





Waste Food or Food Waste

????????????????????

Jim Callier - USEPA Region 7

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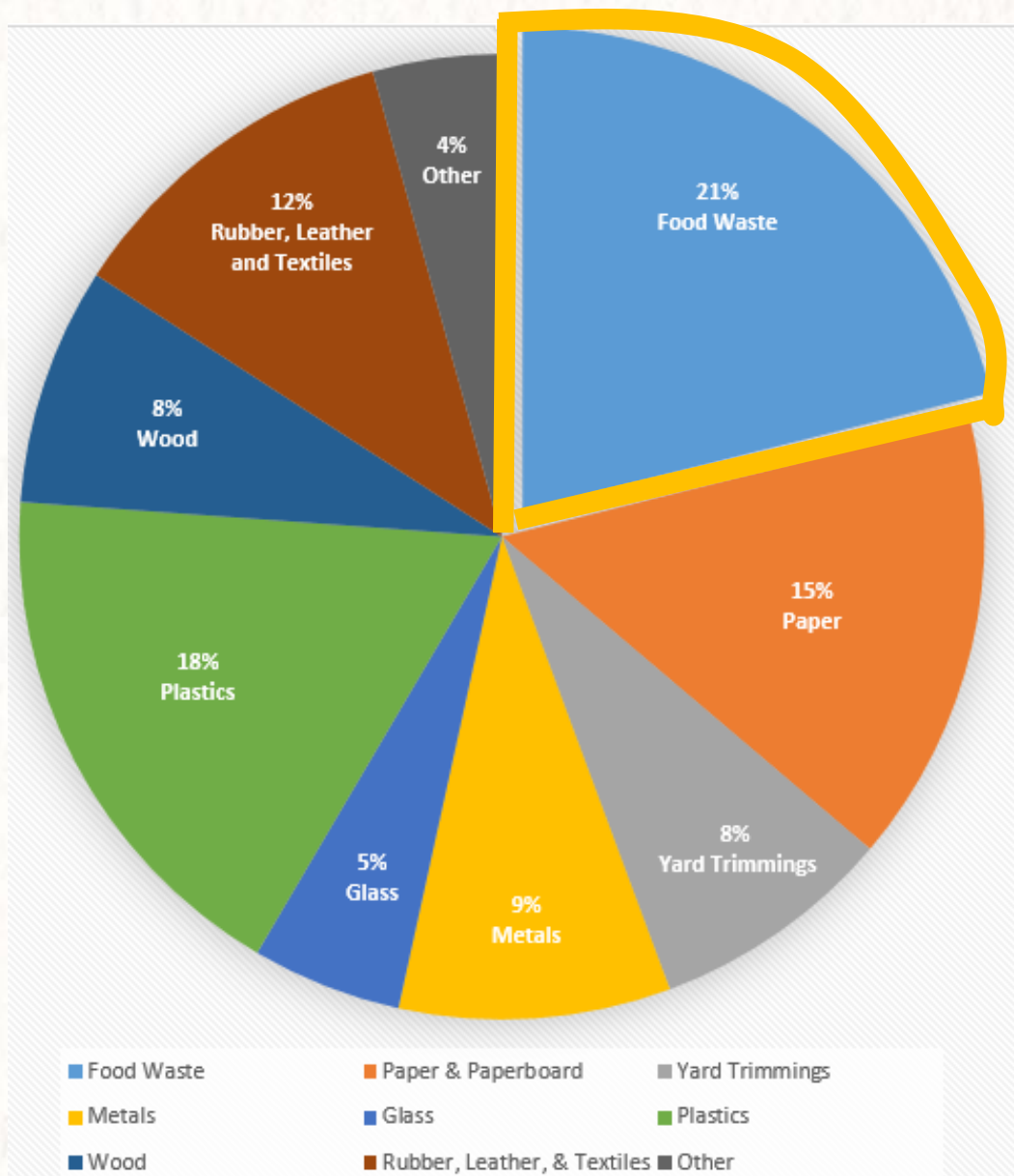
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Sustainable Materials Management



