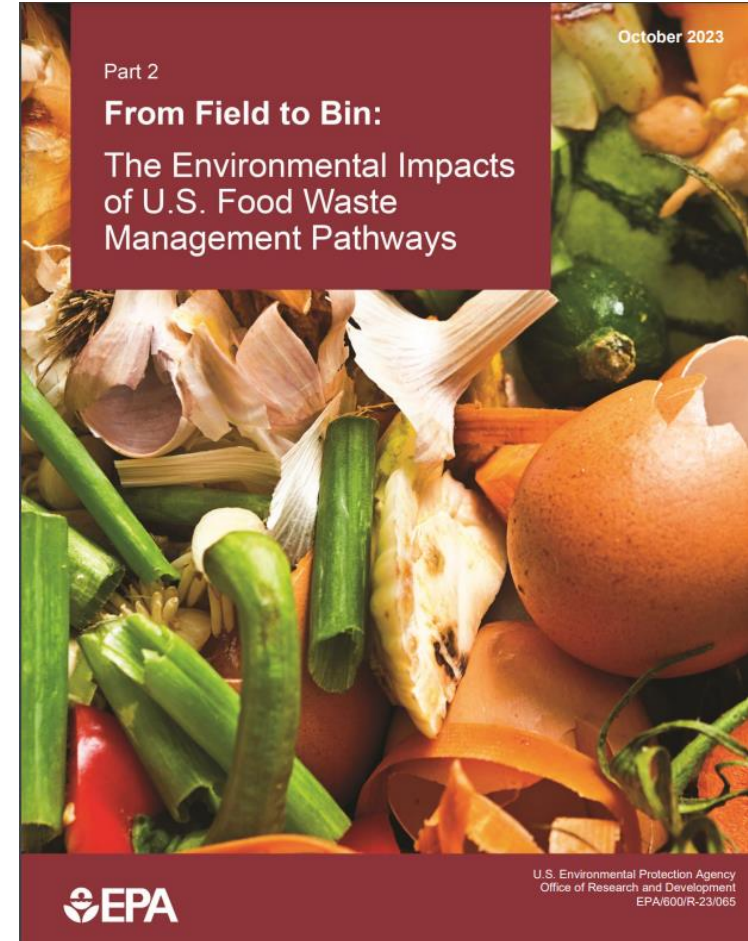


EPA's New Food Waste Research & Wasted Food Scale

October 2023



Methane Emissions from Landfilled Food Waste: *Background & Methodology*

- **How much of the methane emitted from MSW landfills is generated by food waste?**
 - Food waste comprises more than 20 percent of MSW disposed of in U.S. landfills.
 - **No peer-reviewed estimate of national landfill methane emissions from food waste existed.**
- The study estimates annual methane emissions from landfilled food waste from 1990 to 2020, relying on widely-used EPA data and models.

Methane Emissions from Landfilled Food Waste: Findings

The infographic features a red-to-orange gradient background with a city skyline silhouette. In the foreground, a hand pours food waste from a white plate into a dark blue landfill. A dump truck is shown dumping waste into the landfill, which is filled with black bags. A dashed white line connects the food waste to a text box in the upper right. The EPA logo is in the top left corner.

EPA

Wasted food causes **58%** of methane emissions from municipal solid waste landfills.

In landfills, wasted food breaks down relatively quickly, generating methane – a powerful greenhouse gas – before landfill gas collection systems are in place.

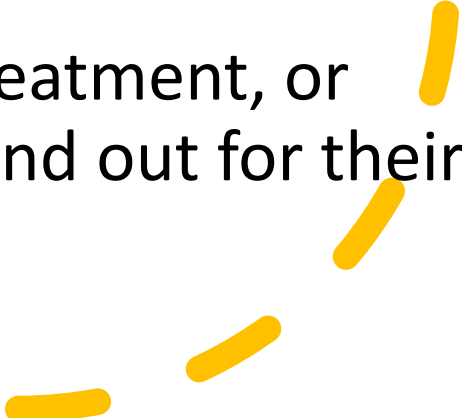
Keeping food out of landfills helps tackle climate change.

