

EPA Sustainable Materials Management Web Academy

**Advancing Sustainable Materials
Management: Facts and Figures 2017**

February 20, 2020



<https://www.epa.gov/smm/sustainable-materials-management-web-academy>

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Outline

- Advancing Sustainable Materials Management: 2017 Facts and Figures
 - Overview and trends
 - Key municipal solid waste (MSW) data
 - Environmental benefits
 - Construction and demolition (C&D) debris generation data
 - Economics data
 - Web demonstration



Advancing Sustainable Materials Management: 2017 Fact Sheet

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

November 2019

EPA Facts & Figures

Data on generation, recycling, composting, combustion with energy recovery and landfilling

- For municipal solid waste (MSW)
- Construction and demolition debris data provided starting with 2013 data year

Report issued every year for over three decades

- Data tables go back to 1960

New for 2017 report

- Data for two years: 2016 and 2017
- Data for one material (paper) published early
- Continued improvements to website

Overview of the Methodology

Scope

- Municipal solid waste (MSW), or trash
- For example, packaging, food, yard trimmings, furniture, electronics, tires and appliances
- Also includes C&D debris generation

Sources of MSW

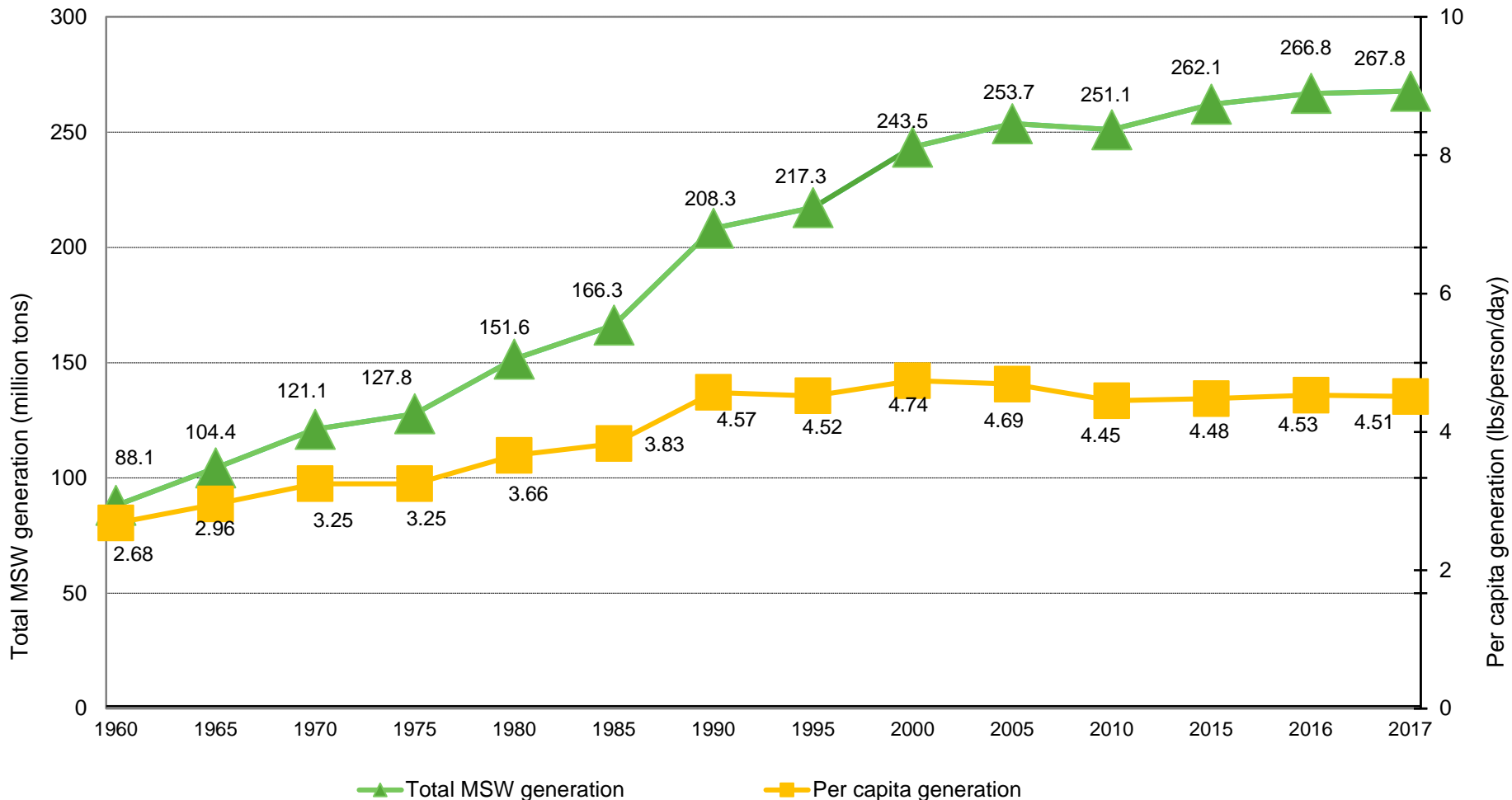
- Residential waste
- Institutions such as schools, hospitals and prisons
- Commercial sources such as restaurants, office buildings and retail establishments



