



Advancing Sustainable Materials Management: 2018 Tables and Figures

Assessing Trends in Materials Generation and
Management in the United States

November 2020

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Table 1. Materials Generated* in the Municipal Waste Stream, 1960 to 2018
(In thousands of tons and percent of total generation)

| Materials | Thousands of Tons | | | | | | | | | |
|---------------------------------------|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Paper and Paperboard | 29,990 | 44,310 | 55,160 | 72,730 | 87,740 | 84,840 | 71,310 | 68,050 | 67,010 | 67,390 |
| Glass | 6,720 | 12,740 | 15,130 | 13,100 | 12,770 | 12,540 | 11,520 | 11,470 | 12,300 | 12,250 |
| Metals | | | | | | | | | | |
| Ferrous | 10,300 | 12,360 | 12,620 | 12,640 | 14,150 | 15,210 | 16,920 | 18,190 | 18,890 | 19,200 |
| Aluminum | 340 | 800 | 1,730 | 2,810 | 3,190 | 3,330 | 3,510 | 3,670 | 3,820 | 3,890 |
| Other Nonferrous | 180 | 670 | 1,160 | 1,100 | 1,600 | 1,860 | 2,020 | 2,010 | 2,510 | 2,510 |
| Total Metals | 10,820 | 13,830 | 15,510 | 16,550 | 18,940 | 20,400 | 22,450 | 23,870 | 25,220 | 25,600 |
| Plastics | 390 | 2,900 | 6,830 | 17,130 | 25,550 | 29,380 | 31,400 | 34,480 | 35,410 | 35,680 |
| Rubber and Leather | 1,840 | 2,970 | 4,200 | 5,790 | 6,670 | 7,290 | 7,750 | 8,560 | 9,110 | 9,160 |
| Textiles | 1,760 | 2,040 | 2,530 | 5,810 | 9,480 | 11,510 | 13,220 | 16,060 | 16,890 | 17,030 |
| Wood | 3,030 | 3,720 | 7,010 | 12,210 | 13,570 | 14,790 | 15,710 | 16,300 | 18,200 | 18,090 |
| Other ** | 70 | 770 | 2,520 | 3,190 | 4,000 | 4,290 | 4,710 | 4,880 | 4,630 | 4,560 |
| Total Materials in Products | 54,620 | 83,280 | 108,890 | 146,510 | 178,720 | 185,040 | 178,070 | 183,670 | 188,770 | 189,760 |
| Other Wastes | | | | | | | | | | |
| Food^ | 12,200 | 12,800 | 13,000 | 23,860 | 30,700 | 32,930 | 35,740 | 39,730 | 40,670 | 63,130 |
| Yard Trimmings | 20,000 | 23,200 | 27,500 | 35,000 | 30,530 | 32,070 | 33,400 | 34,720 | 35,180 | 35,400 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,780 | 2,250 | 2,900 | 3,500 | 3,690 | 3,840 | 3,990 | 4,040 | 4,070 |
| Total Other Wastes | 33,500 | 37,780 | 42,750 | 61,760 | 64,730 | 68,690 | 72,980 | 78,440 | 79,890 | 102,600 |
| Total MSW Generated - Weight ‡ | 88,120 | 121,060 | 151,640 | 208,270 | 243,450 | 253,730 | 251,050 | 262,110 | 268,660 | 292,360 |
| Materials | Percent of Total Generation | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Paper and Paperboard | 34.0% | 36.6% | 36.4% | 34.9% | 36.0% | 33.4% | 28.4% | 26.0% | 24.9% | 23.1% |
| Glass | 7.6% | 10.5% | 10.0% | 6.3% | 5.2% | 4.9% | 4.6% | 4.4% | 4.6% | 4.2% |
| Metals | | | | | | | | | | |
| Ferrous | 11.7% | 10.2% | 8.3% | 6.1% | 5.8% | 6.0% | 6.7% | 6.9% | 7.0% | 6.6% |
| Aluminum | 0.4% | 0.7% | 1.1% | 1.3% | 1.3% | 1.3% | 1.4% | 1.4% | 1.4% | 1.3% |
| Other Nonferrous | 0.2% | 0.6% | 0.8% | 0.5% | 0.7% | 0.7% | 0.8% | 0.8% | 1.0% | 0.9% |
| Total Metals | 12.3% | 11.4% | 10.2% | 7.9% | 7.8% | 8.0% | 8.9% | 9.1% | 9.4% | 8.8% |
| Plastics | 0.4% | 2.4% | 4.5% | 8.2% | 10.5% | 11.6% | 12.5% | 13.2% | 13.2% | 12.2% |
| Rubber and Leather | 2.1% | 2.5% | 2.8% | 2.8% | 2.7% | 2.9% | 3.1% | 3.3% | 3.4% | 3.1% |
| Textiles | 2.0% | 1.7% | 1.7% | 2.8% | 3.9% | 4.5% | 5.3% | 6.1% | 6.3% | 5.8% |
| Wood | 3.4% | 3.1% | 4.6% | 5.9% | 5.6% | 5.8% | 6.3% | 6.2% | 6.8% | 6.2% |
| Other ** | 0.1% | 0.6% | 1.7% | 1.5% | 1.6% | 1.7% | 1.9% | 1.8% | 1.7% | 1.5% |
| Total Materials in Products | 62.0% | 68.8% | 71.8% | 70.3% | 73.4% | 72.9% | 70.9% | 70.1% | 70.3% | 64.9% |
| Other Wastes | | | | | | | | | | |
| Food^ | 13.8% | 10.6% | 8.6% | 11.5% | 12.6% | 13.0% | 14.2% | 15.2% | 15.1% | 21.6% |
| Yard Trimmings | 22.7% | 19.2% | 18.1% | 16.8% | 12.5% | 12.6% | 13.3% | 13.2% | 13.1% | 12.1% |
| Miscellaneous Inorganic Wastes | 1.5% | 1.5% | 1.5% | 1.4% | 1.4% | 1.5% | 1.5% | 1.5% | 1.5% | 1.4% |
| Total Other Wastes | 38.0% | 31.2% | 28.2% | 29.7% | 26.6% | 27.1% | 29.1% | 29.9% | 29.7% | 35.1% |
| 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 are recycled, composted, managed by other food pathways, combusted with energy recovery or landfilled. 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.

^ In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>.

‡ Generation rose considerably from 2017 to 2018 mainly because EPA enhanced its food measurement methodology to more fully account for all the ways wasted food is managed throughout the food system.

Table 2. Materials Recycled,* Composted and Managed by Other Food Pathways in the Municipal Waste Stream, 1960 to 2018

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

| Materials | Thousands of Tons | | | | | | | | | |
|---|--|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Paper and Paperboard | 5,080 | 6,770 | 11,740 | 20,230 | 37,560 | 41,960 | 44,570 | 45,320 | 44,170 | 45,970 |
| Glass | 100 | 160 | 750 | 2,630 | 2,880 | 2,590 | 3,130 | 3,190 | 3,070 | 3,060 |
| Metals | | | | | | | | | | |
| Ferrous | 50 | 150 | 370 | 2,230 | 4,680 | 5,020 | 5,800 | 6,070 | 6,170 | 6,360 |
| Aluminum | Neg. | 10 | 310 | 1,010 | 860 | 690 | 680 | 670 | 600 | 670 |
| Other Nonferrous | Neg. | 320 | 540 | 730 | 1,060 | 1,280 | 1,440 | 1,290 | 1,710 | 1,690 |
| Total Metals | 50 | 480 | 1,220 | 3,970 | 6,600 | 6,990 | 7,920 | 8,030 | 8,480 | 8,720 |
| Plastics | Neg. | Neg. | 20 | 370 | 1,480 | 1,780 | 2,500 | 3,120 | 3,000 | 3,020 |
| Rubber and Leather | 330 | 250 | 130 | 370 | 820 | 1,050 | 1,440 | 1,550 | 1,670 | 1,670 |
| Textiles | 50 | 60 | 160 | 660 | 1,320 | 1,830 | 2,050 | 2,460 | 2,570 | 2,510 |
| Wood | Neg. | Neg. | Neg. | 130 | 1,370 | 1,830 | 2,280 | 2,660 | 3,030 | 3,100 |
| Other ** | Neg. | 300 | 500 | 680 | 980 | 1,210 | 1,370 | 1,230 | 990 | 970 |
| Total MSW recycled | 5,610 | 8,020 | 14,520 | 29,040 | 53,010 | 59,240 | 65,260 | 67,560 | 66,980 | 69,020 |
| Composted | | | | | | | | | | |
| Food - composted | | | | | | | | | | |
| Food^ | Neg. | Neg. | Neg. | Neg. | 680 | 690 | 970 | 2,100 | 2,570 | 2,590 |
| Yard Trimmings - composted | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 4,200 | 15,770 | 19,860 | 19,200 | 21,290 | 24,420 | 22,300 |
| Misc. Inorganic Wastes - composted | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 4,200 | 16,450 | 20,550 | 20,170 | 23,390 | 26,990 | 24,890 |
| Other Food Management | | | | | | | | | | |
| Other Food Management% | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 1,820 |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 1,840 |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 5,260 |
| Food - donation | | | | | | | | | | 4,790 |
| Food - land application | | | | | | | | | | 260 |
| Food – sewer/wastewater treatment | | | | | | | | | | 3,740 |
| Total Food – other food management | | | | | | | | | | 17,710 |
| Total MSW Recycled and Composted - Weight | 5,610 | 8,020 | 14,520 | 33,240 | 69,460 | 79,790 | 85,430 | 90,950 | 93,970 | 93,910 |
| Total MSW Recycled, Composted and Other Food Management - Weight | | | | | | | | | | 111,620 |
| Materials | Percent of Generation of Each Material | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Paper and Paperboard | 16.9% | 15.3% | 21.3% | 27.8% | 42.8% | 49.5% | 62.5% | 66.6% | 65.9% | 68.2% |
| Glass | 1.5% | 1.3% | 5.0% | 20.1% | 22.6% | 20.7% | 27.2% | 27.8% | 25.0% | 25.0% |
| Metals | | | | | | | | | | |
| Ferrous | 0.5% | 1.2% | 2.9% | 17.6% | 33.1% | 33.0% | 34.3% | 33.4% | 32.7% | 33.1% |
| Aluminum | Neg. | 1.3% | 17.9% | 35.9% | 27.0% | 20.7% | 19.4% | 18.3% | 15.7% | 17.2% |
| Other Nonferrous | Neg. | 47.8% | 46.6% | 66.4% | 66.3% | 68.8% | 71.3% | 64.2% | 68.1% | 67.3% |
| Total Metals | 0.5% | 3.5% | 7.9% | 24.0% | 34.8% | 34.3% | 35.3% | 33.6% | 33.6% | 34.1% |
| Plastics | Neg. | Neg. | 0.3% | 2.2% | 5.8% | 6.1% | 8.0% | 9.0% | 8.5% | 8.5% |
| Rubber and Leather | 17.9% | 8.4% | 3.1% | 6.4% | 12.3% | 14.4% | 18.6% | 18.1% | 18.3% | 18.2% |
| Textiles | 2.8% | 2.9% | 6.3% | 11.4% | 13.9% | 15.9% | 15.5% | 15.3% | 15.2% | 14.7% |
| Wood | Neg. | Neg. | Neg. | 1.1% | 10.1% | 12.4% | 14.5% | 16.3% | 16.6% | 17.1% |
| Other ** | Neg. | 39.0% | 19.8% | 21.3% | 24.5% | 28.2% | 29.1% | 25.2% | 21.4% | 21.3% |
| Total Materials in Products – recycled | 10.3% | 9.6% | 13.3% | 19.8% | 29.7% | 32.0% | 36.6% | 36.8% | 35.5% | 36.4% |

Table 2. Materials Recycled,* Composted and Managed by Other Food Pathways in the Municipal Waste Stream, 1960 to 2018

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

| Materials | Thousands of Tons | | | | | | | | | |
|--|-------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Composted | | | | | | | | | | |
| Food - Composted | | | | | | | | | | |
| Food [^] | Neg. | Neg. | Neg. | Neg. | 2.2% | 2.1% | 2.7% | 5.3% | 6.3% | 4.1% |
| Yard Trimmings - Composted | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 12.0% | 51.7% | 61.9% | 57.5% | 61.3% | 69.4% | 63.0% |
| Misc. Inorganic Wastes – composted | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total – composted | Neg. | Neg. | Neg. | 6.8% | 25.4% | 29.9% | 27.6% | 29.8% | 33.8% | 24.3% |
| Other Food Management | | | | | | | | | | |
| Other Food Management[¥] | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 2.9% |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 2.9% |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 8.3% |
| Food - donation | | | | | | | | | | 7.6% |
| Food - land application | | | | | | | | | | 0.4% |
| Food – sewer/wastewater treatment | | | | | | | | | | 5.9% |
| Total Food – other food management | | | | | | | | | | 28.1% |
| Total MSW Recycled and Composted - % | 6.4% | 6.6% | 9.6% | 16.0% | 28.5% | 31.4% | 34.0% | 34.7% | 35.0% | 32.1% |
| Total MSW Recycled, Composted and Other Food Management - % | | | | | | | | | | 38.2% |

* Recycling 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.

[¥] In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>.

Table 3. Materials Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2018

(In thousands of tons and percent of total combusted)

| Materials | Thousands of Tons | | | | | | | | | |
|--|----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Paper and Paperboard | | 150 | 860 | 8,930 | 9,730 | 7,800 | 4,740 | 4,450 | 4,490 | 4,200 |
| Glass | | 60 | 300 | 1,810 | 1,790 | 1,660 | 1,360 | 1,440 | 1,650 | 1,640 |
| Metals | | | | | | | | | | |
| Ferrous | | 60 | 250 | 1,690 | 1,610 | 1,640 | 1,810 | 2,150 | 2,290 | 2,310 |
| Aluminum | | 0 | 30 | 300 | 390 | 410 | 440 | 510 | 550 | 560 |
| Other Nonferrous | | 0 | 20 | 60 | 50 | 50 | 60 | 60 | 70 | 80 |
| <i>Total Metals</i> | | 60 | 300 | 2,050 | 2,050 | 2,100 | 2,310 | 2,720 | 2,910 | 2,950 |
| Plastics | | 0 | 140 | 2,980 | 4,120 | 4,330 | 4,530 | 5,330 | 5,590 | 5,630 |
| Rubber and Leather | | 10 | 70 | 830 | 1,970 | 2,110 | 1,910 | 2,520 | 2,490 | 2,500 |
| Textiles | | 10 | 50 | 880 | 1,880 | 2,110 | 2,270 | 3,060 | 3,170 | 3,220 |
| Wood | | 10 | 150 | 2,080 | 2,290 | 2,270 | 2,310 | 2,570 | 2,880 | 2,840 |
| Other ** | | 0 | 30 | 410 | 540 | 510 | 540 | 670 | 670 | 660 |
| Total Materials in Products | | 300 | 1,900 | 19,970 | 24,370 | 22,890 | 19,970 | 22,760 | 23,850 | 23,640 |
| Other Wastes | | | | | | | | | | |
| Food | | 50 | 260 | 4,060 | 5,820 | 5,870 | 6,150 | 7,380 | 7,470 | 7,550 |
| Yard Trimmings | | 90 | 550 | 5,240 | 2,860 | 2,220 | 2,510 | 2,630 | 2,110 | 2,570 |
| Miscellaneous Inorganic Wastes | | 10 | 50 | 490 | 680 | 670 | 680 | 780 | 790 | 800 |
| Total Other Wastes | | 150 | 860 | 9,790 | 9,360 | 8,760 | 9,340 | 10,790 | 10,370 | 10,920 |
| Total MSW Combusted - Weight | | 450 | 2,760 | 29,760 | 33,730 | 31,650 | 29,310 | 33,550 | 34,220 | 34,560 |
| Materials | Percent of Total Combusted | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Paper and Paperboard | | 33.3% | 31.2% | 30.0% | 28.8% | 24.6% | 16.2% | 13.3% | 13.1% | 12.2% |
| Glass | | 13.3% | 10.9% | 6.1% | 5.3% | 5.2% | 4.6% | 4.3% | 4.8% | 4.8% |
| Metals | | | | | | | | | | |
| Ferrous | | 13.3% | 9.0% | 5.7% | 4.8% | 5.2% | 6.2% | 6.4% | 6.7% | 6.7% |
| Aluminum | | 0.0% | 1.1% | 1.0% | 1.2% | 1.3% | 1.5% | 1.5% | 1.6% | 1.6% |
| Other Nonferrous | | 0.0% | 0.7% | 0.2% | 0.1% | 0.1% | 0.2% | 0.2% | 0.2% | 0.2% |
| <i>Total Metals</i> | | 13.3% | 10.8% | 6.9% | 6.1% | 6.6% | 7.9% | 8.1% | 8.5% | 8.5% |
| Plastics | | Neg. | 5.1% | 10.0% | 12.2% | 13.7% | 15.5% | 15.9% | 16.3% | 16.3% |
| Rubber and Leather | | 2.2% | 2.5% | 2.8% | 5.9% | 6.7% | 6.5% | 7.5% | 7.3% | 7.2% |
| Textiles | | 2.2% | 1.8% | 2.9% | 5.6% | 6.7% | 7.7% | 9.1% | 9.3% | 9.3% |
| Wood | | 2.2% | 5.4% | 7.0% | 6.8% | 7.2% | 7.9% | 7.7% | 8.4% | 8.2% |
| Other ** | | Neg. | 1.1% | 1.4% | 1.6% | 1.6% | 1.8% | 2.0% | 2.0% | 1.9% |
| Total Materials in Products | | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 68.4% |
| Other Wastes | | | | | | | | | | |
| Food | | 11.1% | 9.4% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 21.9% |
| Yard Trimmings | | 20.0% | 20.0% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.4% |
| 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% | 30.3% | 31.6% |
| 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 2018, 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 for details) and food (percentage distribution for food varies by generator sector, see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>). 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 2018
(In thousands of tons and percent of total landfilled)

| Materials | Thousands of Tons | | | | | | | | | |
|--------------------------------------|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Paper and Paperboard | 24,910 | 37,390 | 42,560 | 43,570 | 40,450 | 35,080 | 22,000 | 18,280 | 18,350 | 17,220 |
| Glass | 6,620 | 12,520 | 14,080 | 8,660 | 8,100 | 8,290 | 7,030 | 6,840 | 7,580 | 7,550 |
| Metals | | | | | | | | | | |
| Ferrous | 10,250 | 12,150 | 12,000 | 8,720 | 7,860 | 8,550 | 9,310 | 9,970 | 10,430 | 10,530 |
| Aluminum | 340 | 790 | 1,390 | 1,500 | 1,940 | 2,230 | 2,390 | 2,490 | 2,670 | 2,660 |
| Other Nonferrous | 180 | 350 | 600 | 310 | 490 | 530 | 520 | 660 | 730 | 740 |
| <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>13,830</i> | <i>13,930</i> |
| Plastics | 390 | 2,900 | 6,670 | 13,780 | 19,950 | 23,270 | 24,370 | 26,030 | 26,820 | 27,030 |
| Rubber and Leather | 1,510 | 2,710 | 4,000 | 4,590 | 3,880 | 4,130 | 4,400 | 4,490 | 4,950 | 4,990 |
| Textiles | 1,710 | 1,970 | 2,320 | 4,270 | 6,280 | 7,570 | 8,900 | 10,540 | 11,150 | 11,300 |
| Wood | 3,030 | 3,710 | 6,860 | 10,000 | 9,910 | 10,690 | 11,120 | 11,070 | 12,290 | 12,150 |
| Other ** | 70 | 470 | 1,990 | 2,100 | 2,480 | 2,570 | 2,800 | 2,980 | 2,970 | 2,930 |
| Total Materials in Products | 49,010 | 74,960 | 92,470 | 97,500 | 101,340 | 102,910 | 92,840 | 93,350 | 97,940 | 97,100 |
| Other Wastes | | | | | | | | | | |
| Food | 12,200 | 12,750 | 12,740 | 19,800 | 24,200 | 26,370 | 28,620 | 30,250 | 30,630 | 35,280 |
| Yard Trimmings | 20,000 | 23,110 | 26,950 | 25,560 | 11,900 | 9,990 | 11,690 | 10,800 | 8,650 | 10,530 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,770 | 2,200 | 2,410 | 2,820 | 3,020 | 3,160 | 3,210 | 3,250 | 3,270 |
| Total Other Wastes | 33,500 | 37,630 | 41,890 | 47,770 | 38,920 | 39,380 | 43,470 | 44,260 | 42,530 | 49,080 |
| Total MSW Landfilled - Weight | 82,510 | 112,590 | 134,360 | 145,270 | 140,260 | 142,290 | 136,310 | 137,610 | 140,470 | 146,180 |
| Materials | Percent of Total Landfilled | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Paper and Paperboard | 30.2% | 33.2% | 31.7% | 30.0% | 28.8% | 24.7% | 16.1% | 13.3% | 13.1% | 11.8% |
| Glass | 8.0% | 11.1% | 10.5% | 6.0% | 5.8% | 5.8% | 5.1% | 5.0% | 5.4% | 5.2% |
| Metals | | | | | | | | | | |
| Ferrous | 12.4% | 10.8% | 8.9% | 6.0% | 5.6% | 6.0% | 6.8% | 7.2% | 7.4% | 7.2% |
| Aluminum | 0.4% | 0.7% | 1.0% | 1.0% | 1.4% | 1.6% | 1.8% | 1.8% | 1.9% | 1.8% |
| 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>9.5%</i> |
| Plastics | 0.5% | 2.6% | 5.0% | 9.5% | 14.2% | 16.4% | 17.9% | 18.9% | 19.1% | 18.5% |
| Rubber and Leather | 1.8% | 2.4% | 3.0% | 3.2% | 2.8% | 2.9% | 3.2% | 3.3% | 3.5% | 3.4% |
| Textiles | 2.1% | 1.7% | 1.7% | 2.9% | 4.5% | 5.3% | 6.5% | 7.7% | 7.9% | 7.7% |
| Wood | 3.7% | 3.3% | 5.1% | 6.9% | 7.1% | 7.5% | 8.2% | 8.0% | 8.7% | 8.3% |
| Other ** | 0.1% | 0.4% | 1.5% | 1.4% | 1.8% | 1.8% | 2.1% | 2.2% | 2.2% | 2.0% |
| Total Materials in Products | 59.4% | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 66.4% |
| Other Wastes | | | | | | | | | | |
| Food | 14.8% | 11.3% | 9.5% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 24.1% |
| Yard Trimmings | 24.2% | 20.5% | 20.1% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.2% |
| 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% | 30.3% | 33.6% |
| 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, other food management pathways 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 5. Paper and Paperboard Products In MSW, 2018
(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† | 5,050 | 3,270 | 64.8% | 350 | 1,430 |
| Books | 690 | | | | |
| Magazines | 980 | | | | |
| Office-type Papers* | 3,970 | | | | |
| Marketing Mail** | 3,670 | | | | |
| Other Commercial Printing | 2,000 | | | | |
| Tissue Paper and Towels | 3,790 | | | | |
| Paper Plates and Cups | 1,420 | | | | |
| Other Nonpackaging Paper*** | 3,920 | | | | |
| Subtotal Nondurable Goods excluding Newspaper/Mechanical Papers§ | 20,440 | 8,810 | 43.1% | 2,280 | 9,350 |
| Total Paper and Paperboard Nondurable Goods | 25,490 | 12,080 | 47.4% | 2,630 | 10,780 |
| Containers and Packaging | | | | | |
| Corrugated Boxes | 33,260 | 32,090 | 96.5% | 230 | 940 |
| Gable Top/Aseptic Cartons‡ | 630 | | | | |
| Folding Cartons | 5,370 | | | | |
| Other Paperboard Packaging | 50 | | | | |
| Bags and Sacks | 1,090 | | | | |
| Other Paper Packaging | 1,500 | | | | |
| Subtotal Containers and Packaging excluding Corrugated Boxes§ | 8,640 | 1,800 | 20.8% | 1,340 | 5,500 |
| Total Paper and Paperboard Containers and Packaging | 41,900 | 33,890 | 80.9% | 1,570 | 6,440 |
| Total Paper and Paperboard | 67,390 | 45,970 | 68.2% | 4,200 | 17,220 |

† 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 6. Glass Products in MSW, 2018
(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* | 2,460 | Neg. | Neg. | 330 | 2,130 |
| Containers and Packaging | | | | | |
| Beer and Soft Drink Bottles** | 4,650 | 1,840 | 39.6% | 550 | 2,260 |
| Wine and Liquor Bottles | 1,810 | 720 | 39.8% | 210 | 880 |
| Other Bottles and Jars | 3,330 | 500 | 15.0% | 550 | 2,280 |
| Total Glass Containers | 9,790 | 3,060 | 31.3% | 1,310 | 5,420 |
| Total Glass | 12,250 | 3,060 | 25.0% | 1,640 | 7,550 |

* 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 7. Metal Products in MSW, 2018
(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* | 16,990 | 4,730 | 27.8% | 2,200 | 10,060 |
| Aluminum** | 1,750 | NA | NA | 270 | 1,480 |
| Lead† | 1,710 | 1,690 | 98.8% | | 20 |
| Other Nonferrous Metals‡ | 800 | Neg. | Neg. | 80 | 720 |
| Total Metals in Durable Goods | 21,250 | 6,420 | 30.2% | 2,550 | 12,280 |
| Nondurable Goods | | | | | |
| Aluminum | 220 | NA | NA | 40 | 180 |
| Containers and Packaging | | | | | |
| Steel | | | | | |
| Cans | 1,580 | 1,120 | 70.9% | 90 | 370 |
| Other Steel Packaging | 630 | 510 | 81.0% | 20 | 100 |
| Total Steel Packaging | 2,210 | 1,630 | 73.8% | 110 | 440 |
| Aluminum | | | | | |
| Beer and Soft Drink Cans§ | 1,330 | 670 | 50.4% | 130 | 530 |
| Other Cans | 80 | NA | NA | 20 | 60 |
| Foil and Closures | 510 | NA | NA | 100 | 410 |
| Total Aluminum Packaging | 1,920 | 670 | 34.9% | 250 | 1,000 |
| Total Metals in Containers and Packaging | 4,130 | 2,300 | 55.7% | 360 | 1,470 |
| Total Metals | 25,600 | 8,720 | 34.1% | 2,950 | 13,930 |
| Ferrous | 19,200 | 6,360 | 33.1% | 2,310 | 10,530 |
| Aluminum | 3,890 | 670 | 17.2% | 560 | 2,660 |
| Other nonferrous | 2,510 | 1,690 | 67.3% | 80 | 740 |

