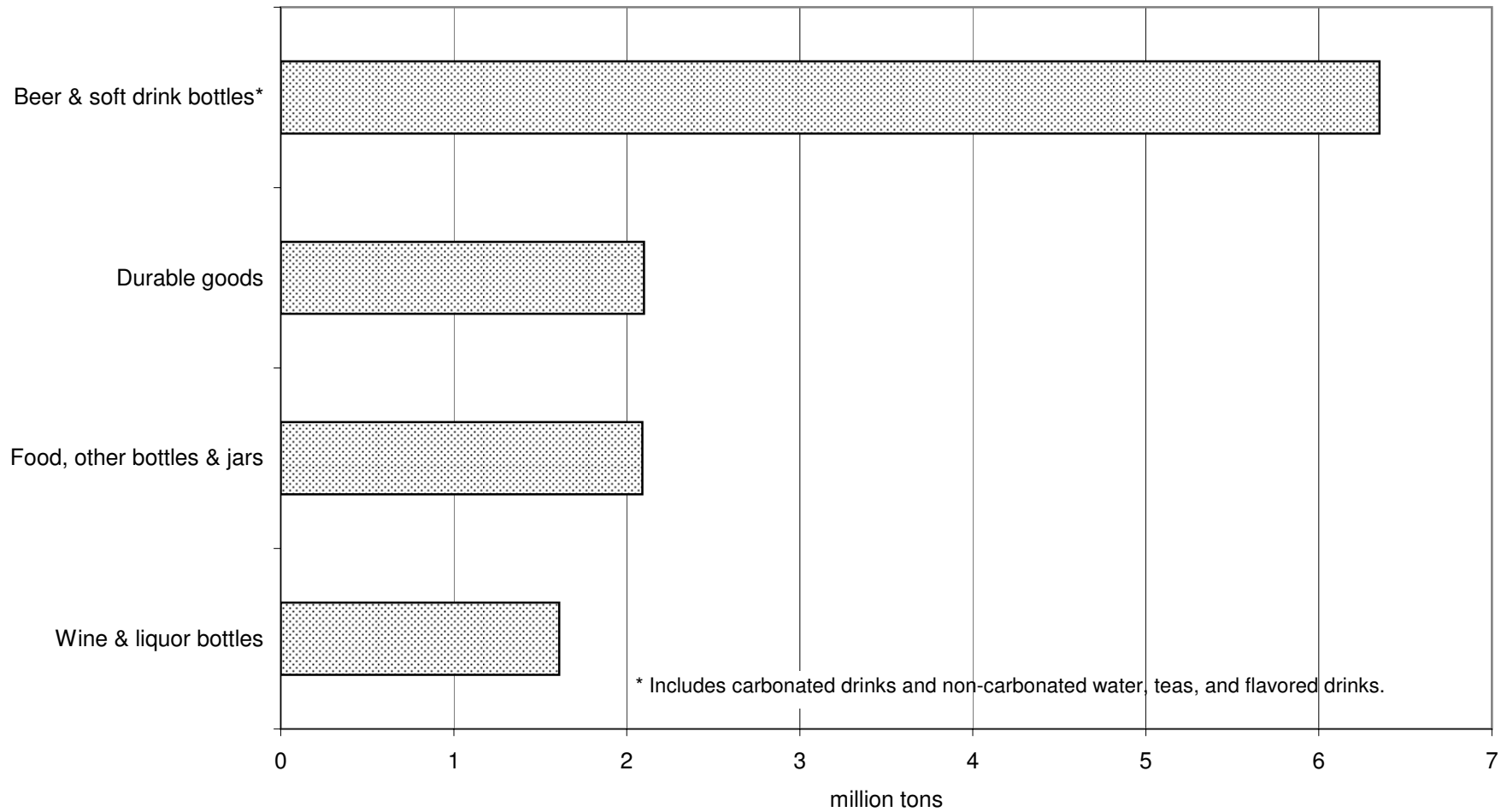


Figure 5. Glass generation and recovery, 1960 to 2008

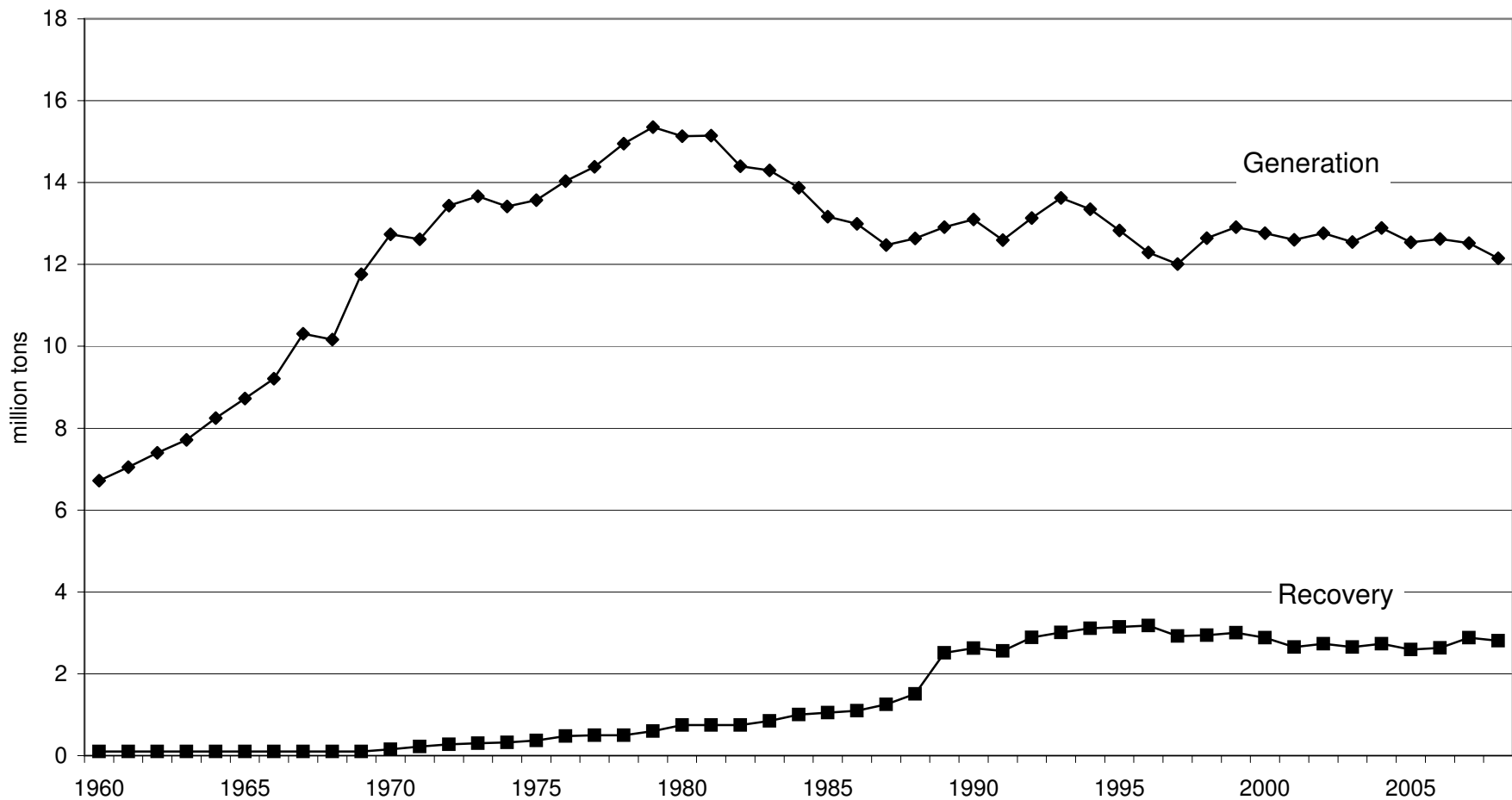


Figure 6. Metal products generated in MSW, 2008

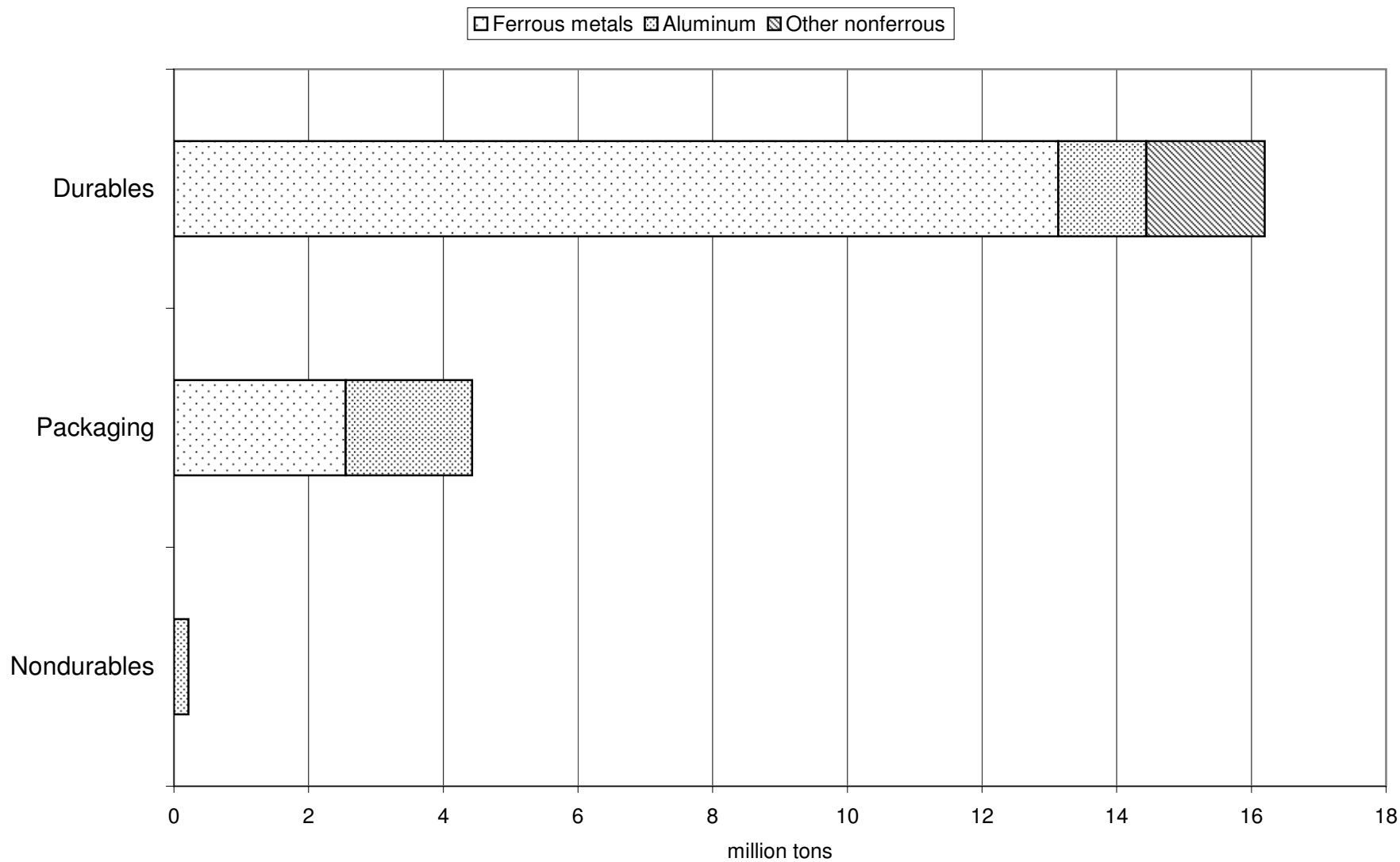


Figure 7. Metals generation and recovery, 1960 to 2008