2013 Municipal Waste Characterization Study





Waste Management Hierarchy

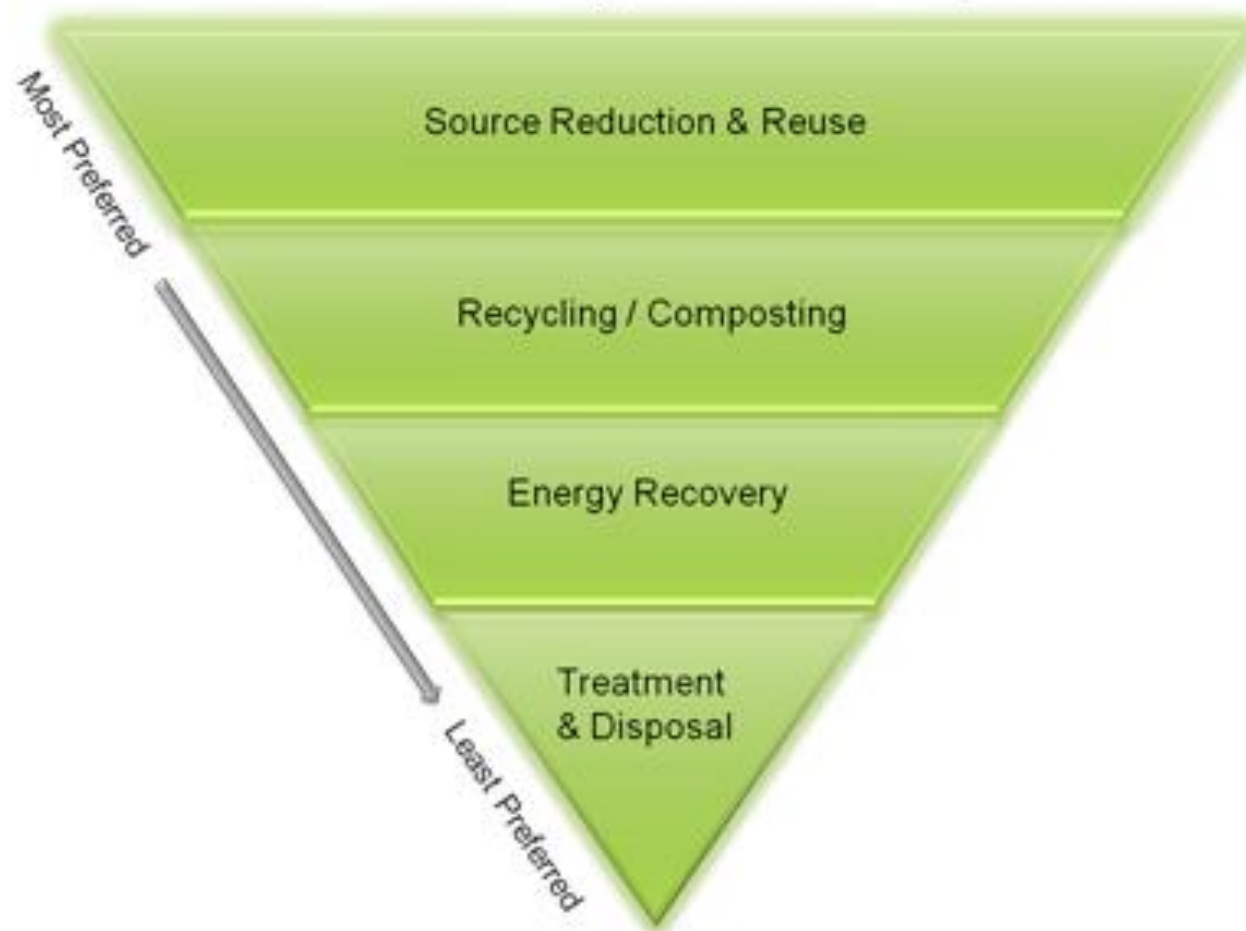
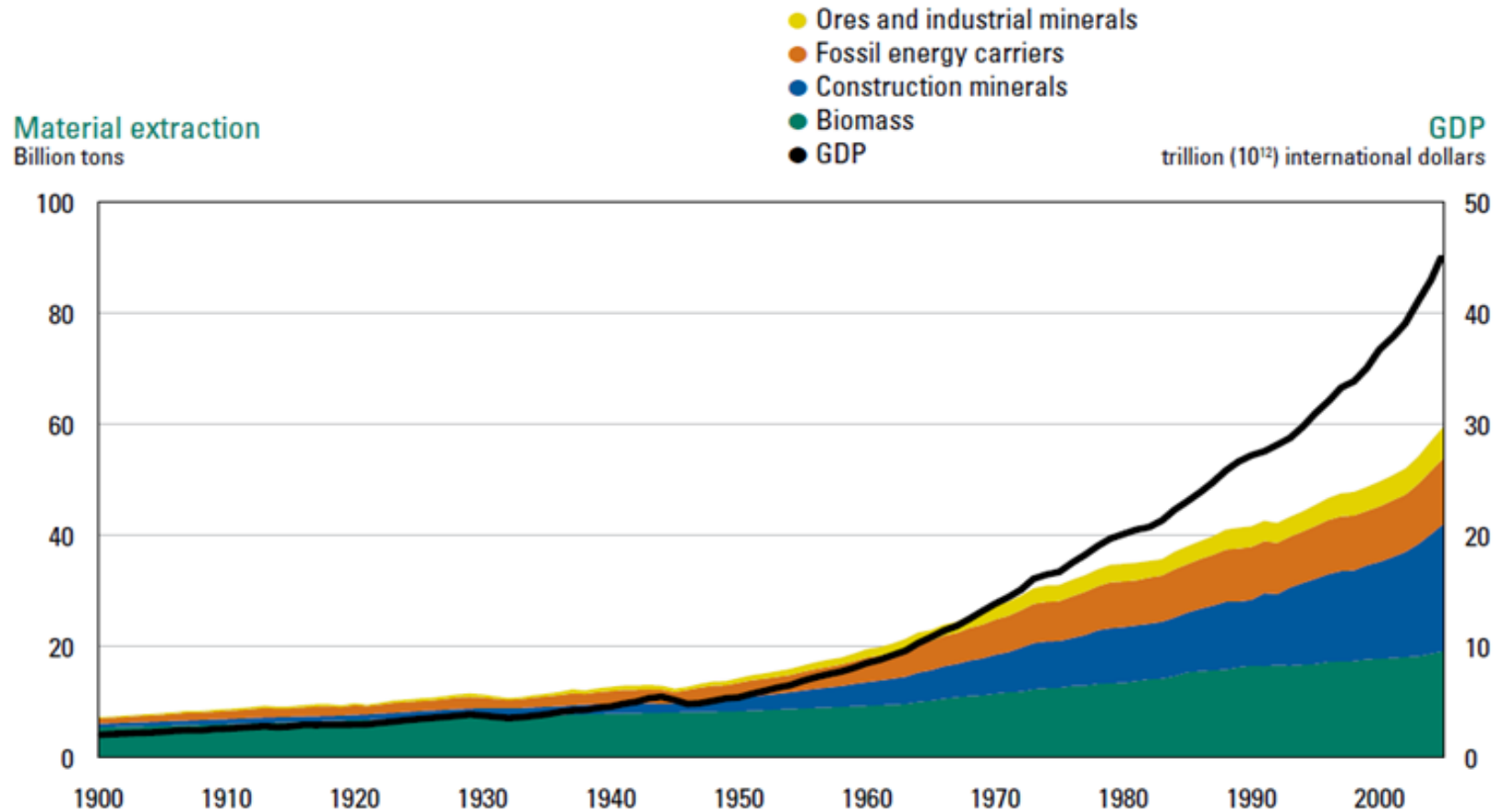




