Advancing Sustainable Materials Management
2014 Facts and Figures Report

Swarupa Ganguli

U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery (ORCR)
LMOP Special Session
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CHANGING HOW WE THINK ABOUT OUR RESOURCES FOR A BETTER TOMORROW

United States
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Outline

- Advancing Sustainable Materials Management: Facts and Figures Report
  - Overview and updates
  - Key Data and trends
  - Conclusions/Next Steps

Facts & Figures

Advancing Sustainable Materials Management: 2014 Fact Sheet

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

November 2016

- Highlights for 2014 report:

  - Replaced recovery and disposal with generation, recycling, combustion and landfilling.
  - New methodology updates for electronics and construction and demolition debris (C&D).

Methodology

Scope

- Municipal solid waste, or trash
- Includes packaging, food, yard trimmings, furniture, electronics, tires, and appliances

Sources of MSW

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

Materials Flow Approach

- Based on national data, which characterizes waste stream of the nation as a whole
- A top-down approach (not a state-by-state or facility-by facility approach)

Sources of Data

- Industry associations
- Government data sources such as the Department of Commerce and the U.S. Census Bureau
- Other sources of data such as state websites.

Key Data (Generation)

- 258 million tons of MSW generated
  - 4.44 pounds per person, per day
  - Increase of 3 million tons (0.02 pounds per day)
- 38.4 million tons of wasted food generated
  - 241 pounds per person per year
  - Increase of 7 pounds per year
  - Composting rose 100,000 tons (0.1%)
- Other generation numbers
  - Yard trimmings
  - Paper
  - Plastics

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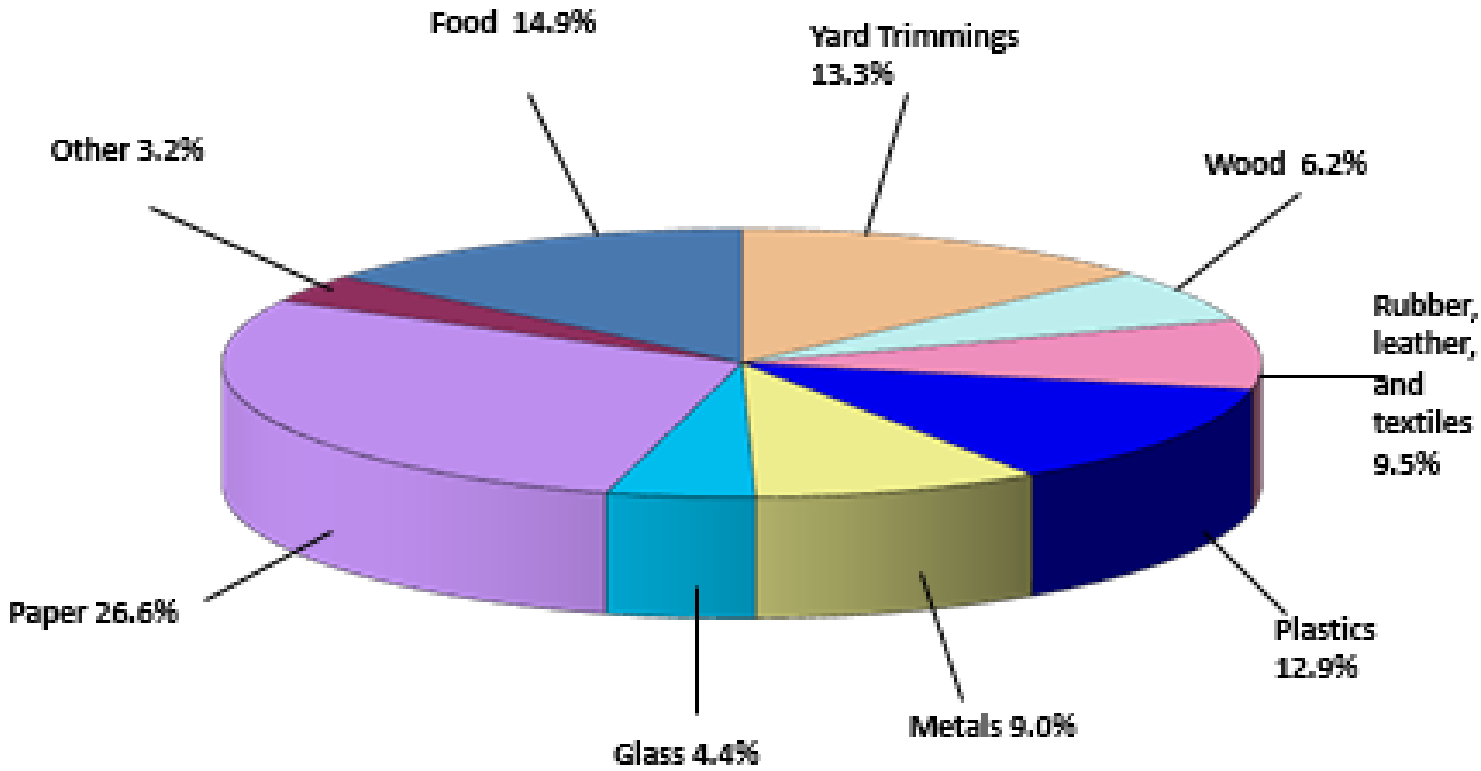EPA United States Environmental Protection Agency