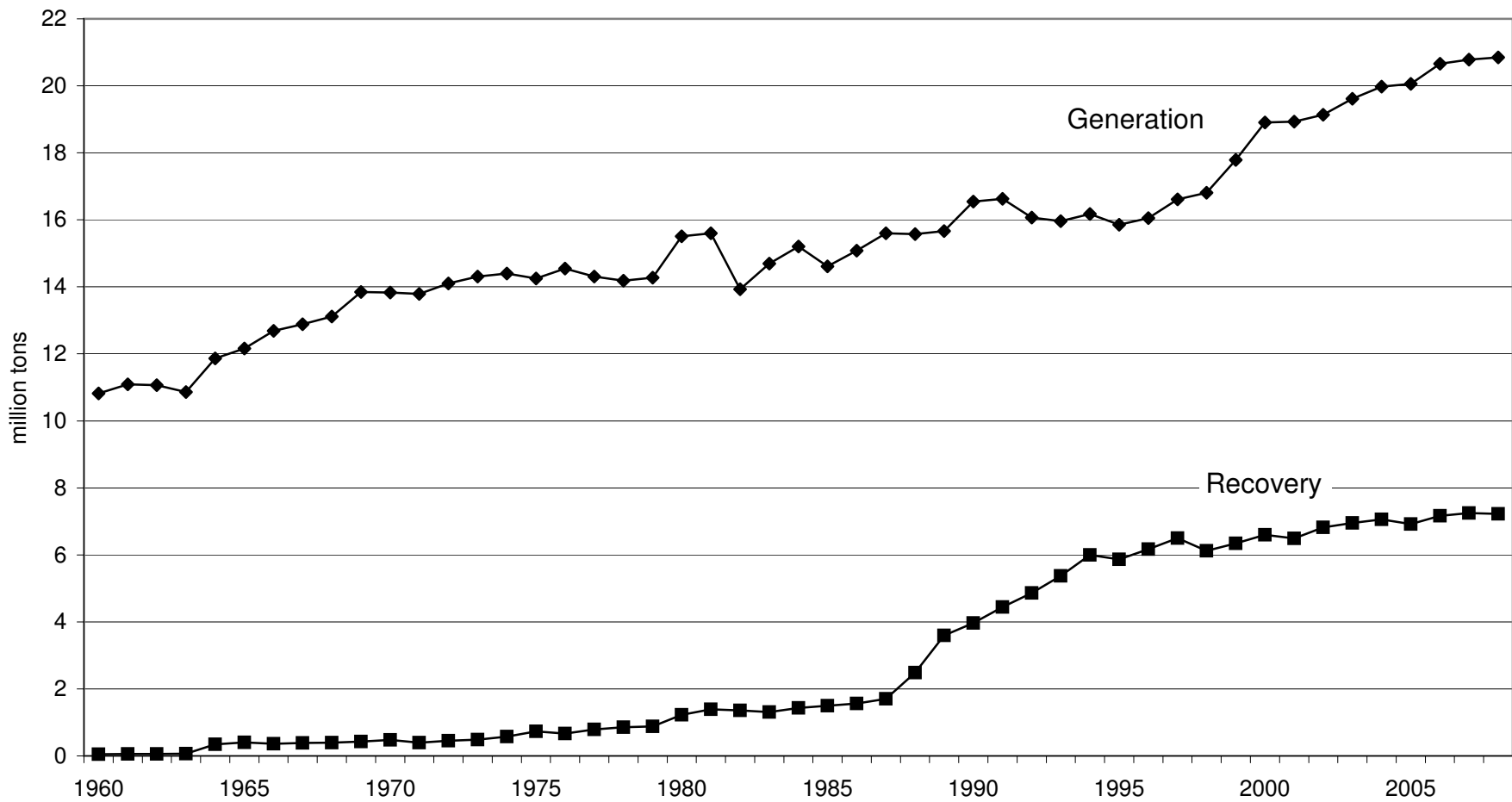


Figure 8. Plastics products generated in MSW, 2008

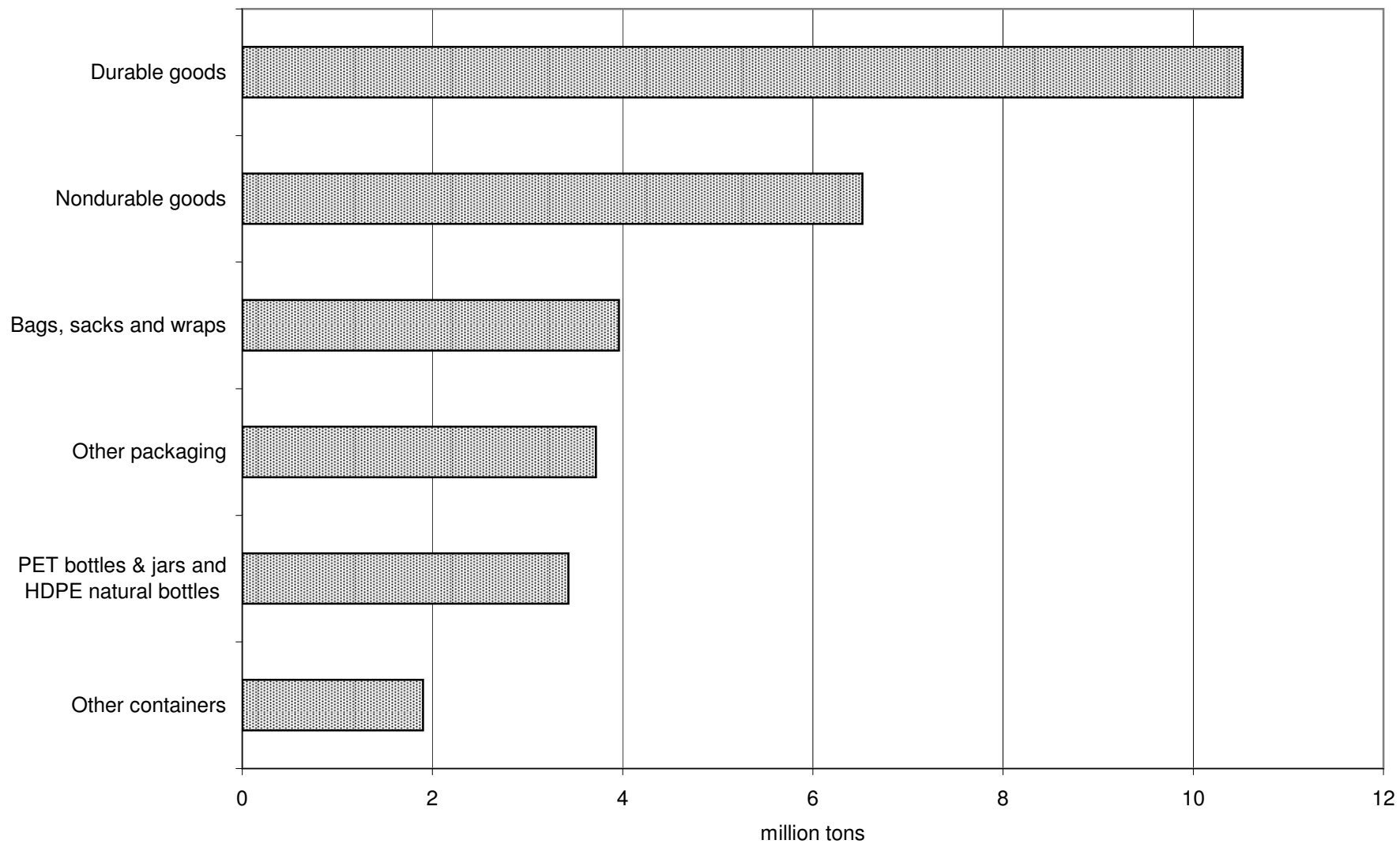


Figure 9. Plastics generation and recovery, 1960 to 2008

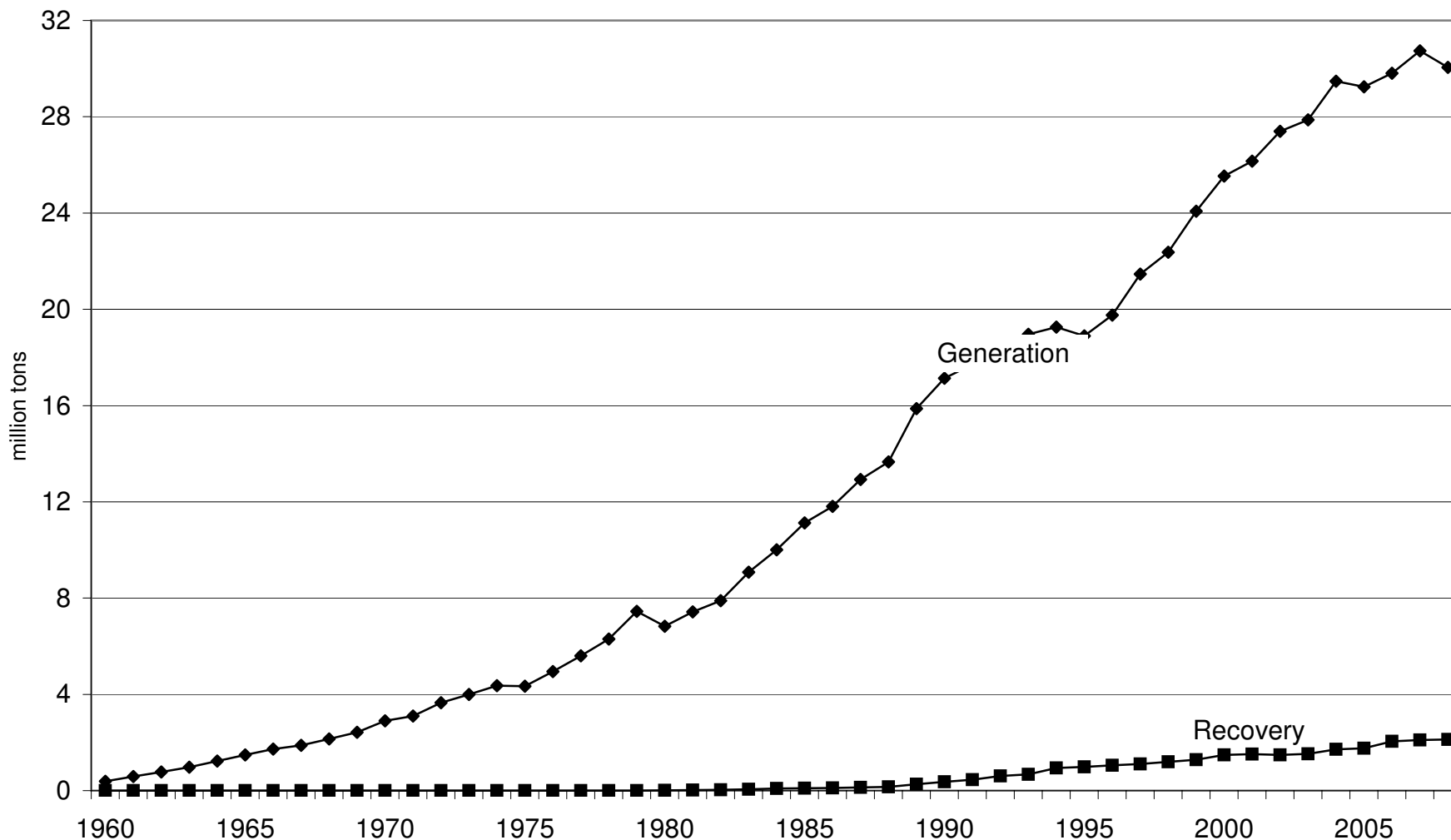