* 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 8. Plastics in Products In MSW, 2018
(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 | 660 | | | | |
| HDPE | 1,590 | | | | |
| PVC | 180 | | | | |
| LDPE/LLDPE | 2,130 | | | | |
| PP | 4,590 | | | | |
| PS | 760 | | | | |
| Other resins | 3,780 | | | | |
| Total Plastics in Durable Goods | 13,690 | 930 | 6.8% | 1,740 | 11,020 |
| Nondurable Goods† | | | | | |
| Plastic Plates and Cups§ | | | | | |
| LDPE/LLDPE | 20 | | | | |
| PLA | 30 | | | | |
| PP | 160 | | | | |
| PS | 820 | | | | |
| Subtotal Plastic Plates and Cups | 1,030 | Neg. | Neg. | 200 | 830 |
| Trash Bags | | | | | |
| HDPE | 230 | | | | |
| LDPE/LLDPE | 1,000 | | | | |
| Subtotal Trash Bags | 1,230 | | | 240 | 990 |
| All other nondurables* | | | | | |
| PET | 770 | | | | |
| HDPE | 690 | | | | |
| PVC | 270 | | | | |
| LDPE/LLDPE | 1,710 | | | | |
| PLA | 40 | | | | |
| PP | 1,570 | | | | |
| PS | 130 | | | | |
| Other resins | 20 | | | | |
| Subtotal All Other Nondurables | 5,200 | 180 | 3.5% | 980 | 4,040 |
| Total Plastics in Nondurable Goods, by resin | | | | | |
| PET | 770 | | | | |
| HDPE | 920 | | | | |
| PVC | 270 | | | | |
| LDPE/LLDPE | 2,730 | | | | |
| PLA | 70 | | | | |
| PP | 1,730 | | | | |
| PS | 950 | | | | |
| Other resins | 20 | | | | |
| Total Plastics in Nondurable Goods | 7,460 | 180 | 2.4% | 1,420 | 5,860 |

Table 8. Plastics in Products In MSW, 2018
(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 | 3,130 | 840 | 26.8% | 450 | 1,840 |
| Natural Bottles† | | | | | |
| HDPE | 750 | 220 | 29.3% | 100 | 430 |
| Other plastic containers | | | | | |
| HDPE | 1,600 | 290 | 18.1% | | |
| PVC | 20 | Neg. | | | |
| LDPE/LLDPE | 40 | Neg. | | | |
| PP | 250 | 20 | 8.0% | | |
| PS | 80 | Neg. | | | |
| Subtotal Other Containers | 1,990 | 310 | 15.6% | 330 | 1,350 |
| Bags, sacks and wraps | | | | | |
| HDPE | 640 | 50 | 7.8% | | |
| PVC | 70 | | | | |
| LDPE/LLDPE | 2,780 | 370 | 13.3% | | |
| PP | 570 | | | | |
| PS | 140 | | | | |
| Subtotal Bags, Sacks and Wraps | 4,200 | 420 | 10.0% | 740 | 3,040 |
| Other Plastics Packaging‡ | | | | | |
| PET | 730 | 70 | 9.6% | | |
| HDPE | 800 | Neg. | | | |
| PVC | 300 | Neg. | | | |
| LDPE/LLDPE | 910 | Neg. | | | |
| PLA | 20 | Neg. | | | |
| PP | 1,010 | 30 | 3.0% | | |
| PS | 330 | 20 | 6.1% | | |
| Other resins | 360 | Neg. | | | |
| Subtotal Other Packaging | 4,460 | 120 | 2.7% | 850 | 3,490 |
| Total Plastics in Containers & Packaging, by resin | | | | | |
| PET | 3,860 | 910 | 23.6% | | |
| HDPE | 3,790 | 560 | 14.8% | | |
| PVC | 390 | Neg. | | | |
| LDPE/LLDPE | 3,730 | 370 | 9.9% | | |
| PLA | 20 | Neg. | | | |
| PP | 1,830 | 50 | 2.7% | | |
| PS | 550 | 20 | 3.6% | | |
| Other resins | 360 | Neg. | | | |
| Total Plastics in Containers & Packaging | 14,530 | 1,910 | 13.1% | 2,470 | 10,150 |

Table 8. Plastics in Products In MSW, 2018
(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 | 5,290 | 910 | 17.2% | | |
| HDPE | 6,300 | 560 | 8.9% | | |
| PVC | 840 | Neg. | | | |
| LDPE/LLDPE | 8,590 | 370 | 4.3% | | |
| PLA | 90 | Neg. | | | |
| PP | 8,150 | 50 | 0.6% | | |
| PS | 2,260 | 20 | 0.9% | | |
| Other resins | 4,160 | 1,110 | 26.7% | | |
| Total Plastics in MSW | 35,680 | 3,020 | 8.5% | 5,630 | 27,030 |

• Mechanical and non-mechanical recycling.

‡ 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 9. Rubber and Leather Products In MSW, 2018
(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* | 4,180 | 1,670 | 40.0% | 1,730 | 780 |
| Other Durables** | 3,800 | Neg. | Neg. | 540 | 3,260 |
| Total Rubber and Leather | | | | | |
| Durable Goods | 7,980 | 1,670 | 20.9% | 2,270 | 4,040 |
| Nondurable Goods | | | | | |
| Clothing and Footwear | 900 | Neg. | Neg. | 180 | 720 |
| Other Nondurables | 280 | Neg. | Neg. | 50 | 230 |
| Total Rubber and Leather | | | | | |
| Nondurable Goods | 1,180 | Neg. | Neg. | 230 | 950 |
| Total Rubber and Leather | 9,160 | 1,670 | 18.2% | 2,500 | 4,990 |

* 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 2018
(In thousands of tons and percent of total generation)

| Products | Thousands of Tons | | | | | | | | | |
|-------------------------------------|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 9,920 | 14,660 | 21,800 | 29,810 | 38,870 | 45,060 | 49,350 | 53,940 | 56,870 | 57,100 |
| (Detail in Table 14) | | | | | | | | | | |
| Nondurable Goods | 17,330 | 25,060 | 34,420 | 52,170 | 64,010 | 63,650 | 53,250 | 51,810 | 50,700 | 50,440 |
| (Detail in Table 18) | | | | | | | | | | |
| Containers and Packaging | 27,370 | 43,560 | 52,670 | 64,530 | 75,840 | 76,330 | 75,470 | 77,920 | 81,200 | 82,220 |
| (Detail in Table 22) | | | | | | | | | | |
| Total Product Wastes | 54,620 | 83,280 | 108,890 | 146,510 | 178,720 | 185,040 | 178,070 | 183,670 | 188,770 | 189,760 |
| Other Wastes | | | | | | | | | | |
| Food^ | 12,200 | 12,800 | 13,000 | 23,860 | 30,700 | 32,930 | 35,740 | 39,730 | 40,670 | 63,130 |
| Yard Trimmings | 20,000 | 23,200 | 27,500 | 35,000 | 30,530 | 32,070 | 33,400 | 34,720 | 35,180 | 35,400 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,780 | 2,250 | 2,900 | 3,500 | 3,690 | 3,840 | 3,990 | 4,040 | 4,070 |
| Total Other Wastes | 33,500 | 37,780 | 42,750 | 61,760 | 64,730 | 68,690 | 72,980 | 78,440 | 79,890 | 102,600 |
| Total MSW Generated - Weight | 88,120 | 121,060 | 151,640 | 208,270 | 243,450 | 253,730 | 251,050 | 262,110 | 268,660 | 292,360 |
| Products | Percent of Total Generation | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 11.3% | 12.1% | 14.4% | 14.3% | 16.0% | 17.8% | 19.7% | 20.6% | 21.2% | 19.5% |
| (Detail in Table 14) | | | | | | | | | | |
| Nondurable Goods | 19.7% | 20.7% | 22.7% | 25.0% | 26.3% | 25.1% | 21.2% | 19.8% | 18.9% | 17.3% |
| (Detail in Table 18) | | | | | | | | | | |
| Containers and Packaging | 31.1% | 36.0% | 34.7% | 31.0% | 31.2% | 30.1% | 30.1% | 29.7% | 30.2% | 28.1% |
| (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% | 64.9% |
| Other Wastes | | | | | | | | | | |
| Food^ | 13.8% | 10.6% | 8.6% | 11.5% | 12.6% | 13.0% | 14.2% | 15.2% | 15.1% | 21.6% |
| Yard Trimmings | 22.7% | 19.2% | 18.1% | 16.8% | 12.5% | 12.6% | 13.3% | 13.2% | 13.1% | 12.1% |
| Miscellaneous Inorganic Wastes | 1.5% | 1.5% | 1.5% | 1.4% | 1.4% | 1.5% | 1.5% | 1.5% | 1.5% | 1.4% |
| Total Other Wastes | 38.0% | 31.2% | 28.2% | 29.7% | 26.6% | 27.1% | 29.1% | 29.9% | 29.7% | 35.1% |
| 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 are recycled, composted, managed by other food pathways, combusted with energy recovery or landfilled. Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.

^ In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

Table 11. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 TO 2018
(In thousands of tons and percent of generation of each product)

| Products | Thousands of Tons | | | | | | | | | |
|---|-----------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods | 350 | 940 | 1,360 | 3,460 | 6,580 | 7,970 | 9,390 | 9,880 | 10,550 | 10,570 |
| (Detail in Table 15) | | | | | | | | | | |
| Nondurable Goods | 2,390 | 3,730 | 4,670 | 8,800 | 17,560 | 19,770 | 19,190 | 16,190 | 16,290 | 14,190 |
| (Detail in Table 19) | | | | | | | | | | |
| Containers and Packaging | 2,870 | 3,350 | 8,490 | 16,780 | 28,870 | 31,500 | 36,680 | 41,490 | 40,140 | 44,260 |
| (Detail in Table 24) | | | | | | | | | | |
| Total Product Wastes - recycled | 5,610 | 8,020 | 14,520 | 29,040 | 53,010 | 59,240 | 65,260 | 67,560 | 66,980 | 69,020 |
| Composted | | | | | | | | | | |
| Food - composted | | | | | | | | | | |
| Food^ | Neg. | Neg. | Neg. | Neg. | 680 | 690 | 970 | 2,100 | 2,570 | 2,590 |
| Yard Trimmings - composted | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 4,200 | 15,770 | 19,860 | 19,200 | 21,290 | 24,420 | 22,300 |
| Misc. Inorganic Wastes - composted | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 4,200 | 16,450 | 20,550 | 20,170 | 23,390 | 26,990 | 24,890 |
| Other Food Management | | | | | | | | | | |
| Other Food Management¥ | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 1,820 |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 1,840 |
| Food - codigestion/anaerobic digestion | | | | | | | | | | 5,260 |
| Food - donation | | | | | | | | | | 4,790 |
| Food - land application | | | | | | | | | | 260 |
| Food - sewer/wastewater treatment | | | | | | | | | | 3,740 |
| Total Food - other food management | | | | | | | | | | 17,710 |
| Total MSW Recycled and Composted - Weight | 5,610 | 8,020 | 14,520 | 33,240 | 69,460 | 79,790 | 85,430 | 90,950 | 93,970 | 93,910 |
| Total MSW Recycled, Composted and Other Food Management - Weight | | | | | | | | | | 111,620 |
| Products | Percent of Total Generation | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods | 3.5% | 6.4% | 6.2% | 11.6% | 16.9% | 17.7% | 19.0% | 18.3% | 18.6% | 18.5% |
| (Detail in Table 15) | | | | | | | | | | |
| Nondurable Goods | 13.8% | 14.9% | 13.6% | 16.9% | 27.4% | 31.1% | 36.0% | 31.2% | 32.1% | 28.1% |
| (Detail in Table 19) | | | | | | | | | | |
| Containers and Packaging | 10.5% | 7.7% | 16.1% | 26.0% | 38.1% | 41.3% | 48.6% | 53.2% | 49.4% | 53.8% |
| (Detail in Table 24) | | | | | | | | | | |
| Total Product Wastes - recycled | 10.3% | 9.6% | 13.3% | 19.8% | 29.7% | 32.0% | 36.6% | 36.8% | 35.5% | 36.4% |
| Composted | | | | | | | | | | |
| Composted - Food | | | | | | | | | | |
| Food^ | Neg. | Neg. | Neg. | Neg. | 2.2% | 2.1% | 2.7% | 5.3% | 6.3% | 4.1% |
| Composted - Yard Trimmings | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 12.0% | 51.7% | 61.9% | 57.5% | 61.3% | 69.4% | 63.0% |
| Composted - Misc. Inorganic Wastes | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 6.8% | 25.4% | 29.9% | 27.6% | 29.8% | 33.8% | 24.3% |

Table 11. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 TO 2018
(In thousands of tons and percent of generation of each product)

| Products | Thousands of Tons | | | | | | | | | |
|--|-------------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Other Food Management | | | | | | | | | | |
| Other Food Management ¥ | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 2.9% |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 2.9% |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 8.3% |
| Food - donation | | | | | | | | | | 7.6% |
| Food - land application | | | | | | | | | | 0.4% |
| Food – sewer/wastewater treatment | | | | | | | | | | 5.9% |
| Total Food – other food management | | | | | | | | | | 28.1% |
| Total MSW Recycled and Composted - % | 6.4% | 6.6% | 9.6% | 16.0% | 28.5% | 31.4% | 34.0% | 34.7% | 35.0% | 32.1% |
| Total MSW Recycled, Composted and Other Food Management - % | | | | | | | | | | 38.2% |

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

^ Includes collection of other MSW organics for composting.

¥ In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

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

Table 12. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2018

(In thousands of tons and percent of total combusted)

| Products | Thousands of Tons | | | | | | | | | |
|--|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | | 60 | 440 | 4,480 | 6,260 | 6,750 | 7,070 | 8,640 | 9,080 | 9,120 |
| (Detail in Table 16) | | | | | | | | | | |
| Nondurable Goods | | 90 | 580 | 7,380 | 9,000 | 7,980 | 6,030 | 6,960 | 6,720 | 7,090 |
| (Detail in Table 20) | | | | | | | | | | |
| Containers and Packaging | | 150 | 880 | 8,110 | 9,110 | 8,160 | 6,870 | 7,160 | 8,050 | 7,430 |
| (Detail in Table 26) | | | | | | | | | | |
| Total Product Wastes | | 300 | 1,900 | 19,970 | 24,370 | 22,890 | 19,970 | 22,760 | 23,850 | 23,640 |
| Other Wastes | | | | | | | | | | |
| Food | | 50 | 260 | 4,060 | 5,820 | 5,870 | 6,150 | 7,380 | 7,470 | 7,550 |
| Yard Trimmings | | 90 | 550 | 5,240 | 2,860 | 2,220 | 2,510 | 2,630 | 2,110 | 2,570 |
| Miscellaneous Inorganic Wastes | | 10 | 50 | 490 | 680 | 670 | 680 | 780 | 790 | 800 |
| Total Other Wastes | | 150 | 860 | 9,790 | 9,360 | 8,760 | 9,340 | 10,790 | 10,370 | 10,920 |
| Total MSW Combusted with Energy Recovery - Weight | | 450 | 2,760 | 29,760 | 33,730 | 31,650 | 29,310 | 33,550 | 34,220 | 34,560 |
| Products | Percent of Total Combusted | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | | 13.3% | 15.9% | 15.1% | 18.6% | 21.3% | 24.1% | 25.8% | 26.5% | 26.4% |
| (Detail in Table 16) | | | | | | | | | | |
| Nondurable Goods | | 19.9% | 21.0% | 24.8% | 26.7% | 25.2% | 20.6% | 20.7% | 19.7% | 20.5% |
| (Detail in Table 20) | | | | | | | | | | |
| Containers and Packaging | | 33.3% | 31.9% | 27.3% | 27.0% | 25.8% | 23.4% | 21.4% | 23.4% | 21.5% |
| (Detail in Table 27) | | | | | | | | | | |
| Total Product Wastes | | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 68.4% |
| Other Wastes | | | | | | | | | | |
| Food | | 11.1% | 9.4% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 21.9% |
| Yard Trimmings | | 20.0% | 20.0% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.4% |
| 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% | 30.3% | 31.6% |
| 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 2018, 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 for details) and food (percentage distribution for food varies by generator sector, see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>). Does not include construction & demolition debris, industrial process wastes or certain other wastes. Details may not add to totals due to rounding.
Neg. = Less than 5,000 tons or 0.05 percent.

Table 13. Products Landfilled* in the Municipal Waste Stream, 1960 to 2018
(In thousands of tons and percent of total landfilled)

| Products | Thousands of Tons | | | | | | | | | |
|--------------------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 9,570 | 13,660 | 20,000 | 21,870 | 26,030 | 30,340 | 32,890 | 35,420 | 37,240 | 37,410 |
| (Detail in Table 17) | | | | | | | | | | |
| Nondurable Goods | 14,940 | 21,240 | 29,170 | 35,990 | 37,450 | 35,900 | 28,030 | 28,660 | 27,690 | 29,160 |
| (Detail in Table 21) | | | | | | | | | | |
| Containers and Packaging | 24,500 | 40,060 | 43,300 | 39,640 | 37,860 | 36,670 | 31,920 | 29,270 | 33,010 | 30,530 |
| (Detail in Table 28) | | | | | | | | | | |
| Total Product Wastes | 49,010 | 74,960 | 92,470 | 97,500 | 101,340 | 102,910 | 92,840 | 93,350 | 97,940 | 97,100 |
| Other Wastes | | | | | | | | | | |
| Food | 12,200 | 12,750 | 12,740 | 19,800 | 24,200 | 26,370 | 28,620 | 30,250 | 30,630 | 35,280 |
| Yard Trimmings | 20,000 | 23,110 | 26,950 | 25,560 | 11,900 | 9,990 | 11,690 | 10,800 | 8,650 | 10,530 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,770 | 2,200 | 2,410 | 2,820 | 3,020 | 3,160 | 3,210 | 3,250 | 3,270 |
| Total Other Wastes | 33,500 | 37,630 | 41,890 | 47,770 | 38,920 | 39,380 | 43,470 | 44,260 | 42,530 | 49,080 |
| Total MSW Landfilled - Weight | 82,510 | 112,590 | 134,360 | 145,270 | 140,260 | 142,290 | 136,310 | 137,610 | 140,470 | 146,180 |
| Products | Percent of Total Landfilled | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 11.6% | 12.1% | 14.9% | 15.0% | 18.6% | 21.3% | 24.1% | 25.7% | 26.5% | 25.6% |
| (Detail in Table 17) | | | | | | | | | | |
| Nondurable Goods | 18.1% | 18.9% | 21.7% | 24.8% | 26.7% | 25.2% | 20.6% | 20.8% | 19.7% | 19.9% |
| (Detail in Table 21) | | | | | | | | | | |
| Containers and Packaging | 29.7% | 35.6% | 32.2% | 27.3% | 27.0% | 25.8% | 23.4% | 21.4% | 23.5% | 20.9% |
| (Detail in Table 29) | | | | | | | | | | |
| Total Product** Wastes | 59.4% | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 66.4% |
| Other Wastes | | | | | | | | | | |
| Food | 14.8% | 11.3% | 9.5% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 24.1% |
| Yard Trimmings | 24.2% | 20.5% | 20.1% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.2% |
| 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% | 30.3% | 33.6% |
| 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, other food management pathways 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.
Neg. = Less than 5,000 tons or 0.05 percent.

Table 14. Products Generated* in the Municipal Waste Stream, 1960 to 2018
(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 | 2017 | 2018 |
| Durable Goods | | | | | | | | | | |
| Major Appliances | 1,630 | 2,170 | 2,950 | 3,310 | 3,640 | 3,610 | 4,020 | 4,860 | 5,160 | 5,250 |
| Small Appliances** | | | | 460 | 1,040 | 1,180 | 1,830 | 2,050 | 2,120 | 2,160 |
| Furniture and Furnishings | 2,150 | 2,830 | 4,760 | 6,790 | 8,120 | 9,340 | 10,820 | 12,050 | 12,210 | 12,080 |
| Carpets and Rugs** | | | | 1,660 | 2,460 | 2,960 | 3,720 | 3,630 | 3,390 | 3,370 |
| Rubber Tires | 1,120 | 1,890 | 2,720 | 3,610 | 4,930 | 4,910 | 5,130 | 5,970 | 6,540 | 6,530 |
| Batteries, Lead-Acid | Neg. | 820 | 1,490 | 1,510 | 2,280 | 2,750 | 3,020 | 2,700 | 2,940 | 2,900 |
| Miscellaneous Durables | | | | | | | | | | |
| Selected Consumer Electronics*** | | | | | 1,900 | 2,630 | 3,120 | 3,100 | 2,840 | 2,700 |
| Other Miscellaneous Durables | | | | | 14,500 | 17,680 | 17,690 | 19,580 | 21,670 | 22,110 |
| <i>Total Miscellaneous Durables</i> | <i>5,020</i> | <i>6,950</i> | <i>9,880</i> | <i>12,470</i> | <i>16,400</i> | <i>20,310</i> | <i>20,810</i> | <i>22,680</i> | <i>24,510</i> | <i>24,810</i> |
| Total Durable Goods | 9,920 | 14,660 | 21,800 | 29,810 | 38,870 | 45,060 | 49,350 | 53,940 | 56,870 | 57,100 |
| Nondurable Goods | 17,330 | 25,060 | 34,420 | 52,170 | 64,010 | 63,650 | 53,250 | 51,810 | 50,700 | 50,440 |
| <i>(Detail in Table 18)</i> | | | | | | | | | | |
| Containers and Packaging | 27,370 | 43,560 | 52,670 | 64,530 | 75,840 | 76,330 | 75,470 | 77,920 | 81,200 | 82,220 |
| <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 | 188,770 | 189,760 |
| Other Wastes | | | | | | | | | | |
| Food^ | 12,200 | 12,800 | 13,000 | 23,860 | 30,700 | 32,930 | 35,740 | 39,730 | 40,670 | 63,130 |
| Yard Trimmings | 20,000 | 23,200 | 27,500 | 35,000 | 30,530 | 32,070 | 33,400 | 34,720 | 35,180 | 35,400 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,780 | 2,250 | 2,900 | 3,500 | 3,690 | 3,840 | 3,990 | 4,040 | 4,070 |
| Total Other Wastes | 33,500 | 37,780 | 42,750 | 61,760 | 64,730 | 68,690 | 72,980 | 78,440 | 79,890 | 102,600 |
| Total MSW Generated - Weight | 88,120 | 121,060 | 151,640 | 208,270 | 243,450 | 253,730 | 251,050 | 262,110 | 268,660 | 292,360 |
| Products | Percent of Total Generation | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | | | | | | | | | | |
| Major Appliances | 1.8% | 1.8% | 1.9% | 1.6% | 1.5% | 1.4% | 1.6% | 1.9% | 1.9% | 1.8% |
| Small Appliances** | | | | 0.2% | 0.4% | 0.5% | 0.7% | 0.8% | 0.8% | 0.7% |
| Furniture and Furnishings | 2.4% | 2.3% | 3.1% | 3.3% | 3.3% | 3.7% | 4.3% | 4.6% | 4.5% | 4.1% |
| Carpets and Rugs** | | | | 0.8% | 1.0% | 1.2% | 1.5% | 1.4% | 1.3% | 1.2% |
| Rubber Tires | 1.3% | 1.6% | 1.8% | 1.7% | 2.0% | 1.9% | 2.0% | 2.3% | 2.4% | 2.2% |
| Batteries, Lead-Acid | Neg. | 0.7% | 1.0% | 0.7% | 0.9% | 1.1% | 1.2% | 1.0% | 1.1% | 1.0% |
| Miscellaneous Durables | | | | | | | | | | |
| Selected Consumer Electronics*** | | | | | 0.8% | 1.0% | 1.2% | 1.2% | 1.1% | 0.9% |
| Other Miscellaneous Durables | | | | | 6.0% | 7.0% | 7.0% | 7.5% | 8.1% | 7.6% |
| <i>Total Miscellaneous Durables</i> | <i>5.7%</i> | <i>5.7%</i> | <i>6.5%</i> | <i>6.0%</i> | <i>6.7%</i> | <i>8.0%</i> | <i>8.3%</i> | <i>8.7%</i> | <i>9.2%</i> | <i>8.5%</i> |
| Total Durable Goods | 11.3% | 12.1% | 14.4% | 14.3% | 16.0% | 17.8% | 19.7% | 20.6% | 21.2% | 19.5% |
| Nondurable Goods | 19.7% | 20.7% | 22.7% | 25.0% | 26.3% | 25.1% | 21.2% | 19.8% | 18.9% | 17.3% |
| <i>(Detail in Table 18)</i> | | | | | | | | | | |
| Containers and Packaging | 31.1% | 36.0% | 34.7% | 31.0% | 31.2% | 30.1% | 30.1% | 29.7% | 30.2% | 28.1% |
| <i>(Detail in Table 23)</i> | | | | | | | | | | |
| Total Product Wastes | 62.0% | 68.8% | 71.8% | 70.3% | 73.4% | 72.9% | 70.9% | 70.1% | 70.2% | 64.9% |
| Other Wastes | | | | | | | | | | |
| Food^ | 13.8% | 10.6% | 8.6% | 11.5% | 12.6% | 13.0% | 14.2% | 15.2% | 15.1% | 21.6% |
| Yard Trimmings | 22.7% | 19.2% | 18.1% | 16.8% | 12.5% | 12.6% | 13.3% | 13.2% | 13.1% | 12.1% |
| Miscellaneous Inorganic Wastes | 1.5% | 1.5% | 1.5% | 1.4% | 1.4% | 1.5% | 1.5% | 1.5% | 1.5% | 1.4% |
| Total Other Wastes | 38.0% | 31.2% | 28.2% | 29.7% | 26.6% | 27.1% | 29.1% | 29.9% | 29.7% | 35.1% |
| 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 are recycled, composted, managed by other food pathways, combusted with energy recovery or landfilled. 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.