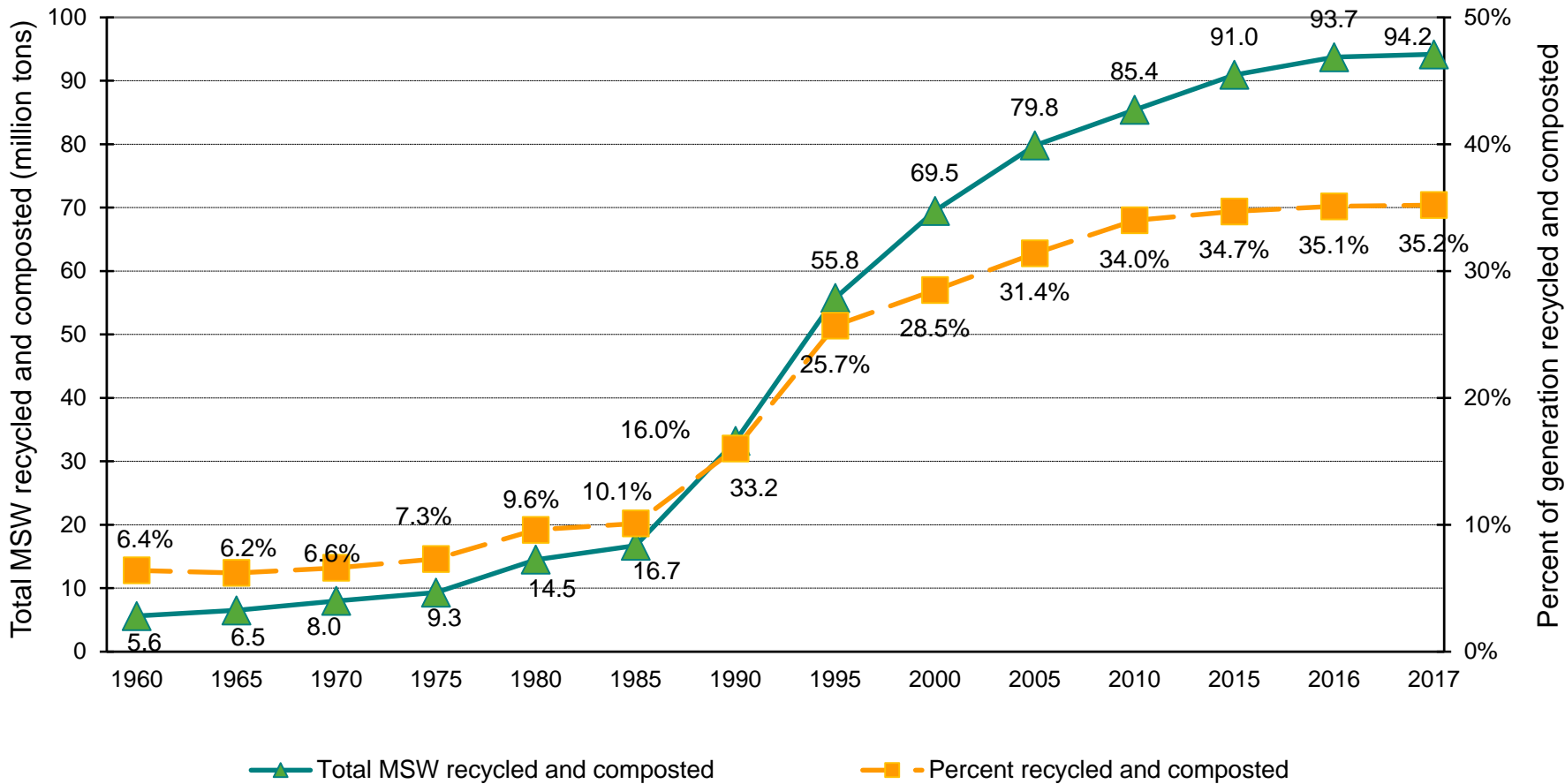
Key MSW Data

MSW Generation and Management	2016	2017
Million tons MSW generated	266.8	267.8
Per capita generation rate in pounds per person per day	4.53	4.51
Million tons recycled	68.6	67.2
Million tons composted	25.1	27.0
Million tons recycled plus composted	93.7	94.2
Recycling plus composting rate	35.1%	35.2%
Million tons combusted with energy recovery	33.9	34.0
Million tons landfilled	139.2	139.6