Figure 10. Generation of materials in MSW, 1960 to 2008

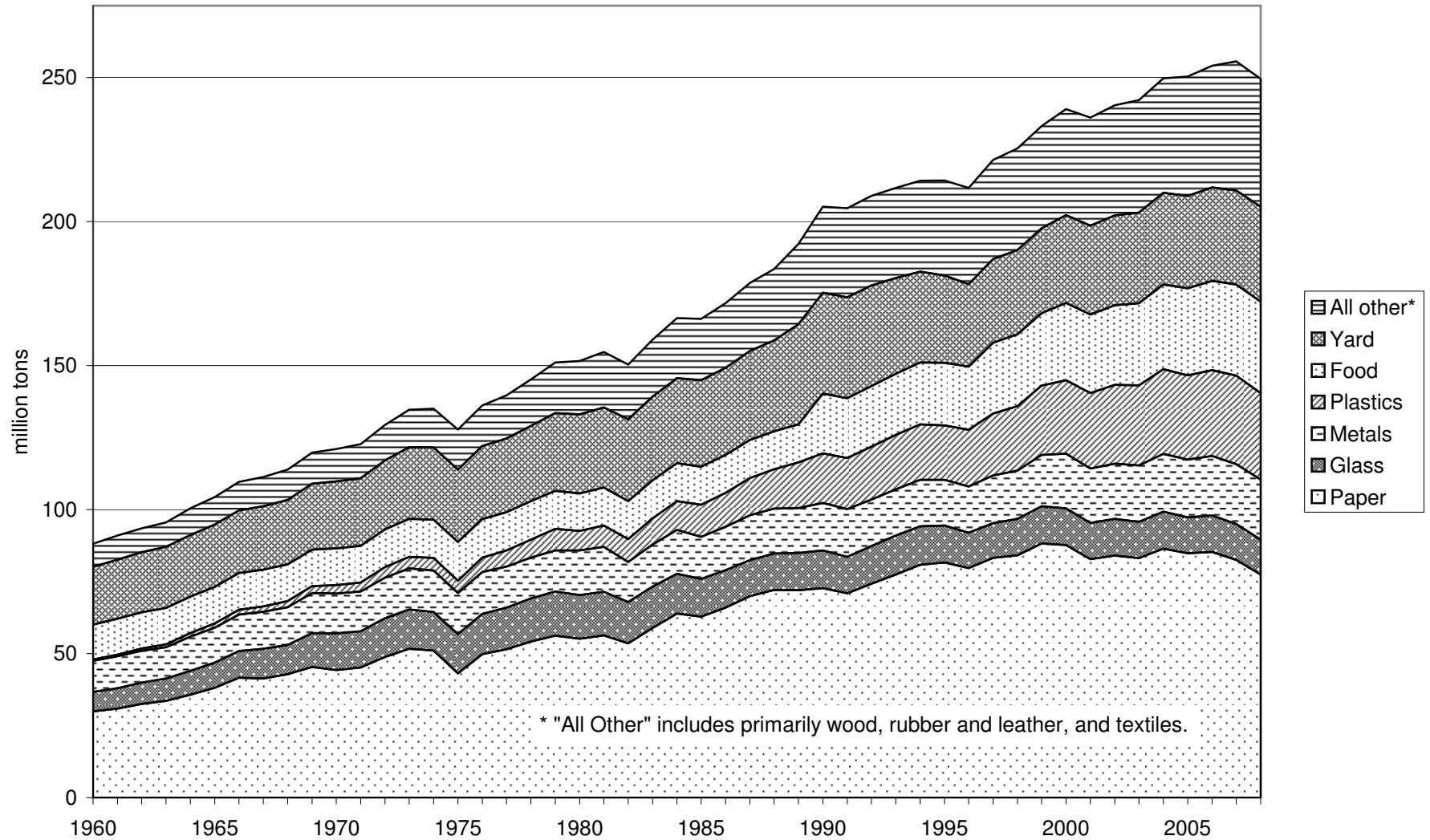


Figure 11. Recovery and discards of materials in MSW, 1960 to 2008

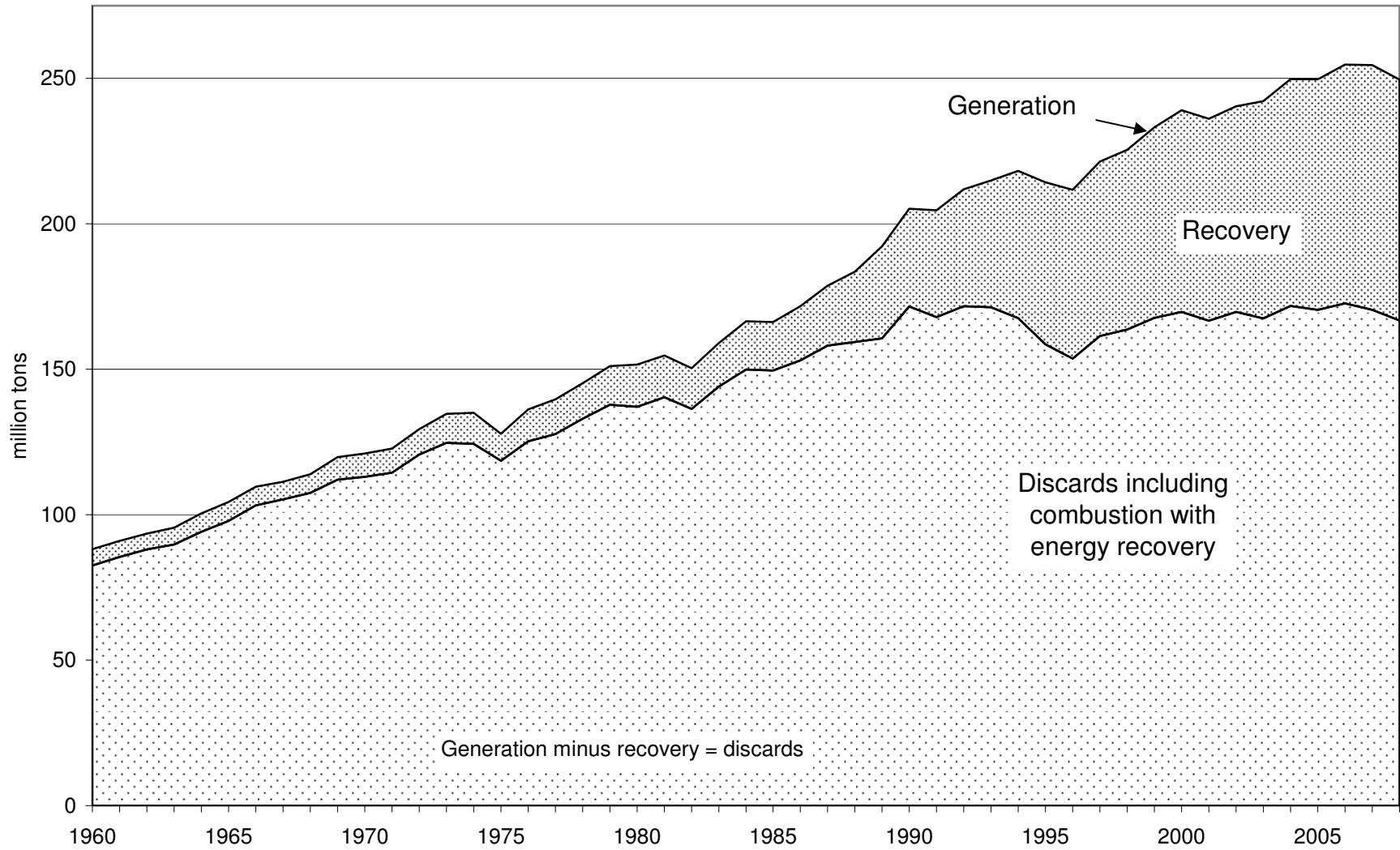
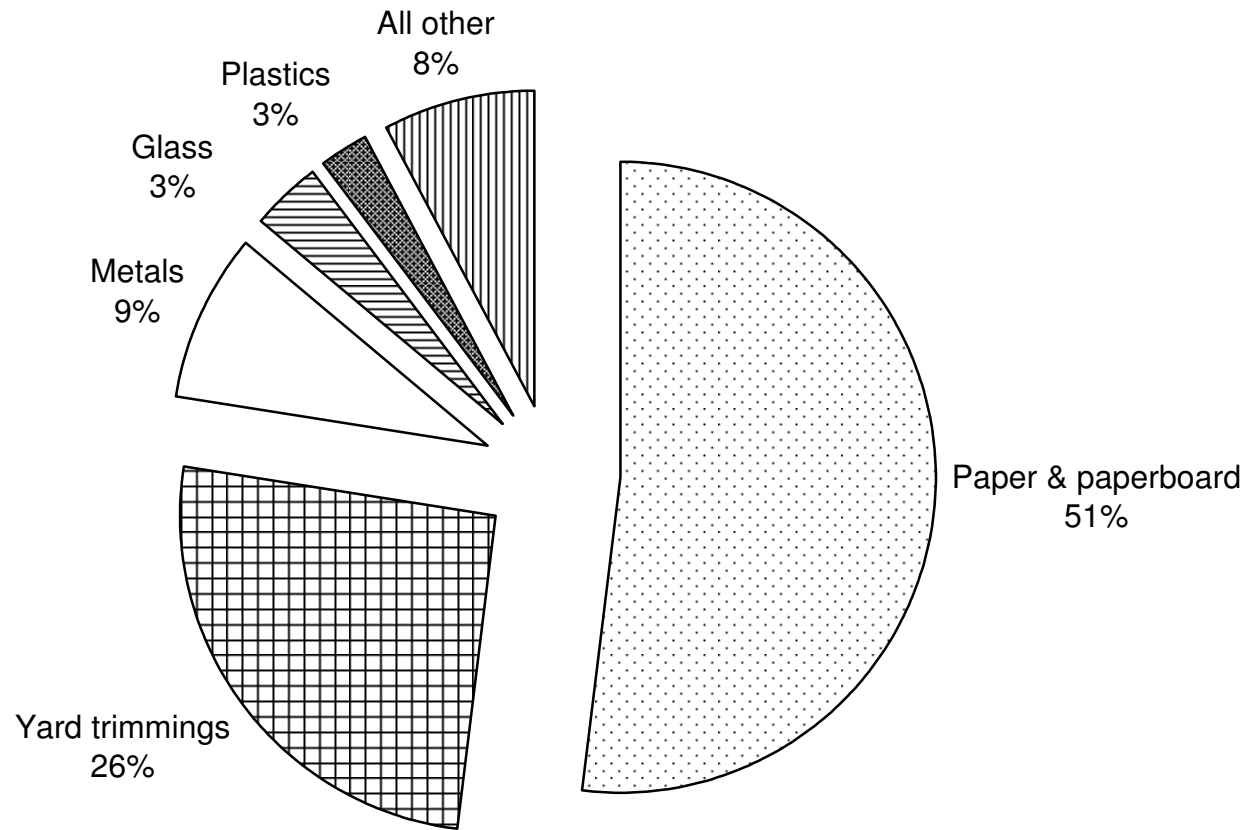
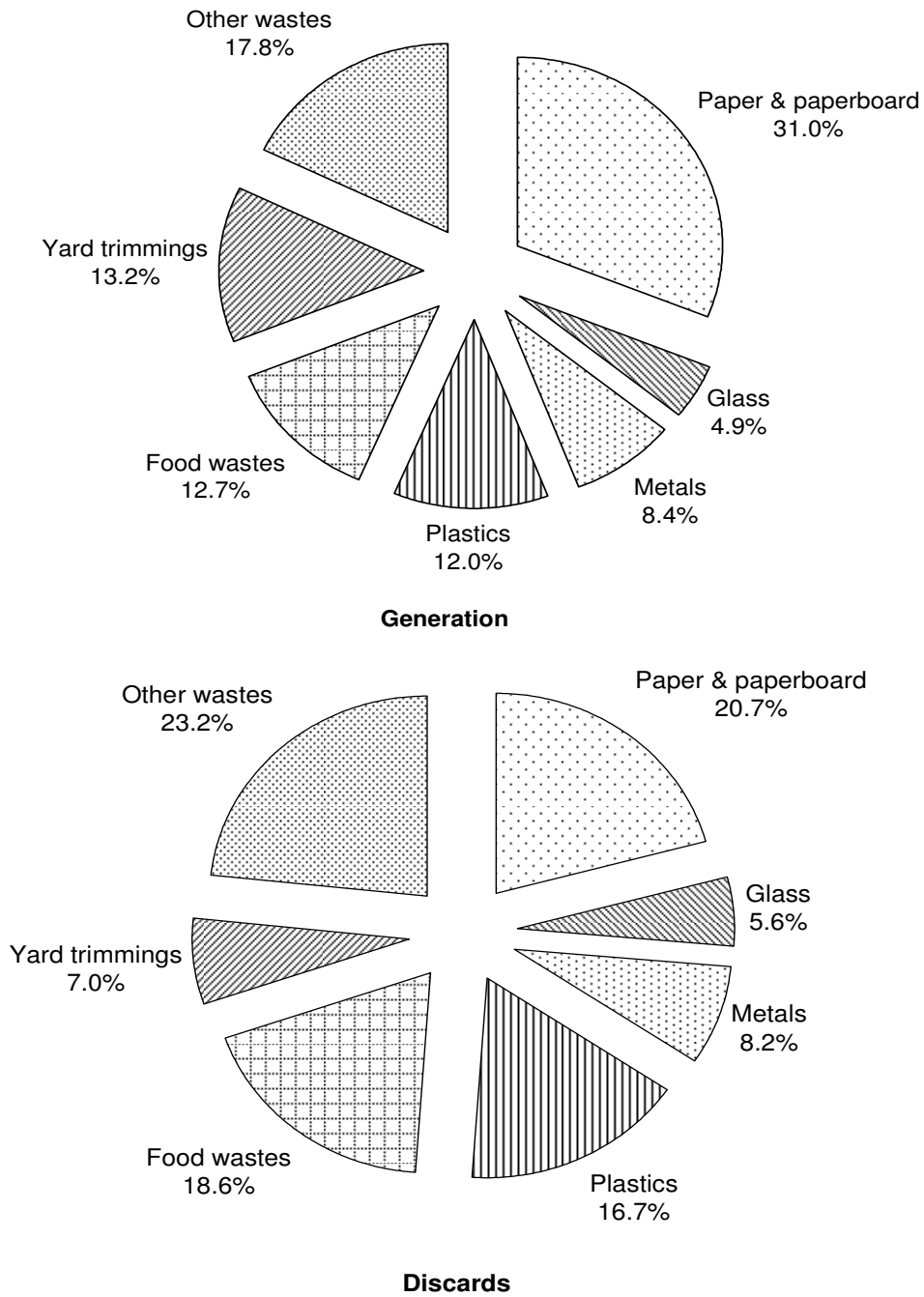