*** Not estimated separately prior to 2000.

^ In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

Table 15. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 TO 2018
(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 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods | | | | | | | | | | |
| Major Appliances | 10 | 50 | 130 | 1,070 | 2,000 | 2,420 | 2,610 | 3,000 | 3,110 | 3,140 |
| Small Appliances** | | | | 10 | 20 | 20 | 120 | 120 | 120 | 120 |
| Furniture and Furnishings | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | 10 | 10 | 40 | 40 |
| Carpets and Rugs** | | | | Neg. | 190 | 250 | 270 | 190 | 280 | 310 |
| Rubber Tires | 330 | 250 | 150 | 440 | 1,290 | 1,640 | 2,270 | 2,410 | 2,610 | 2,610 |
| Batteries, Lead-Acid | Neg. | 620 | 1,040 | 1,470 | 2,130 | 2,640 | 2,980 | 2,670 | 2,910 | 2,870 |
| Miscellaneous Durables | | | | | | | | | | |
| Selected Consumer Electronics*** | | | | | 190 | 360 | 650 | 1,230 | 1,020 | 1,040 |
| Other Miscellaneous Durables | | | | | 760 | 640 | 480 | 250 | 460 | 440 |
| <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>1,480</i> | <i>1,480</i> |
| Total Durable Goods – recycled | 350 | 940 | 1,360 | 3,460 | 6,580 | 7,970 | 9,390 | 9,880 | 10,550 | 10,570 |
| Nondurable Goods – recycled | 2,390 | 3,730 | 4,670 | 8,800 | 17,560 | 19,770 | 19,190 | 16,190 | 16,290 | 14,190 |
| <i>(Detail in Table 19)</i> | | | | | | | | | | |
| Containers and Packaging – recycled | 2,870 | 3,350 | 8,490 | 16,780 | 28,870 | 31,500 | 36,680 | 41,490 | 40,140 | 44,260 |
| <i>(Detail in Table 24)</i> | | | | | | | | | | |
| Total Product Wastes - recycled | 5,610 | 8,020 | 14,520 | 29,040 | 53,010 | 59,240 | 65,260 | 67,560 | 66,980 | 69,020 |
| Composted | | | | | | | | | | |
| Food - composted | | | | | | | | | | |
| Food - composted^ | Neg. | Neg. | Neg. | Neg. | 680 | 690 | 970 | 2,100 | 2,570 | 2,590 |
| Yard Trimmings - composted | | | | | | | | | | |
| Yard Trimmings – composted | Neg. | Neg. | Neg. | 4,200 | 15,770 | 19,860 | 19,200 | 21,290 | 24,420 | 22,300 |
| Misc. Inorganic Wastes - composted | | | | | | | | | | |
| Miscellaneous Inorganic Wastes composted | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 4,200 | 16,450 | 20,550 | 20,170 | 23,390 | 26,990 | 24,890 |
| Other Food Management | | | | | | | | | | |
| Other Food Management‡ | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 1,820 |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 1,840 |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 5,260 |
| Food - donation | | | | | | | | | | 4,790 |
| Food - land application | | | | | | | | | | 260 |
| Food – sewer/wastewater treatment | | | | | | | | | | 3,740 |
| Total Food – other food management | | | | | | | | | | 17,710 |
| Total MSW Recycled and Composted - Weight | 5,610 | 8,020 | 14,520 | 33,240 | 69,460 | 79,790 | 85,430 | 90,950 | 93,970 | 93,910 |
| Total MSW Recycled, Composted and Other Food Management - Weight | | | | | | | | | | 111,620 |
| Products | Percent of Total Generation | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods | | | | | | | | | | |
| Major Appliances | 0.6% | 2.3% | 4.4% | 32.3% | 54.9% | 67.0% | 64.9% | 61.7% | 60.3% | 59.8% |
| Small Appliances** | | | | 2.2% | 1.9% | 1.7% | 6.6% | 5.9% | 5.7% | 5.6% |
| Furniture and Furnishings | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | 0.1% | 0.1% | 0.3% | 0.3% |
| Carpets and Rugs** | | | | Neg. | 7.7% | 8.4% | 7.3% | 5.2% | 8.3% | 9.2% |
| Rubber Tires | 29.5% | 13.2% | 5.5% | 12.2% | 26.2% | 33.4% | 44.2% | 40.4% | 39.9% | 40.0% |
| Batteries, Lead-Acid | Neg. | 75.6% | 69.8% | 97.4% | 93.4% | 96.0% | 98.7% | 98.9% | 99.0% | 99.0% |
| Miscellaneous Durables | | | | | | | | | | |
| Selected Consumer Electronics*** | | | | | 10.0% | 13.7% | 20.8% | 39.7% | 35.9% | 38.5% |
| Other Miscellaneous Durables | | | | | 5.2% | 3.6% | 2.7% | 1.3% | 2.1% | 2.0% |
| <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>6.0%</i> | <i>6.0%</i> |

**Table 15. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 TO 2018
(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 | 2017 | 2018 |
| Total Durable Goods – recycled | 3.5% | 6.4% | 6.2% | 11.6% | 16.9% | 17.7% | 19.0% | 18.3% | 18.6% | 18.5% |
| Nondurable Goods -recycled | 13.8% | 14.9% | 13.6% | 16.9% | 27.4% | 31.1% | 36.0% | 31.2% | 32.1% | 28.1% |
| <i>(Detail in Table 19)</i> | | | | | | | | | | |
| Containers and Packaging - recycled | 10.5% | 7.7% | 16.1% | 26.0% | 38.1% | 41.3% | 48.6% | 53.2% | 49.4% | 53.8% |
| <i>(Detail in Table 25)</i> | | | | | | | | | | |
| Total Product Wastes - recycled | 10.3% | 9.6% | 13.3% | 19.8% | 29.7% | 32.0% | 36.6% | 36.8% | 35.5% | 36.4% |
| Composted | | | | | | | | | | |
| Composted – Food | | | | | | | | | | |
| Food – composted [^] | Neg. | Neg. | Neg. | Neg. | 2.2% | 2.1% | 2.7% | 5.3% | 6.3% | 4.1% |
| Composted – Yard Trimmings | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 12.0% | 51.7% | 61.9% | 57.5% | 61.3% | 69.4% | 63.0% |
| Composted – Misc. Inorganic Wastes | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 6.8% | 25.4% | 29.9% | 27.6% | 29.8% | 33.8% | 24.3% |
| Other Food Management | | | | | | | | | | |
| Other Food Management[¥] | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 2.9% |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 2.9% |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 8.3% |
| Food - donation | | | | | | | | | | 7.6% |
| Food - land application | | | | | | | | | | 0.4% |
| Food – sewer/wastewater treatment | | | | | | | | | | 5.9% |
| Total Food – other food management | | | | | | | | | | 28.1% |
| Total MSW Recycled and Composted - % | 6.4% | 6.6% | 9.6% | 16.0% | 28.5% | 31.4% | 34.0% | 34.7% | 35.0% | 32.1% |
| Total MSW Recycled, Composted and Other Food Management - % | | | | | | | | | | 38.2% |

* Recycling 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.

[¥] In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

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

Table 16. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2018

(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 | 2017 | 2018 |
| Durable Goods | | | | | | | | | | |
| Major Appliances [‡] | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Appliances** | | | | 90 | 200 | 200 | 310 | 380 | 390 | 400 |
| Furniture and Furnishings | | Neg. | 90 | 1,150 | 1,570 | 1,700 | 1,910 | 2,350 | 2,380 | 2,360 |
| Carpets and Rugs** | | | | 290 | 440 | 490 | 610 | 670 | 610 | 600 |
| Rubber Tires [§] | | Neg. | 30 | 400 | 2,260 | 2,390 | 2,000 | 2,840 | 2,710 | 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 | 2,990 | 3,050 |
| Total Durable Goods | | 60 | 440 | 4,480 | 6,260 | 6,750 | 7,070 | 8,640 | 9,080 | 9,120 |
| Nondurable Goods | | 90 | 580 | 7,380 | 9,000 | 7,980 | 6,030 | 6,960 | 6,720 | 7,090 |
| (Detail in Table 20) | | | | | | | | | | |
| Containers and Packaging | | 150 | 880 | 8,110 | 9,110 | 8,160 | 6,870 | 7,160 | 8,050 | 7,430 |
| (Detail in Table 26) | | | | | | | | | | |
| Total Product Wastes | | 300 | 1,900 | 19,970 | 24,370 | 22,890 | 19,970 | 22,760 | 23,850 | 23,640 |
| Other Wastes | | | | | | | | | | |
| Food | | 50 | 260 | 4,060 | 5,820 | 5,870 | 6,150 | 7,380 | 7,470 | 7,550 |
| Yard Trimmings | | 90 | 550 | 5,240 | 2,860 | 2,220 | 2,510 | 2,630 | 2,110 | 2,570 |
| Miscellaneous Inorganic Wastes | | 10 | 50 | 490 | 680 | 670 | 680 | 780 | 790 | 800 |
| Total Other Wastes | | 150 | 860 | 9,790 | 9,360 | 8,760 | 9,340 | 10,790 | 10,370 | 10,920 |
| Total MSW Combusted with Energy Recovery - Weight | | 450 | 2,760 | 29,760 | 33,730 | 31,650 | 29,310 | 33,550 | 34,220 | 34,560 |
| Products | Percent of Total Combusted | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| 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% | 1.2% |
| Furniture and Furnishings | | Neg. | 3.3% | 3.9% | 4.7% | 5.4% | 6.5% | 7.0% | 7.0% | 6.8% |
| Carpets and Rugs** | | | | 1.0% | 1.3% | 1.5% | 2.1% | 2.0% | 1.8% | 1.7% |
| Rubber Tires [§] | | Neg. | 1.1% | 1.3% | 6.7% | 7.6% | 6.8% | 8.5% | 7.9% | 7.8% |
| 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% | 8.7% | 8.8% |
| Total Durable Goods | | 13.3% | 15.9% | 15.1% | 18.6% | 21.3% | 24.1% | 25.8% | 26.5% | 24.6% |
| Nondurable Goods | | 19.9% | 21.0% | 24.8% | 26.7% | 25.2% | 20.6% | 20.7% | 19.7% | 20.5% |
| (Detail in Table 20) | | | | | | | | | | |
| Containers and Packaging | | 33.3% | 31.9% | 27.3% | 27.0% | 25.8% | 23.4% | 21.4% | 23.4% | 21.5% |
| (Detail in Table 27) | | | | | | | | | | |
| Total Product Wastes | | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 66.4% |

Table 16. Products Combusted with Energy Recovery* in the Municipal Waste Stream, 1960 to 2018
(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 | 2018 |
| Other Wastes | | | | | | | | | | |
| Food | | 11.1% | 9.4% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 21.9% |
| Yard Trimmings | | 20.0% | 20.0% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.4% |
| 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% | 30.3% | 31.6% |
| 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 2018, 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 for details) and food (percentage distribution for food varies by generator sector, see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>). 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.

§ 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 2018
(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 | 2017 | 2018 |
| Durable Goods | | | | | | | | | | |
| Major Appliances | 1,620 | 2,120 | 2,820 | 2,240 | 1,640 | 1,190 | 1,410 | 1,860 | 2,050 | 2,110 |
| Small Appliances** | | | | 360 | 820 | 960 | 1,400 | 1,550 | 1,610 | 1,640 |
| Furniture and Furnishings | 2,150 | 2,830 | 4,670 | 5,640 | 6,550 | 7,640 | 8,900 | 9,690 | 9,790 | 9,680 |
| Carpets and Rugs** | | | | 1,370 | 1,830 | 2,220 | 2,840 | 2,770 | 2,500 | 2,460 |
| Rubber Tires | 790 | 1,640 | 2,540 | 2,770 | 1,380 | 880 | 860 | 720 | 1,220 | 1,210 |
| Batteries, Lead-Acid | | 200 | 450 | 40 | 150 | 110 | 40 | 30 | 30 | 30 |
| Miscellaneous Durables | | | | | | | | | | |
| Selected Consumer Electronics*** | | | | | | | | | | |
| Other Miscellaneous Durables | | | | | | | | | | |
| <i>Total Miscellaneous Durables</i> | <i>5,010</i> | <i>6,870</i> | <i>9,520</i> | <i>9,450</i> | <i>13,660</i> | <i>17,340</i> | <i>17,440</i> | <i>18,800</i> | <i>20,040</i> | <i>20,280</i> |
| Total Durable Goods | 9,570 | 13,660 | 20,000 | 21,870 | 26,030 | 30,340 | 32,890 | 35,420 | 37,240 | 37,410 |
| Nondurable Goods | 14,940 | 21,240 | 29,170 | 35,990 | 37,450 | 35,900 | 28,030 | 28,660 | 27,690 | 29,160 |
| <i>(Detail in Table 21)</i> | | | | | | | | | | |
| Containers and Packaging | 24,500 | 40,060 | 43,300 | 39,640 | 37,860 | 36,670 | 31,920 | 29,270 | 33,010 | 30,530 |
| <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 | 97,940 | 97,100 |
| Other Wastes | | | | | | | | | | |
| Food | 12,200 | 12,750 | 12,740 | 19,800 | 24,200 | 26,370 | 28,620 | 30,250 | 30,630 | 35,280 |
| Yard Trimmings | 20,000 | 23,110 | 26,950 | 25,560 | 11,900 | 9,990 | 11,690 | 10,800 | 8,650 | 10,530 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,770 | 2,200 | 2,410 | 2,820 | 3,020 | 3,160 | 3,210 | 3,250 | 3,270 |
| Total Other Wastes | 33,500 | 37,630 | 41,890 | 47,770 | 38,920 | 39,380 | 43,470 | 44,260 | 42,530 | 49,080 |
| Total MSW Landfilled- Weight | 82,510 | 112,590 | 134,360 | 145,270 | 140,260 | 142,290 | 136,310 | 137,610 | 140,470 | 146,180 |
| Products | Percent of Total Landfilled | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | | | | | | | | | | |
| Major Appliances | 2.0% | 1.9% | 2.1% | 1.5% | 1.2% | 0.8% | 1.0% | 1.4% | 1.5% | 1.4% |
| Small Appliances** | | | | 0.2% | 0.6% | 0.7% | 1.0% | 1.1% | 1.1% | 1.1% |
| Furniture and Furnishings | 2.6% | 2.5% | 3.5% | 3.9% | 4.7% | 5.4% | 6.5% | 7.0% | 7.0% | 6.6% |
| Carpets and Rugs** | | | | 0.9% | 1.3% | 1.5% | 2.1% | 2.0% | 1.8% | 1.7% |
| Rubber Tires | 1.0% | 1.5% | 1.9% | 1.9% | 1.0% | 0.6% | 0.6% | 0.5% | 0.9% | 0.7% |
| 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 | | | | | | | | | | |
| <i>Total Miscellaneous Durables</i> | <i>6.1%</i> | <i>6.1%</i> | <i>7.1%</i> | <i>6.5%</i> | <i>9.7%</i> | <i>12.2%</i> | <i>12.8%</i> | <i>13.7%</i> | <i>14.3%</i> | <i>13.9%</i> |
| Total Durable Goods | 11.6% | 12.1% | 14.9% | 15.0% | 18.6% | 21.3% | 24.1% | 25.7% | 26.5% | 25.6% |
| Nondurable Goods | 18.1% | 18.9% | 21.7% | 24.8% | 26.7% | 25.2% | 20.6% | 20.8% | 19.7% | 19.9% |
| <i>(Detail in Table 21)</i> | | | | | | | | | | |
| Containers and Packaging | 29.7% | 35.6% | 32.2% | 27.3% | 27.0% | 25.8% | 23.4% | 21.4% | 23.5% | 20.9% |
| <i>(Detail in Table 29)</i> | | | | | | | | | | |
| Total Product Wastes | 59.4% | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 66.4% |
| Other Wastes | | | | | | | | | | |
| Food | 14.8% | 11.3% | 9.5% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 24.1% |
| Yard Trimmings | 24.2% | 20.5% | 20.1% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.2% |
| 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% | 30.3% | 33.6% |
| 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, other food management pathways 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.

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

**Table 18. Products Generated* in the Municipal Waste Stream, 1960 to 2018
(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 | 2017 | 2018 |
| Durable Goods | 9,920 | 14,660 | 21,800 | 29,810 | 38,870 | 45,060 | 49,350 | 53,940 | 56,870 | 57,100 |
| <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 | 5,440 | 5,050 |
| 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 | 700 | 690 |
| Magazines** | | | | 2,830 | 2,230 | 2,580 | 1,590 | 1,190 | 1,020 | 980 |
| Office-Type Papers*** | 1,520 | 2,650 | 4,000 | 6,410 | 7,420 | 6,620 | 5,260 | 4,530 | 3,970 | 3,970 |
| Marketing Mail§ | | | | 3,820 | 5,570 | 5,830 | 4,340 | 4,050 | 3,790 | 3,670 |
| Other Commercial Printing† | 1,260 | 2,130 | 3,120 | 4,460 | 7,380 | 6,440 | 2,480 | 2,080 | 1,960 | 2,000 |
| Tissue Paper and Towels | 1,090 | 2,080 | 2,300 | 2,960 | 3,220 | 3,460 | 3,490 | 3,680 | 3,750 | 3,790 |
| Paper Plates and Cups | 270 | 420 | 630 | 650 | 960 | 1,160 | 1,350 | 1,360 | 1,440 | 1,420 |
| Other Nonpackaging Paper | 2,700 | 3,630 | 4,230 | 3,840 | 4,250 | 4,490 | 4,190 | 3,700 | 3,880 | 3,920 |
| Total Other Paper Nondurable Goods | 8,760 | 13,380 | 17,670 | 25,940 | 32,270 | 29,920 | 23,690 | 21,390 | 20,510 | 20,440 |
| Disposable Diapers | Neg. | 350 | 1,930 | 2,700 | 3,230 | 3,410 | 3,700 | 4,170 | 4,150 | 4,100 |
| Plastic Plates and Cups¥ | | | 190 | 650 | 870 | 930 | 890 | 1,050 | 1,080 | 1,030 |
| Trash Bags** | | | | 780 | 850 | 1,060 | 980 | 1,130 | 1,140 | 1,230 |
| Clothing and Footwear | 1,360 | 1,620 | 2,170 | 4,010 | 6,470 | 7,890 | 9,100 | 11,940 | 12,800 | 12,970 |
| Towels, Sheets and Pillowcases** | | | | 710 | 820 | 980 | 1,290 | 1,350 | 1,470 | 1,520 |
| Other Miscellaneous Nondurables | 100 | 200 | 1,410 | 3,340 | 4,030 | 4,250 | 3,720 | 4,050 | 4,110 | 4,100 |
| Total Nondurable Goods | 17,330 | 25,060 | 34,420 | 52,170 | 64,010 | 63,650 | 53,250 | 51,810 | 50,700 | 50,440 |
| Containers and Packaging | 27,370 | 43,560 | 52,670 | 64,530 | 75,840 | 76,330 | 75,470 | 77,920 | 81,200 | 82,220 |
| <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 | 188,770 | 189,760 |
| Other Wastes | 33,500 | 37,780 | 42,750 | 61,760 | 64,730 | 68,690 | 72,980 | 78,440 | 79,890 | 102,600 |
| Total MSW Generated - Weight | 88,120 | 121,060 | 151,640 | 208,270 | 243,450 | 253,730 | 251,050 | 262,110 | 268,660 | 292,360 |
| Products | Percent of Generation of Each Product | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 11.3% | 12.1% | 14.4% | 14.3% | 16.0% | 17.8% | 19.7% | 20.6% | 21.2% | 19.5% |
| <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% | 2.0% | 1.7% |
| 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% | 0.2% |
| Magazines** | | | | 1.4% | 0.9% | 1.0% | 0.6% | 0.5% | 0.4% | 0.3% |
| Office-Type Papers*** | 1.7% | 2.2% | 2.6% | 3.1% | 3.0% | 2.6% | 2.1% | 1.8% | 1.6% | 1.4% |
| Marketing Mail§ | | | | 1.8% | 2.3% | 2.3% | 1.7% | 1.5% | 1.4% | 1.3% |
| Other Commercial Printing† | 1.4% | 1.8% | 2.1% | 2.1% | 3.0% | 2.5% | 1.0% | 0.8% | 0.7% | 0.7% |
| Tissue Paper and Towels | 1.2% | 1.7% | 1.5% | 1.4% | 1.3% | 1.4% | 1.4% | 1.4% | 1.4% | 1.3% |
| 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% | 1.3% |
| Total Other Paper Nondurable Goods | 9.9% | 11.1% | 11.7% | 12.5% | 13.3% | 12.5% | 9.4% | 8.2% | 7.7% | 7.0% |
| Disposable Diapers | Neg. | 0.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.5% | 1.6% | 1.5% | 1.4% |
| 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 2018
(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 | 2017 | 2018 |
| Clothing and Footwear | 1.5% | 1.3% | 1.4% | 1.9% | 2.7% | 3.1% | 3.6% | 4.6% | 4.8% | 4.4% |
| 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% | 1.4% |
| Total Nondurables | 19.7% | 20.7% | 22.7% | 25.0% | 26.3% | 25.1% | 21.2% | 19.8% | 18.9% | 17.3% |
| Containers and Packaging | 31.1% | 36.0% | 34.7% | 31.0% | 31.2% | 30.1% | 30.1% | 29.7% | 30.2% | 28.1% |
| <i>(Detail in Table 23)</i> | | | | | | | | | | |
| Total Product Wastes | 62.0% | 68.8% | 71.8% | 70.3% | 73.4% | 72.9% | 70.9% | 70.1% | 70.3% | 64.9% |
| Other Wastes | 38.0% | 31.2% | 28.2% | 29.7% | 26.6% | 27.1% | 29.1% | 29.9% | 29.7% | 35.1% |
| 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 are recycled, composted, managed by other food pathways, combusted with energy recovery or landfilled. 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.

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

**Table 19. Products Recycled,* Composted and Managed By Other Food Pathways In The Municipal Solid Waste Stream, 1960 To 2018
(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 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods – recycled | 350 | 940 | 1,360 | 3,460 | 6,580 | 7,970 | 9,390 | 9,880 | 10,550 | 10,570 |
| <i>(Detail in Table 15)</i> | | | | | | | | | | |
| Nondurable Goods – recycled | | | | | | | | | | |
| Newspapers/Mechanical Papers† | 1,820 | 2,250 | 3,020 | 5,110 | 8,720 | 9,360 | 7,070 | 4,790 | 4,180 | 3,270 |
| 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 – recycled | 520 | 1,420 | 1,500 | 3,000 | 7,680 | 8,870 | 10,650 | 9,330 | 9,910 | 8,810 |
| Disposable Diapers | | | | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Plastic Plates and Cups¥ | | | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Trash Bags** | | | | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Clothing and Footwear | 50 | 60 | 150 | 520 | 900 | 1,250 | 1,250 | 1,690 | 1,740 | 1,690 |
| Towels, Sheets and Pillowcases** | | | | 120 | 140 | 170 | 220 | 220 | 240 | 240 |
| Other Miscellaneous Nondurables | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | 160 | 220 | 180 |
| Total Nondurable Goods | 2,390 | 3,730 | 4,670 | 8,800 | 17,560 | 19,770 | 19,190 | 16,190 | 16,290 | 14,190 |
| Containers and Packaging - recycled | 2,870 | 3,350 | 8,490 | 16,780 | 28,870 | 31,500 | 36,680 | 41,490 | 40,140 | 44,260 |
| <i>(Detail in Table 24)</i> | | | | | | | | | | |
| Total Product Wastes - recycled | 5,610 | 8,020 | 14,520 | 29,040 | 53,010 | 59,240 | 65,260 | 67,560 | 66,980 | 69,020 |
| Food – composted | | | | | | | | | | |
| Food^ | Neg. | Neg. | Neg. | Neg. | 680 | 690 | 970 | 2,100 | 2,570 | 2,590 |
| Yard Trimmings - composted | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 4,200 | 15,770 | 19,860 | 19,200 | 21,290 | 24,420 | 22,300 |
| Misc. Inorganic Wastes - composted | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 4,200 | 16,450 | 20,550 | 20,170 | 23,390 | 26,990 | 24,890 |
| Other Food Management | | | | | | | | | | |
| Other Food Management†† | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 1,820 |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 1,840 |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 5,260 |
| Food - donation | | | | | | | | | | 4,790 |
| Food - land application | | | | | | | | | | 260 |
| Food – sewer/wastewater treatment | | | | | | | | | | 3,740 |
| Total Food – other food management | | | | | | | | | | 17,710 |
| Total MSW Recycled and Composted - Weight | 5,610 | 8,020 | 14,520 | 33,240 | 69,460 | 79,790 | 85,430 | 90,950 | 93,970 | 93,910 |
| Total MSW Recycled, Composted and Other Food Management - Weight | | | | | | | | | | 111,620 |

**Table 19. Products Recycled,* Composted and Managed By Other Food Pathways In The Municipal Solid Waste Stream, 1960 To 2018
(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 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods – recycled | 3.5% | 6.4% | 6.2% | 11.6% | 16.9% | 17.7% | 19.0% | 18.3% | 18.6% | 18.5% |
| <i>(Detail in Table 15)</i> | | | | | | | | | | |
| Nondurable Goods – recycled | | | | | | | | | | |
| Newspapers/Mechanical Papers† | 25.6% | 23.7% | 27.3% | 38.0% | 59.0% | 73.2% | 71.6% | 71.2% | 76.8% | 64.8% |
| 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 - recycled | 5.9% | 10.6% | 8.5% | 11.6% | 24.2% | 28.0% | 45.0% | 43.6% | 48.3% | 43.1% |
| Disposable Diapers | | | | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Plastic Plates and Cups¥ | | | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Trash Bags** | | | | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Clothing and Footwear | Neg. | Neg. | Neg. | 13.0% | 13.9% | 15.8% | 13.7% | 14.2% | 13.6% | 13.0% |
| Towels, Sheets and Pillowcases** | | | | 16.9% | 17.1% | 17.3% | 17.1% | 16.3% | 16.3% | 15.8% |
| Other Miscellaneous Nondurables | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | 4.0% | 5.4% | 4.4% |
| Total Nondurables recycled | 13.8% | 14.9% | 13.6% | 16.9% | 27.4% | 31.1% | 36.0% | 31.2% | 32.1% | 28.1% |
| Containers and Packaging - recycled | 10.5% | 7.7% | 16.1% | 26.0% | 38.1% | 41.3% | 48.6% | 53.2% | 49.4% | 53.8% |
| <i>(Detail in Table 25)</i> | | | | | | | | | | |
| Total Product Wastes - recycled | 10.3% | 9.6% | 13.3% | 19.8% | 29.7% | 32.0% | 36.6% | 36.8% | 35.5% | 36.4% |
| Composted | | | | | | | | | | |
| Composted - Food | | | | | | | | | | |
| Food – composted^ | Neg. | Neg. | Neg. | Neg. | 2.2% | 2.1% | 2.7% | 5.3% | 6.3% | 4.1% |
| Composted – Yard Trimmings | | | | | | | | | | |
| Yard Trimmings – composted | Neg. | Neg. | Neg. | 12.0% | 51.7% | 61.9% | 57.5% | 61.3% | 69.4% | 63.0% |
| Composted – Misc. Inorganic Wastes | | | | | | | | | | |
| Miscellaneous Inorganic Wastes - composted | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 6.8% | 25.4% | 29.9% | 27.6% | 29.8% | 33.8% | 24.3% |

**Table 19. Products Recycled,* Composted and Managed By Other Food Pathways In The Municipal Solid Waste Stream, 1960 To 2018
(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 | 2017 | 2018 |
| Other Food Management | | | | | | | | | | |
| Other Food Management†† | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 2.9% |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 2.9% |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 8.3% |
| Food - donation | | | | | | | | | | 7.6% |
| Food - land application | | | | | | | | | | 0.4% |
| Food – sewer/wastewater treatment | | | | | | | | | | 5.9% |
| Total Food – other food management | | | | | | | | | | 28.1% |
| Total MSW Recycled and Composted - % | 6.4% | 6.6% | 9.6% | 16.0% | 28.5% | 31.4% | 34.0% | 34.7% | 35.0% | 32.1% |
| Total MSW Recycled, Composted and Other Food Management - % | | | | | | | | | | 38.2% |

* Recycling 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.