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Key Data (Management)

- ## 34.6 % recycled
  - Includes both recycling and composting
  - 89 million tons

- ## 12.8% combusted (with energy recovery)
  - 33 million tons
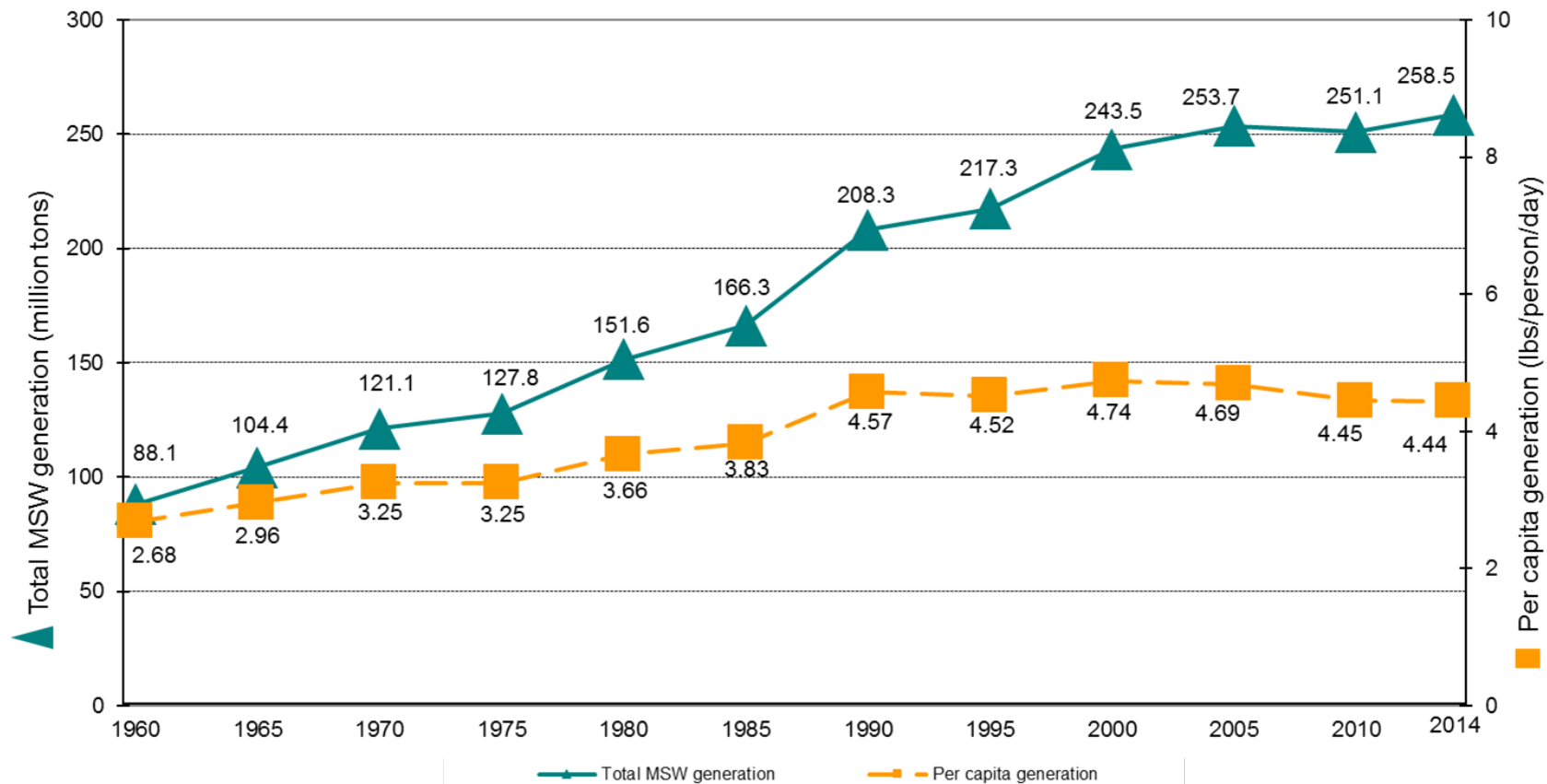
- ## 52.6% landfilled
  - 136 million tons