Figure 12. Materials recovery,* 2008



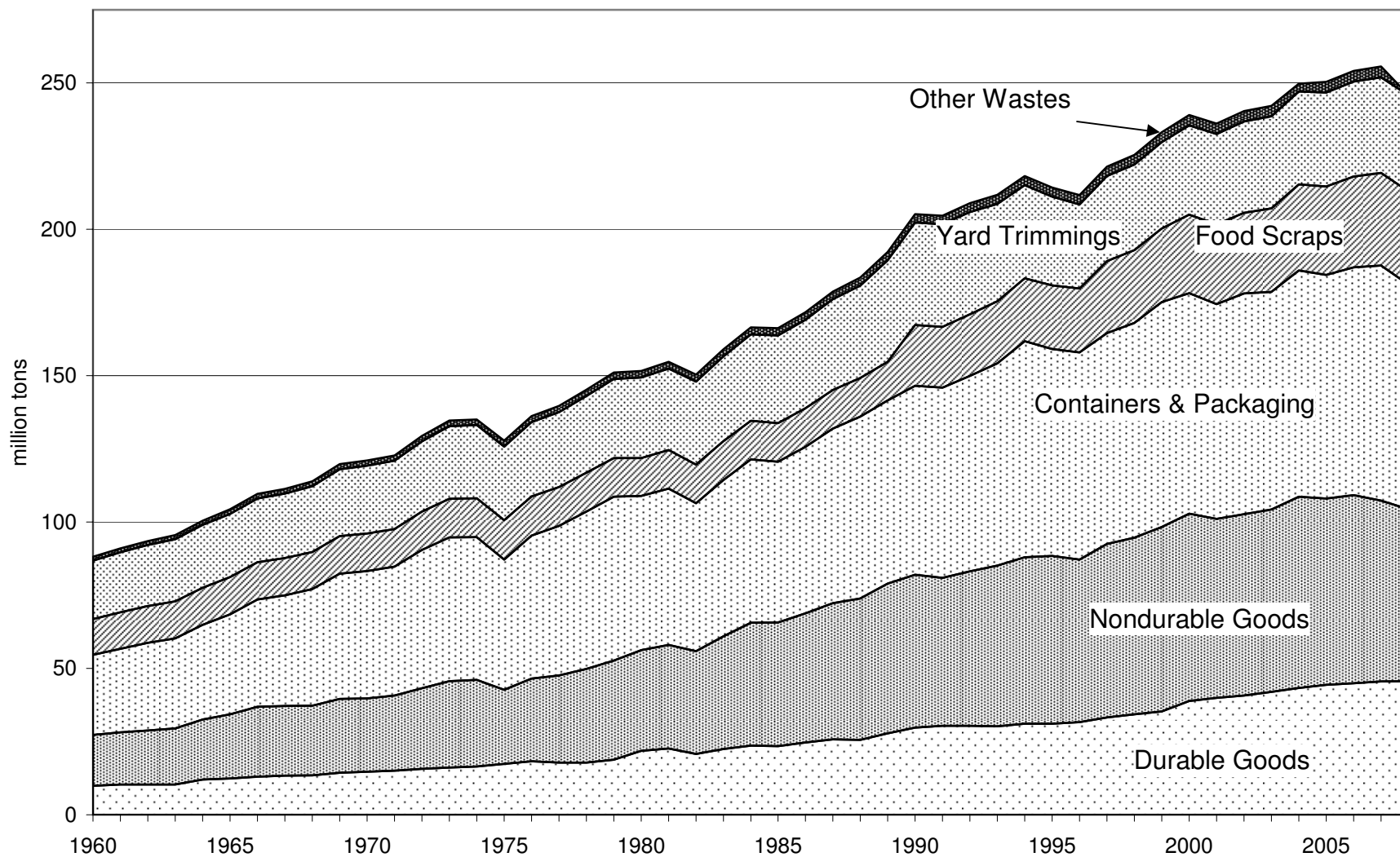
* In percent by weight of total recovery

**Figure 13. Materials generated and discarded*
in municipal solid waste, 2008
(In percent of total generation and discards)**