^ Includes collection of other MSW organics for composting.

†† In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

- 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 2018
(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 | 2017 | 2018 |
| Durable Goods | 0 | 60 | 440 | 4,480 | 6,260 | 6,750 | 7,070 | 8,640 | 9,080 | 9,120 |
| <i>(Detail in Table 16)</i> | | | | | | | | | | |
| Nondurable Goods | | | | | | | | | | |
| Newspapers/Mechanical Papers† | 0 | 30 | 160 | 1,420 | 1,180 | 620 | 500 | 380 | 250 | 350 |
| 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 | | 50 | 320 | 3,900 | 4,760 | 4,150 | 2,310 | 2,360 | 2,080 | 2,280 |
| Disposable Diapers | | Neg. | 30 | 460 | 630 | 620 | 650 | 810 | 810 | 800 |
| Plastic Plates and Cups¥ | | | Neg. | 110 | 170 | 170 | 160 | 210 | 210 | 200 |
| Trash Bags** | | | | 130 | 160 | 190 | 170 | 220 | 220 | 240 |
| Clothing and Footwear | 0 | 10 | 50 | 590 | 1,080 | 1,210 | 1,390 | 2,010 | 2,160 | 2,210 |
| Towels, Sheets and Pillowcases** | | | | 100 | 130 | 150 | 190 | 220 | 240 | 250 |
| Other Miscellaneous Nondurables | 0 | Neg. | 20 | 570 | 780 | 770 | 660 | 750 | 750 | 760 |
| Total Nondurables | 0 | 90 | 580 | 7,380 | 9,000 | 7,980 | 6,030 | 6,960 | 6,720 | 7,090 |
| Containers and Packaging | 0 | 150 | 880 | 8,110 | 9,110 | 8,160 | 6,870 | 7,160 | 8,050 | 7,430 |
| <i>(Detail in Table 26)</i> | | | | | | | | | | |
| Total Product Wastes | 0 | 300 | 1,900 | 19,970 | 24,370 | 22,890 | 19,970 | 22,760 | 23,850 | 23,640 |
| Other Wastes | 0 | 150 | 860 | 9,790 | 9,360 | 8,760 | 9,340 | 10,790 | 10,370 | 10,920 |
| Total MSW Combusted with Energy Recovery - Weight | 0 | 450 | 2,760 | 29,760 | 33,730 | 31,650 | 29,310 | 33,550 | 34,220 | 34,560 |

| Products | Percent of Total Combusted | | | | | | | | | |
|-------------------------------|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | | 13.3% | 15.9% | 15.1% | 18.6% | 21.3% | 24.1% | 25.8% | 26.5% | 26.4% |
| <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% | 0.7% | 1.0% |
| 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 2018
(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 | 2017 | 2018 |
| 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 | | 11.1% | 11.6% | 13.1% | 14.1% | 13.1% | 7.9% | 7.0% | 6.1% | 6.6% |
| Disposable Diapers | | Neg. | 1.1% | 1.5% | 1.9% | 2.0% | 2.2% | 2.4% | 2.4% | 2.3% |
| 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% | 0.7% |
| Clothing and Footwear | | 2.2% | 1.8% | 2.0% | 3.2% | 3.8% | 4.7% | 6.0% | 6.3% | 6.4% |
| 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% | 2.2% |
| Total Nondurables | | 19.9% | 21.0% | 24.8% | 26.7% | 25.2% | 20.6% | 20.7% | 19.7% | 20.5% |
| Containers and Packaging | | 33.3% | 31.9% | 27.3% | 27.0% | 25.8% | 23.4% | 21.4% | 23.4% | 21.5% |
| (Detail in Table 27) | | | | | | | | | | |
| Total Product Wastes | | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 68.4% |
| Other Wastes | | 33.4% | 31.2% | 32.9% | 27.7% | 27.7% | 31.9% | 32.1% | 30.3% | 31.6% |
| 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 2018, 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 for details) and food (percentage distribution for food varies by generator sector, see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>). 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.

- Detailed data not available.

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

Table 21. Products Landfilled* in Municipal Solid Waste, 1960 to 2018
(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 | 2017 | 2018 |
| Durable Goods | 9,570 | 13,660 | 20,000 | 21,870 | 26,030 | 30,340 | 32,890 | 35,420 | 37,240 | 37,410 |
| <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 | 1,010 | 1,430 |
| 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 | 8,240 | 11,910 | 15,850 | 19,040 | 19,830 | 18,660 | 10,730 | 9,700 | 8,520 | 9,350 |
| Disposable Diapers | | 350 | 1,900 | 2,240 | 2,600 | 2,790 | 3,050 | 3,360 | 3,340 | 3,300 |
| Plastic Plates and Cups¥ | | | 190 | 540 | 700 | 760 | 730 | 840 | 870 | 830 |
| Trash Bags** | | | | 650 | 690 | 870 | 810 | 910 | 920 | 990 |
| Clothing and Footwear | 1,310 | 1,550 | 1,970 | 2,900 | 4,490 | 5,430 | 6,460 | 8,240 | 8,900 | 9,070 |
| Towels, Sheets and Pillowcases** | | | | 490 | 550 | 660 | 880 | 910 | 990 | 1,030 |
| Other Miscellaneous Nondurables | 100 | 200 | 1,390 | 2,770 | 3,250 | 3,480 | 3,060 | 3,140 | 3,140 | 3,160 |
| Total Nondurables | 14,940 | 21,240 | 29,170 | 35,990 | 37,450 | 35,900 | 28,030 | 28,660 | 27,690 | 29,160 |
| Containers and Packaging | 24,500 | 40,060 | 43,300 | 39,640 | 37,860 | 36,670 | 31,920 | 29,270 | 33,010 | 30,530 |
| <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 | 97,940 | 97,100 |
| Other Wastes | 33,500 | 37,630 | 41,890 | 47,770 | 38,920 | 39,380 | 43,470 | 44,260 | 42,530 | 48,080 |
| Total MSW Landfilled - Weight | 82,510 | 112,590 | 134,360 | 145,270 | 140,260 | 142,290 | 136,310 | 137,610 | 140,470 | 146,180 |
| Products | Percent of Total Landfilled | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 11.6% | 12.1% | 14.9% | 15.1% | 18.6% | 21.3% | 24.1% | 25.7% | 26.5% | 25.6% |
| <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% | 0.7% | 1.0% |
| 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 | 10.0% | 10.6% | 11.8% | 13.1% | 14.1% | 17.6% | 7.9% | 7.0% | 6.1% | 6.4% |

Table 21. Products Landfilled* in Municipal Solid Waste, 1960 to 2018
(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 | 2017 | 2018 |
| Disposable Diapers | Neg. | 0.3% | 1.4% | 1.5% | 1.9% | 2.0% | 2.2% | 2.4% | 2.4% | 2.3% |
| 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% | 0.7% | 0.7% |
| Clothing and Footwear | 1.6% | 1.4% | 1.5% | 2.0% | 3.2% | 3.8% | 4.7% | 6.0% | 6.3% | 6.2% |
| 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% | 19.7% | 19.1% |
| Containers and Packaging | 29.7% | 35.6% | 32.2% | 27.3% | 27.0% | 25.8% | 23.4% | 21.4% | 23.5% | 20.9% |
| (Detail in Table 29) | | | | | | | | | | |
| Total Product Wastes | 59.4% | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 66.4% |
| Other Wastes | 40.6% | 33.4% | 31.2% | 32.9% | 27.7% | 27.7% | 31.9% | 32.1% | 30.3% | 33.6% |
| 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, other food management pathways 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.

- 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 2018
(With Detail on Containers and Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|--|-------------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 9,920 | 14,660 | 21,800 | 29,810 | 38,870 | 45,060 | 49,350 | 53,940 | 56,870 | 57,100 |
| <i>(Detail in Table 14)</i> | | | | | | | | | | |
| Nondurable Goods | 17,330 | 25,060 | 34,420 | 52,170 | 64,010 | 63,650 | 53,250 | 51,810 | 50,700 | 50,440 |
| <i>(Detail in Table 18)</i> | | | | | | | | | | |
| 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 | 4,830 | 4,650 |
| Wine and Liquor Bottles | 1,080 | 1,900 | 2,450 | 2,030 | 1,910 | 1,630 | 1,700 | 1,810 | 1,800 | 1,810 |
| Other Bottles & Jars | 3,710 | 4,440 | 4,780 | 4,160 | 3,420 | 2,290 | 1,990 | 1,990 | 3,220 | 3,330 |
| Total Glass Packaging | 6,190 | 11,920 | 13,970 | 11,830 | 11,040 | 10,460 | 9,360 | 9,120 | 9,850 | 9,790 |
| 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 | 1,480 | 1,580 |
| Other Steel Packaging | 260 | 270 | 240 | 200 | 240 | 240 | 440 | 480 | 530 | 630 |
| Total Steel Packaging | 4,660 | 5,380 | 3,610 | 2,890 | 2,870 | 2,370 | 2,740 | 2,220 | 2,010 | 2,210 |
| Aluminum Packaging | | | | | | | | | | |
| Beer and Soft Drink Cans | Neg. | 100 | 850 | 1,550 | 1,520 | 1,450 | 1,370 | 1,220 | 1,330 | 1,330 |
| Other Cans | Neg. | 60 | 40 | 20 | 50 | 80 | 70 | 130 | 50 | 80 |
| Foil and Closures | 170 | 410 | 380 | 330 | 380 | 400 | 460 | 490 | 500 | 510 |
| Total Aluminum Packaging | 170 | 570 | 1,270 | 1,900 | 1,950 | 1,930 | 1,900 | 1,840 | 1,880 | 1,920 |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | 7,330 | 12,760 | 17,080 | 24,010 | 30,210 | 30,930 | 29,050 | 31,330 | 32,540 | 33,260 |
| Other Paper & Paperboard Pkg | | | | | | | | | | |
| Gable Top/Aseptic Cartons‡ | | | 790 | 510 | 550 | 500 | 540 | 590 | 590 | 630 |
| Folding Cartons | | | 3,820 | 4,300 | 5,820 | 5,530 | 5,470 | 5,380 | 5,330 | 5,370 |
| Other Paperboard Packaging | 3,840 | 4,830 | 230 | 290 | 200 | 160 | 90 | 70 | 50 | 50 |
| Bags and Sacks | | | 3,380 | 2,440 | 1,490 | 1,120 | 1,040 | 930 | 1,100 | 1,090 |
| 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 | 1,450 | 1,500 |
| <i>Subtotal Other Paper & Paperboard Pkg</i> | <i>6,780</i> | <i>8,640</i> | <i>9,270</i> | <i>8,670</i> | <i>9,730</i> | <i>8,710</i> | <i>8,630</i> | <i>8,590</i> | <i>8,520</i> | <i>8,640</i> |
| Total Paper & Board Pkg | 14,110 | 21,400 | 26,350 | 32,680 | 39,940 | 39,640 | 37,680 | 39,920 | 41,060 | 41,900 |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | 260 | 430 | 1,720 | 2,540 | 2,670 | 2,980 | 2,960 | 3,130 |
| HDPE Natural Bottles | | | 230 | 530 | 690 | 800 | 800 | 760 | 770 | 750 |
| Other Containers | 60 | 910 | 890 | 1,430 | 1,740 | 1,420 | 1,830 | 1,940 | 1,990 | 1,990 |
| Bags and Sacks | | | 390 | 940 | 1,650 | 1,640 | 770 | - | - | - |
| Wraps | | | 840 | 1,530 | 2,550 | 2,810 | 3,160 | - | - | - |
| <i>Subtotal Bags, Sacks and Wraps</i> | | | <i>1,230</i> | <i>2,470</i> | <i>4,200</i> | <i>4,450</i> | <i>3,930</i> | <i>4,130</i> | <i>4,140</i> | <i>4,200</i> |
| Other Plastics Packaging | 60 | 1,180 | 790 | 2,040 | 2,840 | 3,210 | 4,450 | 4,870 | 4,630 | 4,460 |
| Total Plastics Packaging | 120 | 2,090 | 3,400 | 6,900 | 11,190 | 12,420 | 13,680 | 14,680 | 14,490 | 14,530 |
| Other Packaging | | | | | | | | | | |
| Wood Packaging | 2,000 | 2,070 | 3,940 | 8,180 | 8,610 | 9,230 | 9,770 | 9,770 | 11,560 | 11,530 |
| Other Misc. Packaging | 120 | 130 | 130 | 150 | 240 | 280 | 340 | 370 | 350 | 340 |
| Total Containers & Pkg | 27,370 | 43,560 | 52,670 | 64,530 | 75,840 | 76,330 | 75,470 | 77,920 | 81,200 | 82,220 |
| Total Product Wastes | 54,620 | 83,280 | 108,890 | 146,510 | 178,720 | 185,040 | 178,070 | 183,670 | 188,770 | 189,760 |

Table 22. Products Generated* in the Municipal Waste Stream, 1960 to 2018
(With Detail on Containers and Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|-------------------------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Other Wastes | | | | | | | | | | |
| Food [^] | 12,200 | 12,800 | 13,000 | 23,860 | 30,700 | 32,930 | 35,740 | 39,730 | 40,670 | 63,130 |
| Yard Trimmings | 20,000 | 23,200 | 27,500 | 35,000 | 30,530 | 32,070 | 33,400 | 34,720 | 35,180 | 35,400 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,780 | 2,250 | 2,900 | 3,500 | 3,690 | 3,840 | 3,990 | 4,040 | 4,070 |
| Total Other Wastes | 33,500 | 37,780 | 42,750 | 61,760 | 64,730 | 68,690 | 72,980 | 78,440 | 79,890 | 102,600 |
| Total MSW Generated - Weight | 88,120 | 121,060 | 151,640 | 208,270 | 243,450 | 253,730 | 251,050 | 262,110 | 268,660 | 292,360 |

* Generation before materials are recycled, composted, managed by other food pathways, combusted with energy recovery or landfilled. 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.

[^] In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

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 2018
(With Detail on Containers and Packaging)
(In percent of total generation)

| Products | Percent of Total Generation | | | | | | | | | |
|--|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 11.3% | 12.1% | 14.4% | 14.3% | 16.0% | 17.8% | 19.7% | 20.6% | 21.2% | 19.5% |
| <i>(Detail in Table 14)</i> | | | | | | | | | | |
| Nondurable Goods | 19.7% | 20.7% | 22.7% | 25.0% | 26.3% | 25.1% | 21.2% | 19.8% | 18.9% | 17.3% |
| <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% | 1.8% | 1.6% |
| Wine and Liquor Bottles | 1.2% | 1.6% | 1.6% | 1.0% | 0.8% | 0.6% | 0.7% | 0.7% | 0.8% | 0.6% |
| Other Bottles & Jars | 4.2% | 3.7% | 3.2% | 2.0% | 1.4% | 0.9% | 0.8% | 0.8% | 1.2% | 1.1% |
| Total Glass Packaging | 7.0% | 9.8% | 9.2% | 5.7% | 4.5% | 4.1% | 3.7% | 3.5% | 3.8% | 3.3% |
| 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% | 0.5% |
| 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% | 0.7% | 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% | 0.02% | 0.03% |
| 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% | 0.7% |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | 8.3% | 10.5% | 11.3% | 11.5% | 12.4% | 12.2% | 11.6% | 12.0% | 12.1% | 11.4% |
| 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% | 1.8% |
| 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% | 0.5% | 0.5% |
| <i>Subtotal Other Paper & Paperboard Pkg</i> | | | | | | | 3.4% | 3.3% | 3.1% | 3.0% |
| Total Paper & Board Pkg | 16.0% | 17.7% | 17.4% | 15.7% | 16.4% | 15.6% | 15.0% | 15.3% | 15.3% | 14.3% |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | 0.2% | 0.2% | 0.7% | 1.0% | 1.1% | 1.1% | 1.1% | 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% | - | - | - |
| <i>Subtotal Bags, Sacks and Wraps</i> | | | 0.8% | 1.2% | 1.7% | 1.8% | 1.6% | 1.6% | 1.5% | 1.4% |
| Other Plastics Packaging | 0.1% | 1.0% | 0.5% | 1.0% | 1.2% | 1.3% | 1.8% | 1.8% | 1.7% | 1.5% |
| Total Plastics Packaging | 0.1% | 1.7% | 2.2% | 3.3% | 4.6% | 4.9% | 5.4% | 5.5% | 5.3% | 5.0% |
| Other Packaging | | | | | | | | | | |
| Wood Packaging | 2.3% | 1.7% | 2.6% | 3.9% | 3.5% | 3.6% | 3.9% | 3.7% | 4.3% | 3.9% |
| 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% | 30.2% | 28.1% |
| Total Product Wastes | 62.0% | 68.8% | 71.8% | 70.3% | 73.4% | 72.9% | 70.9% | 70.1% | 70.3% | 64.9% |

Table 23. Products Generated* in the Municipal Waste Stream, 1960 to 2018
(With Detail on Containers and Packaging)
(In percent of total generation)

| Products | Percent of Total Generation | | | | | | | | | |
|--------------------------------|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Other Wastes | | | | | | | | | | |
| Food [^] | 13.8% | 10.6% | 8.6% | 11.5% | 12.6% | 13.0% | 14.2% | 15.2% | 15.1% | 21.6% |
| Yard Trimmings | 22.7% | 19.2% | 18.1% | 16.8% | 12.5% | 12.6% | 13.3% | 13.2% | 13.1% | 12.1% |
| Miscellaneous Inorganic Wastes | 1.5% | 1.5% | 1.5% | 1.4% | 1.4% | 1.5% | 1.5% | 1.5% | 1.5% | 1.4% |
| Total Other Wastes | 38.0% | 31.2% | 28.2% | 29.7% | 26.6% | 27.1% | 29.1% | 29.9% | 29.7% | 35.1% |
| 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 are recycled, composted, managed by other food pathways, combusted with energy recovery or landfilled. 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.

[^] In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

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

NA = Not Available

- Detailed data not available.

Table 24. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 To 2018
(With Detail On Containers And Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|--|-------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods – recycled | 350 | 940 | 1,360 | 3,460 | 6,580 | 7,970 | 9,390 | 9,880 | 10,550 | 10,570 |
| (Detail in Table 15) | | | | | | | | | | |
| Nondurable Goods – recycled | 2,390 | 3,730 | 4,670 | 8,800 | 17,560 | 19,770 | 19,190 | 16,190 | 16,290 | 14,190 |
| (Detail in Table 19) | | | | | | | | | | |
| Containers and Packaging – recycled | | | | | | | | | | |
| Glass Packaging | | | | | | | | | | |
| Beer and Soft Drink Bottles** | 90 | 140 | 730 | 1,890 | 1,530 | 2,000 | 2,350 | 2,230 | 1,880 | 1,840 |
| Wine and Liquor Bottles | 10 | 10 | 20 | 210 | 430 | 250 | 540 | 660 | 710 | 720 |
| Other Bottles & Jars | Neg. | Neg. | Neg. | 520 | 920 | 340 | 240 | 300 | 480 | 500 |
| Total Glass Packaging | 100 | 150 | 750 | 2,620 | 2,880 | 2,590 | 3,130 | 3,190 | 3,070 | 3,060 |
| 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 | 1,050 | 1,120 |
| Other Steel Packaging | Neg. | Neg. | Neg. | 60 | 160 | 160 | 350 | 380 | 420 | 510 |
| Total Steel Packaging | 30 | 80 | 200 | 690 | 1,690 | 1,500 | 1,890 | 1,620 | 1,470 | 1,630 |
| Aluminum Packaging | | | | | | | | | | |
| Beer and Soft Drink Cans | Neg. | 10 | 320 | 990 | 830 | 650 | 680 | 670 | 600 | 670 |
| 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 | 600 | 670 |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | 2,520 | 2,760 | 6,390 | 11,530 | 20,330 | 22,100 | 24,690 | 28,930 | 28,780 | 32,090 |
| 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. | - | - | - | - |
| <i>Subtotal Other Paper & Paperboard Pkg</i> | | | | | | | 2,160 | 2,270 | 1,300 | 1,800 |
| Total Paper & Board Pkg | 2,740 | 3,110 | 7,210 | 12,070 | 21,040 | 23,610 | 26,850 | 31,200 | 30,080 | 33,890 |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | 10 | 140 | 380 | 590 | 780 | 890 | 860 | 840 |
| HDPE Natural Bottles | | | Neg. | 20 | 210 | 230 | 220 | 230 | 240 | 220 |
| Other Containers | Neg. | Neg. | Neg. | 20 | 170 | 140 | 300 | 360 | 300 | 310 |
| Bags and Sacks | | | | | | | | | | |
| Wraps | | | | | | | | | | |
| <i>Subtotal Bags, Sacks and Wraps</i> | | | Neg. | 60 | 180 | 230 | 450 | 530 | 390 | 420 |
| Other Plastics Packaging | Neg. | Neg. | Neg. | 20 | 90 | 90 | 100 | 140 | 100 | 120 |
| Total Plastics Packaging | Neg. | Neg. | 10 | 260 | 1,030 | 1,280 | 1,850 | 2,150 | 1,890 | 1,910 |
| Other Packaging | | | | | | | | | | |
| Wood Packaging | Neg. | Neg. | Neg. | 130 | 1,370 | 1,830 | 2,280 | 2,660 | 3,030 | 3,100 |
| Other Misc. Packaging | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total Containers & Pkg – recycled | 2,870 | 3,350 | 8,490 | 16,780 | 28,870 | 31,500 | 36,680 | 41,490 | 40,140 | 44,260 |

Table 24. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 To 2018
(With Detail On Containers And Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|---|-------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Total Product Wastes – recycled | 5,610 | 8,020 | 14,520 | 29,040 | 53,010 | 59,240 | 65,260 | 67,560 | 66,980 | 69,020 |
| Composted | | | | | | | | | | |
| Food - composted | | | | | | | | | | |
| Food [^] | Neg. | Neg. | Neg. | Neg. | 680 | 690 | 970 | 2,100 | 2,570 | 2,590 |
| Yard Trimmings - composted | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 4,200 | 15,770 | 19,860 | 19,200 | 21,290 | 24,420 | 22,300 |
| Misc. Inorganic Wastes - composted | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 4,200 | 16,450 | 20,550 | 20,170 | 23,390 | 26,990 | 24,890 |
| Other Food Management | | | | | | | | | | |
| Other Food Management[‡] | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 1,820 |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 1,840 |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 5,260 |
| Food - donation | | | | | | | | | | 4,790 |
| Food - land application | | | | | | | | | | 260 |
| Food – sewer/wastewater treatment | | | | | | | | | | 3,740 |
| Total Food – other food management | | | | | | | | | | 17,710 |
| Total MSW Recycled and Composted - Weight | 5,610 | 8,020 | 14,520 | 33,240 | 69,460 | 79,790 | 85,430 | 90,950 | 93,970 | 93,910 |
| Total MSW Recycled, Composted and Other Food Management - Weight | | | | | | | | | | 111,620 |

* Recycling 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.

[^] Includes collection of other MSW organics for composting.

‡ In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

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

NA = Not Available

- Detailed data not available.