Figure 2. Global material extraction in billion tons, 1900–2005



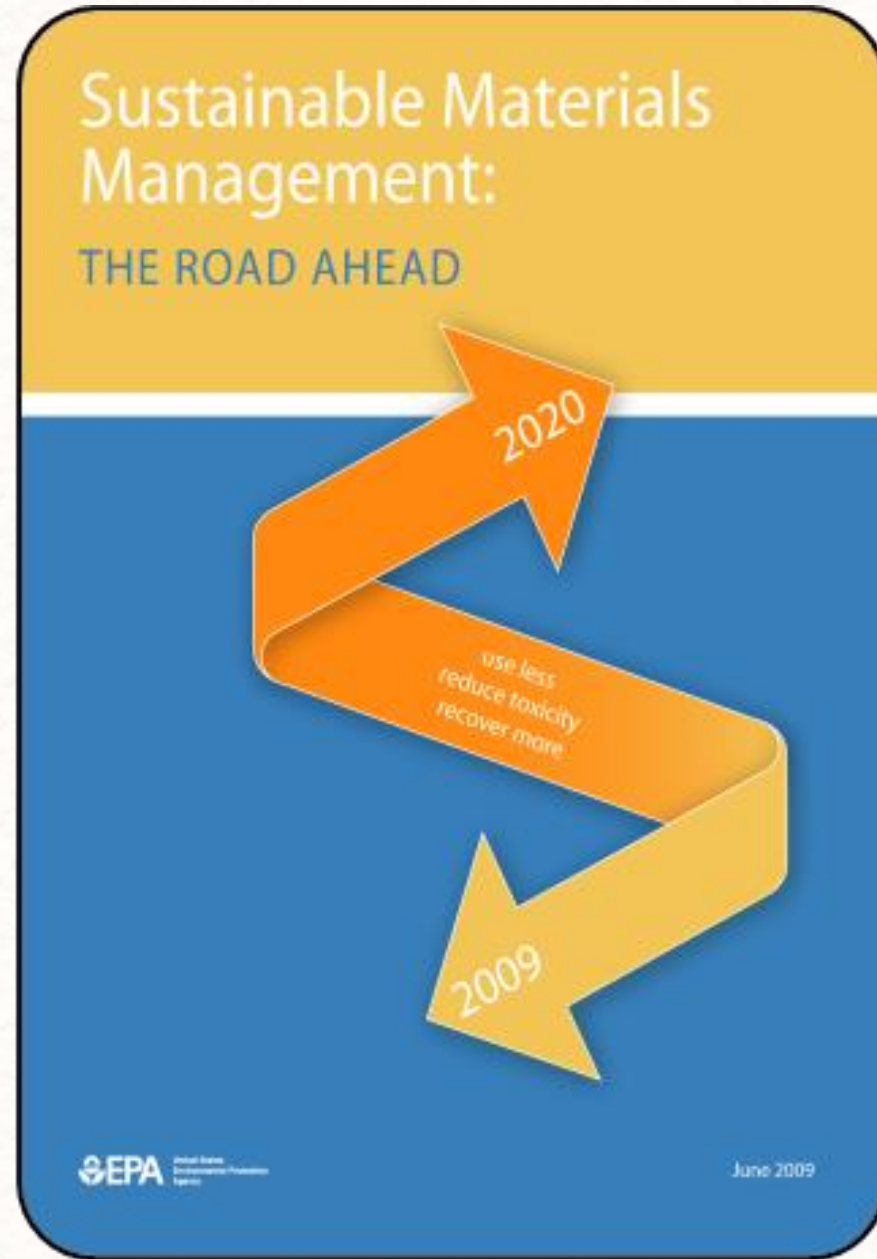
Source: Krausmann *et al.*, 2009

“One half to three quarters of annual resource inputs to industrial economies is returned to the environment as wastes within just one year.”

*Weight of Nations:
Material Outflows
from Industrial
Economies, WRI*

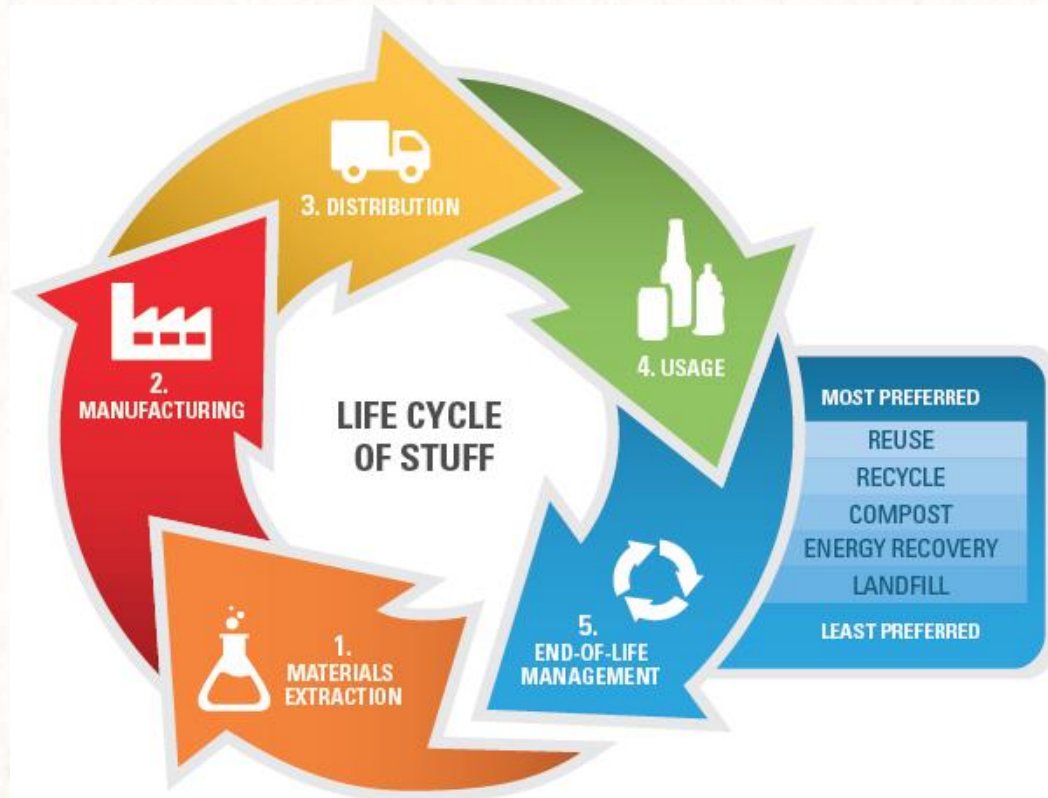


A Brief History:





What is Sustainable Materials Management



"An approach to serving human needs by using/reusing resources productively and sustainably throughout their life cycles, generally minimizing the amount of materials involved and all associated environmental impacts."

Sustainable Materials Management: The Road Ahead, EPA

<https://www.epa.gov/smm>

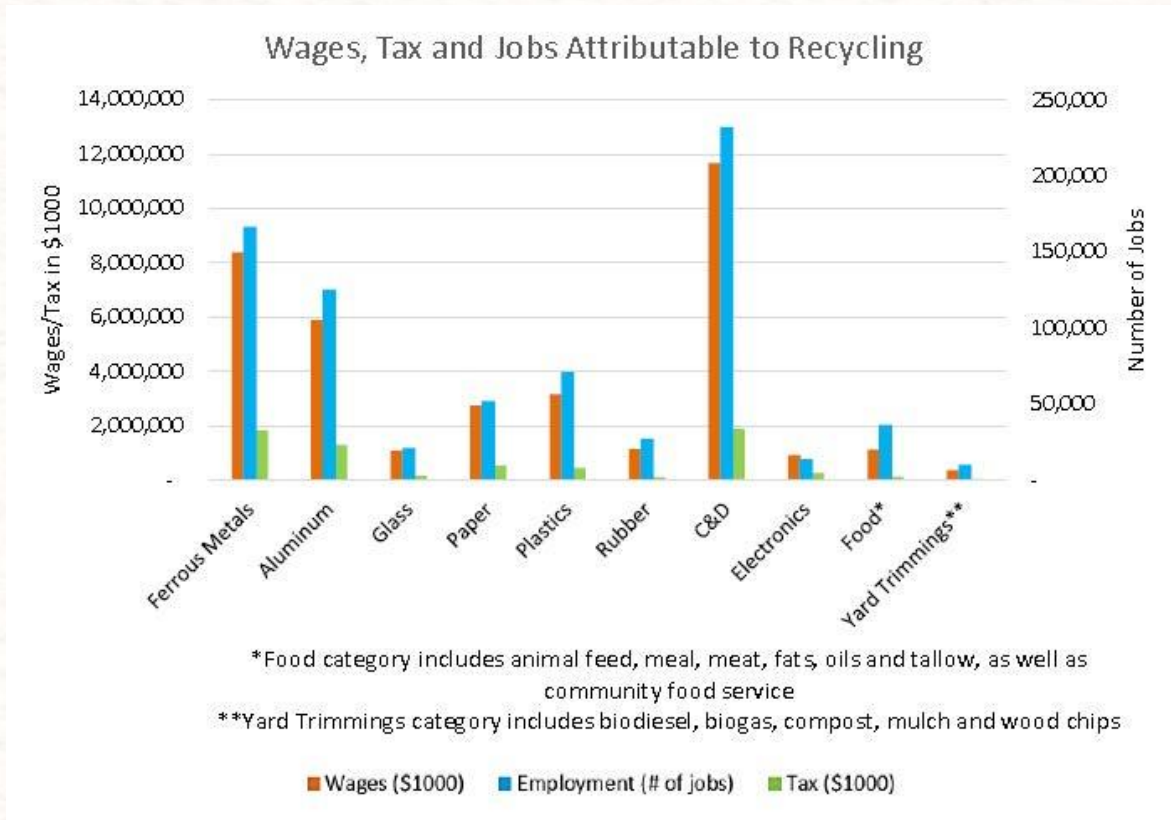


Recycling Economic Information Report

Key Findings

<https://www.epa.gov/smm/recycling-economic-information-rei-report>

- Recycling and reuse of materials creates jobs, while also generating local and state tax revenues
- In 2007, recycling and reuse activities in the United States accounted for
 - 757,000 jobs
 - \$36,6 billion in wages
 - \$6.7 billion in tax revenues
- This equates to 1.57 jobs for every 1,000 tons of materials recycled.
- Construction and Demolition waste provides the largest contribution to all three categories





Recycling Economic Information Study for The Kansas City Metro Area

- by
 - Joseph S. Martinich
 - College of Business Administration
 - University of Missouri - St. Louis
- November 30, 2016
 - <http://marc.org/Environment/Solid-Waste/District-Programs-and-Projects/Regional-Solid-Waste-Planning>





The study estimates that in 2015:

Total direct employment for all 26 Recycling, Re-use, Re-manufacturing industries combined in the KCMSA was 6250, with **direct annual payroll/personal income** of \$214 million and **direct annual receipts/output** of almost \$1.4 billion.