MSW Generation Rates 1960 to 2017

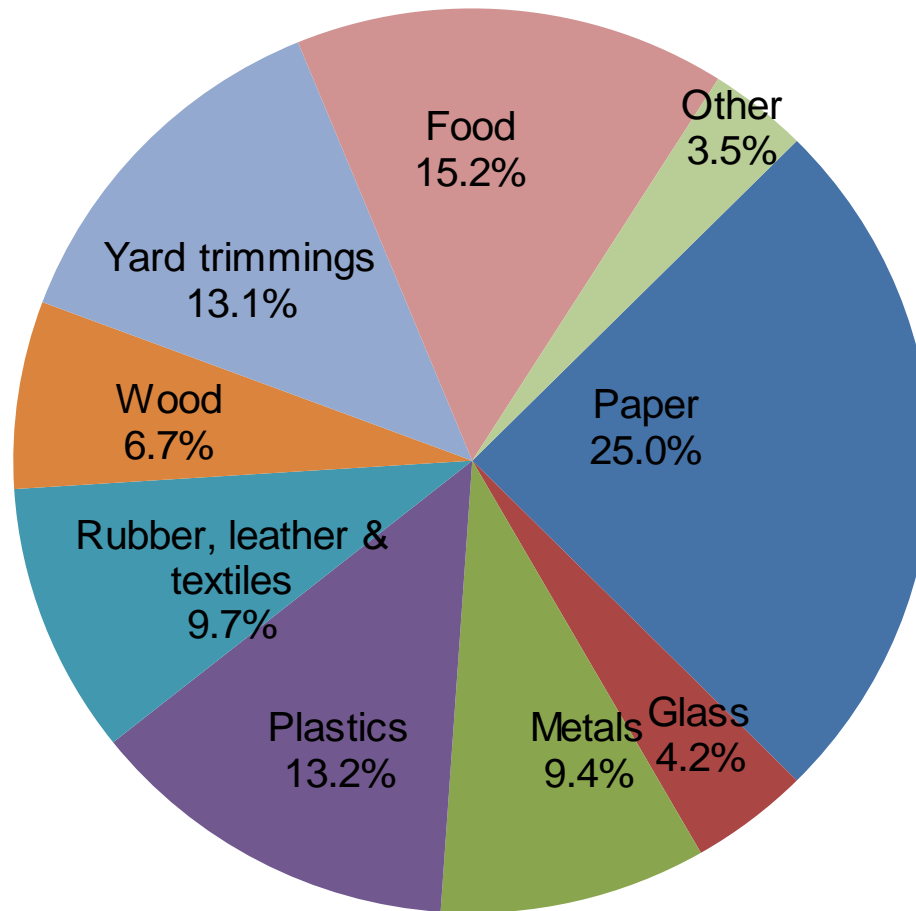


MSW Recycling and Composting Rates 1960 to 2017

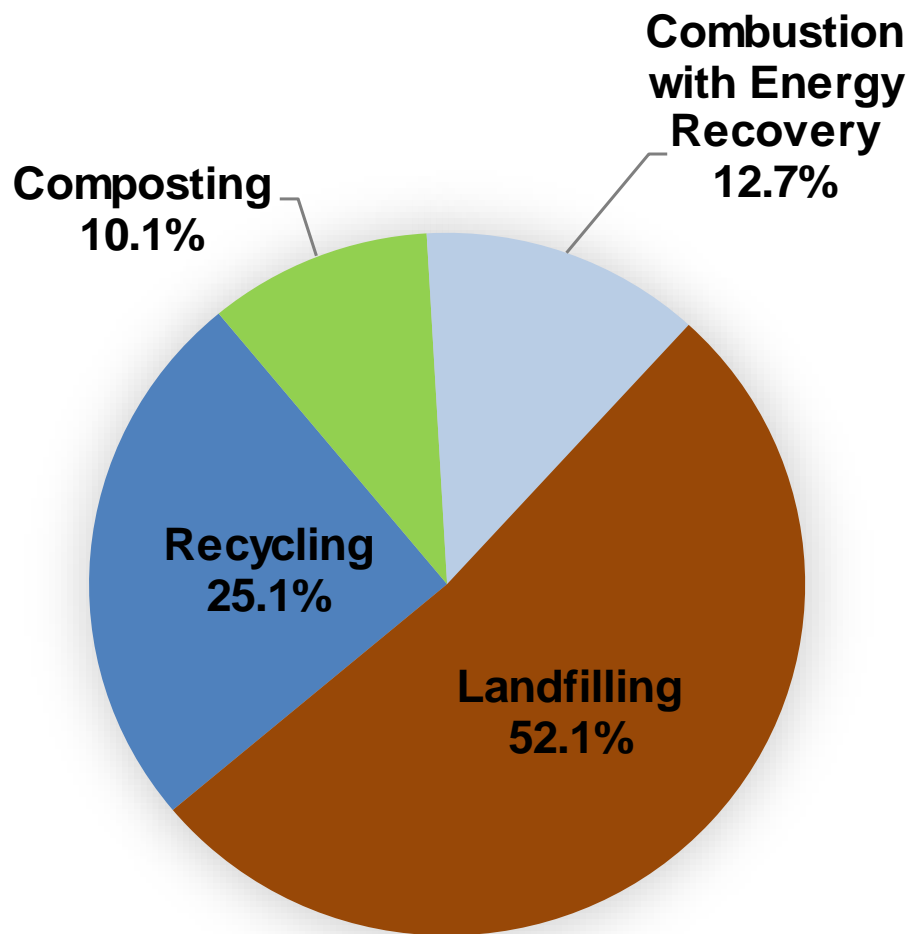


MSW Generation in 2017

267.8 Million Tons

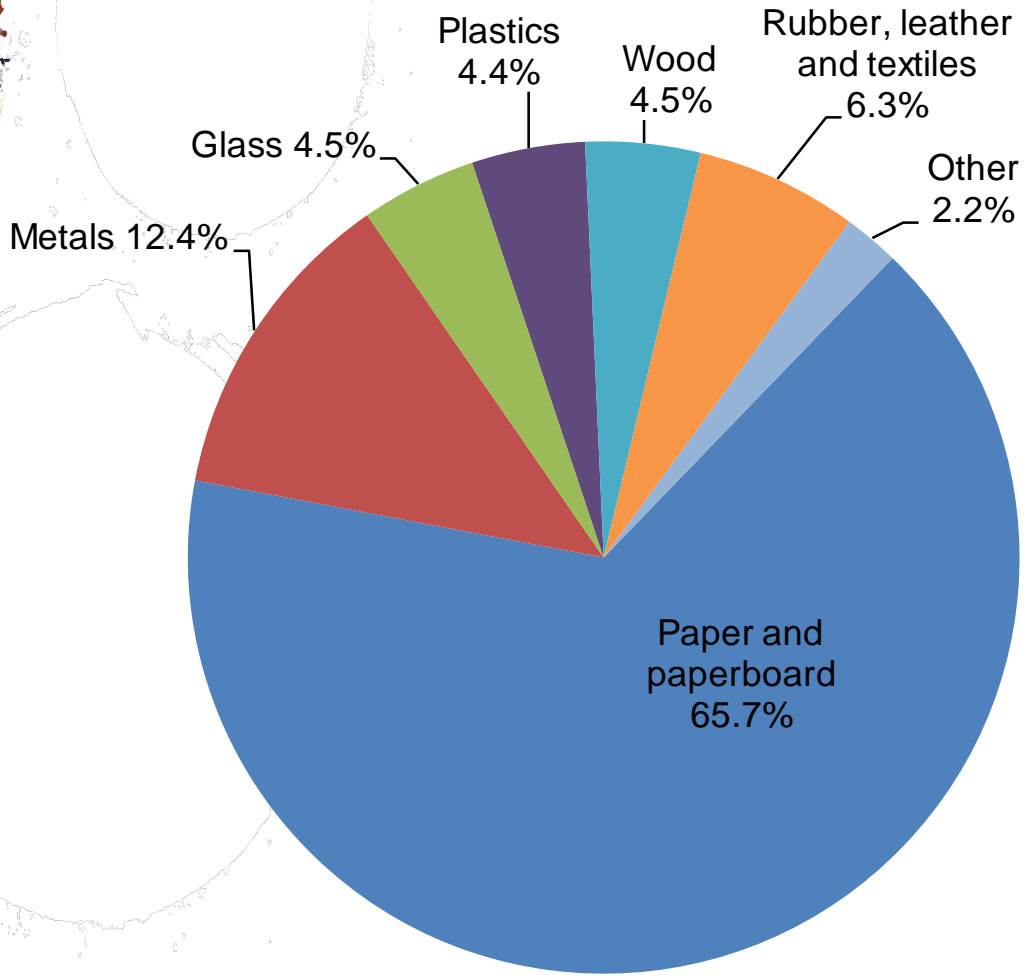


MSW Management in the United States in 2017 (267.8 million tons)