Table 25. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 To 2018
(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 | 2017 | 2018 |
| Recycled | | | | | | | | | | |
| Durable Goods - recycled | 3.5% | 6.4% | 6.2% | 11.6% | 16.9% | 17.7% | 19.0% | 18.3% | 18.6% | 18.5% |
| <i>(Detail in Table 15)</i> | | | | | | | | | | |
| Nondurable Goods – recycled | 13.8% | 14.9% | 13.6% | 16.9% | 27.4% | 31.1% | 36.0% | 31.2% | 32.1% | 28.1% |
| <i>(Detail in Table 19)</i> | | | | | | | | | | |
| Containers and Packaging – recycled | | | | | | | | | | |
| Glass Packaging | | | | | | | | | | |
| Beer and Soft Drink Bottles** | 6.4% | 2.5% | 10.8% | 33.5% | 26.8% | 30.6% | 41.4% | 41.9% | 38.9% | 39.6% |
| Wine and Liquor Bottles | Neg. | Neg. | Neg. | 10.3% | 22.5% | 15.3% | 31.8% | 36.5% | 39.4% | 39.8% |
| Other Bottles & Jars | Neg. | Neg. | Neg. | 12.5% | 26.9% | 14.8% | 12.1% | 15.1% | 14.9% | 15.0% |
| Total Glass Packaging | 1.6% | 1.3% | 5.4% | 22.1% | 26.1% | 24.8% | 33.4% | 35.0% | 31.2% | 31.3% |
| 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% | 70.9% | 70.9% |
| Other Steel Packaging | Neg. | Neg. | Neg. | 30.0% | 66.7% | 66.7% | 79.5% | 79.2% | 79.2% | 81.0% |
| Total Steel Packaging | Neg. | 1.5% | 5.5% | 23.9% | 58.9% | 63.3% | 69.0% | 73.0% | 73.1% | 73.8% |
| Aluminum Packaging | | | | | | | | | | |
| Beer and Soft Drink Cans | Neg. | 10.0% | 37.6% | 63.9% | 54.6% | 44.8% | 49.6% | 54.9% | 45.1% | 50.4% |
| 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% | 31.9% | 34.9% |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | 34.4% | 21.6% | 37.4% | 48.0% | 67.3% | 71.5% | 85.0% | 92.3% | 88.4% | 96.5% |
| 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. | - | - | - | - |
| <i>Subtotal Other Paper & Paperboard Pkg</i> | | | | | | | 25.0% | 26.4% | 15.3% | 20.8% |
| Total Paper & Board Pkg | 19.4% | 14.5% | 27.4% | 36.9% | 52.7% | 59.6% | 71.3% | 78.2% | 73.3% | 80.9% |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | 3.8% | 32.6% | 22.1% | 23.2% | 29.2% | 29.9% | 29.1% | 26.8% |
| HDPE Natural Bottles | | | Neg. | 3.8% | 30.4% | 28.8% | 27.5% | 30.3% | 31.2% | 29.3% |
| Other Containers | Neg. | Neg. | Neg. | 1.4% | 9.8% | 9.9% | 16.4% | 18.6% | 15.1% | 15.6% |
| Bags and Sacks | | | | | | | | | | |
| Wraps | | | | | | | | | | |

Table 25. Products Recycled,* Composted and Managed by Other Food Pathways in the Municipal Solid Waste Stream, 1960 To 2018
(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 | 2017 | 2018 |
| <i>Subtotal Bags, Sacks and Wraps</i> | | | Neg. | 2.4% | 4.3% | 5.2% | 11.5% | 12.8% | 9.4% | 10.0% |
| Other Plastics Packaging | Neg. | Neg. | Neg. | 1.0% | 3.2% | 2.8% | 2.2% | 2.9% | 2.2% | 2.7% |
| Total Plastics Packaging | Neg. | Neg. | Neg. | 3.8% | 9.2% | 10.3% | 13.5% | 14.6% | 13.0% | 13.1% |
| Other Packaging | | | | | | | | | | |
| Wood Packaging | Neg. | Neg. | Neg. | 1.6% | 15.9% | 19.8% | 23.3% | 27.2% | 26.2% | 26.9% |
| Other Misc. Packaging | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total Containers & Pkg – recycled | 10.5% | 7.7% | 16.1% | 26.0% | 38.1% | 41.3% | 48.6% | 53.2% | 49.4% | 53.8% |
| Total Product Wastes recycled | 10.3% | 9.6% | 13.3% | 19.8% | 29.7% | 32.0% | 36.6% | 36.8% | 35.5% | 36.4% |
| Composted | | | | | | | | | | |
| Composted - Food | | | | | | | | | | |
| Food^ | Neg. | Neg. | Neg. | Neg. | 2.2% | 2.1% | 2.7% | 5.3% | 6.3% | 4.1% |
| Composted – Yard Trimmings | | | | | | | | | | |
| Yard Trimmings | Neg. | Neg. | Neg. | 12.0% | 51.7% | 61.9% | 57.5% | 61.3% | 69.4% | 63.0% |
| Composted – Misc. Inorganic Wastes | | | | | | | | | | |
| Miscellaneous Inorganic Wastes | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. |
| Total - composted | Neg. | Neg. | Neg. | 6.8% | 25.4% | 29.9% | 27.6% | 29.8% | 33.8% | 24.3% |
| Other Food Management | | | | | | | | | | |
| Other Food Management‡ | | | | | | | | | | |
| Food - animal feed | | | | | | | | | | 2.9% |
| Food - bio-based materials/biochemical processing | | | | | | | | | | 2.9% |
| Food – codigestion/anaerobic digestion | | | | | | | | | | 8.3% |
| Food - donation | | | | | | | | | | 7.6% |
| Food - land application | | | | | | | | | | 0.4% |
| Food – sewer/wastewater treatment | | | | | | | | | | 5.9% |
| Total Food – other food management | | | | | | | | | | 28.1% |
| Total MSW Recycled and Composted - % | 6.4% | 6.6% | 9.6% | 16.0% | 28.5% | 31.4% | 34.0% | 34.7% | 35.0% | 32.1% |
| Total MSW Recycled, Composted and Other Food Management - % | | | | | | | | | | 38.2% |

* Recycling 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.

^ Includes collection of other MSW organics for composting.

¥ In 2018, the food waste measurement methodology was expanded to include additional sources of generation and management pathways beyond composting, combustion with energy recovery and landfilling. Please see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>

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 2018
(With Detail on Containers and Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|--|-------------------|------|------|-------|-------|-------|-------|-------|-------|-------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 0 | 60 | 440 | 4,480 | 6,260 | 6,750 | 7,070 | 8,640 | 9,080 | 9,120 |
| <i>(Detail in Table 16)</i> | | | | | | | | | | |
| Nondurable Goods | 0 | 90 | 580 | 7,380 | 9,000 | 7,980 | 6,030 | 6,960 | 6,720 | 7,090 |
| <i>(Detail in Table 20)</i> | | | | | | | | | | |
| Containers and Packaging | | | | | | | | | | |
| Glass Packaging | | | | | | | | | | |
| Beer and Soft Drink Bottles** | 0 | 20 | 120 | 640 | 810 | 830 | 590 | 610 | 580 | 550 |
| Wine and Liquor Bottles | 0 | 10 | 50 | 310 | 290 | 250 | 210 | 230 | 210 | 210 |
| Other Bottles & Jars | 0 | 20 | 100 | 620 | 490 | 350 | 310 | 330 | 540 | 550 |
| Total Glass Packaging | 0 | 50 | 270 | 1,570 | 1,590 | 1,430 | 1,110 | 1,170 | 1,330 | 1,310 |
| 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 | 80 | 90 |
| Other Steel Packaging | 0 | Neg. | Neg. | 20 | 20 | 10 | 20 | 20 | 20 | 20 |
| Total Steel Packaging | 0 | 20 | 60 | 370 | 230 | 150 | 150 | 120 | 100 | 110 |
| Aluminum Packaging | | | | | | | | | | |
| Beer and Soft Drink Cans | 0 | Neg. | 10 | 100 | 130 | 150 | 120 | 110 | 140 | 130 |
| Other Cans | 0 | Neg. | Neg. | Neg. | 10 | 10 | 10 | 30 | 10 | 20 |
| Foil and Closures | 0 | Neg. | 10 | 50 | 70 | 70 | 80 | 100 | 100 | 100 |
| Total Aluminum Pkg | 0 | Neg. | 20 | 150 | 210 | 230 | 210 | 240 | 250 | 250 |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | 0 | 40 | 210 | 2,120 | 1,920 | 1,610 | 770 | 470 | 740 | 230 |
| 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 | - | - | - | - |
| <i>Subtotal Other Paper & Paperboard Pkg</i> | | | | | | | 1,150 | 1,240 | 1,420 | 1,340 |
| Total Paper & Board Pkg | 0 | 70 | 380 | 3,500 | 3,670 | 2,920 | 1,920 | 1,710 | 2,160 | 1,570 |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | Neg. | 50 | 260 | 350 | 330 | 410 | 410 | 450 |
| HDPE Natural Bottles | | | Neg. | 90 | 90 | 100 | 100 | 100 | 100 | 100 |
| Other Containers | 0 | Neg. | 20 | 240 | 300 | 230 | 270 | 310 | 330 | 330 |
| Bags and Sacks | | | | | | | | | | |
| Wraps | | | | | | | | | | |
| <i>Subtotal Bags, Sacks and Wraps</i> | | | 30 | 410 | 780 | 770 | 620 | 710 | 740 | 740 |
| Other Plastics Packaging | 0 | Neg. | 20 | 340 | 530 | 570 | 770 | 930 | 890 | 850 |
| Total Plastics Packaging | 0 | Neg. | 70 | 1,130 | 1,960 | 2,020 | 2,090 | 2,460 | 2,470 | 2,470 |

Table 26. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2018
(With Detail on Containers and Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|--|-------------------|------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Other Packaging | | | | | | | | | | |
| Wood Packaging | 0 | 10 | 80 | 1,370 | 1,400 | 1,350 | 1,330 | 1,390 | 1,670 | 1,650 |
| 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 | 8,050 | 7,430 |
| Total Product Wastes | 0 | 300 | 1,900 | 19,970 | 24,370 | 22,890 | 19,970 | 22,760 | 23,850 | 23,640 |
| Other Wastes | | | | | | | | | | |
| Food | 0 | 50 | 260 | 4,060 | 5,820 | 5,870 | 6,150 | 7,380 | 7,470 | 7,550 |
| Yard Trimmings | 0 | 90 | 550 | 5,240 | 2,860 | 2,220 | 2,510 | 2,630 | 2,110 | 2,570 |
| Miscellaneous Inorganic Wastes | 0 | 10 | 50 | 490 | 680 | 670 | 680 | 780 | 790 | 800 |
| Total Other Wastes | 0 | 150 | 860 | 9,790 | 9,360 | 8,760 | 9,340 | 10,790 | 10,370 | 10,920 |
| Total MSW Combusted with Energy Recovery - Weight | 0 | 450 | 2,760 | 29,760 | 33,730 | 31,650 | 29,310 | 33,550 | 32,220 | 34,560 |

* Products and materials combusted with energy recovery estimated at percentage total MSW after recycling and composting. In 2018, 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 for details) and food (percentage distribution for food varies by generator sector, see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>). 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.

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 2018
(With Detail on Containers and Packaging)
(In percent of total combusted)

| Products | Percent of Total Combusted | | | | | | | | | |
|--|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | | 13.3% | 15.9% | 15.1% | 18.6% | 21.3% | 24.1% | 25.8% | 26.5% | 26.4% |
| <i>(Detail in Table 16)</i> | | | | | | | | | | |
| Nondurable Goods | | 19.9% | 21.0% | 24.8% | 26.7% | 25.2% | 20.6% | 20.7% | 19.7% | 20.5% |
| <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% | 1.7% | 1.6% |
| 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% | 1.6% | 1.6% |
| Total Glass Packaging | | 11.1% | 9.8% | 5.3% | 4.7% | 4.5% | 3.8% | 3.5% | 3.9% | 3.8% |
| 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% | 0.2% | 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% | 0.3% | 0.3% |
| Aluminum Packaging | | | | | | | | | | |
| Beer and Soft Drink Cans | | Neg. | 0.4% | 0.3% | 0.4% | 0.5% | 0.4% | 0.3% | 0.3% | 0.4% |
| Other Cans | | Neg. | Neg. | Neg. | Neg. | Neg. | Neg. | 0.1% | 0.0% | 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% | 0.6% | 0.7% |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | | 8.9% | 7.6% | 7.1% | 5.7% | 5.1% | 2.6% | 1.4% | 2.2% | 0.7% |
| 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% | 4.1% | 3.8% |
| Total Paper & Board Pkg | | 15.6% | 13.8% | 11.8% | 10.9% | 9.2% | 6.6% | 5.1% | 6.3% | 4.5% |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | Neg. | 0.2% | 0.8% | 1.1% | 1.1% | 1.3% | 1.2% | 1.3% |
| 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% | 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% | 2.2% | 2.1% |
| Other Plastics Packaging | | Neg. | 0.7% | 1.1% | 1.5% | 1.8% | 2.6% | 2.8% | 2.6% | 2.5% |
| Total Plastics Packaging | | Neg. | 2.5% | 3.8% | 5.8% | 6.4% | 7.1% | 7.4% | 7.2% | 7.2% |
| 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% | 23.4% | 21.5% |
| Total Product Wastes | | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 68.4% |

Table 27. Products Combusted with Energy Recovery* in Municipal Solid Waste, 1960 to 2018
(With Detail on Containers and Packaging)
(In percent of total combusted)

| Products | Percent of Total Combusted | | | | | | | | | |
|---|----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Other Wastes | | | | | | | | | | |
| Food | | 11.1% | 9.4% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 21.9% |
| Yard Trimmings | | 20.0% | 20.0% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.4% |
| 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% | 30.3% | 31.6% |
| 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 2018, 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 for details) and food (percentage distribution for food varies by generator sector, see <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/food-material-specific-data>). 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.

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 2018
(With Detail on Containers and Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|--|-------------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 9,570 | 13,660 | 20,000 | 21,870 | 26,030 | 30,340 | 32,890 | 35,420 | 37,240 | 37,410 |
| <i>(Detail in Table 17)</i> | | | | | | | | | | |
| Nondurable Goods | 14,940 | 21,240 | 29,170 | 35,990 | 37,450 | 35,900 | 28,030 | 28,660 | 27,690 | 29,160 |
| <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 | 2,370 | 2,260 |
| Wine and Liquor Bottles | 1,070 | 1,880 | 2,380 | 1,510 | 1,190 | 1,130 | 950 | 920 | 880 | 880 |
| Other Bottles & Jars | 3,710 | 4,420 | 4,680 | 3,020 | 2,010 | 1,600 | 1,440 | 1,360 | 2,200 | 2,280 |
| Total Glass Packaging | 6,090 | 11,720 | 12,950 | 7,640 | 6,570 | 6,440 | 5,120 | 4,760 | 5,450 | 5,420 |
| 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 | 350 | 370 |
| Other Steel Packaging | 260 | 270 | 240 | 120 | 60 | 70 | 70 | 80 | 90 | 100 |
| Total Steel Packaging | 4,630 | 5,280 | 3,350 | 1,830 | 950 | 720 | 700 | 480 | 440 | 470 |
| Aluminum Packaging | | | | | | | | | | |
| Beer and Soft Drink Cans | Neg. | 90 | 520 | 460 | 560 | 650 | 570 | 440 | 590 | 530 |
| Other Cans | Neg. | 60 | 40 | 20 | 40 | 70 | 60 | 100 | 40 | 60 |
| Foil and Closures | 170 | 410 | 370 | 260 | 280 | 290 | 380 | 390 | 400 | 410 |
| Total Aluminum Pkg | 170 | 560 | 930 | 740 | 880 | 1,010 | 1,010 | 930 | 1,030 | 1,000 |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | 4,810 | 9,960 | 10,480 | 10,360 | 7,960 | 7,220 | 3,590 | 1,930 | 3,020 | 940 |
| 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 | - | - | - | - |
| <i>Subtotal Other Paper & Paperboard Pkg</i> | | | | | | | 5,320 | 5,080 | 5,800 | 5,500 |
| Total Paper & Board Pkg | 11,370 | 18,220 | 18,760 | 17,110 | 15,230 | 13,110 | 8,910 | 7,010 | 8,820 | 6,440 |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | 250 | 240 | 1,080 | 1,600 | 1,560 | 1,680 | 1,690 | 1,840 |
| 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 | 1,360 | 1,350 |
| Bags and Sacks | | | | | | | | | | |
| Wraps | | | | | | | | | | |
| <i>Subtotal Bags, Sacks and Wraps</i> | | | 1,200 | 2,000 | 3,240 | 3,450 | 2,860 | 2,890 | 3,010 | 3,040 |
| Other Plastics Packaging | 60 | 1,180 | 770 | 1,680 | 2,220 | 2,550 | 3,580 | 3,800 | 3,640 | 3,490 |
| Total Plastics Packaging | 120 | 2,090 | 3,320 | 5,510 | 8,200 | 9,120 | 9,740 | 10,070 | 10,130 | 10,150 |
| Other Packaging | | | | | | | | | | |
| Wood Packaging | 2,000 | 2,060 | 3,860 | 6,680 | 5,840 | 6,050 | 6,160 | 5,720 | 6,860 | 6,780 |
| Other Misc. Packaging | 120 | 130 | 130 | 130 | 190 | 220 | 280 | 300 | 280 | 270 |
| Total Containers & Pkg | 24,500 | 40,060 | 43,300 | 39,640 | 37,860 | 36,670 | 31,920 | 29,270 | 33,010 | 30,530 |
| Total Product Wastes | 49,010 | 74,960 | 92,470 | 97,500 | 101,340 | 102,910 | 92,840 | 93,350 | 97,940 | 97,100 |

Table 28. Products Landfilled* in Municipal Solid Waste, 1960 to 2018
(With Detail on Containers and Packaging)
(In thousands of tons)

| Products | Thousands of Tons | | | | | | | | | |
|--------------------------------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Other Wastes | | | | | | | | | | |
| Food | 12,200 | 12,750 | 12,740 | 19,800 | 24,200 | 26,370 | 28,620 | 30,250 | 30,630 | 35,280 |
| Yard Trimmings | 20,000 | 23,110 | 26,950 | 25,560 | 11,900 | 9,990 | 11,690 | 10,800 | 8,650 | 10,530 |
| Miscellaneous Inorganic Wastes | 1,300 | 1,770 | 2,200 | 2,410 | 2,820 | 3,020 | 3,160 | 3,210 | 3,250 | 3,270 |
| Total Other Wastes | 33,500 | 37,630 | 41,890 | 47,770 | 38,920 | 39,380 | 43,470 | 44,260 | 42,530 | 49,080 |
| Total MSW Landfilled - Weight | 82,510 | 112,590 | 134,360 | 145,270 | 140,260 | 142,290 | 136,310 | 137,610 | 140,470 | 146,180 |

* Landfilling after recycling, composting, other food management pathways 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.

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 2018
(With Detail on Containers and Packaging)
(In percent of total landfilled)

| Products | Percent of Total Landfilled | | | | | | | | | |
|--|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Durable Goods | 11.6% | 12.1% | 14.9% | 15.0% | 18.6% | 21.3% | 24.1% | 25.7% | 26.5% | 25.6% |
| <i>(Detail in Table 17)</i> | | | | | | | | | | |
| Nondurable Goods | 18.1% | 18.9% | 21.7% | 24.8% | 26.7% | 25.2% | 20.6% | 20.8% | 19.7% | 19.9% |
| <i>(Detail in Table 21)</i> | | | | | | | | | | |
| 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% | 1.7% | 1.5% |
| Wine and Liquor Bottles | 1.3% | 1.7% | 1.8% | 1.0% | 0.8% | 0.8% | 0.7% | 0.7% | 0.6% | 0.6% |
| Other Bottles & Jars | 4.5% | 3.9% | 3.5% | 2.1% | 1.5% | 1.1% | 1.1% | 1.0% | 1.6% | 1.6% |
| Total Glass Packaging | 7.4% | 10.4% | 9.6% | 5.3% | 4.7% | 4.5% | 3.8% | 3.5% | 3.9% | 3.7% |
| 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% | 0.2% | 0.2% |
| 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% | 0.3% | 0.3% |
| 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% | 0.0% | 0.0% |
| 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% | 0.7% | 0.7% |
| Paper & Paperboard Pkg | | | | | | | | | | |
| Corrugated Boxes | 5.8% | 8.8% | 7.8% | 7.1% | 5.7% | 5.1% | 2.6% | 1.4% | 2.1% | 0.6% |
| 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% | - | - | - | - |
| <i>Subtotal Other Paper & Paperboard Pkg</i> | | | | | | | 3.9% | 3.7% | 4.1% | 3.8% |
| Total Paper & Board Pkg | 13.8% | 16.2% | 14.0% | 11.8% | 10.9% | 9.2% | 6.5% | 5.1% | 6.3% | 4.4% |
| Plastics Packaging | | | | | | | | | | |
| PET Bottles and Jars | | | 0.2% | 0.2% | 0.8% | 1.1% | 1.1% | 1.2% | 1.2% | 1.3% |
| 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% | 1.0% | 0.9% |
| Bags and Sacks | | | | | | | | | | |
| Wraps | | | | | | | | | | |
| <i>Subtotal Bags, Sacks and Wraps</i> | | | 0.9% | 1.4% | 2.3% | 2.4% | 2.1% | 2.1% | 2.1% | 2.1% |
| Other Plastics Packaging | 0.1% | 1.0% | 0.6% | 1.2% | 1.5% | 1.8% | 2.6% | 2.8% | 2.6% | 2.4% |
| Total Plastics Packaging | 0.1% | 1.9% | 2.5% | 3.8% | 5.8% | 6.4% | 7.1% | 7.3% | 7.2% | 7.0% |
| Other Packaging | | | | | | | | | | |
| Wood Packaging | 2.4% | 1.8% | 2.9% | 4.6% | 4.2% | 4.3% | 4.5% | 4.2% | 4.9% | 4.6% |
| 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% | 23.5% | 20.9% |
| Total Product Wastes | 59.4% | 66.6% | 68.8% | 67.1% | 72.3% | 72.3% | 68.1% | 67.9% | 69.7% | 66.4% |
| Other Wastes | | | | | | | | | | |
| Food | 14.8% | 11.3% | 9.5% | 13.6% | 17.3% | 18.5% | 21.0% | 22.0% | 21.8% | 24.1% |
| Yard Trimmings | 24.2% | 20.5% | 20.1% | 17.6% | 8.5% | 7.0% | 8.6% | 7.8% | 6.2% | 7.2% |
| 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% | 30.3% | 33.6% |
| 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, other food management pathways 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.

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"> Optimize food packaging (size and design) to maximize consumption of product Trayless dining in cafeterias Smaller plates and portions in food service settings Standardized food product date labeling |
| 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 | <ul style="list-style-type: none"> Marketing, sale and consumption of off-grade produce |
| 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"> Use intelligent packaging that extends shelf life and prevents spoilage of food products |
| Consumer and Business 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"> Implement xeriscaping Perform backyard composting, vermicomposting and grasscycling Donate food from businesses Businesses can use just in time ordering/inventory control Businesses can avoid food spoilage by changing: <ul style="list-style-type: none"> Storage and transportation Supply chain management Adjust menus to reduce frequently uneaten or wasted items Avoid spoilage by monitoring and tracking food and purchases and use Perform proper food storage and preparation Repurpose (e.g., older bread can be made into croutons) |

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.) |
| 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 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 | <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 | |
| 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 31. Households with Residential Food Collection Programs in the U.S., 2018*

| 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% |

*Table presents 2017 data, the most recent data as of July 2020.

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 32. Material Recovery Facilities (MRF), 2018*

| 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 33. Municipal Waste-To-Energy Projects, 2018

| Region | Number Operational | Design Capacity (tons per day) |
|--------------------|--------------------|--------------------------------|
| NORTHEAST | 37 | 44,807 |
| SOUTH | 19 | 32,194 |
| MIDWEST | 14 | 11,524 |
| WEST | 5 | 6,530 |
| U.S. Total* | 75 | 95,055 |

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

Source: "The 2018 ERC Directory of Waste-to-Energy Facilities." Energy Recovery Council (ERC). 2018.