In 2015, the number of direct jobs in:

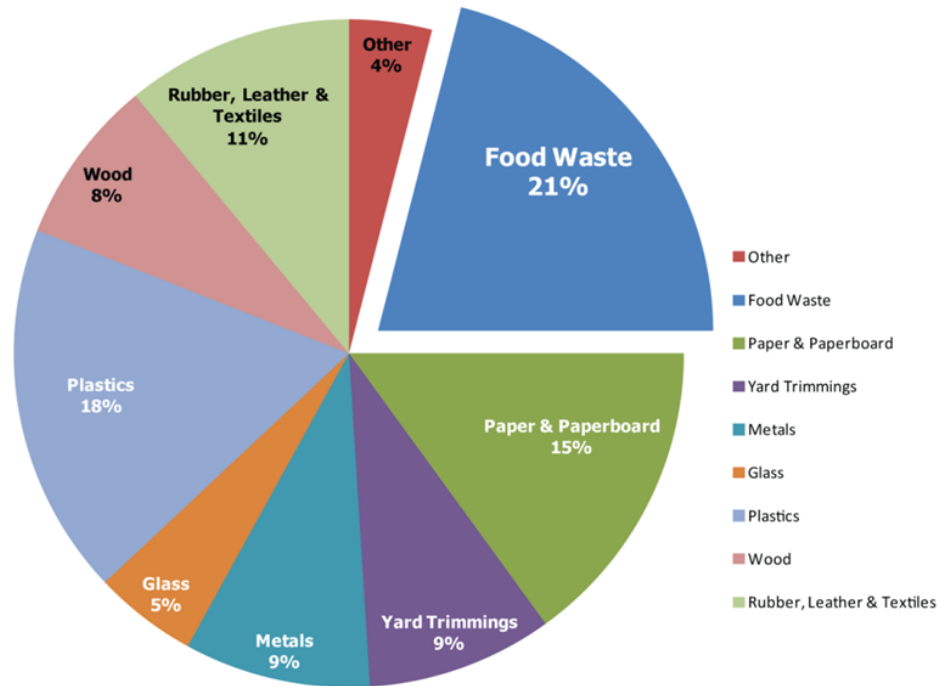
- commercial RRR activities (6250)
- public utilities (4621)
- printing and related support activities (5284 jobs)
- chemical manufacturing (5403 jobs)
- machinery manufacturing (5634 jobs)
- highway, street, and bridge construction (2277 jobs).



Sustainable Management of Food

U.S. Waste

Wasted Food





THE KANSAS CITY STAR.

September 22, 2014



Food waste in America: A multi-billion-dollar loss

JIM CALLIER/JOHN HOLMES



Additional Food Reduction & Recovery facts/figures

- Roughly one third of the worldwide food production for human consumption- approximately 1.3 billion tons- gets lost or wasted. (UNEP 2011)
- 40% of U.S. food goes to waste costing Americans approximately \$165 billion annually.
- Getting food to our table accounts for 10% of U.S. energy consumption uses 50% of U.S. land and
- If we recovered only 15% of the wasted food 25 million Americans could be fed. (Natural Resources Defense Council 2012)





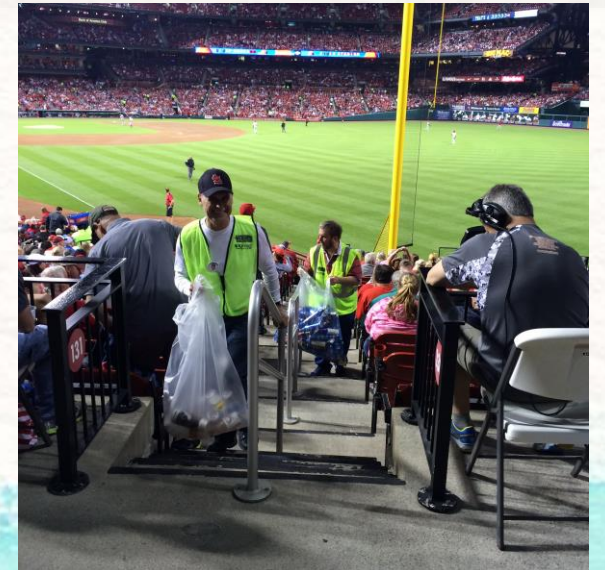
Sustainable Management of Food





Food Waste Partnerships in R7 Yield Results

- R7 has formed partnerships with the St. Louis Cardinals, Kansas City Chiefs, regional universities and grocery stores to reduce the amount of food entering the waste stream
- Excess food is donated or composted through the food waste recovery program
- Participating organizations set goals each year and report progress to the Agency





Extra Yard for the Environment KC Chiefs Partnerships





Food Recovery Challenge Contacts

- Liz Blackburn
 - Air and Waste Management Division
 - U.S. EPA Region 7
 - 11201 Renner Blvd
 - Lenexa, KS 66219
 - 913-551-7899
 - Blackburn.lizi@epa.gov
- Penny Harrell
 - Air and Waste Management Division
 - U.S. EPA, Region 7
 - 11201 Renner Blvd.
 - Lenexa, KS 66219
 - 913-551-7474
 - Harrell.penny@epa.gov



How EPA can help!

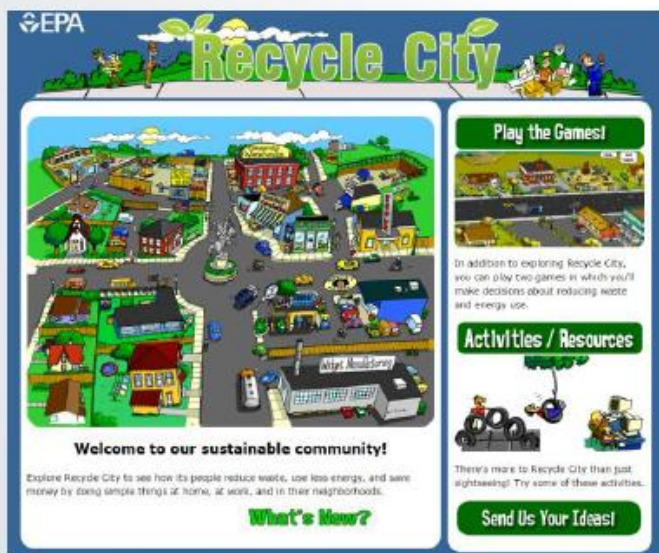
START HERE



<https://cfpub.epa.gov/mwiz/index.cfm>

<https://www.epa.gov/smm>

RECYCLE CITY



REDUCING WASTED FOOD AND PACKAGING TOOLKIT



MSW-DST





EPA and USDA Announce U.S. Food Loss and Waste 2030 Champions

- [Learn about the 2030 Champions](#)
- [Read the press release announcement](#)