Environmental Impacts of Managing U.S. Food Waste:

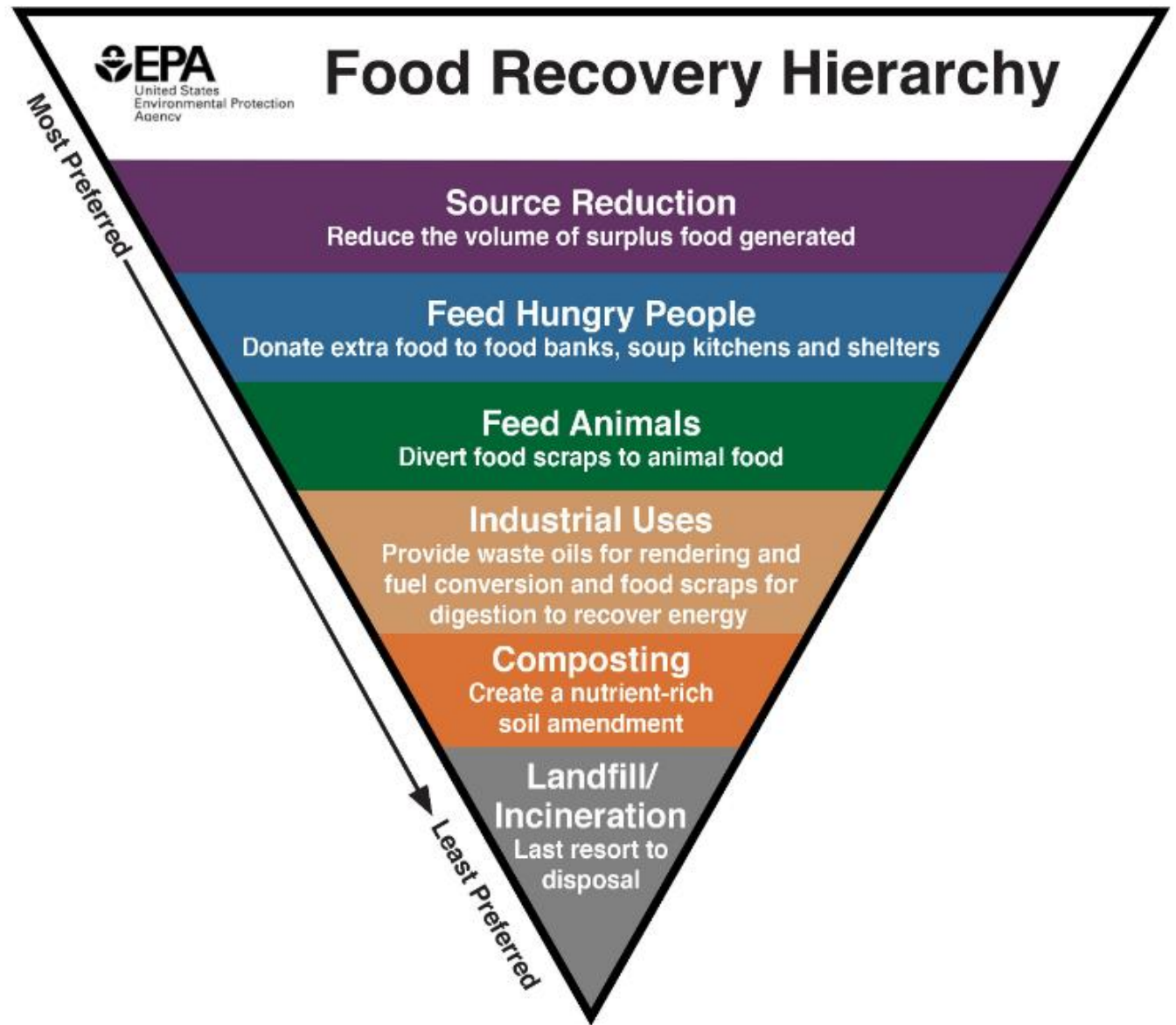
Background & Methodology

- New report investigates 11 wasted food pathways, including 4 common pathways not on previous food recovery hierarchy:
 - Source Reduction
 - Donation
 - **Upcycling**
 - Anaerobic Digestion
 - Animal Feed
 - Composting
 - Controlled Combustion (Incineration)
 - **Land Application**
 - Landfill
 - **Sewer/Wastewater Treatment (“Down the Drain”)**
 - **Unharvested/Plowed In**
- Pathways were evaluated by two methodologies – Life Cycle Assessment (LCA) and Circularity Assessment

Environmental Impacts of Managing U.S. Food Waste: *Findings*

- **Source reduction, donation, and upcycling** are the most environmentally preferable pathways because they can displace additional food production.
 - The **benefits of other pathways are small** relative to the impacts of food production; thus, they can do little to offset the original impact.
 - Recycling wasted food into **soil amendments** offers opportunities to make long-term improvements in soil structure and health.
 - **Landfill** and sewer/wastewater treatment, or **sending food down the drain**, stand out for their sizeable methane emissions.
- 