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 34. Landfill Facilities, 2018

| Region | Number of Landfills |
|--------------------------|---------------------|
| NORTHEAST | 105 |
| SOUTH | 491 |
| MIDWEST | 345 |
| WEST | 328 |
| <i>U.S. Total</i> | <i>1,269</i> |

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 2018
(In thousands of tons and percent of total generation)

| | Thousands of Tons | | | | | | | | | |
|---------------------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Generation | 88,120 | 121,060 | 151,640 | 208,270 | 243,450 | 253,730 | 251,050 | 262,110 | 268,660 | 292,360 |
| Recycling | 5,610 | 8,020 | 14,520 | 29,040 | 53,010 | 59,240 | 65,260 | 67,560 | 66,980 | 69,020 |
| Composting* | Neg. | Neg. | Neg. | 4,200 | 16,450 | 20,550 | 20,170 | 23,390 | 26,990 | 24,890 |
| Other food management** | | | | | | | | | | 17,710 |
| Combustion with energy recovery‡ | 0 | 450 | 2,760 | 29,760 | 33,730 | 31,650 | 29,310 | 33,550 | 34,220 | 34,560 |
| Discards to landfill, other disposal† | 82,510 | 112,590 | 134,360 | 145,270 | 140,260 | 142,290 | 136,310 | 137,610 | 140,470 | 146,180 |
| | Pounds per Person per Day | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| Generation | 2.68 | 3.25 | 3.66 | 4.57 | 4.74 | 4.69 | 4.45 | 4.48 | 4.53 | 4.90 |
| Recycling | 0.17 | 0.22 | 0.35 | 0.64 | 1.03 | 1.10 | 1.16 | 1.15 | 1.13 | 1.16 |
| Composting* | Neg. | Neg. | Neg. | 0.09 | 0.32 | 0.38 | 0.36 | 0.40 | 0.45 | 0.42 |
| Other food management** | | | | | | | | | | 0.30 |
| Combustion with energy recovery‡ | 0.00 | 0.01 | 0.07 | 0.65 | 0.66 | 0.59 | 0.52 | 0.57 | 0.58 | 0.58 |
| Discards to landfill, other disposal† | 2.51 | 3.02 | 3.24 | 3.19 | 2.73 | 2.62 | 2.41 | 2.36 | 2.37 | 2.44 |
| Population (thousands) | 179,979 | 203,984 | 227,255 | 249,907 | 281,422 | 296,410 | 309,051 | 320,897 | 325,147 | 327,167 |
| | Percent of Total Generation | | | | | | | | | |
| | 1960 | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 | 2018 |
| 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% | 24.9% | 23.6% |
| Composting* | Neg. | Neg. | Neg. | 2.0% | 6.7% | 8.1% | 8.0% | 8.9% | 10.1% | 8.5% |
| Other food management** | | | | | | | | | | 6.1% |
| Combustion with energy recovery‡ | 0.0% | 0.3% | 1.8% | 14.2% | 13.9% | 12.5% | 11.7% | 12.8% | 12.7% | 11.8% |
| Landfilling and other disposal† | 93.6% | 93.1% | 88.6% | 69.8% | 57.6% | 56.1% | 54.3% | 52.5% | 52.3% | 50.0% |

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

** Includes the following management pathways: animal feed, bio-based materials/biochemical processing, codigestion/anaerobic digestion, donation, land application, and sewer/wastewater treatment

‡ 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). 2018 includes 30,200 MSW, 1,650 wood, and 2,710 tires (1,000 tons)

† Landfilling after recycling, composting, other food management, and combustion with 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 | ■ Agricultural wastes |
| ■ Industrial nonhazardous process wastes | ■ Oil and gas wastes |
| ■ Construction and demolition debris* | ■ Mining wastes |
| ■ Land clearing debris | ■ Auto bodies |
| ■ Transportation parts and equipment | ■ Grease and oils (non-food) |

*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 3. Paper and Paperboard Products Generated in MSW, 2018

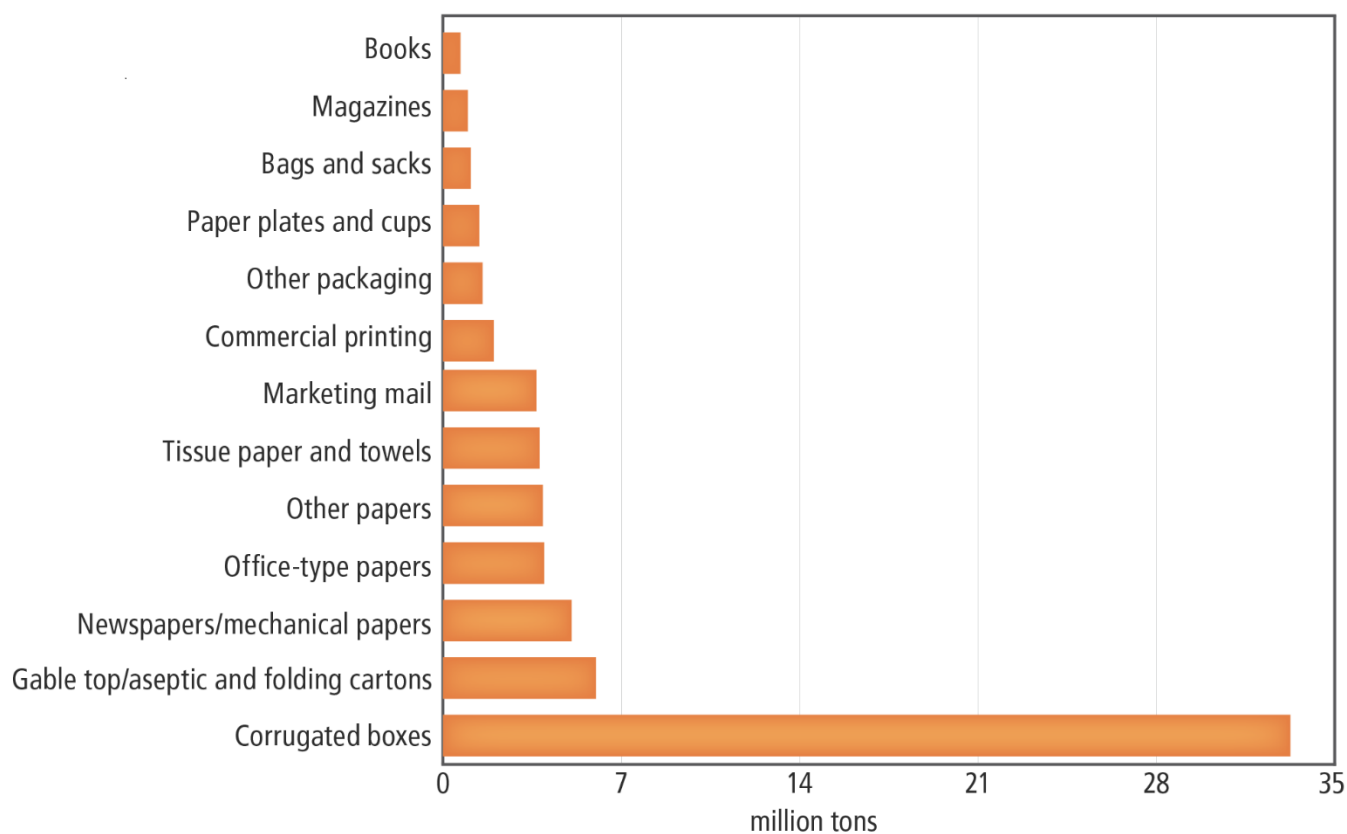


Figure 4. Paper and Paperboard Generation and Recycling, 1960 to 2018

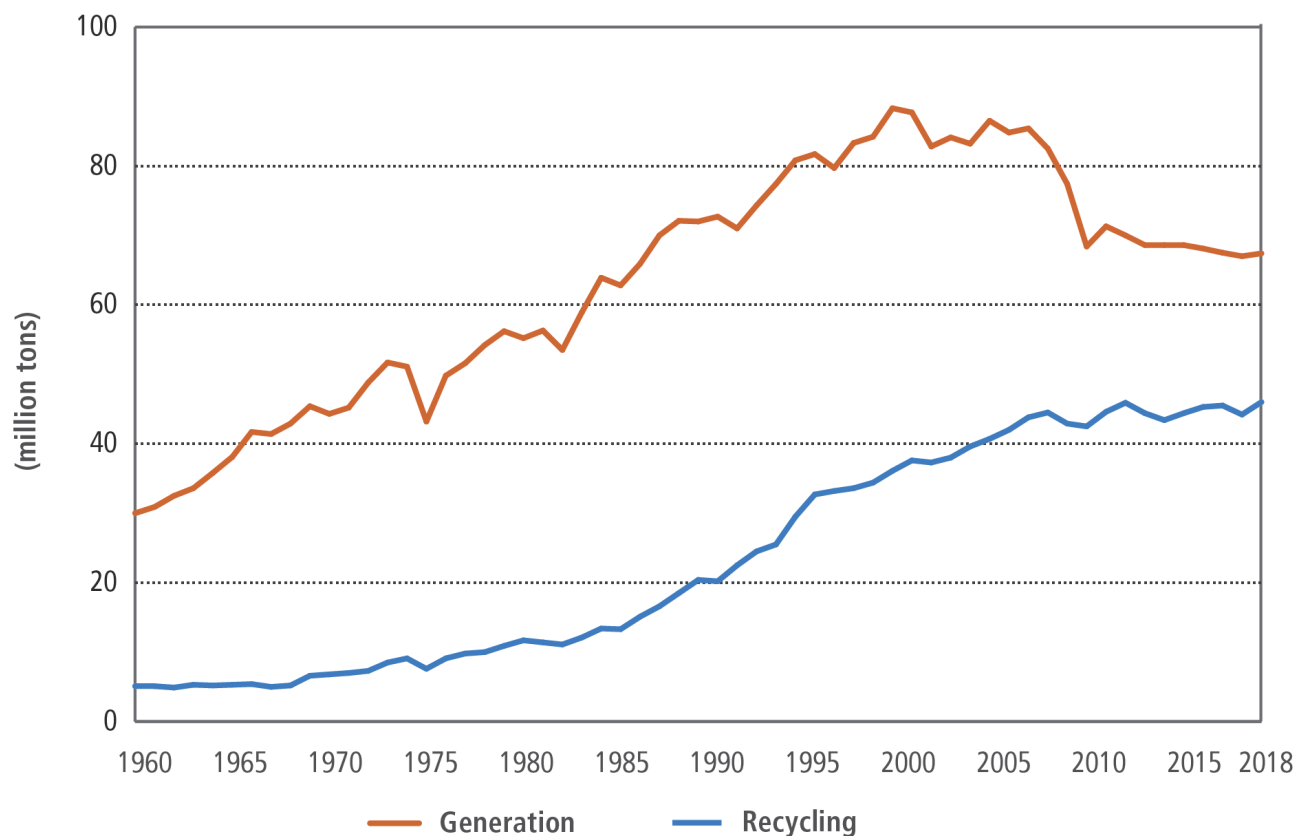


Figure 5. Glass Products Generated in MSW, 2018

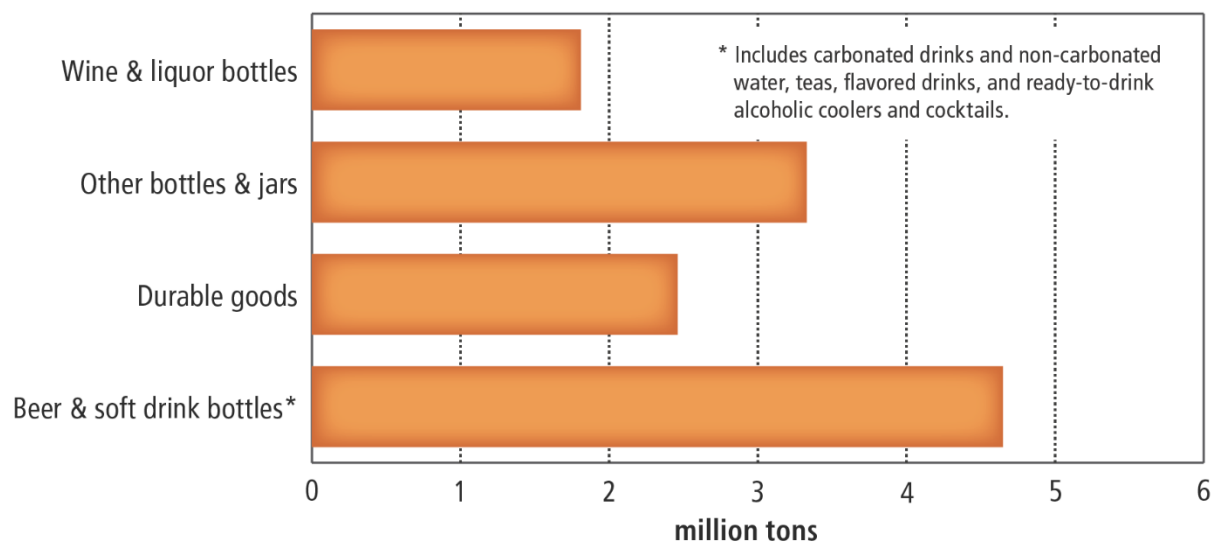


Figure 6. Glass Generation and Recycling, 1960 to 2018

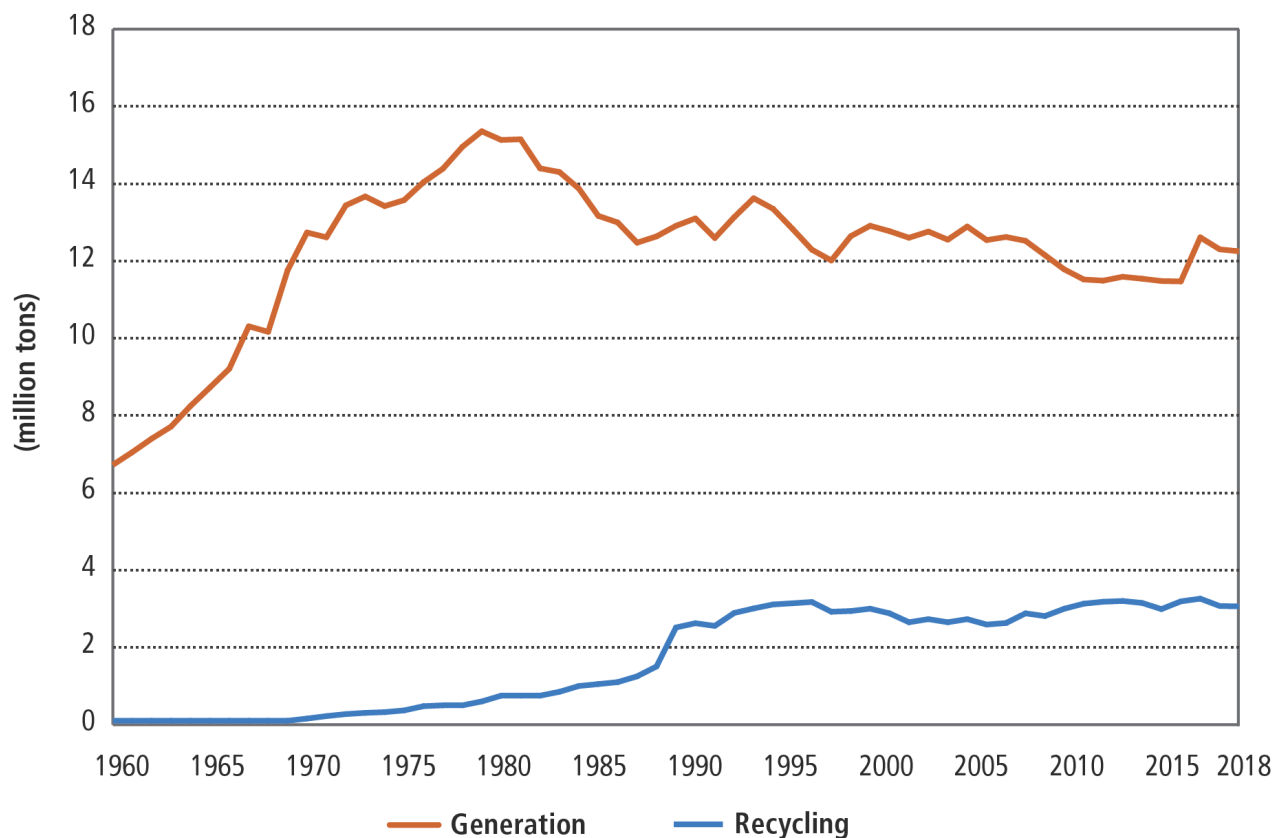


Figure 7. Metal Products Generated in MSW, 2018

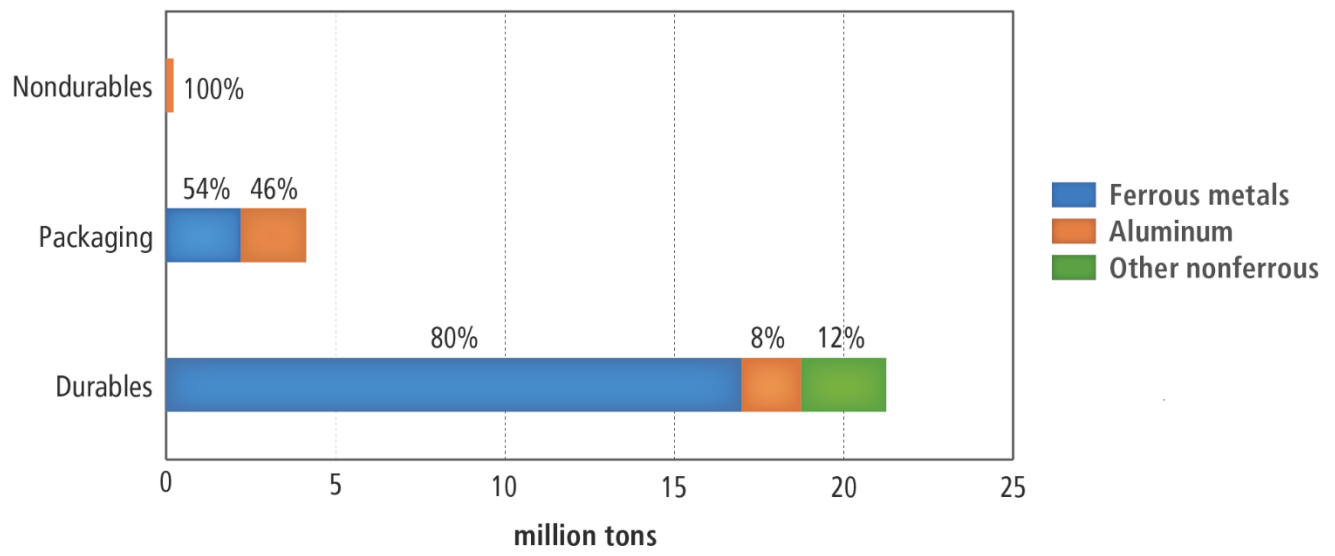


Figure 8. Metals Generation and Recycling, 1960 to 2018

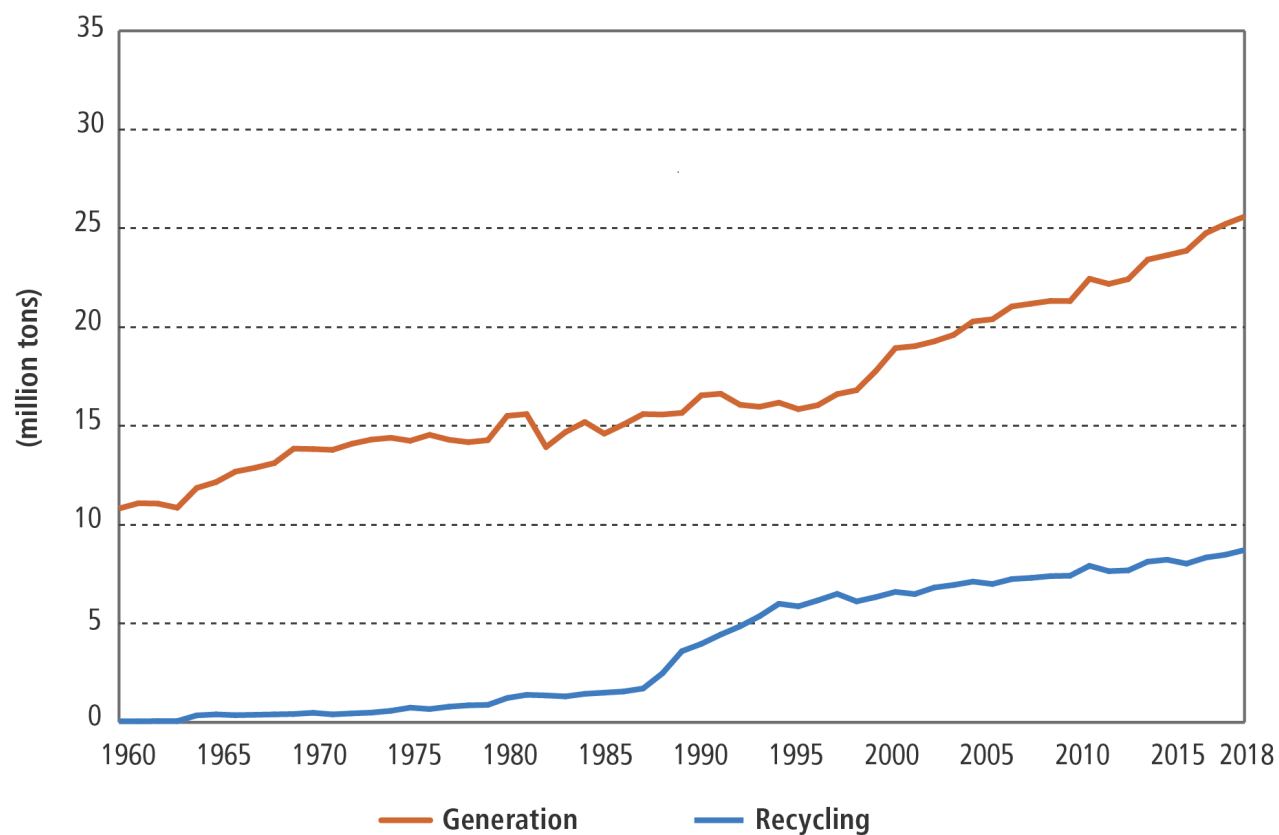


Figure 9. Plastics Products Generated in MSW, 2018

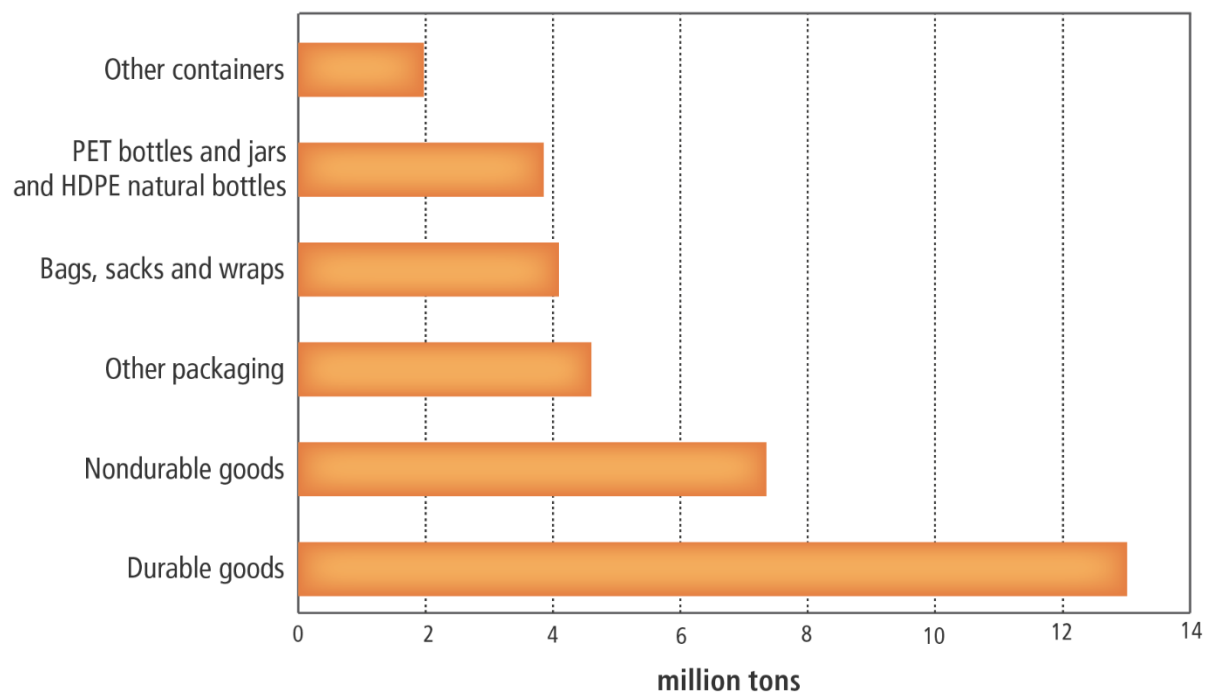


Figure 10. Plastics Generation and Recycling, 1960 to 2018

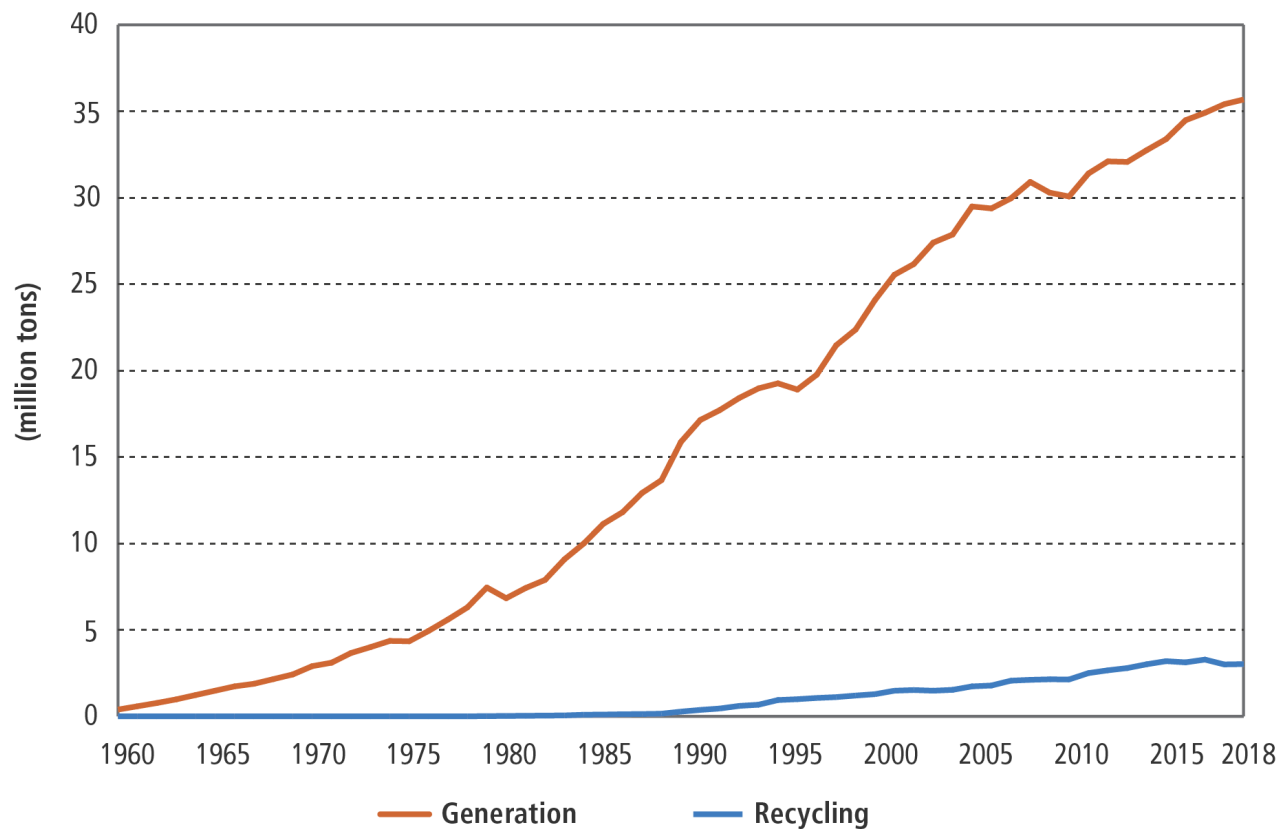
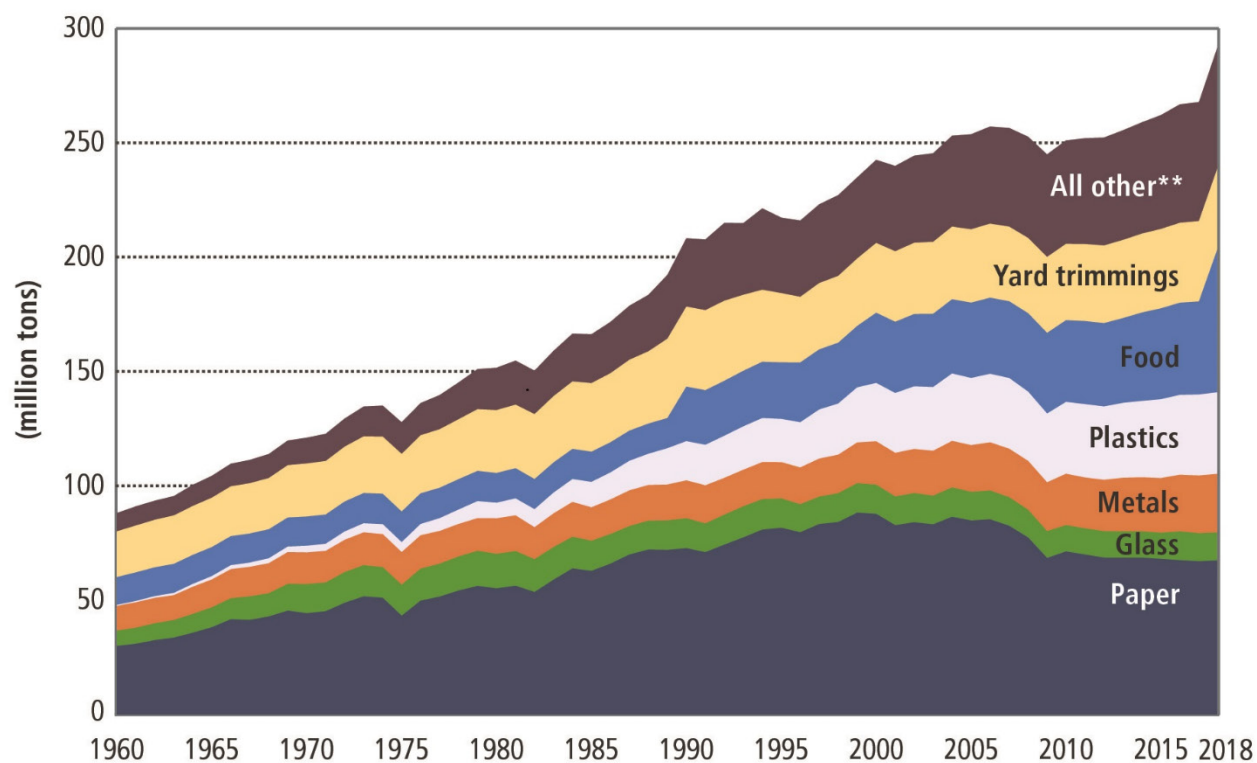