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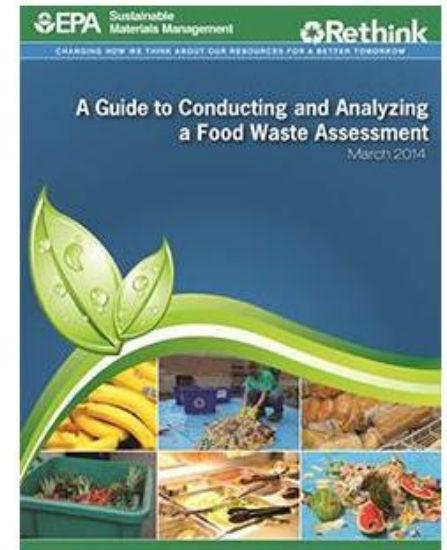
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Food Waste Assessment Guidebook

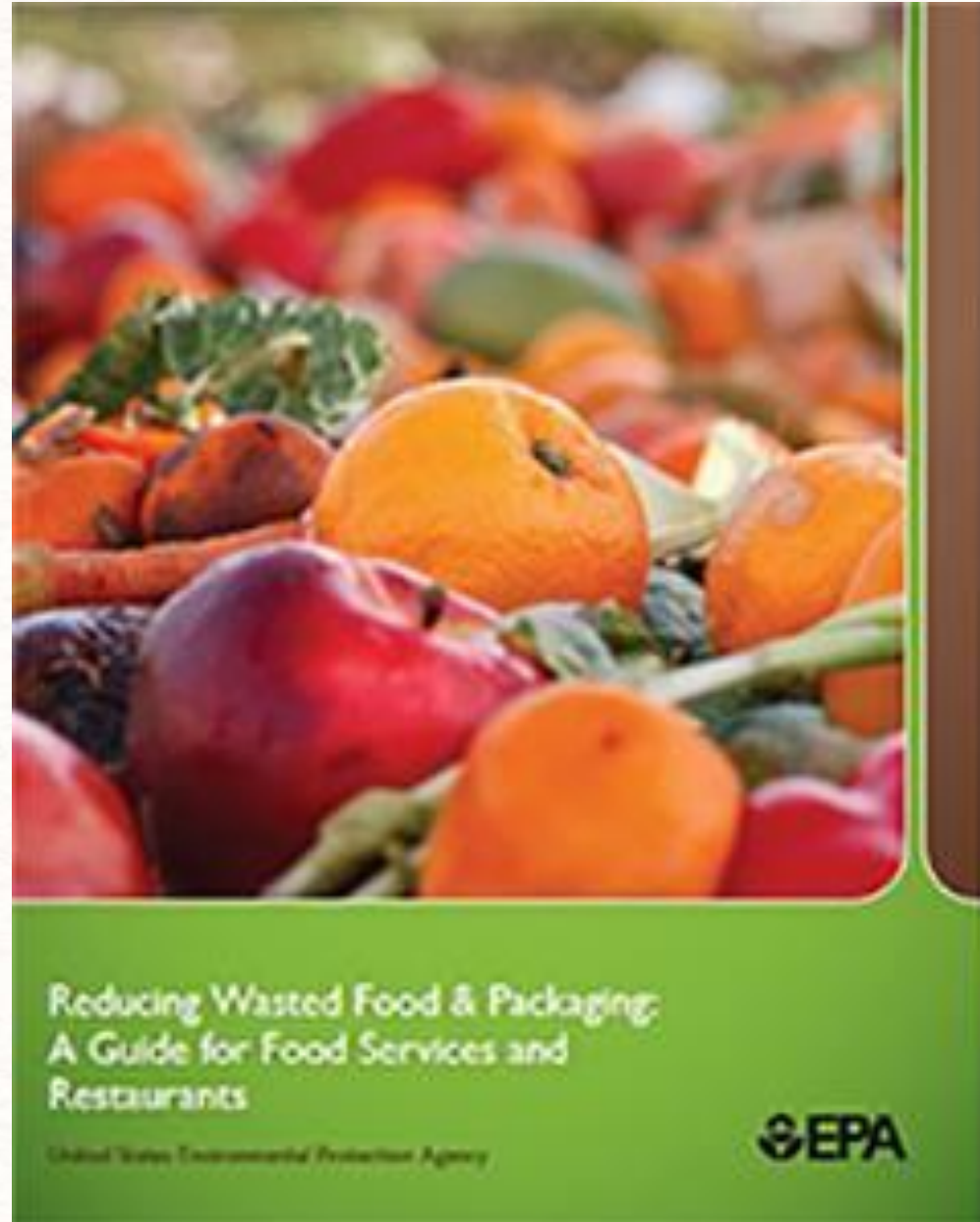
One way to identify what types of food and how much is being wasted is to perform an assessment of waste once it has already been thrown out.

Retail, food service, and other food management establishments can use the [Food Waste Assessment Guidebook](#) to learn how to take a "snapshot in time" of their wasted food by either manually sorting through materials in a garbage sample or by visually observing and estimating waste.





Toolkit for Reducing Wasted Food and Packaging



Food Waste Management Cost Calculator

- The [Food Waste Management Cost Calculator](#)(1 pg, 586 K) estimates the cost competitiveness of alternatives to food waste disposal, including source reduction, donation, composting, and recycling of yellow grease. The calculator:
- develops an alternative food waste management scenario based on your waste profile, availability of diversion methods, and preferences, and
- compares cost estimates for a disposal versus an alternative scenario.