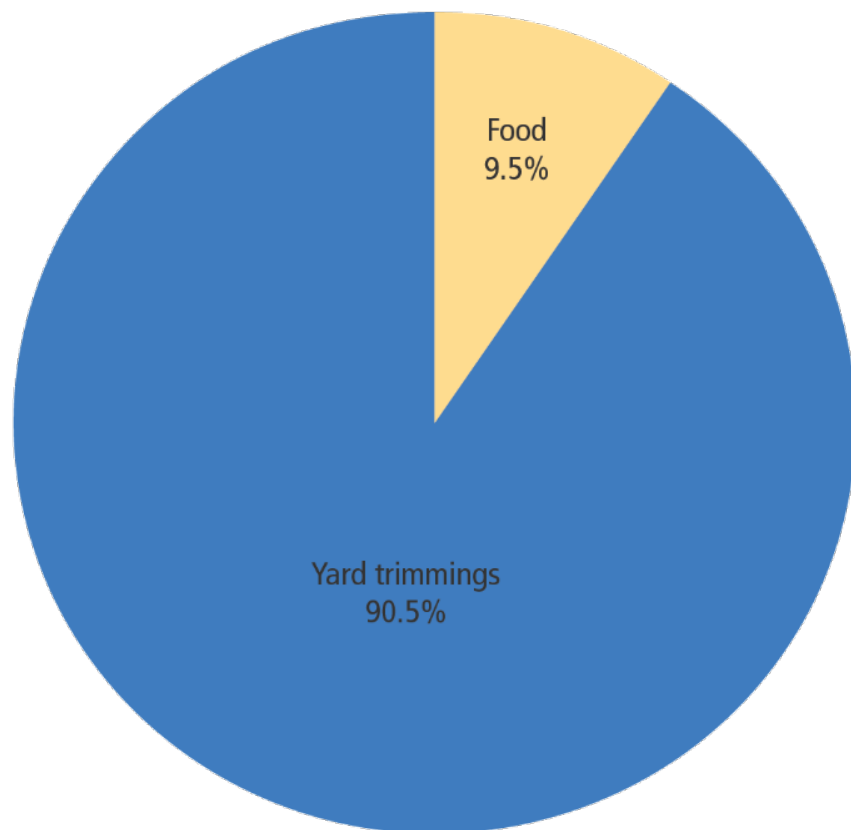
MSW Recycling in 2017

67.2 million tons

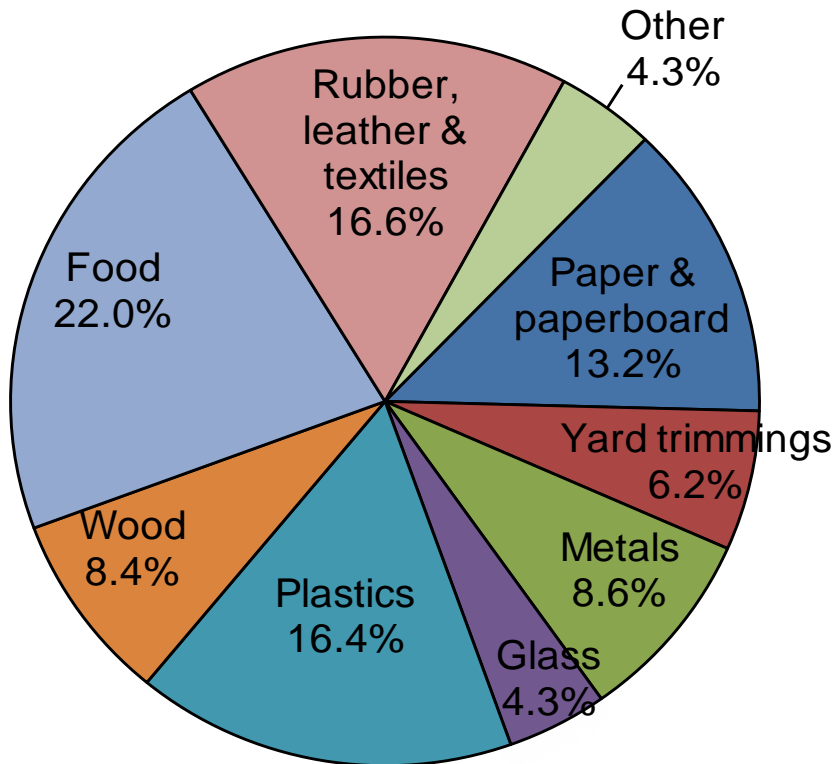


MSW Composting in 2017

27 million tons

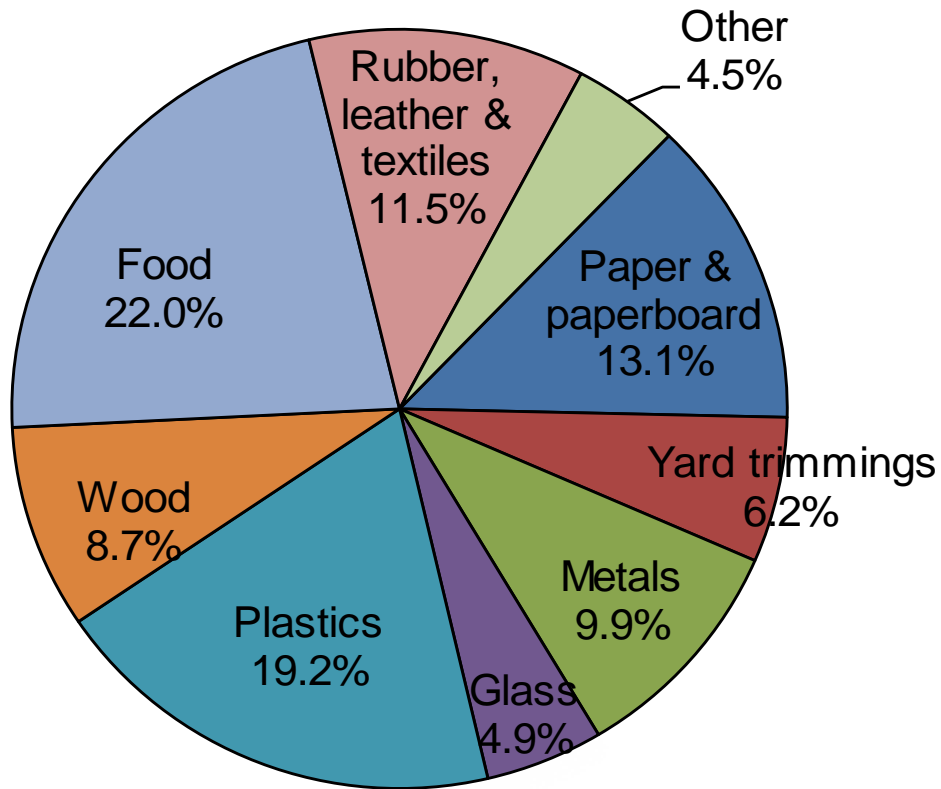


MSW Combusted with Energy Recovery in 2017 (34 million tons)