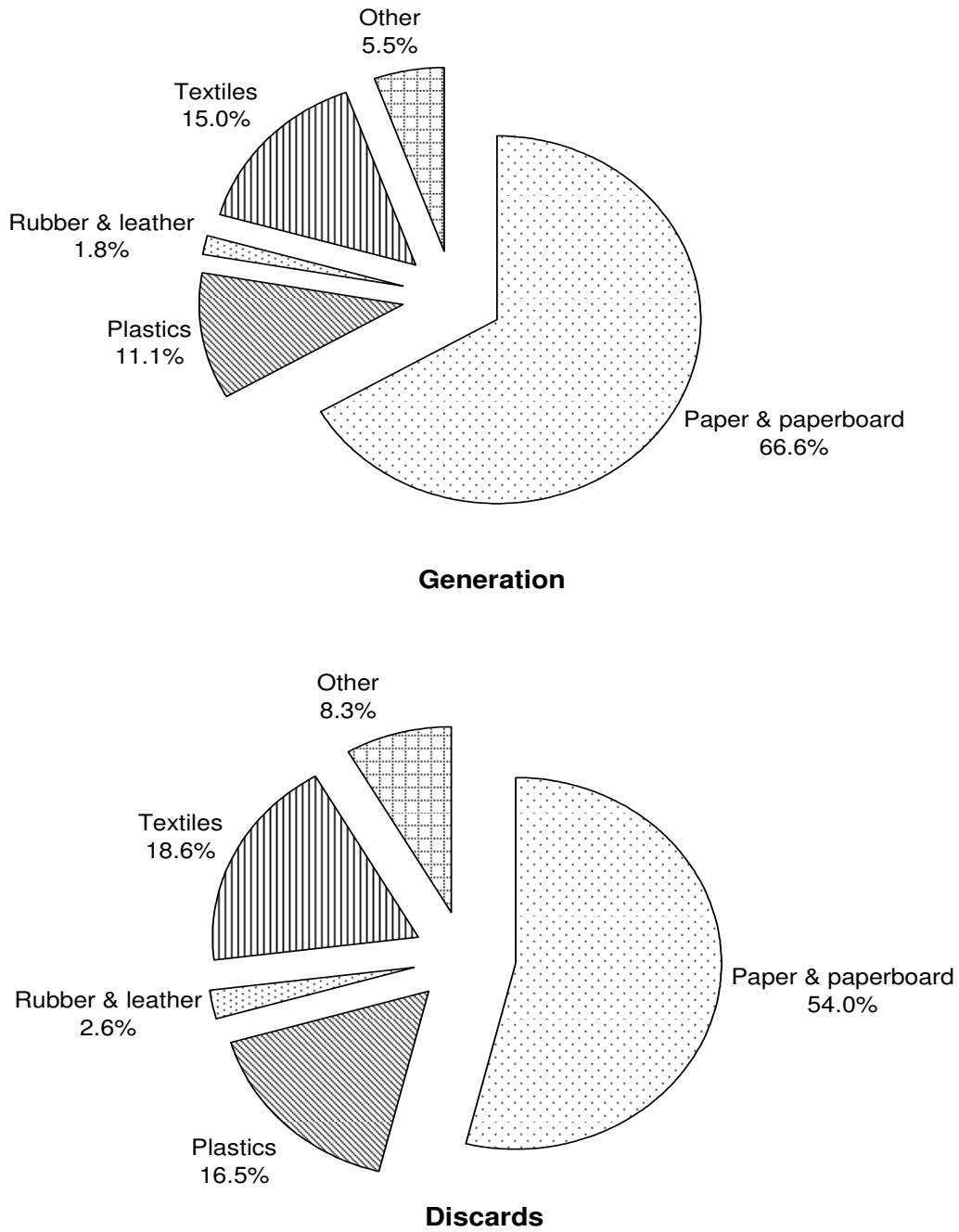


* Discards in this figure include combustion with energy recovery.

Figure 14. Generation of products in MSW, 1960 to 2008

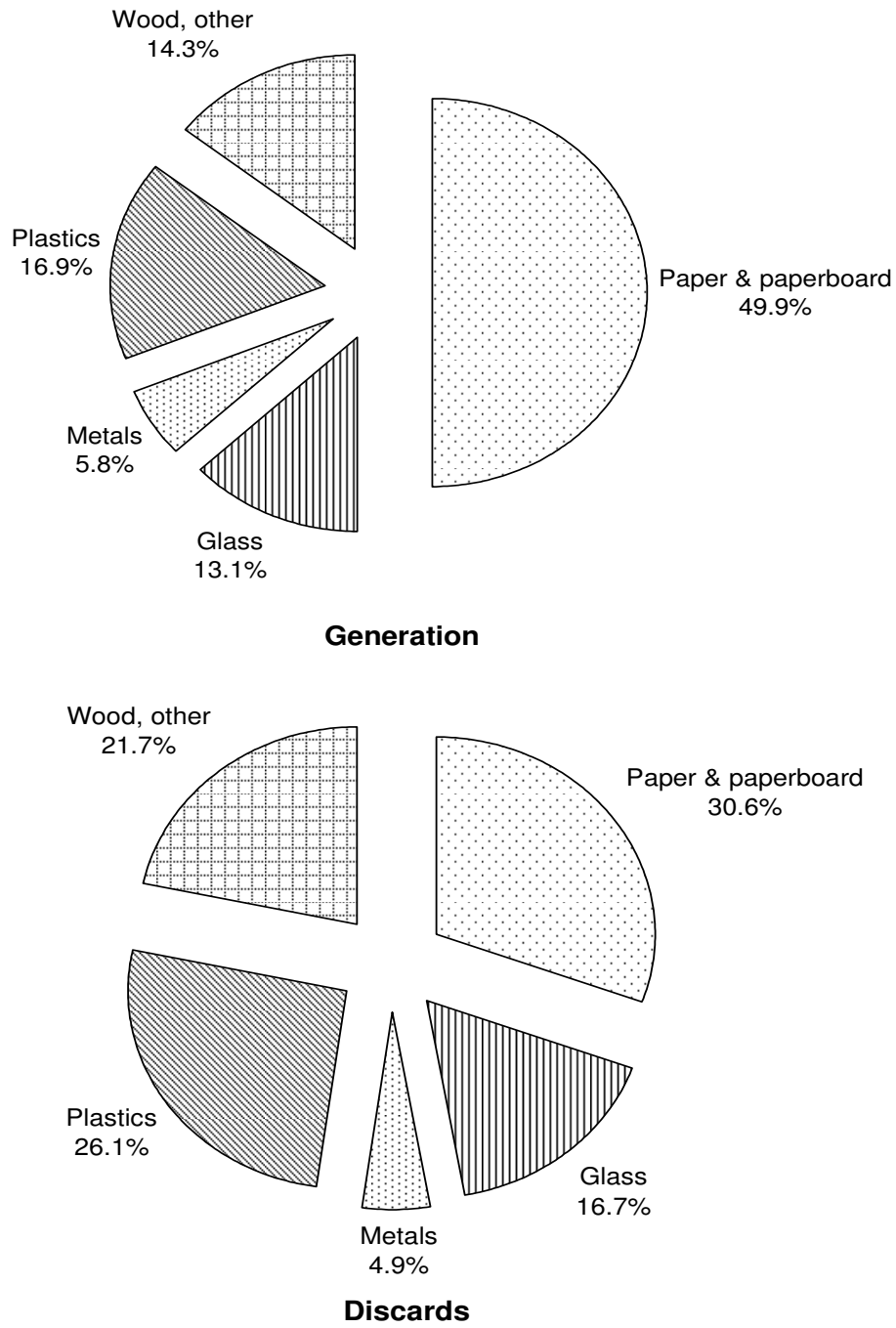


**Figure 15. Nondurable goods generated and discarded*
in municipal solid waste, 2008
(In percent of total generation and discards)**



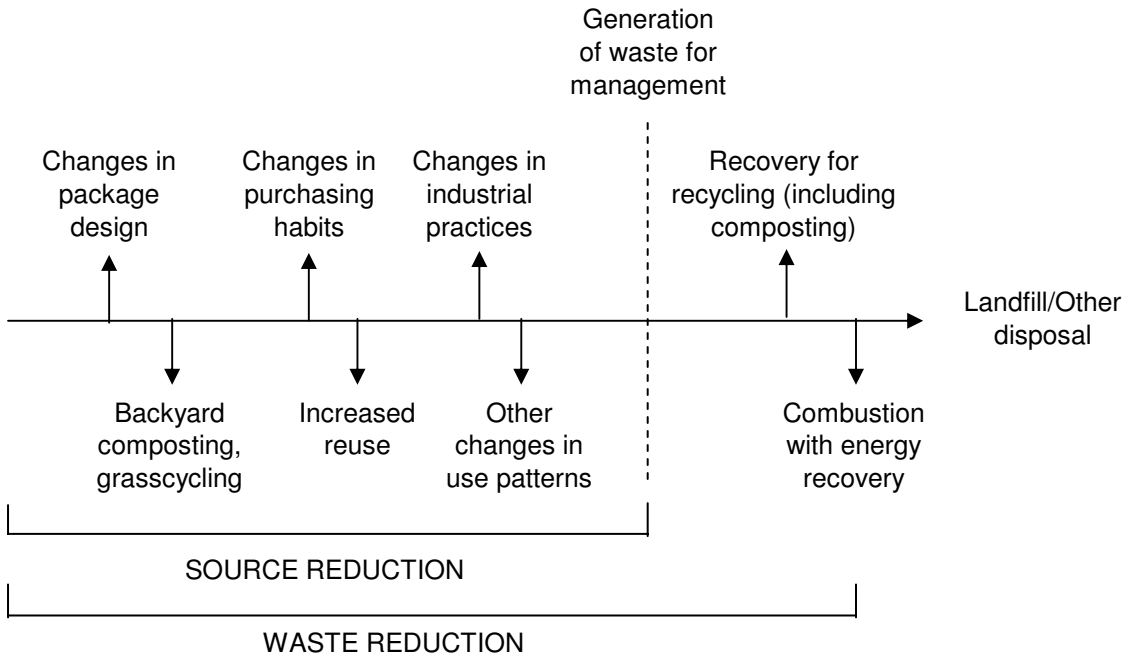
*Discards in this figure include combustion with energy recovery.

Figure 16. Containers and packaging generated and discarded*
in municipal solid waste, 2008
(In percent of total generation and discards)



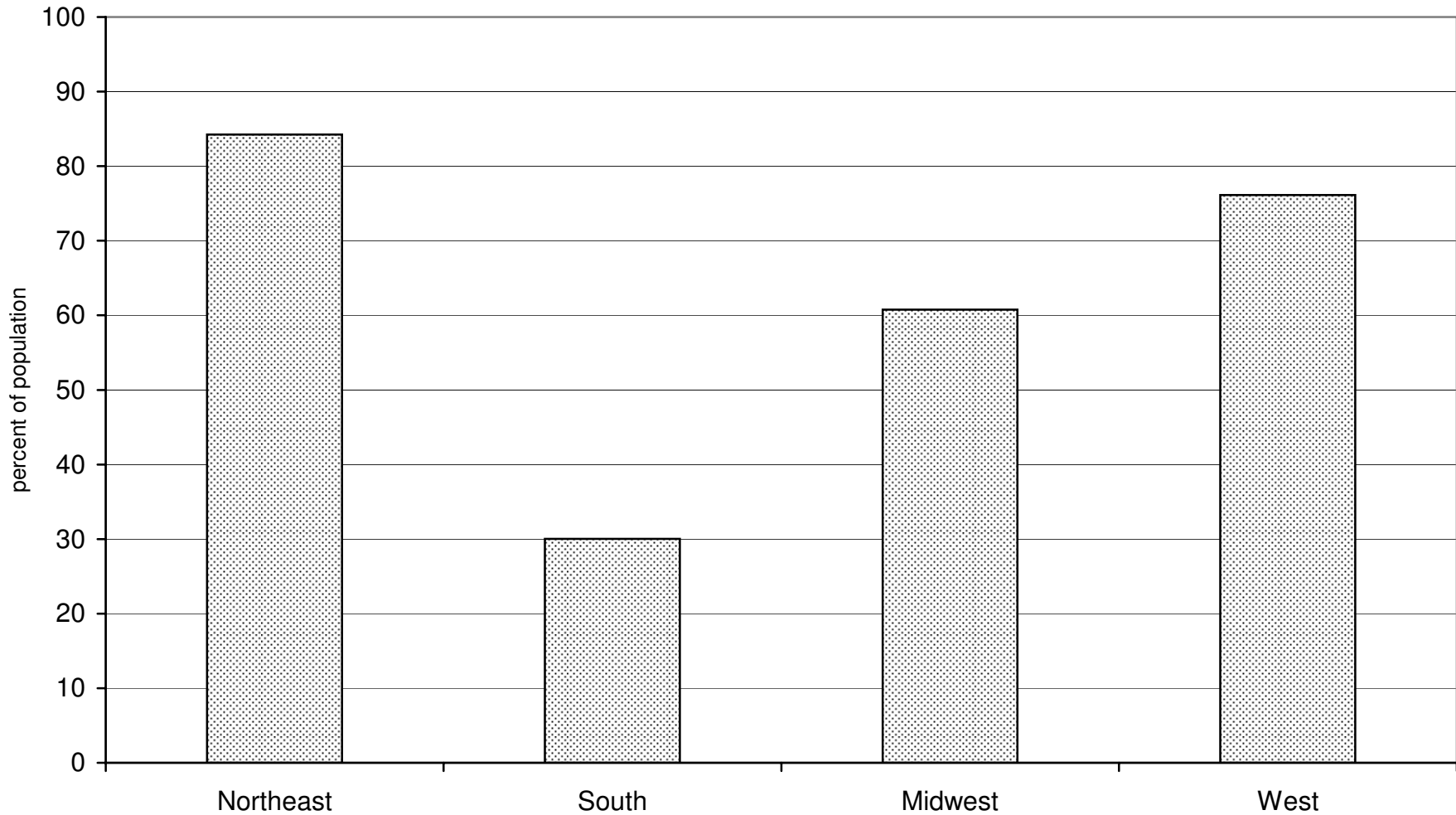
*Discards in this figure include combustion with energy recovery.