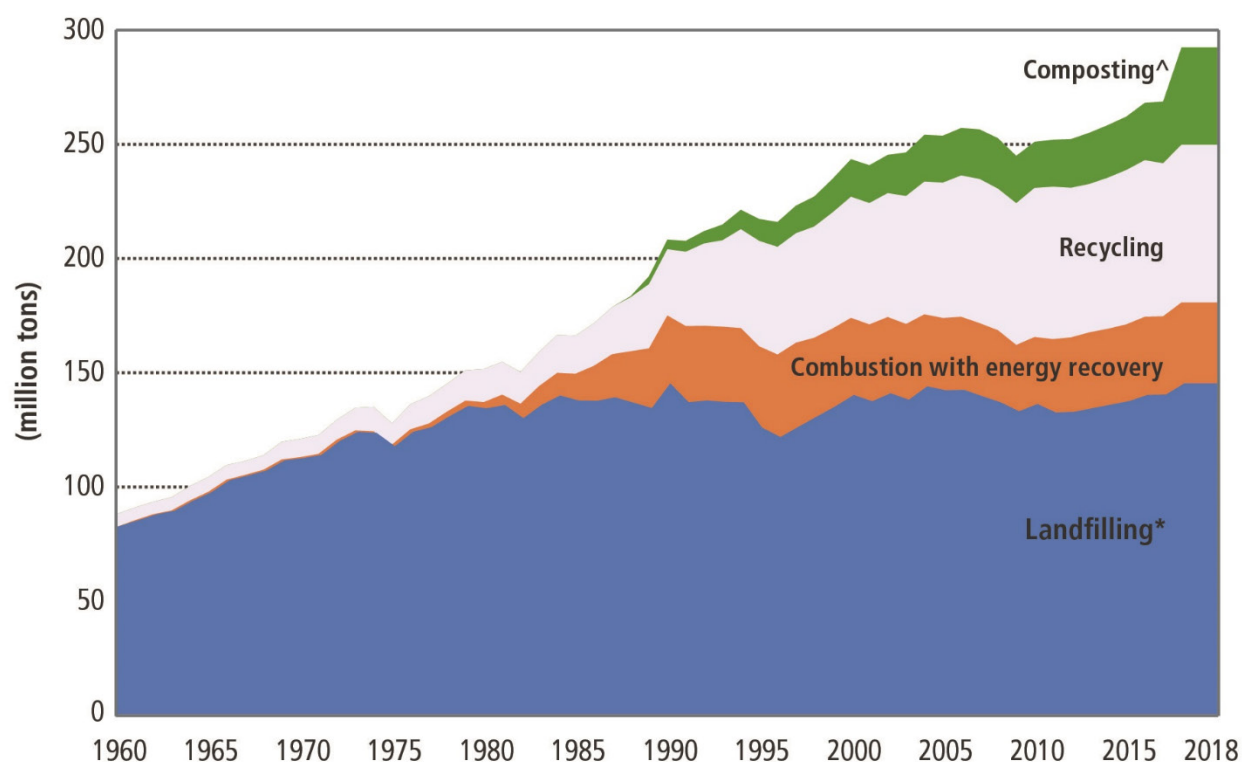
Figure 11. Generation of Materials in MSW, 1960 to 2018*



* Generation rose considerably from 2017 to 2018 mainly because EPA enhanced its food measurement methodology to more fully account for all the ways wasted food is managed throughout the food system.

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

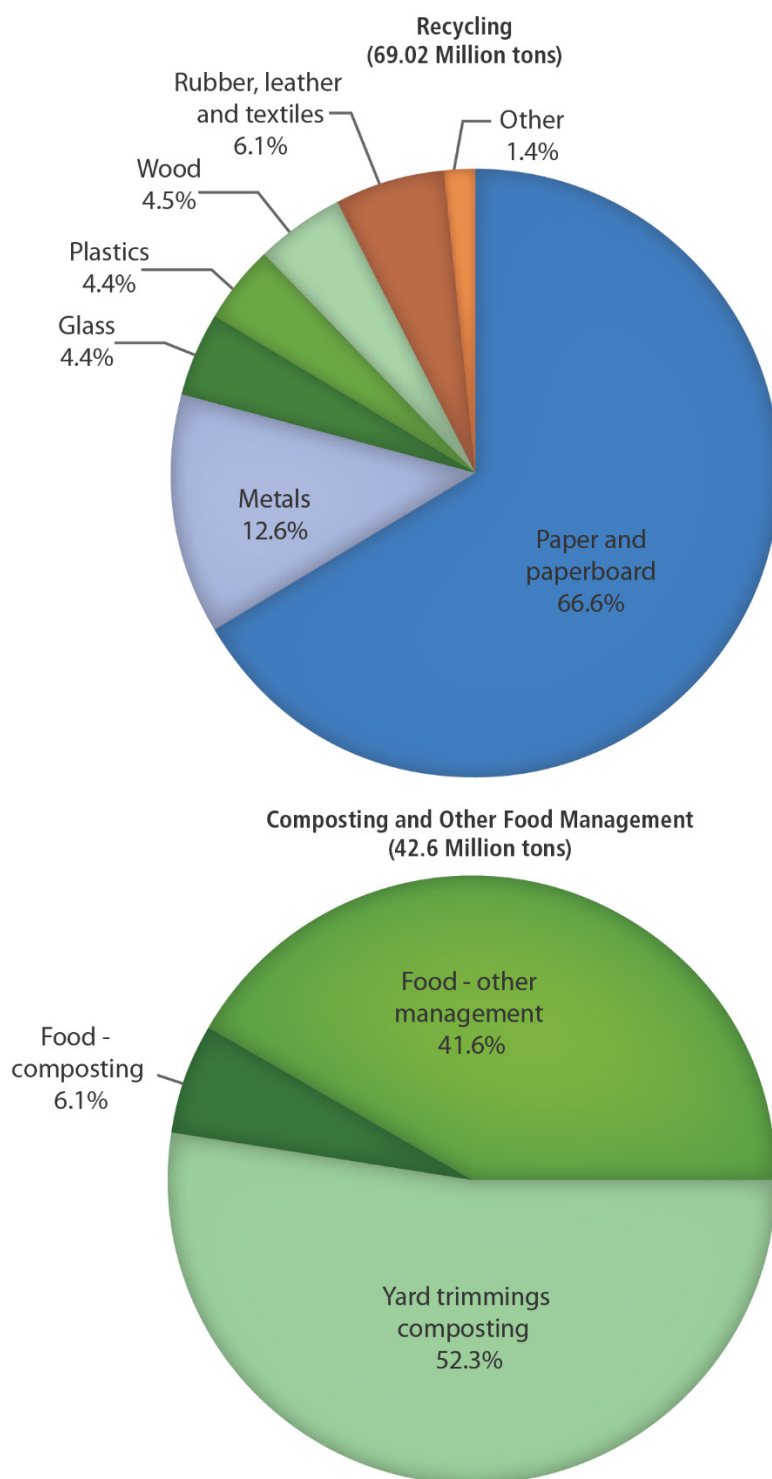
Figure 12. Recycled, Composted, Managed By Other Food Pathways, Combustion with Energy Recovery and Landfilling of Materials in MSW, 1960 to 2018



^ In this figure composting and other food management pathways are combined.

* Landfilling after composting, food waste management, 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 13. Materials Recycling, Composting and Other Food Management in MSW,* 2018



* In percent by weight of total recycling and composting and other food management

Figure 14. Materials Generated, Combusted with Energy Recovery and Landfilled in MSW, 2018

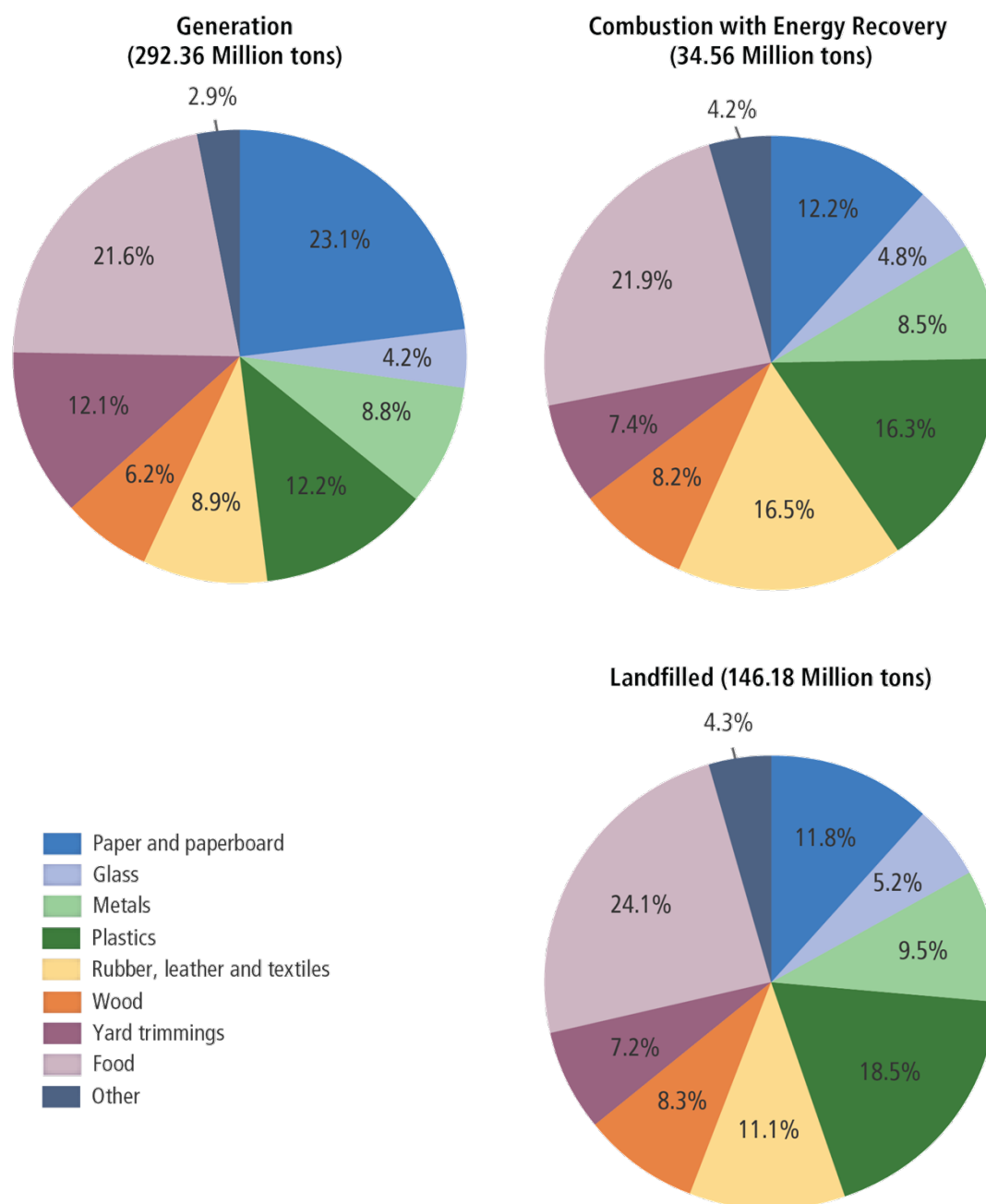
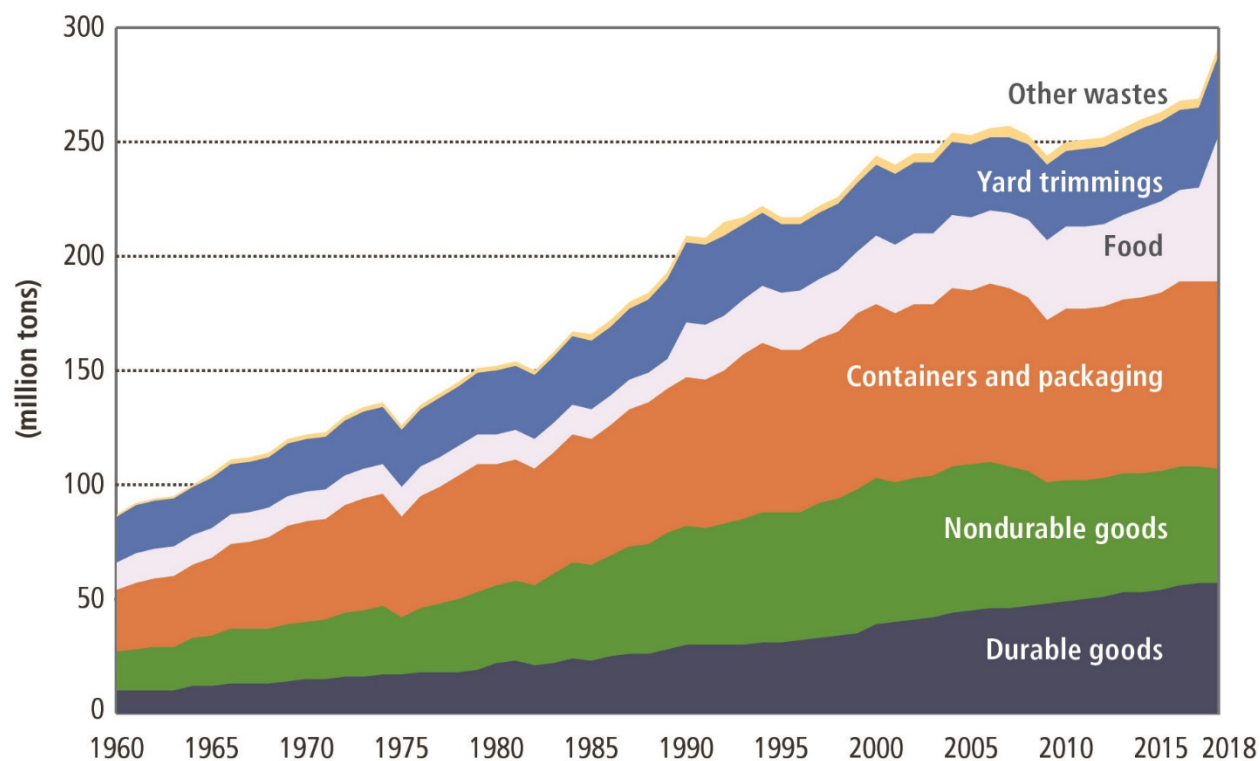


Figure 15. Generation of Products in MSW, 1960 to 2018*



* Generation rose considerably from 2017 to 2018 mainly because EPA enhanced its food measurement methodology to more fully account for all the ways wasted food is managed throughout the food system.

Figure 16. Nondurable Goods Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2018

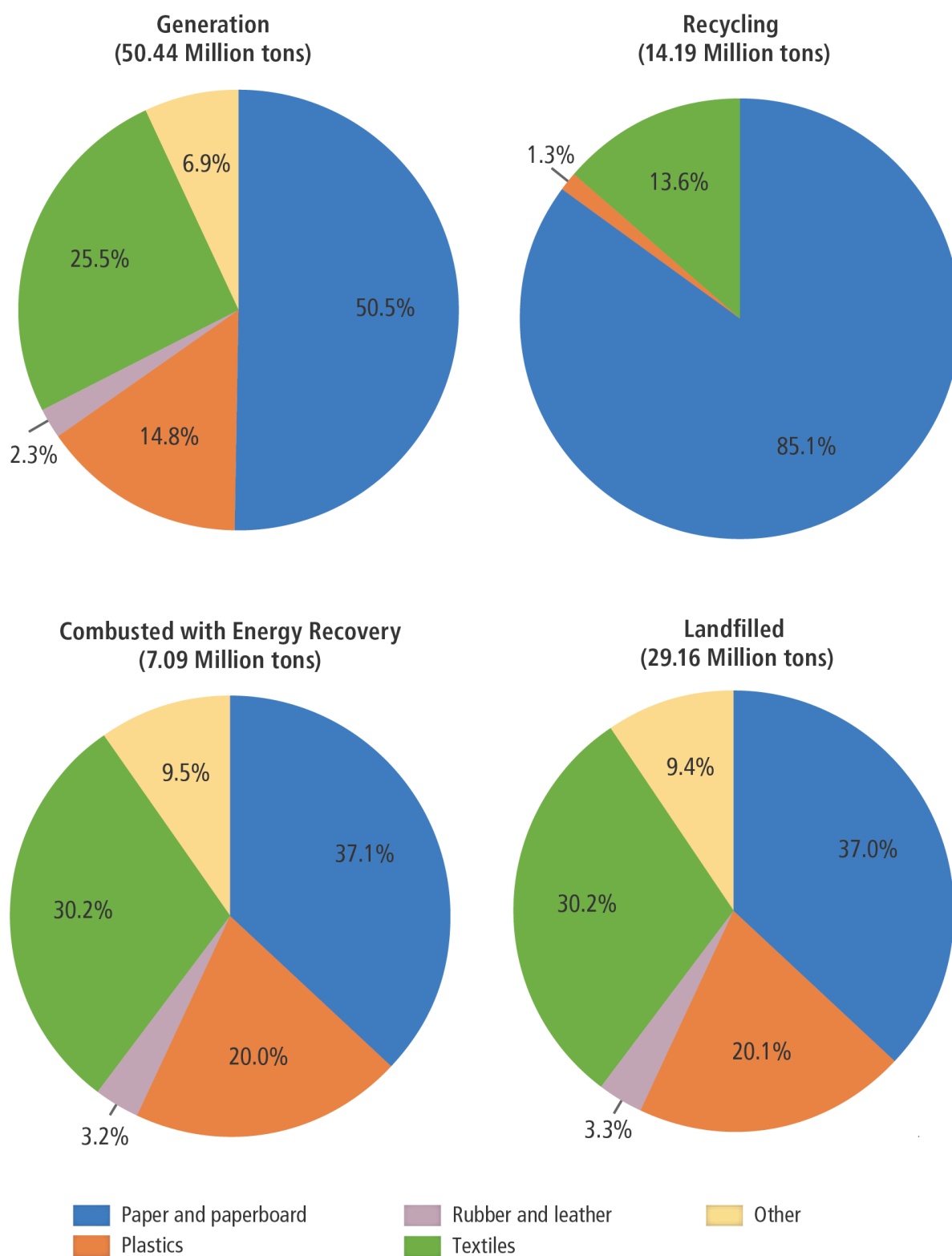
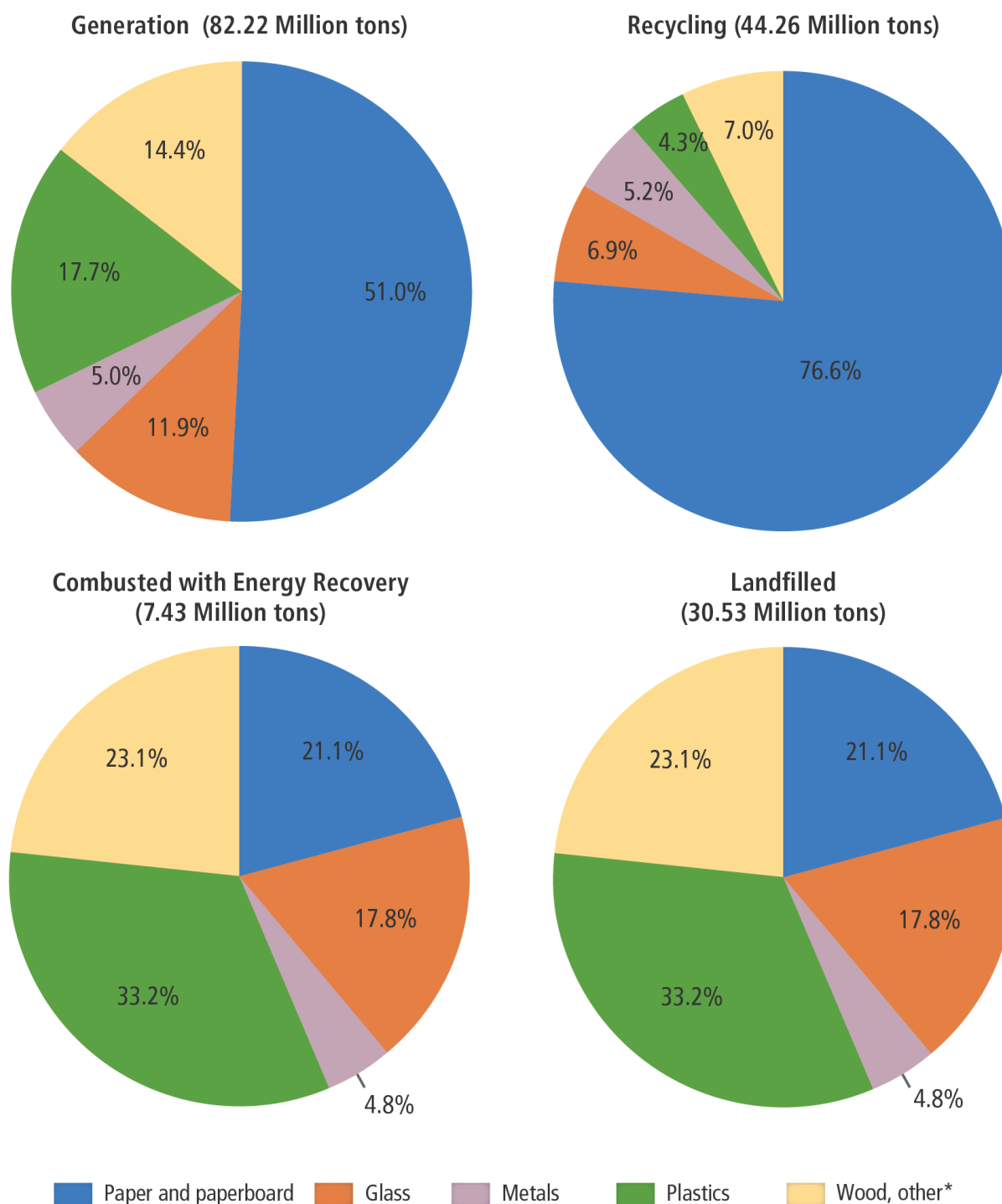


Figure 17. Containers and Packaging Materials Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2018



*Primarily wood, with less than 1% textiles.