MSW Landfilled in 2017

140 million tons





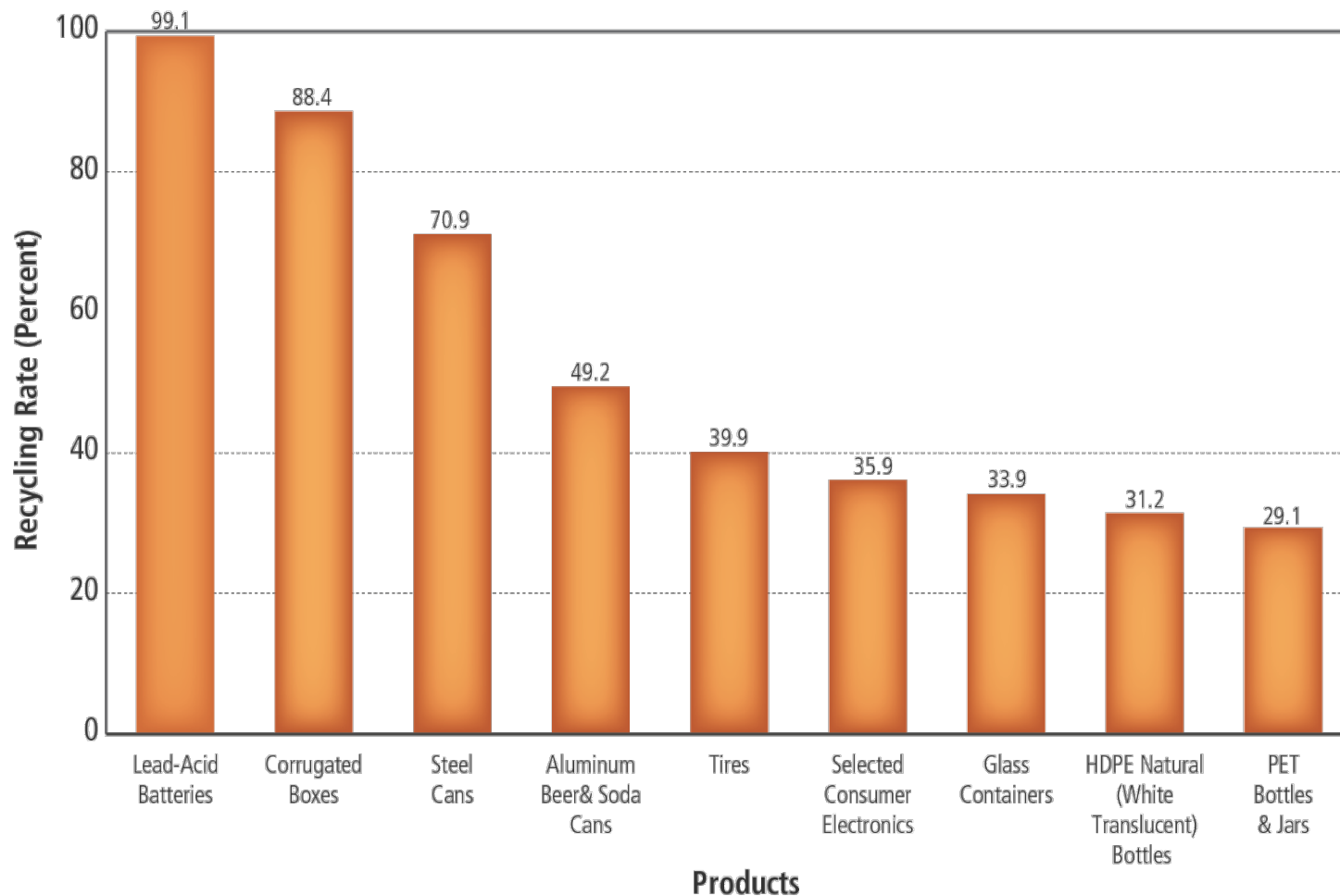
Key Materials/Products

Recycling Rates

- Paper and paperboard recycling was 65.9%
- Metals recycling was 33.3%
- Glass recycling was 26.6%
- Plastics recycling was 8.4%
 - PET bottles and jars recycling was 29.1%
 - HDPE Natural (white translucent) bottle recycling was 31.2%



Selected Products with High Recycling Rates, 2017*



*Does not include combustion with energy recovery.

Food



Generation

- 40.7 million tons in 2017, up from 40.3 million tons in 2016

Composting

- 2.6 million tons, up from 2.2 million tons of food and other organic materials composted in 2016
- Composting rate of 6.3%, up from 5.3% in 2016