Environmental
Impacts of
Managing U.S.
Food Waste:
*Previous Food
Recovery
Hierarchy*

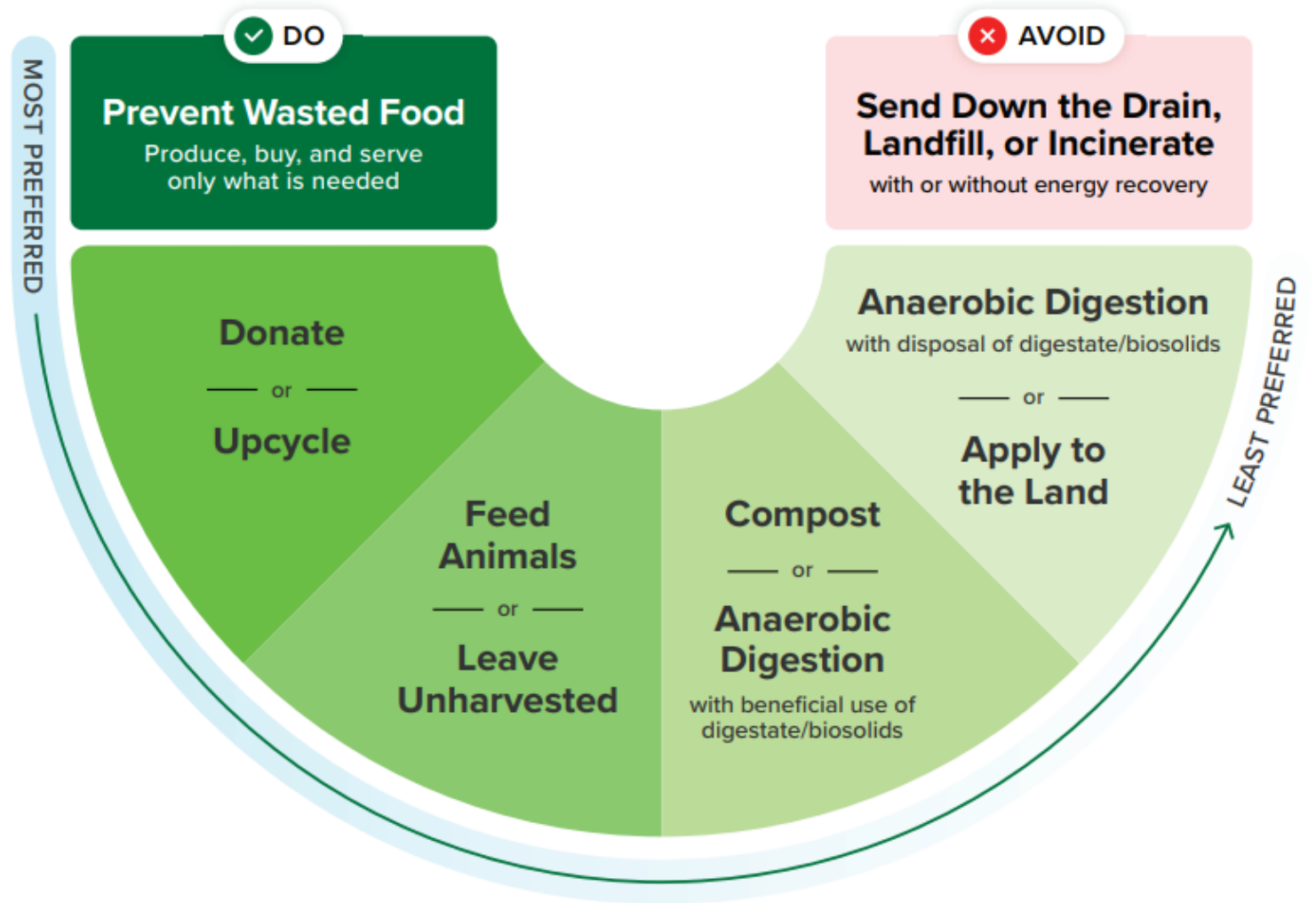


Environmental Impacts of Managing U.S. Food Waste:
New Wasted Food Scale



Wasted Food Scale

How to reduce the environmental impacts of wasted food



October 2023

Links

- Wasted Food Scale
<https://www.epa.gov/sustainable-management-food/wasted-food-scale>
- From Field to Bin: The Environmental Impacts of Food Waste Management Pathways (Part 2)
<https://www.epa.gov/land-research/field-bin-environmental-impacts-us-food-waste-management-pathways>
- Quantifying Methane Emissions from Landfilled Food Waste
<https://www.epa.gov/land-research/quantifying-methane-emissions-landfilled-food-waste>
- EPA Sustainable Management of Food
<https://www.epa.gov/sustainable-management-food>