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Municipal Solid Waste Generation in 2014 258.5 Million Tons (before recycling)

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MSW Generation Rates, 1960 to 2014

MSW Recycling Rates, 1960 to 2014

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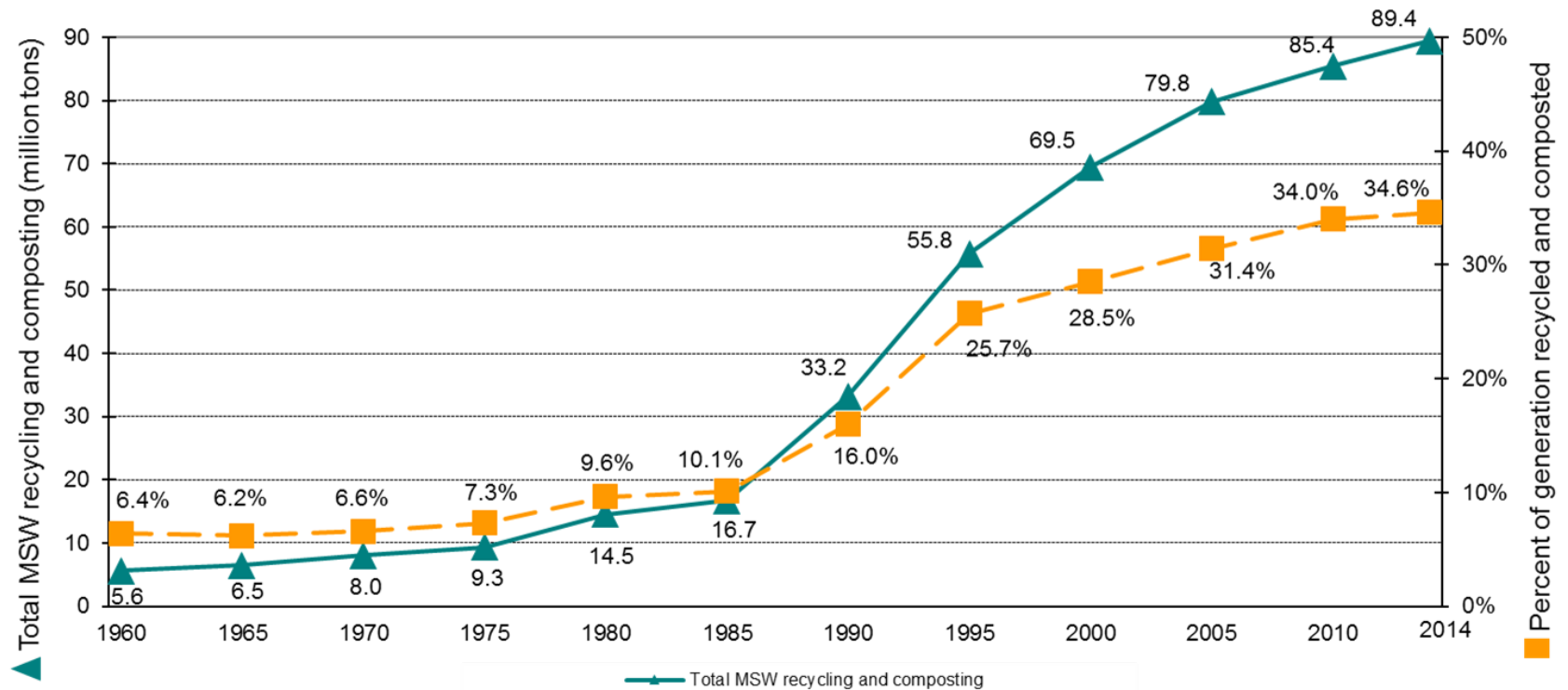
MSW Facts and Figures in the U.S.
Key Data (Management)