Landfilling

- 22.0% of MSW landfilled was food

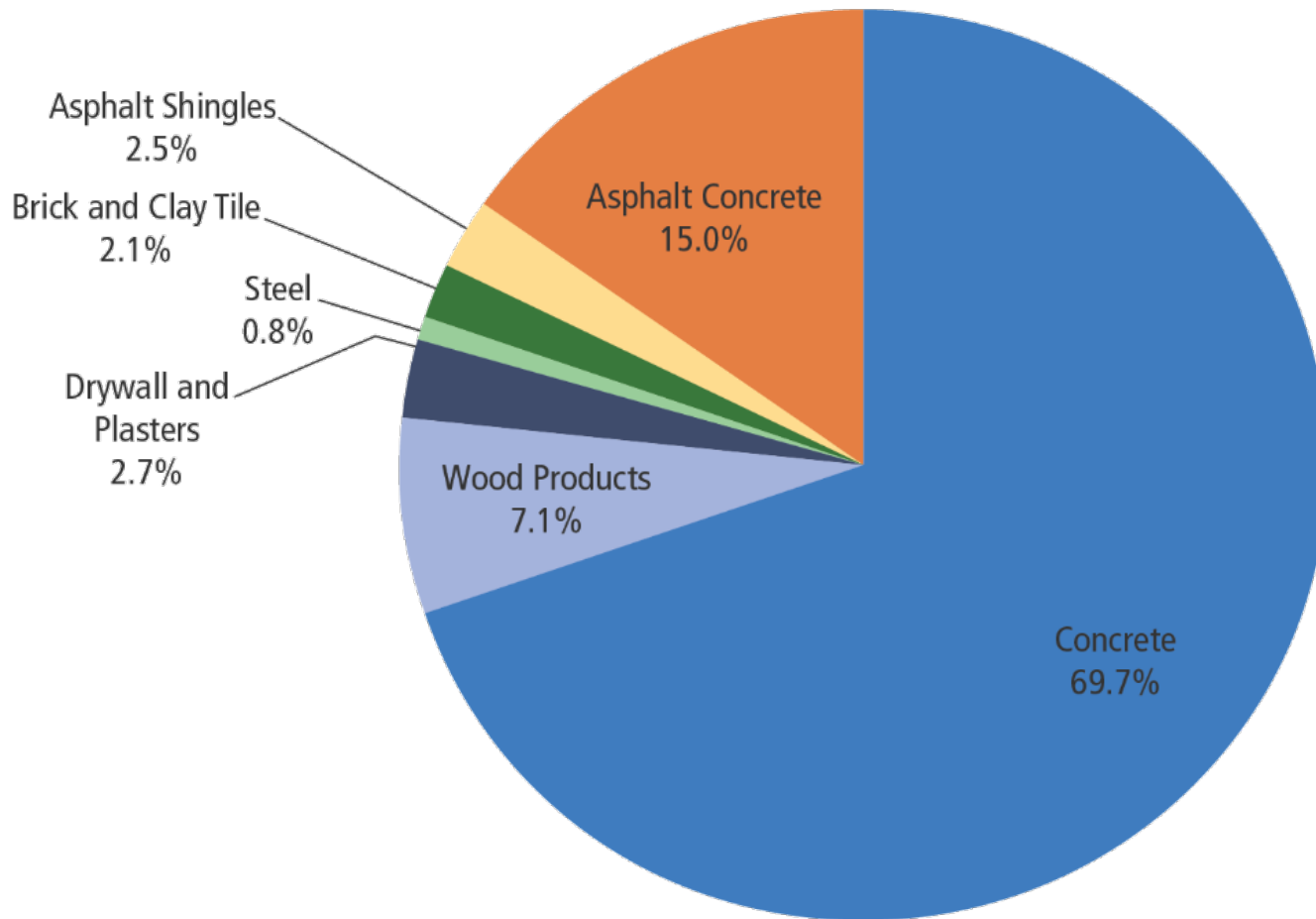
Environmental Benefits

Greenhouse Gas (GHG) Emissions

- In 2017, management of MSW prevented over 184.7 million metric tons of carbon dioxide equivalent of GHG emissions.
- These reductions are comparable to the annual emissions from over 39.2 million passenger vehicles.
- These estimates are calculated using EPA's WARM (Waste Reduction Model) methodology.