Figure 18. Containers and Packaging Products Generated, Recycled, Combusted with Energy Recovery and Landfilled in Municipal Solid Waste, 2018

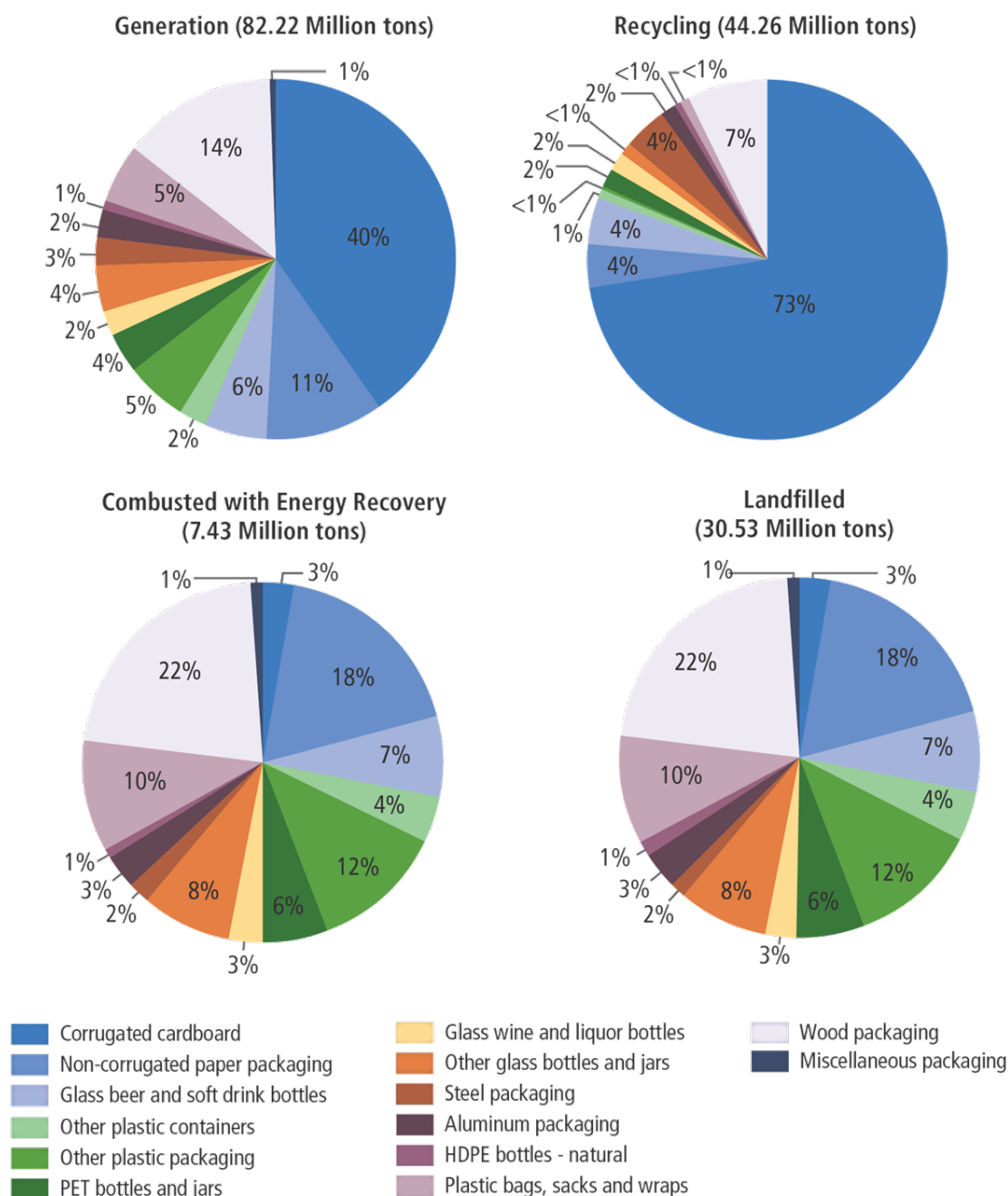


Figure 19. Diagram of Solid Waste Management

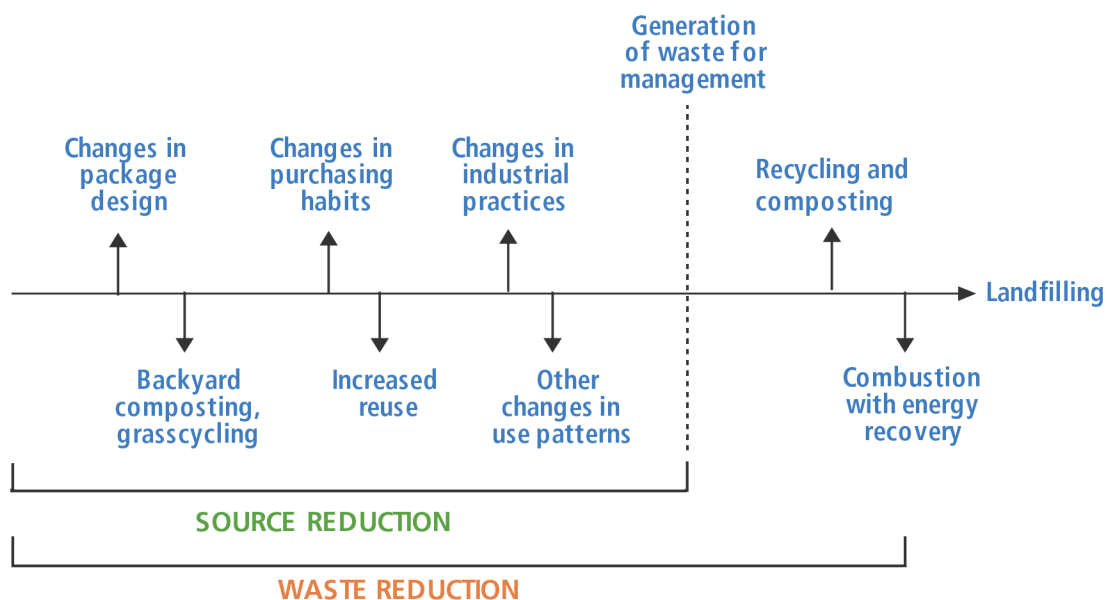
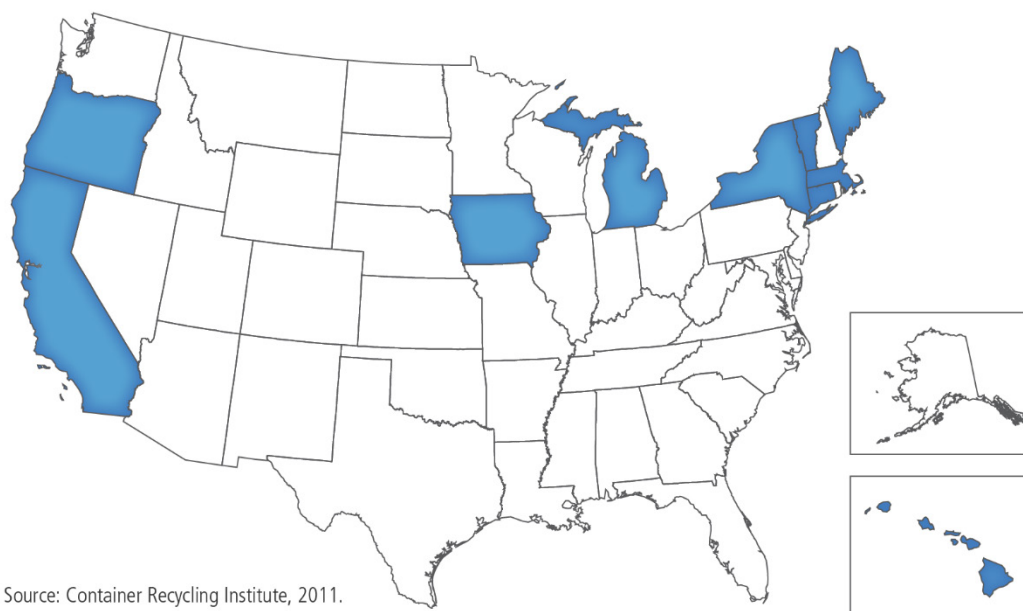
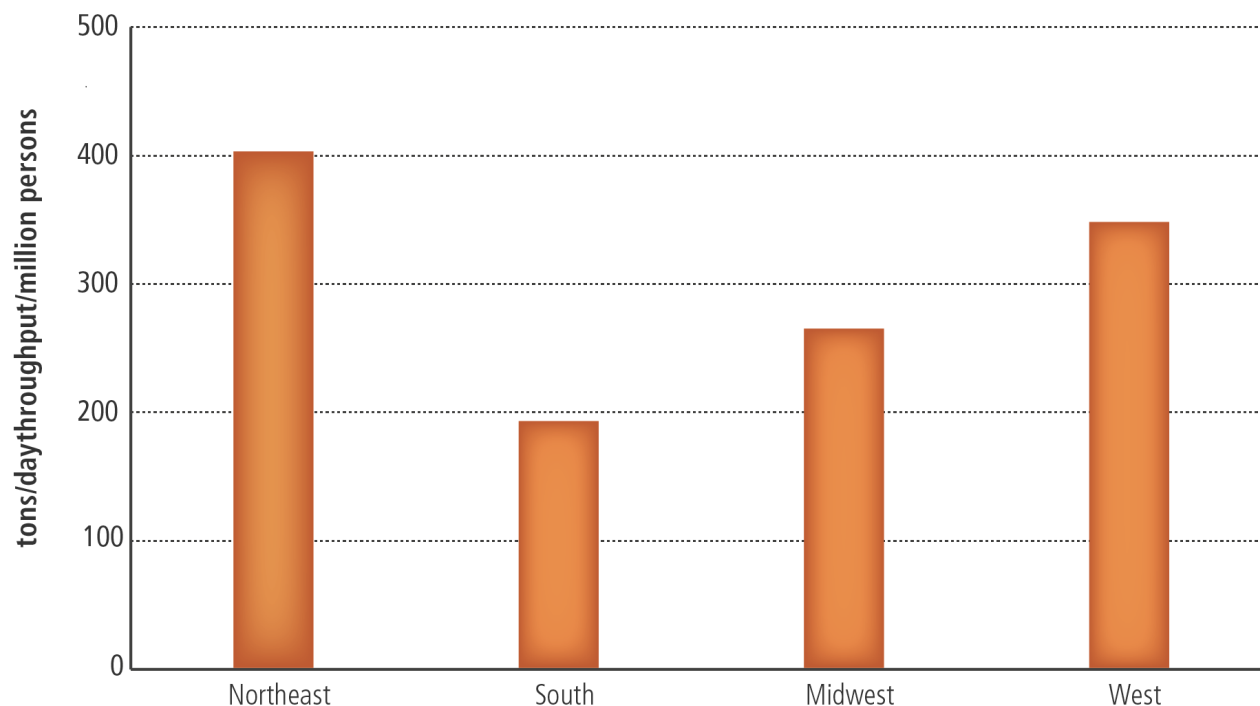


Figure 20. States with Bottle Deposit Rules



Source: Container Recycling Institute, 2011.

Figure 21. Estimated MRF Throughput, 2018*
(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

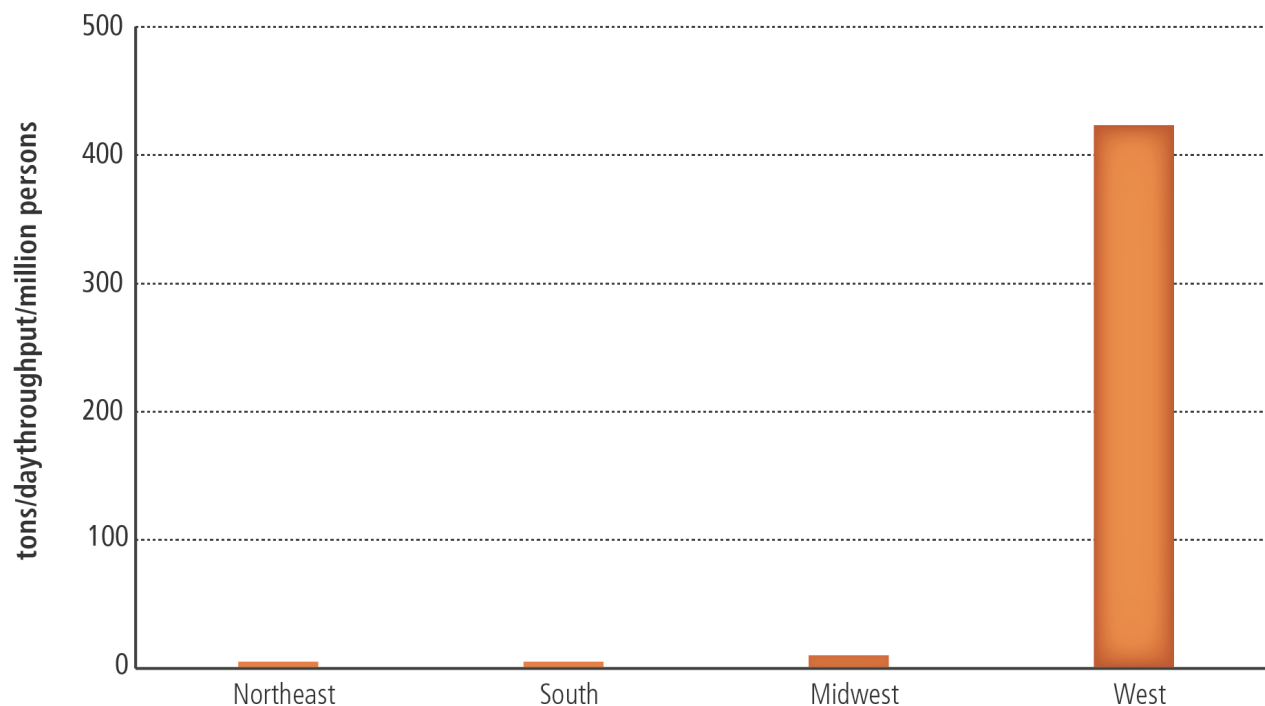
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

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 22. Mixed Waste Processing Estimated Throughput, 2018*
(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.

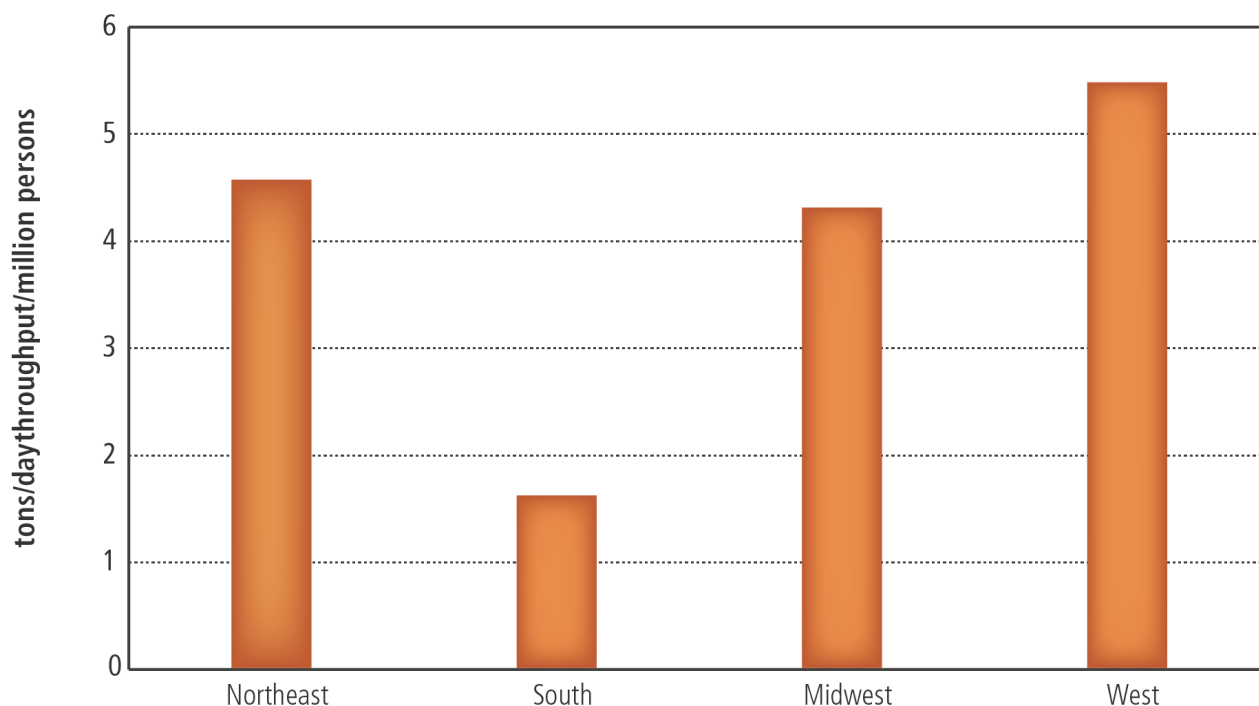
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

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 23. MSW Composting Throughput, 2018*
(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, CA; Marlborough, MA; Nantucket, MA; Faribault County, MN; Gallatin County, MT; Delaware County, NY; Medina County, OH; Rapid City, SD; Sevier County, TN websites.

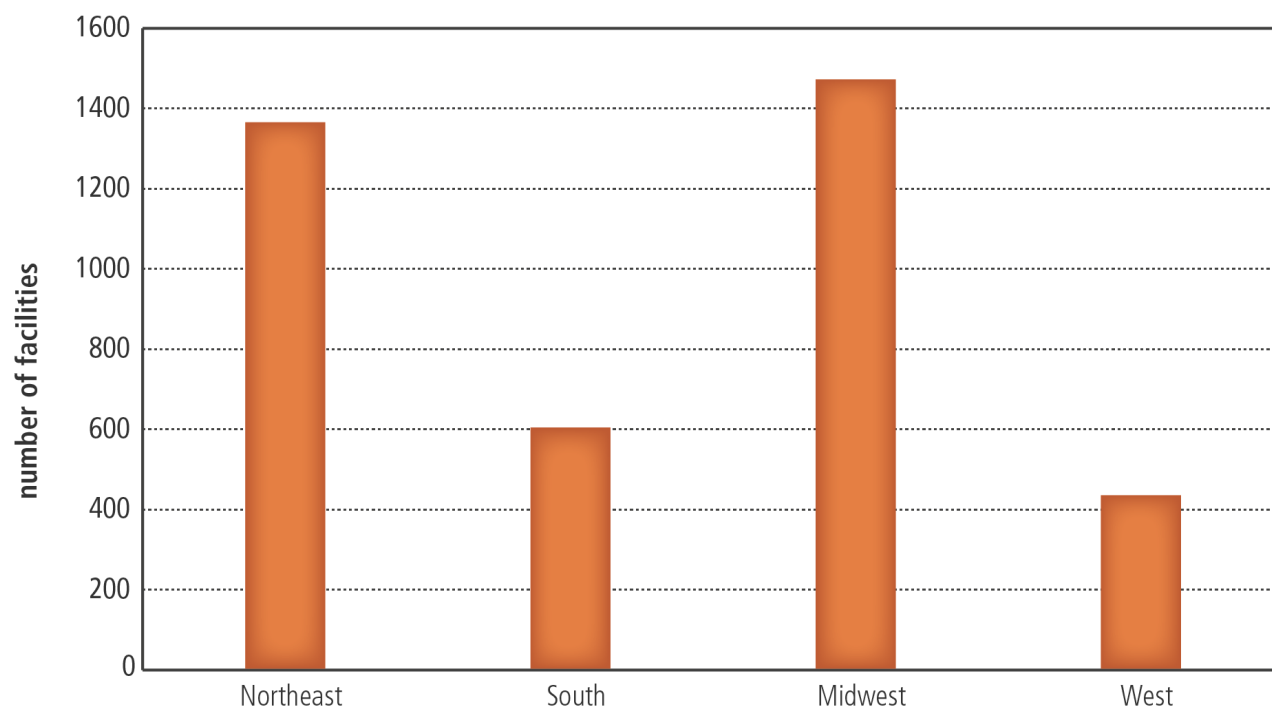
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

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 24. Yard Trimmings Composting Facilities, 2018*
(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

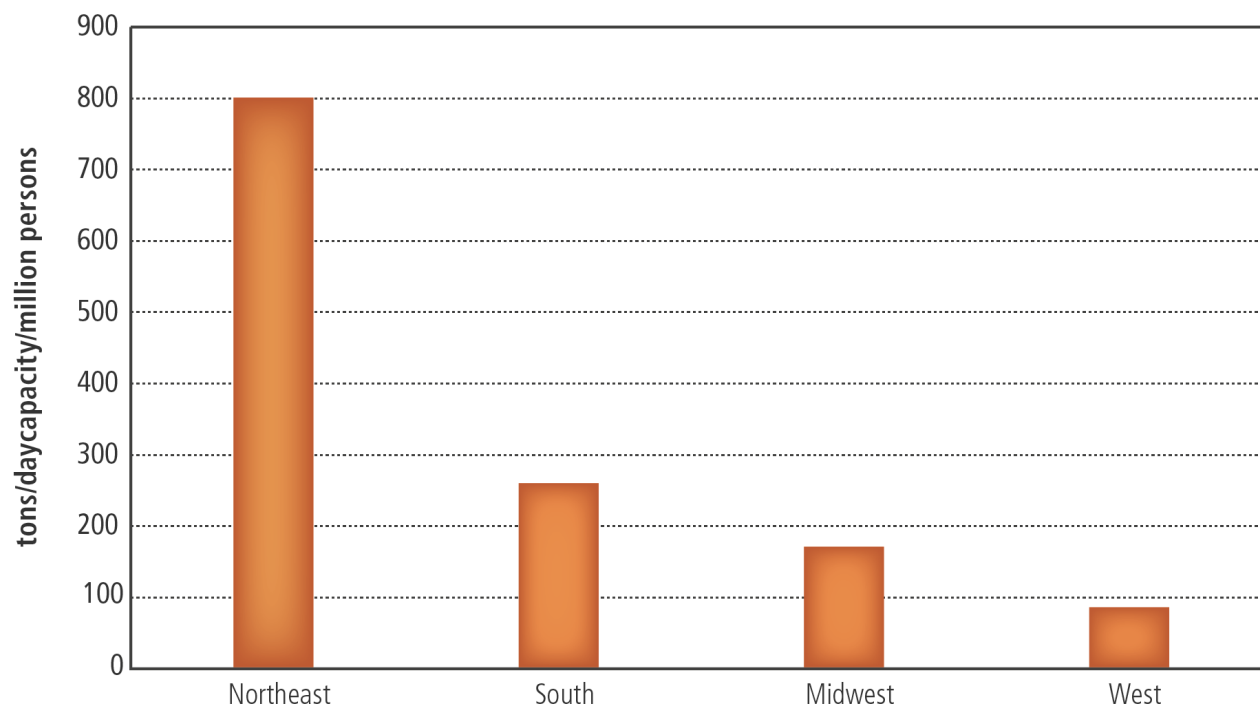
South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

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

* Latest data available.

Figure 25. Municipal Waste-To-Energy Capacity, 2018
(Tons per day per million persons)



Source: U.S. Census Bureau, Energy Recovery Council (ERC). 2018.

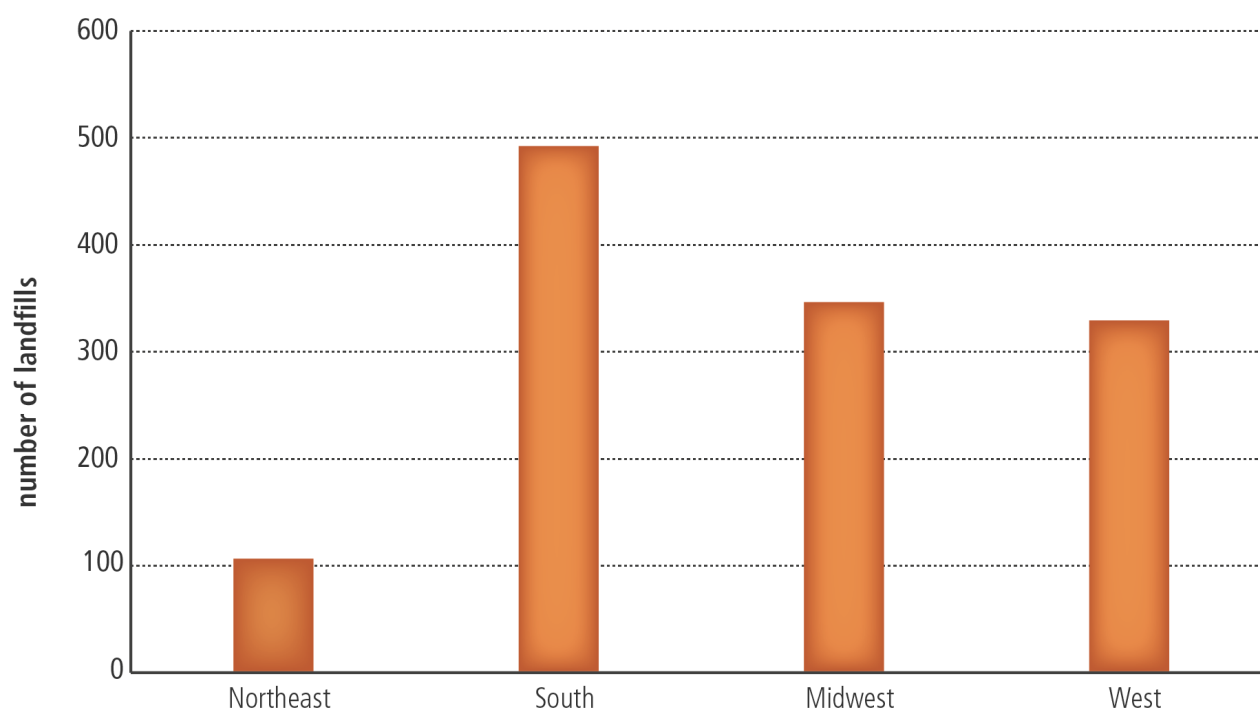
Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

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 26. Number of Landfills in the U.S., 2018



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