Combustion with
Energy Recovery
12.8%

Recycling/
Composting
34.6%

Landfilled
52.6%

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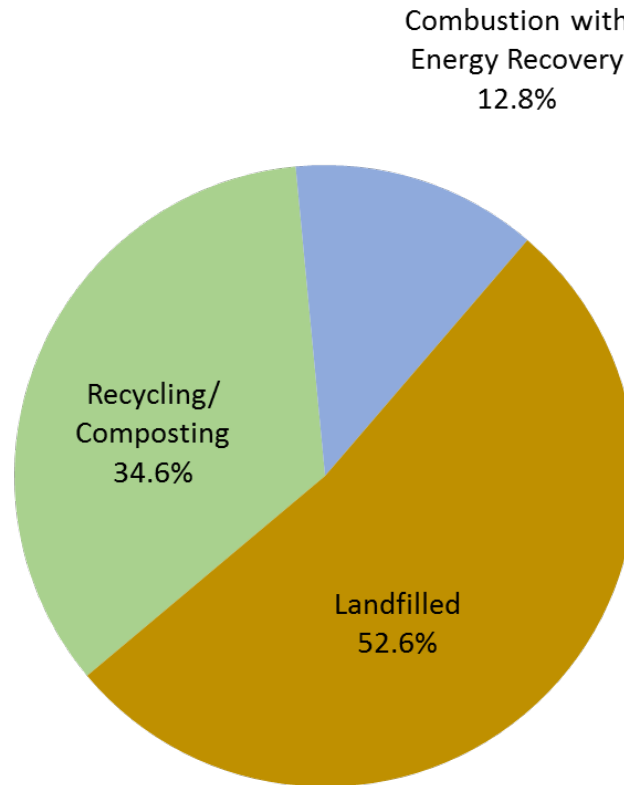
Total MSW Recycling and Composting (by material) 89 million tons

Metals 8.8%
Glass, 3.3%
Plastics, 3.5%
Wood, 2.9%
Food, 2.2%
Other 6.0%
Yard trimmings 23.6%
Paper & paperboard 49.7%

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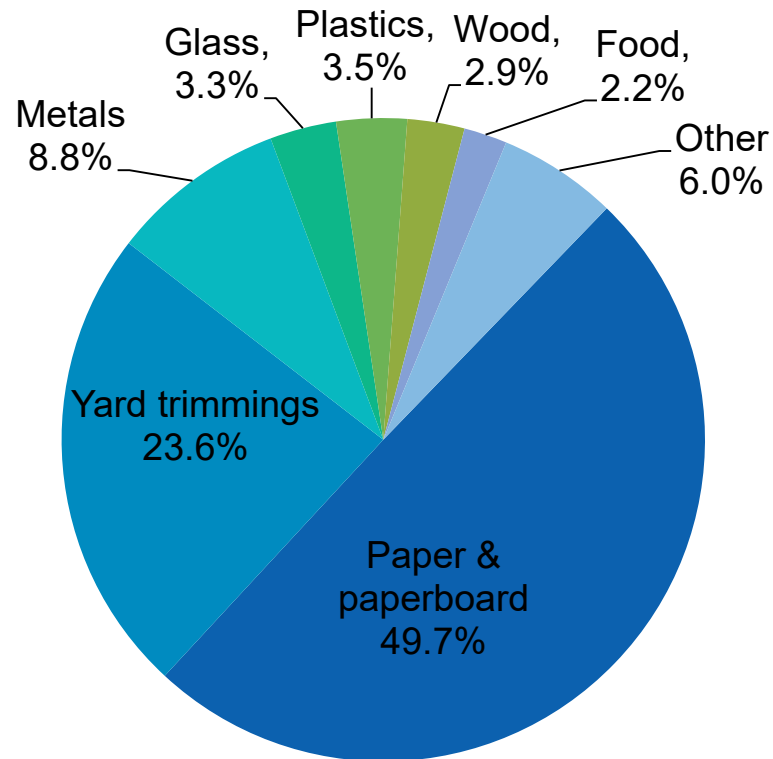
Total MSW Combusted with Energy Recovery (by material)