C&D Generation in 2017

569 Million Tons

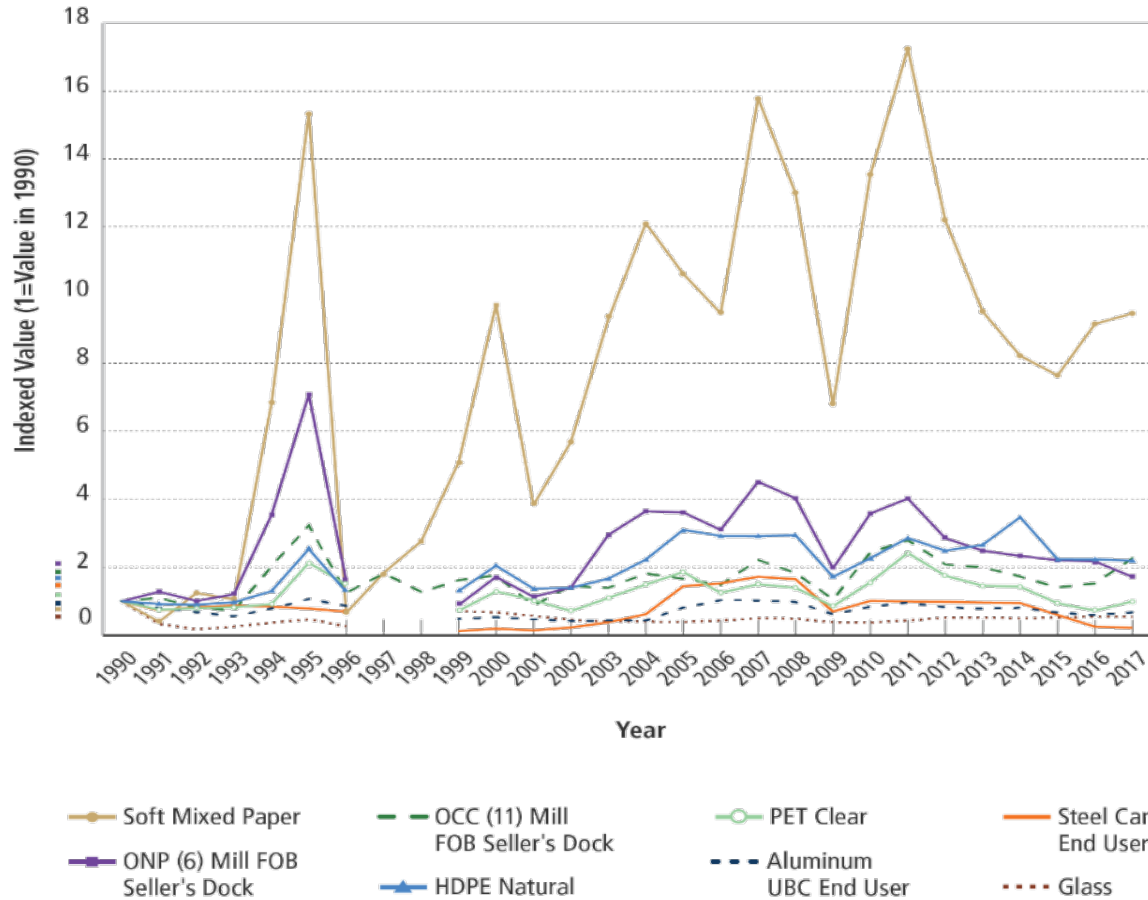


C&D Debris Generation in 2017

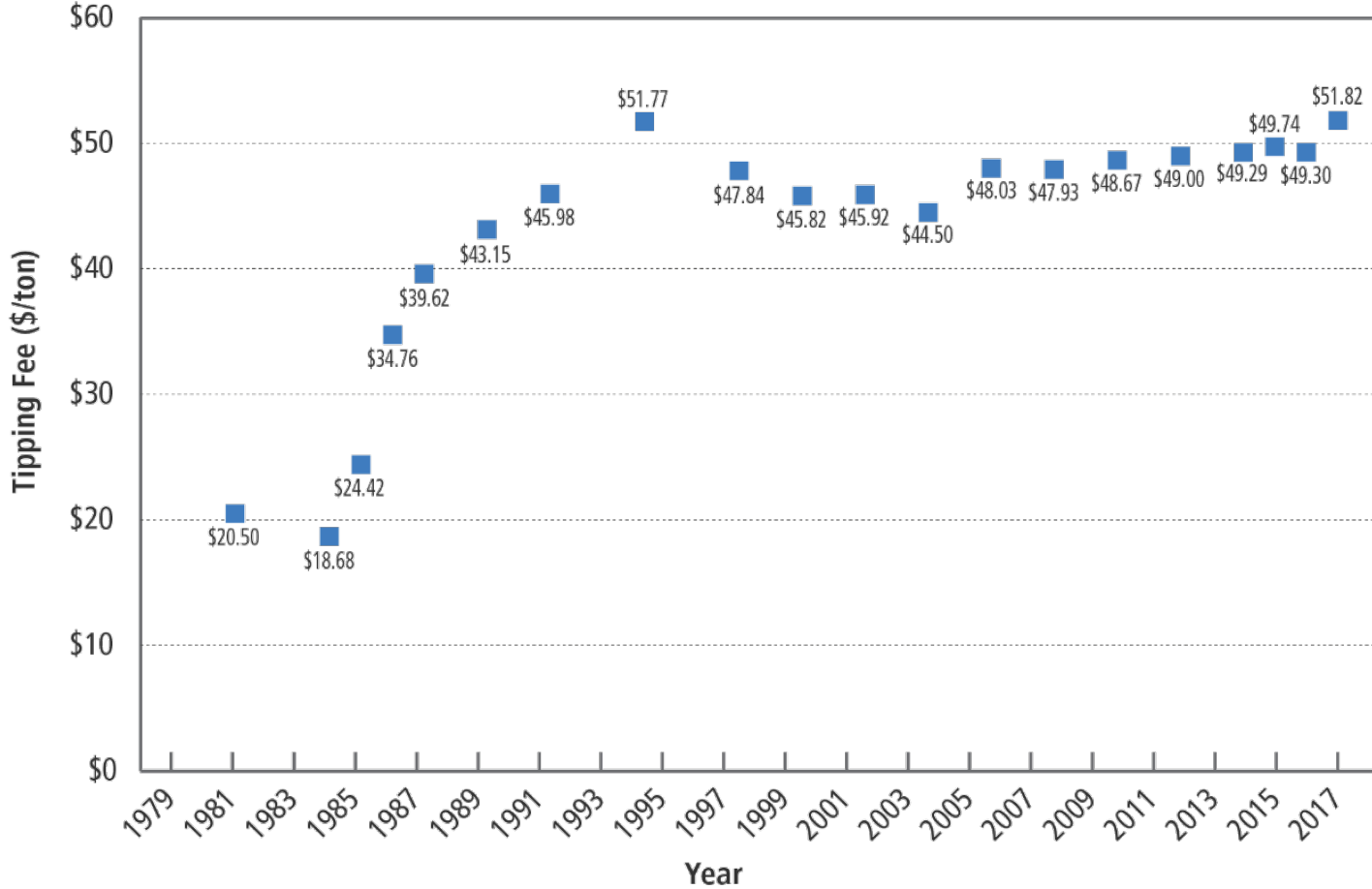
569 Million Tons

	Buildings	Roads and Bridges	Other
Concrete	98.8	164.5	133.7
Wood Products ⁷	38.9	-	1.3
Drywall and Plasters	15.3	-	-
Steel ⁸	4.6	-	-
Brick and Clay Tile	12.2	-	-
Asphalt Shingles	14.4	-	-
Asphalt Concrete	-	85.7	-
Total	184.2	250.2	135.0

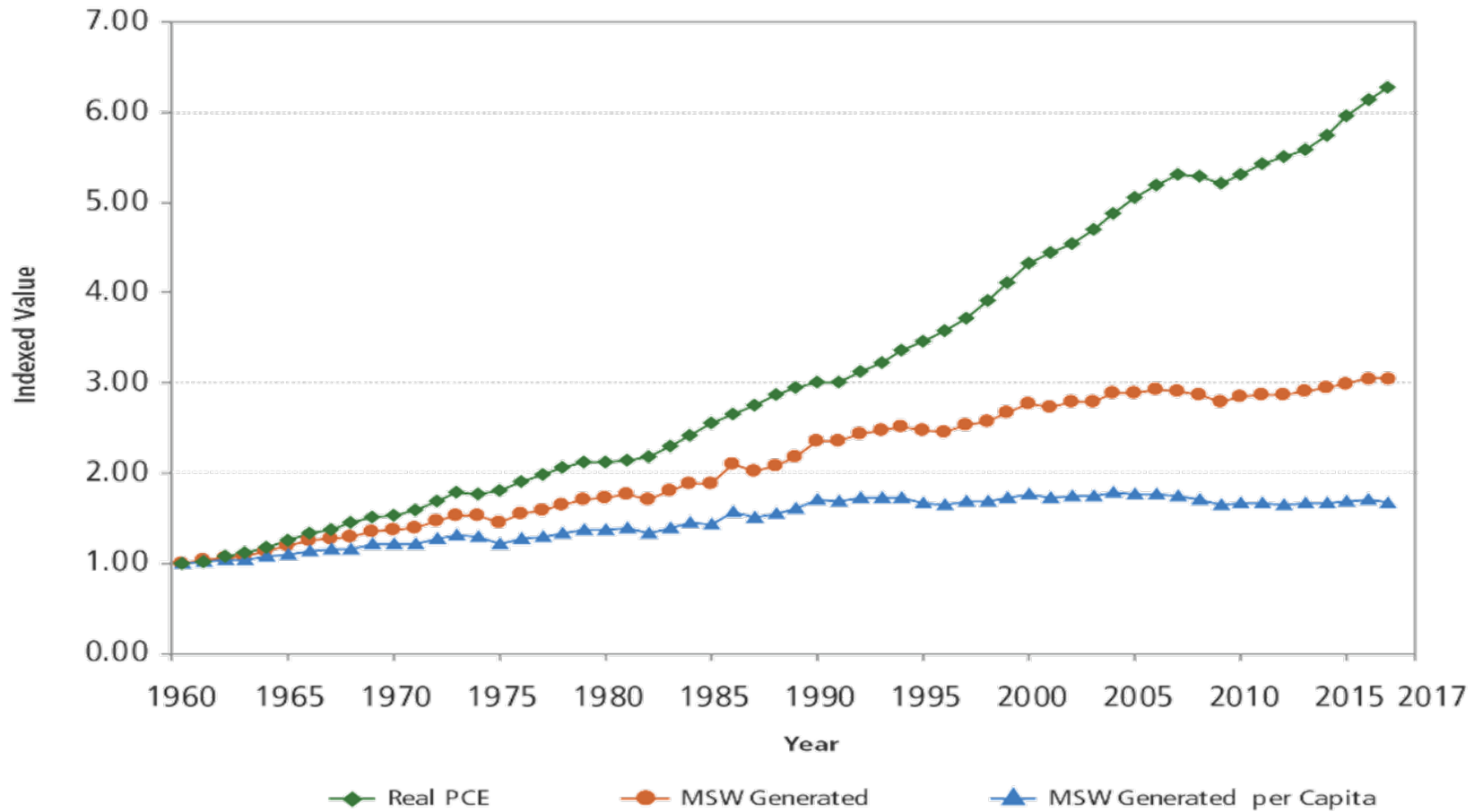
Recycled Commodity Values 1990 - 2017



National Landfill Tipping Fees 1982-2017



Personal Consumer Expenditures 1960-2017



Facts and Figures about Materials, Waste and Recycling

Our Latest Facts and Figures Data are Available

All of our 2016 and 2017 data are now available.