Figure 17. Diagram of solid waste management



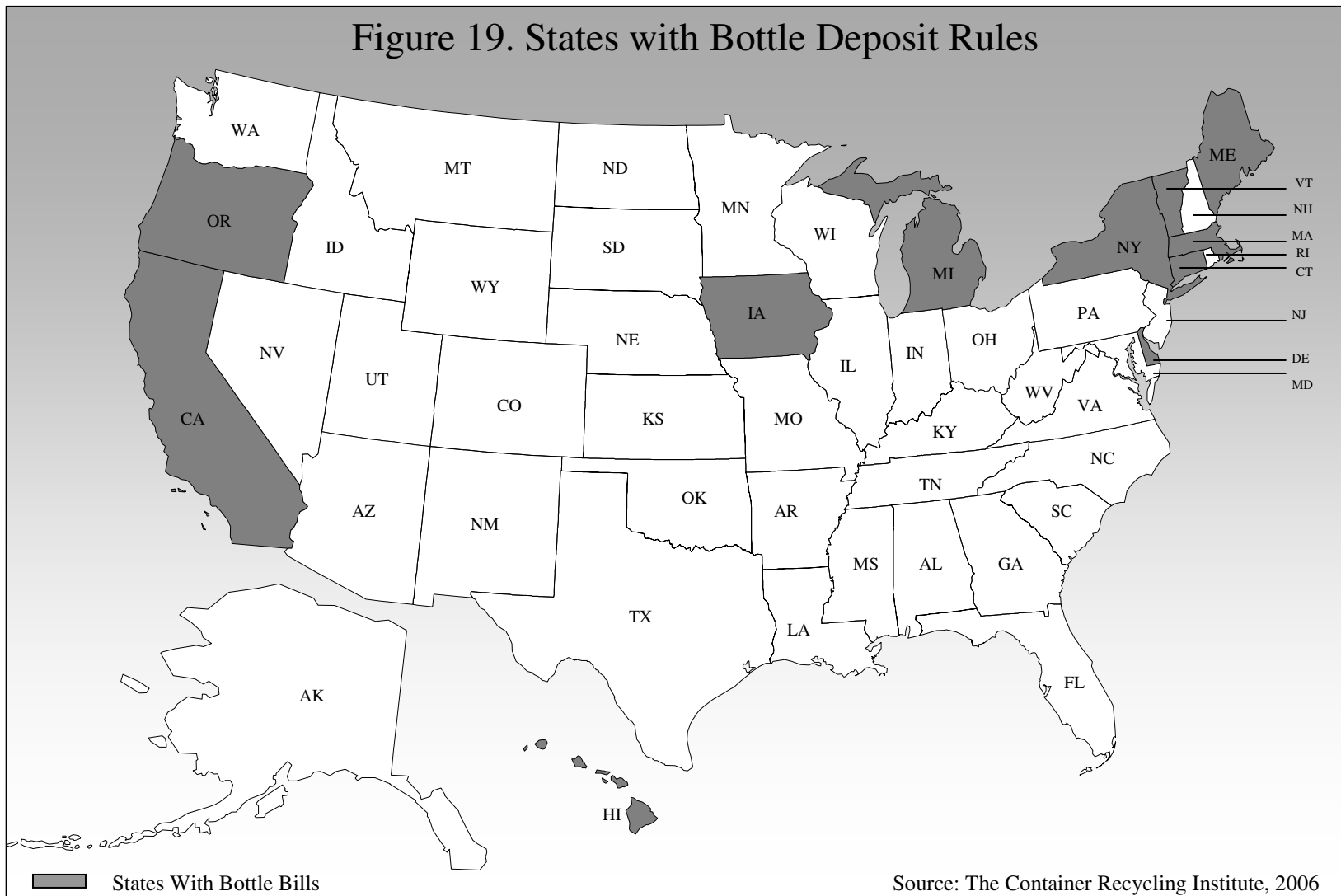
Source: Franklin Associates, A Division of ERG

Figure 18. Population served by curbside recycling, 2008

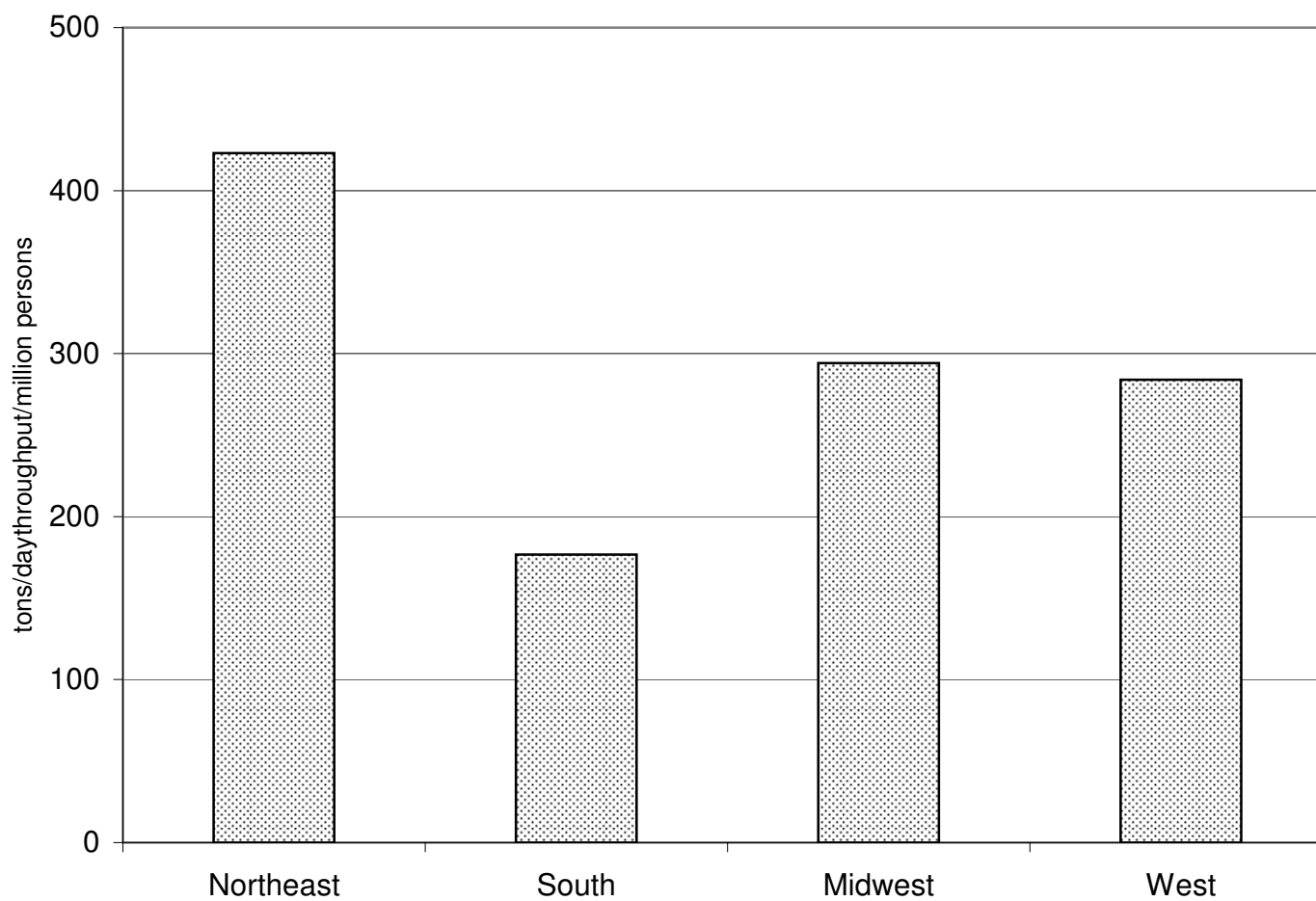


Source: U.S. Census Bureau, BioCycle April 2006, California Integrated Waste Management Board, Illinois Recycling Association, www.coloradocurbside.com, Nebraska State Recycling Association, Pennsylvania Department of Environmental Protection