Paper Tracking Waste Logs

Waste Logbook – Facility: _____



Downloaded from <http://ajphaphysoc.org/> at University of California, San Diego on November 10, 2014

Wavelength: _____

Noted/Special Events Today: _____

[illegible]



Guide to Conducting Student Food Waste Audits

- [Wondering how much food is wasted in your cafeteria and strategies to reduce it?](#)

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Date	Topic	Speaker(s)
August 24, 2017	The ABC's of K-12 Food Waste Reduction: Start with the <i>Guide to Conducting Student Food Waste Audits</i>	Melissa Terry , Researcher, University of Arkansas, Fayetteville, Arkansas Lori De La Cruz , Sustainability Coordinator at Mountain View College, Dallas, Texas Esau Milenthal Ex-executive chef at Hutto Independent School District, Hutto, Texas

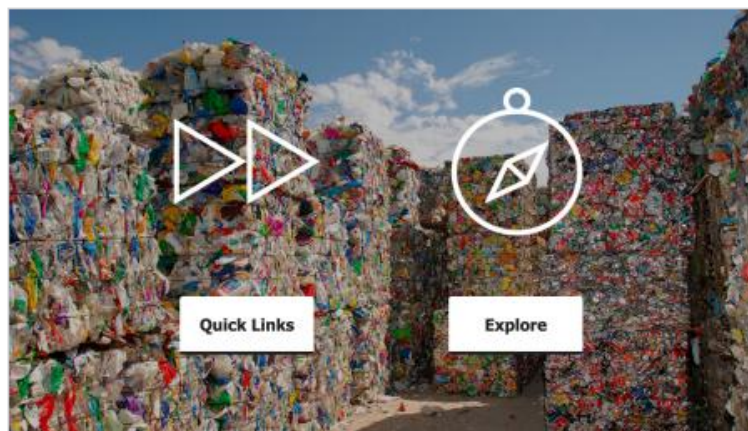


Materials Management Wizard

Materials Management is a systemic approach to using and reusing materials more productively over their entire lifecycles. EPA's Materials Management Wizard, or [MWiz](#), provides access to a repository of EPA-sourced materials management tools and resources designed to support and promote sustainable materials management and community planning.



What is MWiz?



MWiz is an interactive web application that connects communities to EPA Materials Management tools & resources.

Users can produce customized reports.

Find it [HERE](#).

Features include:

Quick Links – Customized access to thousands of materials management tools & resources, according to one of four objectives.

Explore – Access to an interactive database of materials management tools & resources, based on your individualized specifications.

Connect – For application related questions, send an email to GIWIZ@epa.gov.

Resources

- [Fact Sheet](#)

Key Links

- [Sustainable Materials Management](#)
- [Sustainable and Healthy Communities](#)
- [Sustainability](#)



Quick Links

Explore

Which Materials Interest You?

What are Your Objectives?

Use the Keyword Search

Who are You?

Which Resources Meet Your Needs?

What Benefits Do You Want to Achieve?

- ☐ Construction & Demolition (C&D)
- ☐ Electronics
- ☐ Food
- ☐ Industrial Secondary Materials
- ☐ Paper, Plastic, Glass, Metal

Show results Clear results

Use the Explore feature to access materials management tools and resources, customized to your specifications. Answer any or all of the questions above by selecting one or more of the corresponding topics that interest you. At any point, click the "Show Results" button to view your customized list of results. Select as many, or as few, questions and corresponding topics as you would like. Click the "Clear Results" button to remove all previous selections and start over.



Quick Links

Explore

Which Materials Interest You?

What are Your Objectives?

Use the Keyword Search

Who are You?

Which Resources Meet Your Needs?

What Benefits Do You Want to Achieve?

- ☐ Buy Recycled/Sustainable Purchasing
- ☐ Composting
- ☐ Energy Recovery
- ☐ Implement Sustainable Materials Management Programs
- ☐ Improve Waste Management
- ☐ Life Cycle Assessment
- ☐ Recognition
- ☐ Recycle
- ☐ Reduce
- ☐ Reuse

Show results Clear results

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Keyword Search



Clear results

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Which Resources Meet Your Needs?

What Benefits Do You Want to Achieve?

- ☐ Consumer
- ☐ Waste Management Professional
- ☐ Company Representative
- ☐ Community Representative
- ☐ Academic/Scientist
- ☐ Federal Official
- ☐ State/Local/Tribal Official

Show results Clear results

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Quick Links

Explore

Which Materials Interest You?

What are Your Objectives?

Use the Keyword Search

Who are You?

Which Resources Meet Your Needs?

What Benefits Do You Want to Achieve?

- ☐ Case Studies
- ☐ Models, Calculators, Databases
- ☐ Popular Press
- ☐ Reports
- ☐ Webinars
- ☐ Website

Show results Clear results

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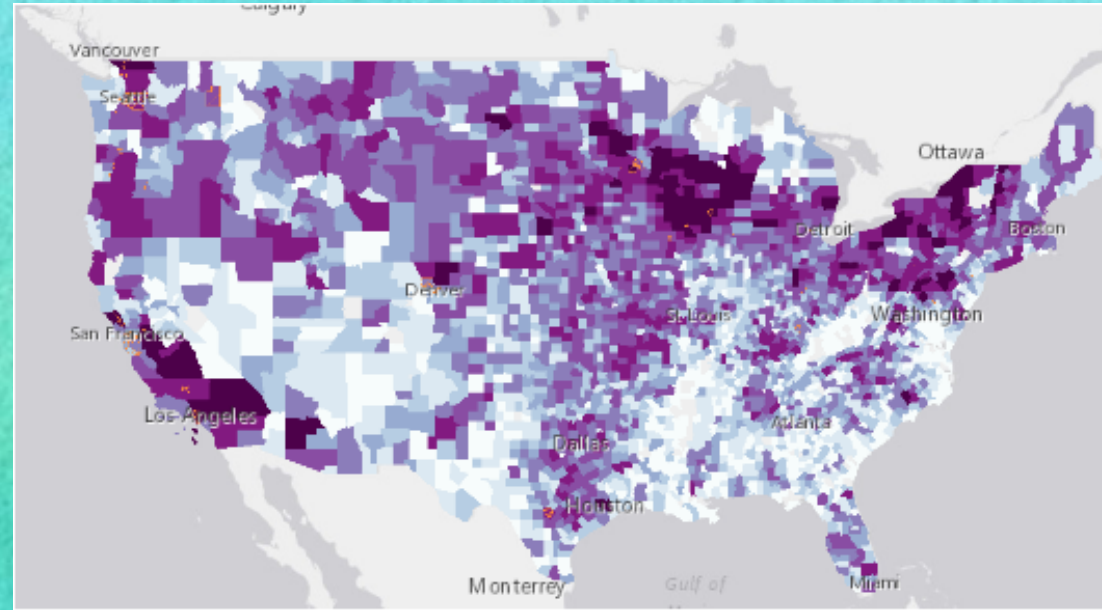
Which Resources Meet Your Needs?