- Check out the different [Materials](#) and [Products](#)
- Read about the [Current National Picture](#)

TRASH OR MUNICIPAL SOLID WASTE, 1900-2017
MATERIALS CONSUMERS CONTINUOUSLY THROW AWAY AFTER BEING USED.

1 2 3

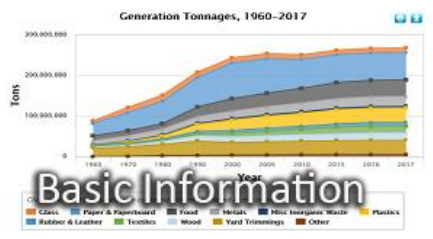


NOTE:
The facts and figures data only represent municipal solid waste in the United States. The most recent data are from 2017.

Join the [Sustainable Materials Management](#) (SMM) listserv to get updates and webinar announcements from EPA!

[EXIT](#)

The Facts and Figures data looks at generation, recycling, composting, combustion with energy recovery, and landfilling for a variety of materials and products. Check out our [A to Z Directory](#) for terms and keywords for which our web visitors frequently search.



- [What's Included and Key Definitions](#)
- [Frequent Questions about This Data](#)
- [Report and Data Tables](#)
- [State and Local Data](#)
- [Recycling Economic Information Report](#)



- [The Current National Picture](#)
- [Generation](#)
- [Recycling/Composting](#)
- [Combustion with Energy](#)
- [Landfilling](#)



- [Containers and Packaging](#)
- [Electronics](#)
- [Food](#)
- [Construction and Demolition Debris](#)
- [All Materials and Products](#)



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[Full Report and Data Tables](#)

A to Z Directory for the Facts and Figures Report about Materials, Waste and Recycling

The following list contains terms and keywords for which our web visitors frequently search. The pages that the terms and keywords link to are popular choices for information. However, our website may contain information about these terms on other pages as well. Use our [search engine](#) to view all of our resources on a particular term or keyword.

Use the key below to jump to terms and keywords for a particular letter.

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A

[Aluminum](#)

[Aluminum Containers and Packaging](#)

[Appliances, major](#)

[Appliances, small](#)



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Paper and Paperboard: Material-Specific Data

In 2017, paper and paperboard (cardboard) materials comprised the largest component of municipal solid waste (MSW). For this analysis, EPA classified products made of paper and paperboard materials as either nondurable goods or as containers and packaging. Nondurable goods include products such as office papers, newspapers, tissue paper, and paper plates and cups. Containers and packaging include products such as corrugated boxes, milk cartons, and bags and sacks (See the definitions of [nondurable goods](#) and [containers and packaging](#) for more information).

This web page is a brief summary of paper and paperboard material-specific data.

On this page:

- [Overview](#)
- [Summary Table and Graph](#)

Overview

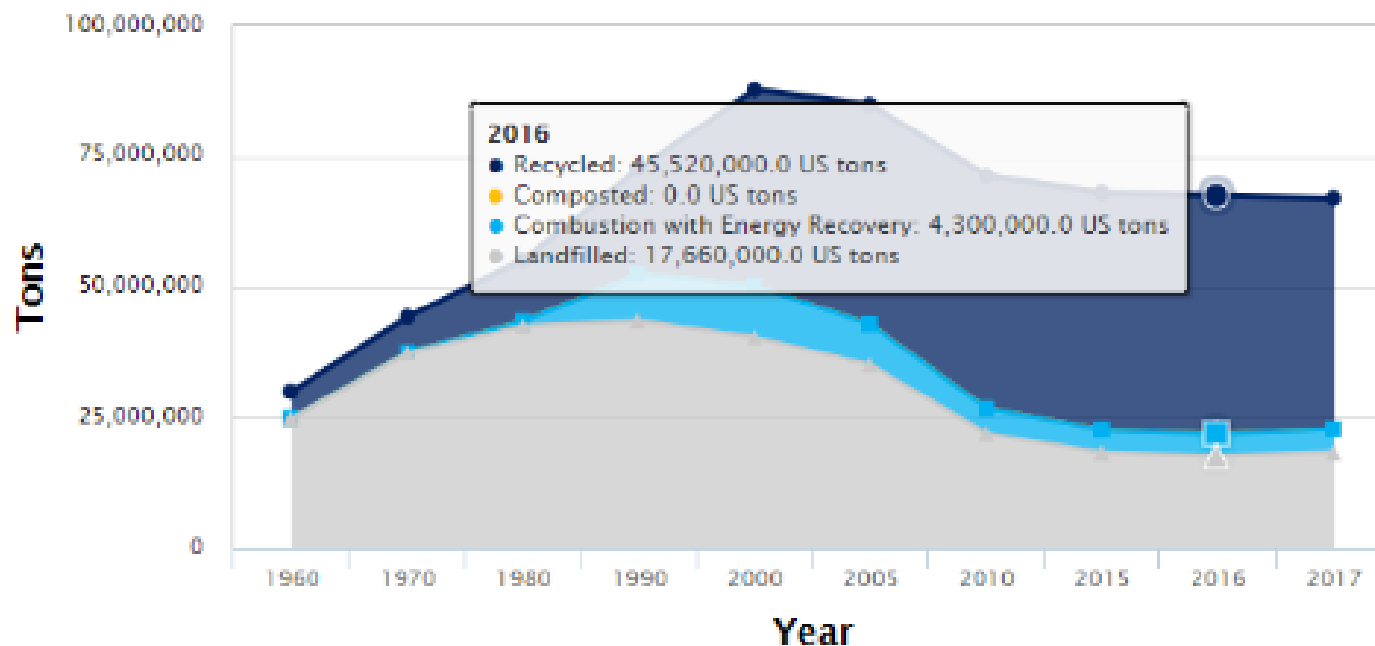
EPA measures the generation, recycling, composting, combustion with energy recovery and landfilling of paper and paperboard products.

Note:

This web page contains material-specific information and data on paper and paperboard.

Looking for other information? Take a look at the [products](#) and at the other [materials](#) we studied. Still have a question about the data? Check out our [Frequent Questions page](#).

Paper and Paperboard Waste Management: 1960–2017



Click on legend items below to customize items displayed in the chart

Recycled
 Composted
 Combustion with Energy Recovery
 Landfilled

[↑ Top of Page](#)

Thank you

For further information visit us at:

<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling>

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