Figure 19. States with Bottle Deposit Rules

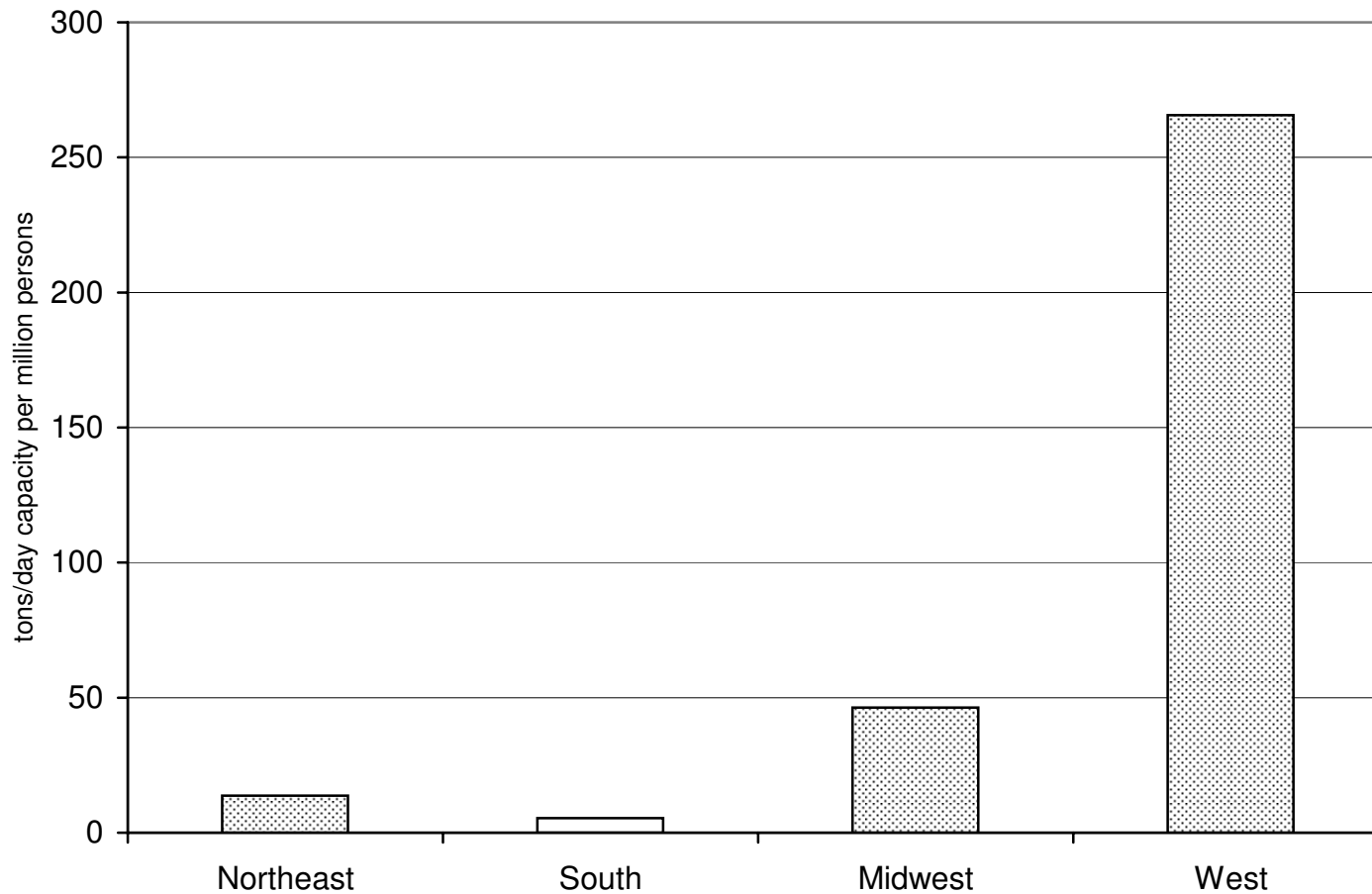


**Figure 20. Estimated MRF throughput, 2008
(Tons per day per million persons)**



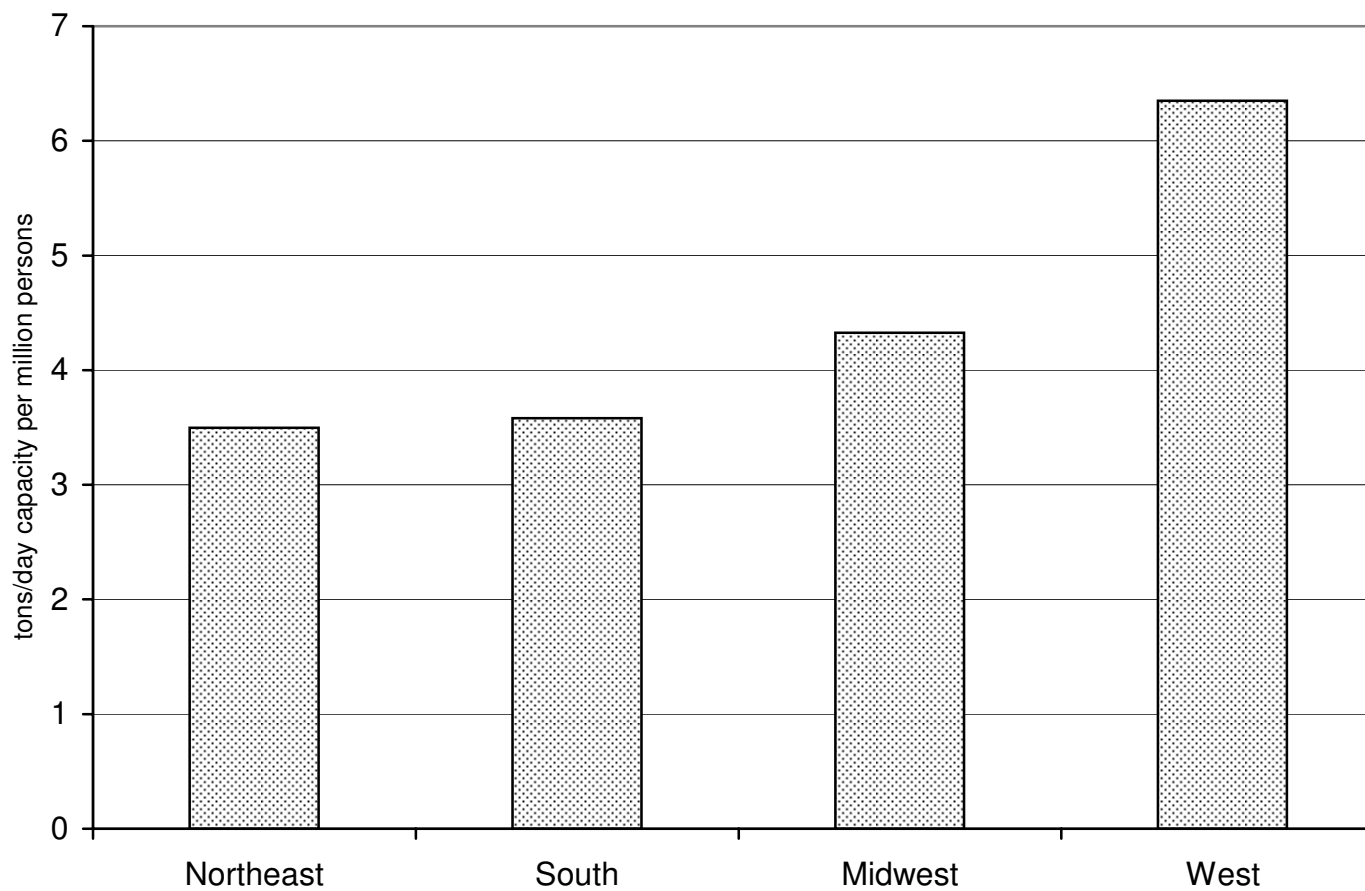
Source: U.S. Census Bureau, Governmental Advisory Associates, Inc.

Figure 21. Mixed waste processing estimated throughput 2008
(tons per day per million persons)



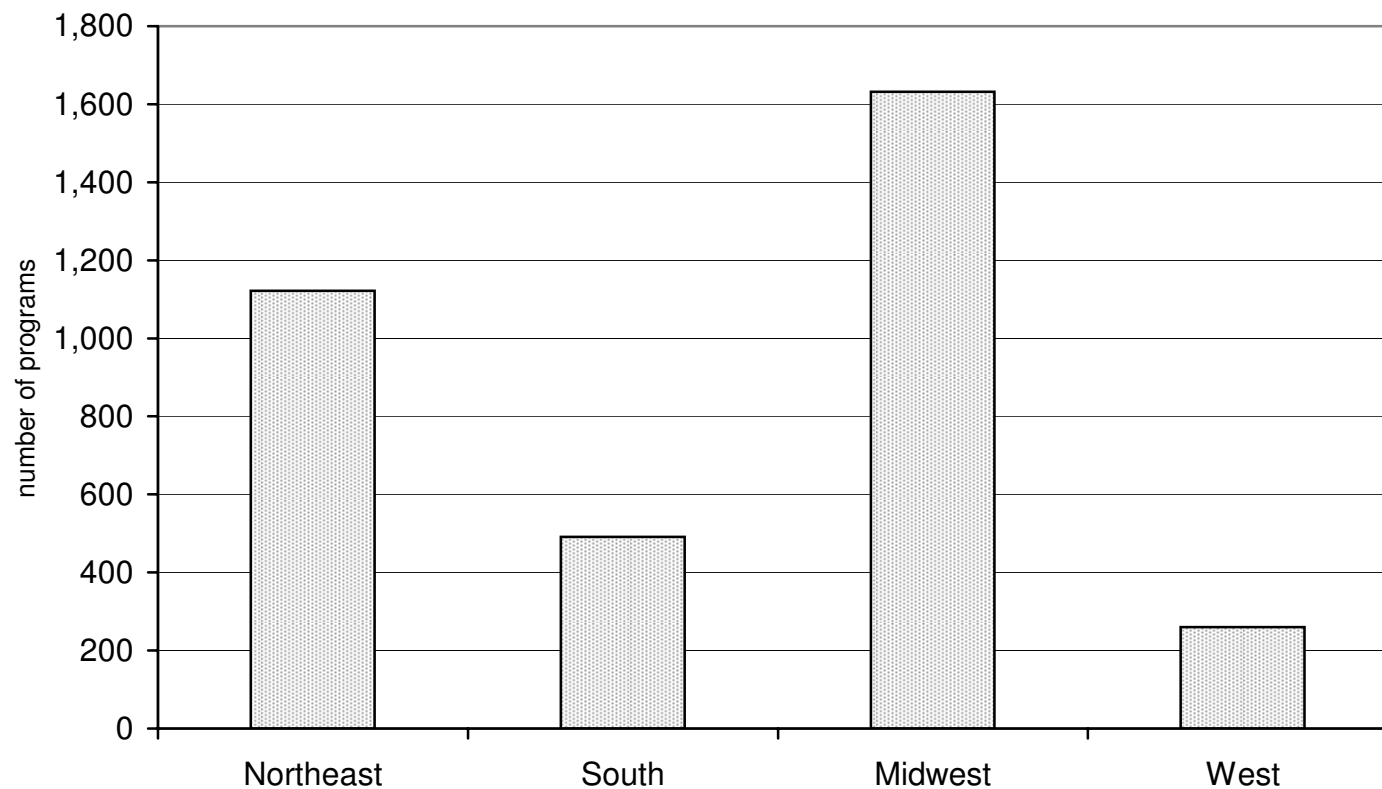
Source: U.S. Census Bureau; Governmental Advisory Associates, Inc.

Figure 22. MSW composting capacity, 2008
(Capacity in tons per day per million persons)



Source: U.S. Census Bureau; *BioCycle*, November 2008.

