EPA’s Facts and Figures: Plastics

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NIST Workshop: Data and Harmonization to Improve the Circularity of Plastics
January 24 - 26, 2023
EPA’s Facts and Figures: Background

• Annual national waste characterization since the 1980s
  • Estimates national recycling, composting, incineration and landfilling quantities.
  • Uses top-down, mass-balance material flows approach.
  • Uses national economic data along with industry data and sampling studies.
  • Materials covered: municipal solid waste - paper, glass, metals, plastics, textiles, rubber and wood.
  • Newer stand-alone methods for C&D debris and food waste.

• Popular with stakeholders:
  • Most clicks on our website
  • Estimated recycling rate of 32.1% (2018) is the most frequently-cited statistic.
MSW Generation and Plastics

Total MSW Generated by Material, 2018

292.4 million tons

- Misc. Inorganic Wastes: 1.4%
- Other: 1.5%
- Textiles: 5.8%
- Rubber and Leather: 3.1%
- Wood: 6.2%
- Food: 21.6%
- Metals: 8.8%
- Yard Trimmings: 12.1%
- Paper and Paperboard: 23%
- Plastics: 12.2%

Generation Tonnages, 1960–2018

Tons

Year

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

- Glass
- Paper & Paperboard
- Food
- Metals
- Misc Inorganic Waste
- Plastics
- Rubber & Leather
- Textiles
- Wood
- Yard Trimmings
- Other
Plastic Waste Management

Of the approximately 36 million tons generated in 2018:
- 27 million tons landfilled
- 6 million tons combusted with energy recovery
- 3 million tons recycled
Now Moving to a Circular Economy Approach...

SOURCE
Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellennmacarthurfoundation.org

Drawing based on Braunart & McDonough,
Cradle to Cradle (C2C)
Capitalize on EPA’s U.S. EEIO Models

• Update and expand USEEIO modeling to support:
  • Goal measurement and methods.
  • National estimates of waste generation, management, and leakage.
  • Tracking materials and wastes and assess their related impacts throughout the economy
  • Perform projections
Path Forward: Describe Other Environmental and Social Impacts from Waste Management

- Cost
- GHG emissions
- Environmental contamination
- Environmental Justice
- Capacity

Location of active landfills in the United States near environmental justice communities, by landfill size

Source: EPA
EPA is establishing a 10-year vision that embraces circularity, sustainable materials management, addresses climate change, and environmental justice.

**Objectives:**

A. Improve Markets for Recycling Commodities  
B. Increase Collection and Improve Materials Management Infrastructure  
C. Reduce Contamination in the Recycled Materials Stream  
D. Enhance Policies to Support Recycling  
E. Standardize Measurement and Increase Data Collection
Grant Programs

SWIFR

Grants for Political Subdivisions
Applications Due: Feb. 15

Grants for Tribes and Intertribal Consortia
Applications Due: April 4

Tribal Webinars:
Series 1: January 25th
Series 2: February 1st, 7th
epa.gov/infrastructure/grants-tribes-and-intertribal-consortia#webinars

Grants for States and Territories
Applications Due: Feb. 15

Recycling Education & Outreach

epa.gov/infrastructure/bipartisan-infrastructure-law-transforming-us-recycling-and-waste-management
SWIFR States and Territories

• **Eligible Entities**: States and Territories

• **Estimated Funding**: About $30,000,000

• Projects for **states and territories** may include:
  1. **Develop or update plans** to advance post-consumer materials management
  2. **Develop, strengthen, and/or implement comprehensive data collection** efforts that demonstrate progress towards the National Recycling Goal and Food Loss and Waste Reduction Goal
  3. **Support** the state-led implementation of plans
     • *Only for territories*: **equipment** and **construction**

• [epa.gov/rcra/grants-states-and-territories](epa.gov/rcra/grants-states-and-territories)
Mississippi River Cities and Towns Initiative (MRCTI)

• Through a 5-year MOU, EPA and MRCTI intend to:
  • Engage with stakeholders in community-driven solutions for plastic pollution along the River
  • Provide technical assistance to communities on waste management and pollution prevention to support their goals for reducing plastic pollution and managing materials sustainably.
    • Data and measurement
    • Analyzing impacts in communities
THANK YOU!

For more information:
epa.gov/RecyclingStrategy

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