What Benefits Do You Want to Achieve?

- ☐ Brand Management
- ☐ Cost Savings
- ☐ Energy Efficiency
- ☐ Human Health
- ☐ Mitigating Climate Change
- ☐ Reducing Waste
- ☐ Socioeconomic

Show results Clear results

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Overview of EPA's Wasted Food Opportunities Map



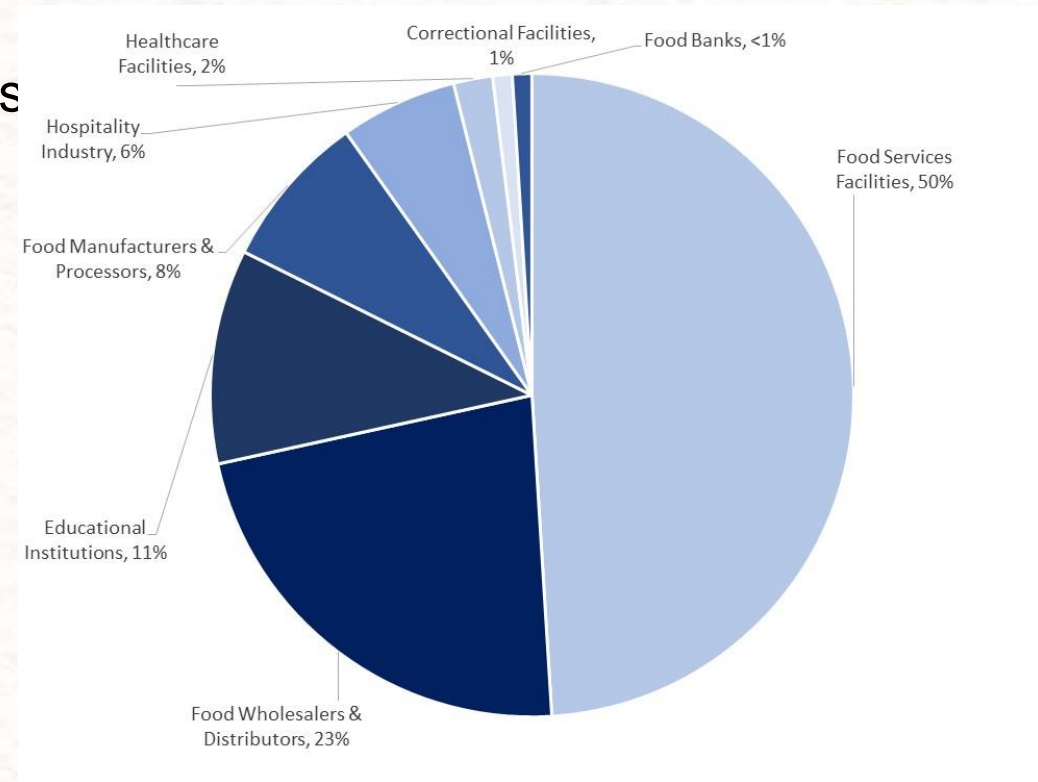
Map Overview

- Identifies **potential wasted food generators** and estimated quantities from institutional, commercial & industrial facilities
- Identifies **potential recipients** of wasted food
- Best used in combination with other publicly available complementary tools and information to identify strategic opportunities for location-specific management of food loss & waste
- Potential users include:
 - Cities, states, or counties wanting a better understanding of wasted food generation and potential recipients
 - Prospective project developers (e.g., compost or AD facility)
 - Private sector and nonprofits working to reduce wasted food
 - Manufacturers with excess product



Potential Generators of Wasted Food

- More than 1.3 million wasted food-generating establishments identified
- More than 660,000 establishments mapped across 89 industries
- Industries grouped as follows:
 - Correctional facilities
 - Educational institutions
 - Food banks
 - Food manufacturers & processors
 - Food wholesalers & distributors
 - Healthcare facilities
 - Hospitality industry
 - *Food services sectors
(not mapped in this version)





How Users Can Leverage the Map

- Combine with other publicly available complementary tools and information to **identify strategic opportunities** for location-specific management of food loss & waste
- Support decision-making through identification of:
 - potential sources of food for rescue and reuse;
 - feedstocks for compost, anaerobic digestion, or other wasted food processors;
 - potential infrastructure gaps for managing wasted food; and,
 - alternatives to sending wasted food to landfill.
- Download data, and adapt/adopt methodology, if desired



MIDWEST FOOD RECOVERY SUMMIT



September 6-8, 2017 • Des Moines Marriott Downtown

As food waste continues to become a mainstream problem, the need for resources and information about how to reduce it from the start, recover it if possible and where it should go become essential. The Midwest Food Recovery Summit will focus on ALL of the recovery options.

Attendees _____

REGISTER TODAY 

REGISTER TODAY 

Exhibitors _____

REGISTER TODAY 

REGISTER TODAY 



Thank You!!!

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