33 Million Tons (after recycling and composting)

Rubber, leather & textiles 17.4%

Food 21.6%

Paper & paperboard 14.3%

Yard trimmings 7.9%

Metals 7.7%

Glass 4.4%

Plastics 15.0%

Wood 7.7%

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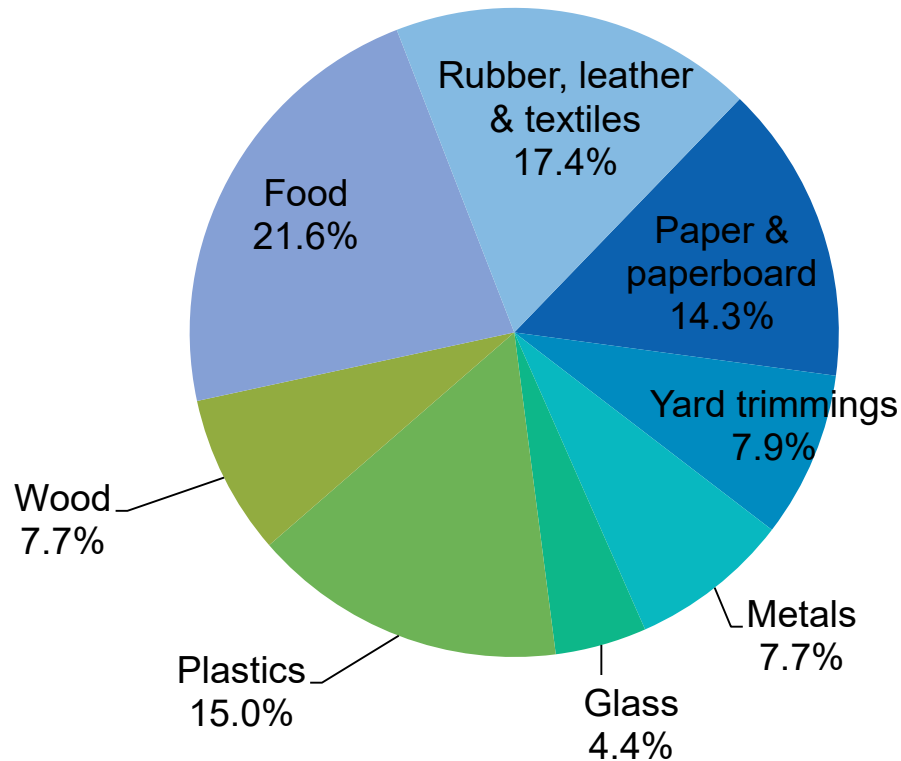
Total MSW Landfilled (by material)
136 Million Tons (after recycling, composting, and combustion with energy recovery)

- Rubber, leather & textiles 17.4%
- Paper & paperboard 14.3%
- Food 21.6%
- Yard trimmings 7.9%
- Wood 7.7%
- Metals 7.7%
- Glass 4.4%
- Plastics 15.0%

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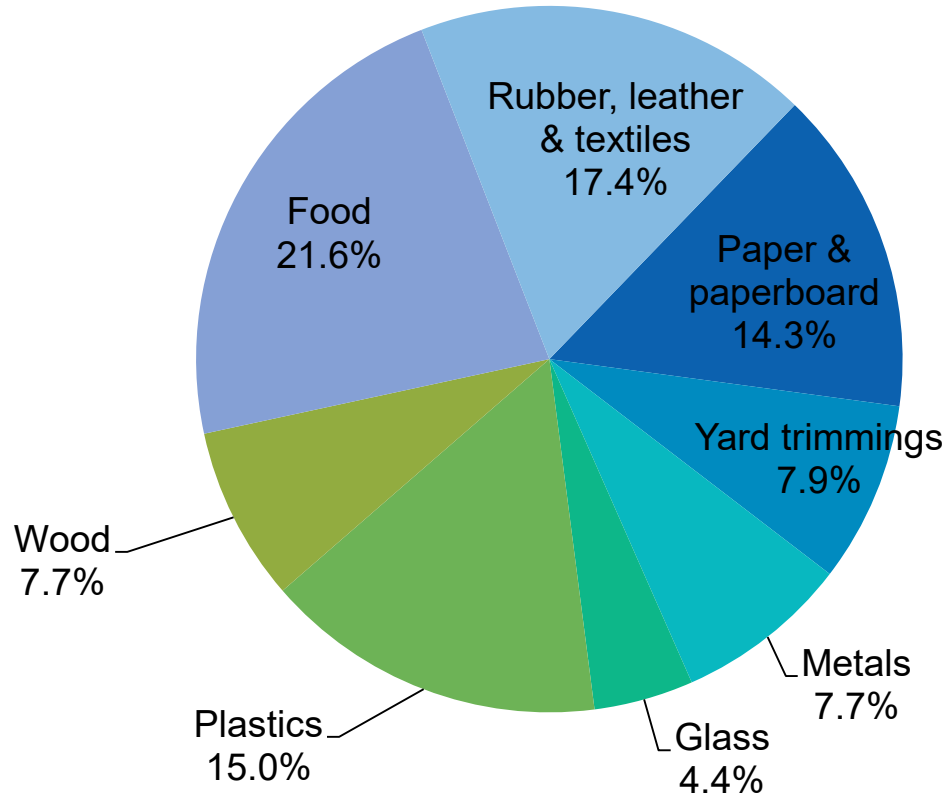
Food

Generation

- 38.4 million tons in 2014, up from 37.1 million tons in 2013.