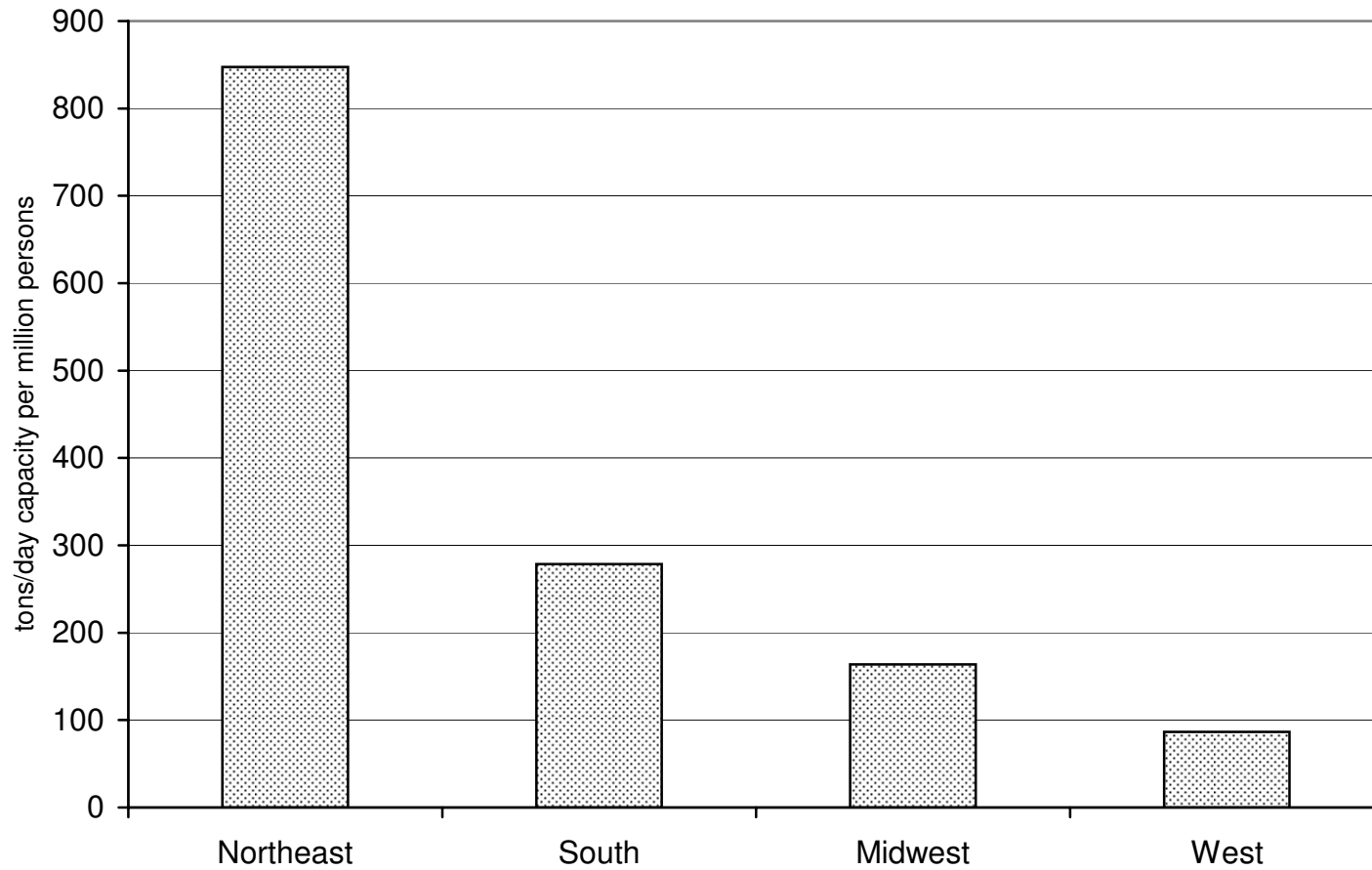
**Figure 23. Yard trimmings composting programs, 2008
(In number of programs)**



Source: *BioCycle* April 2006.

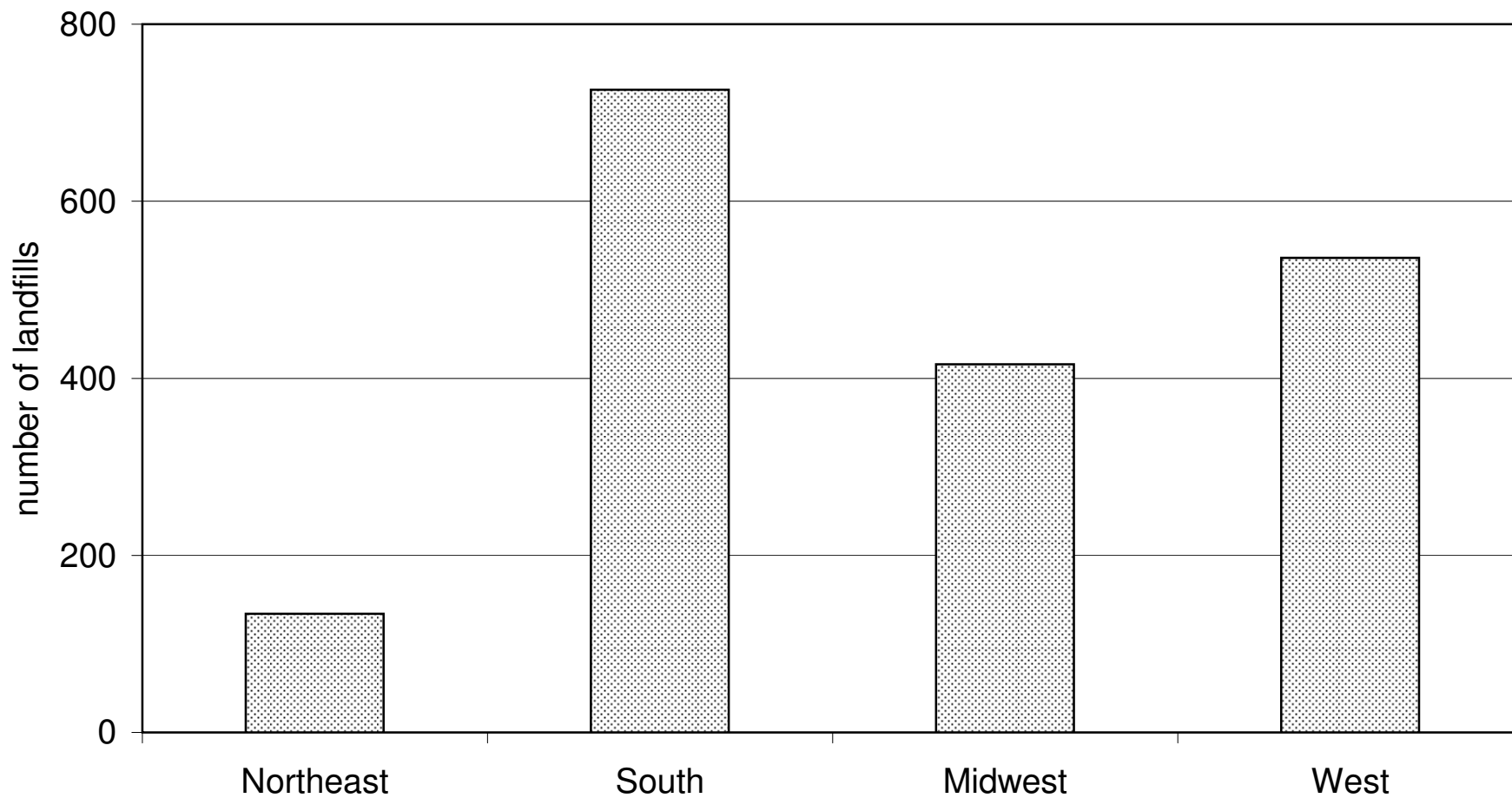
Revised with data from Arkansas Department of Environmental Quality, California Integrated Waste Management Board, and Colorado Department of Public Health and Environment.

**Figure 24. Municipal waste-to-energy capacity, 2008
(Capacity in tons per million persons)**



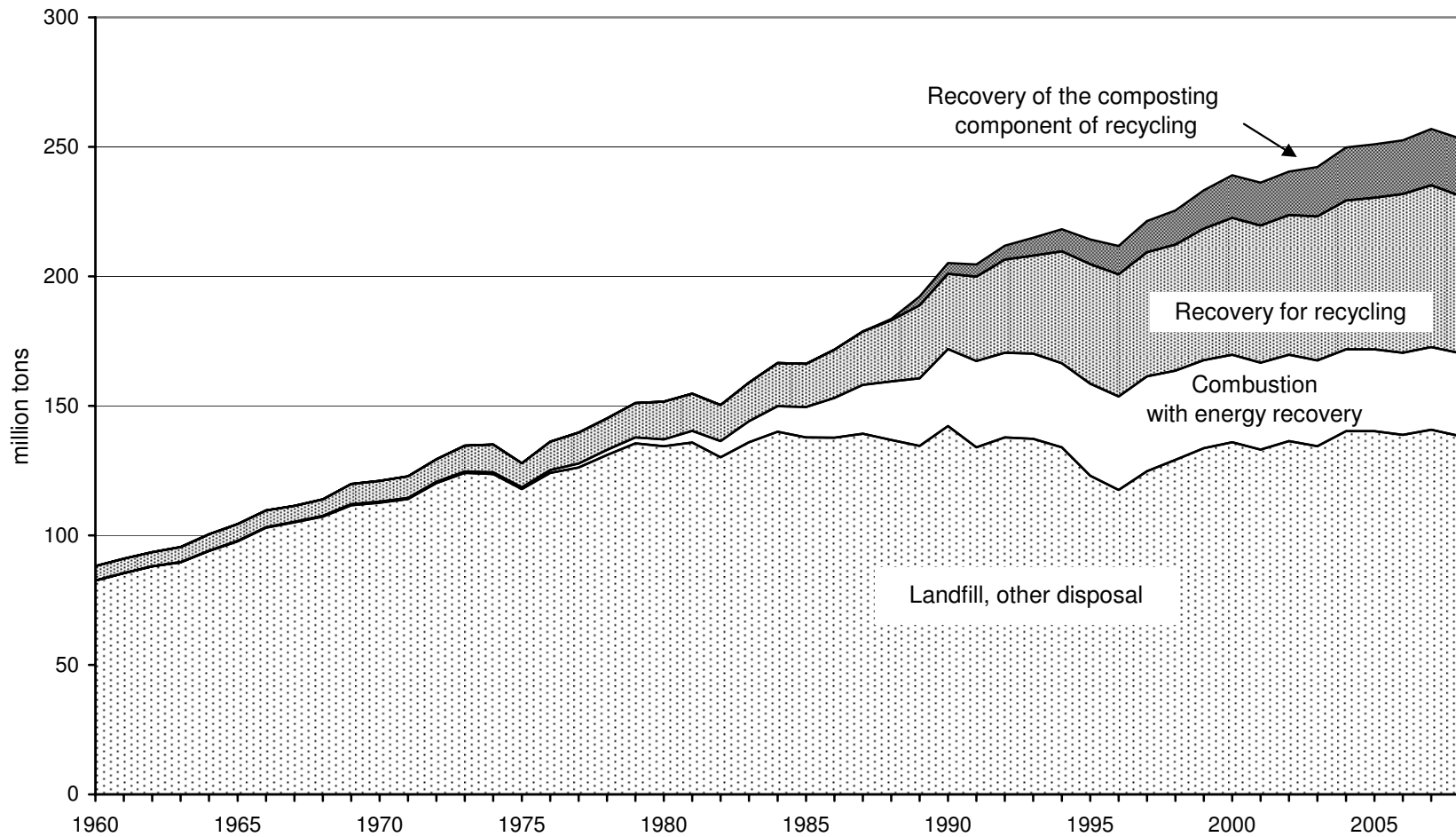
Source: U.S. Census Bureau, Integrated Waste Services Association 2007.

Figure 25. Number of landfills in the U.S., 2008



Source: BioCycle December 2008, Alabama Department of Environmental Management, California Integrated Waste Management Board, Colorado Department of Public Health and Environment, and Nevada Division of Environmental Protection

Figure 26. Municipal solid waste management, 1960 to 2008



Source: Franklin Associates, A Division of ERG