Composting

- 1.9 million tons, up from 1.8 million tons of food and other organic materials composted in 2013
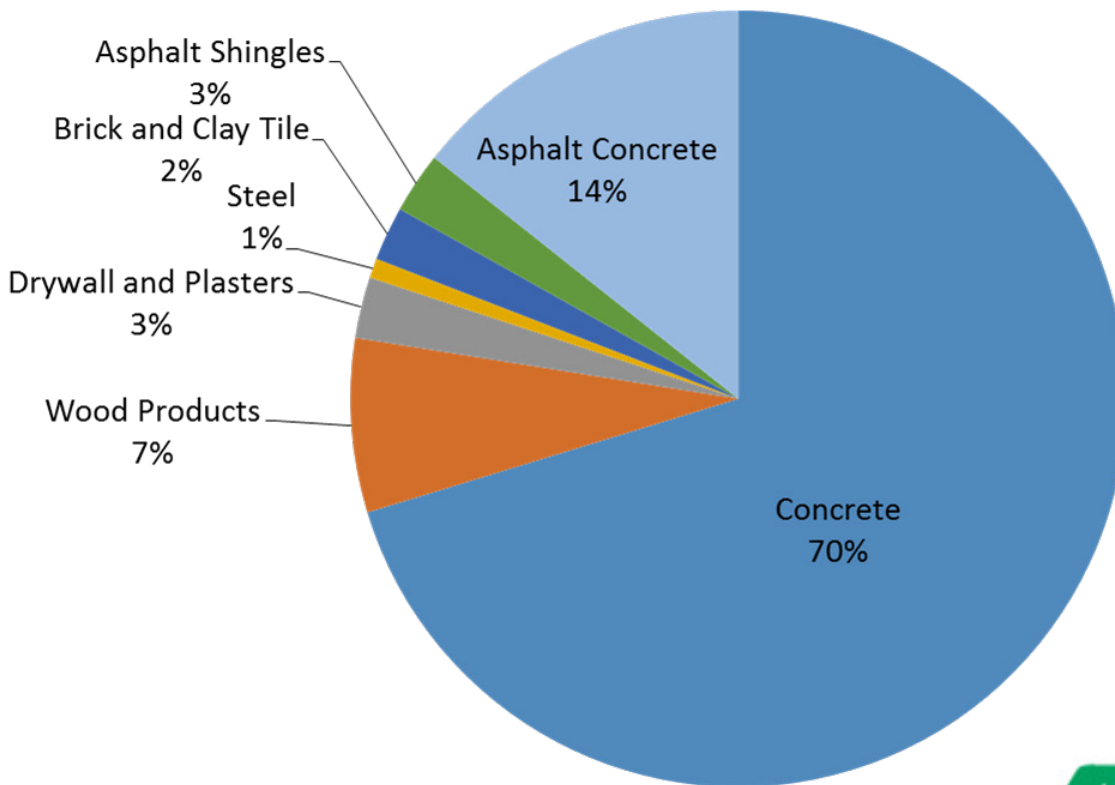
- Composting rate of 5.1%, up from 5.0% in 2013

Landfilling

- 21.6% of MSW landfilled was food

C&D Generation Composition by Material, 2014 (534 Million Tons Before Recycling)

C&D Debris Generation by Source (Million Tons)

	Buildings	Roads and Bridges	Other
	2014	2014	2014
Concrete	84.8	157.4	133.1
Wood Products	37.3		1.4
Drywall and Plasters	13.6		
Steel	4.4		
Brick and Clay Tile	12.0		
Asphalt Shingles	13.5		
Asphalt Concrete		76.6	
Total	165.6	234.0	134.5

Conclusions

- EPA is thinking beyond waste by employing a systemic approach to reduce materials use and their associated environmental impacts.

- Data on MSW generation, recycling, composting, combustion with energy recovery and landfilling is an important starting point to implement the SMM approach.

- We continue look for ways to improve our data collection efforts and collaborate with our stakeholders in this process.

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