Contact us: SMMFood@epa.gov



Excess Food Opportunities Map

www.epa.gov/foodmap



EFOM Background

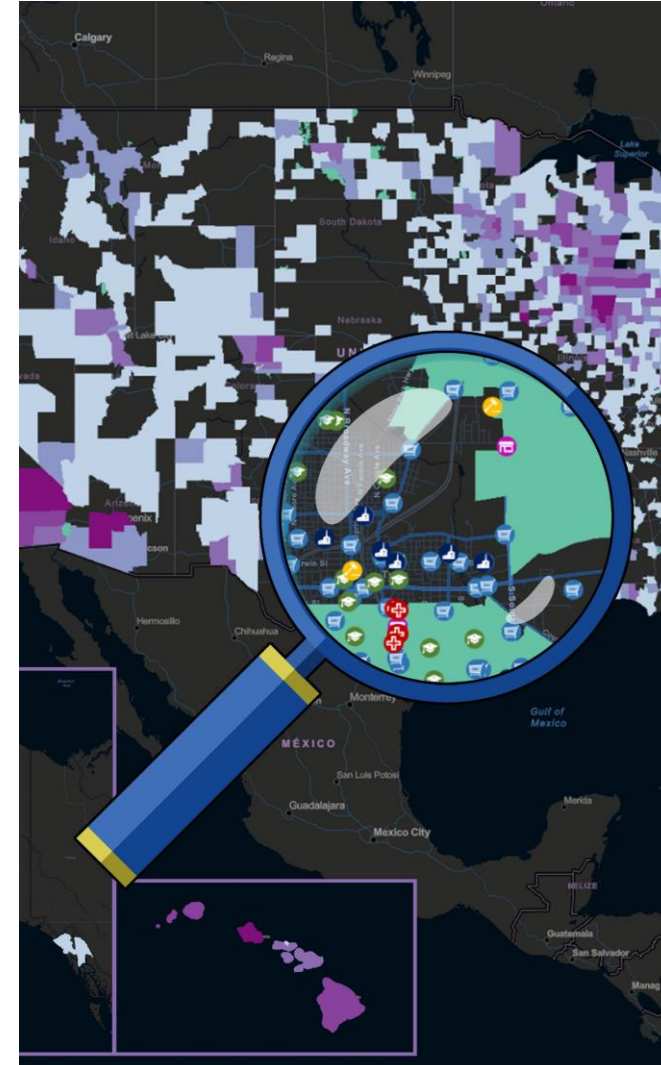
- First published in June 2018; the latest update to Version 3 was in **July 2023**.
- Main intent of the map is to provide information:
 - 1) On potential sources and amounts of excess food for donation, animal feed, composting and AD; and
 - 2) On alternative options to landfilling or incinerating excess food.
- Map shows **location and basic information** for generators and recipients, as well as **excess food estimates** for each generator.
- Accompanying **technical methodology** and **publicly available data sets** can assist organizations and government agencies working to develop policy and regulations.

What's in EFOM V3.0?

Over 950,000 excess-food
generating establishments mapped
across 90 NAICS codes and three
school types

Generators:

- Correctional facilities
- Educational institutions
- **Farmers markets**
- Food banks
- Food manufacturers and processors
- Food wholesale and retail
- Healthcare facilities
- Hospitality industry
- Restaurants and food services





What's in EFOM V3.0?

Recipients:

- ~1000 food banks
- ~1,600 anaerobic digestion (AD) facilities
- ~3,800 composting facilities

Infrastructure to support excess food management:

- ~585 refrigerated warehousing and storage facilities
- 275 communities with source-separated organics programs

What's in EFOM V3.0?

- EJScreen layers
 - EJScreen Indexes
 - Pollution and Sources
 - Socioeconomic Indicators
 - Health Indicators
 - Critical Services, including food access
- USDA data
 - Food Insecurity (state level)
 - Food Assistance (mix of state and county level) - SNAP, WIC, NSLP etc.

EJScreen is undergoing an update – changes may affect the layers in this map.

How is the Map Used?



Identify opportunities for
new partnerships



Identify infrastructure
gaps & needs



Landscape assessment of
wasted food in your area



Use the underlying data
and methodology



Accompanying Resources:

- Technical Methodology
- FAQs
- User Guide
- Data available for download

User Guide for the Excess Food Opportunities Map

The U.S. EPA Excess Food Opportunities Map supports nationwide diversion of excess food from landfills. The interactive map displays the locations of more than 500,000 potential industrial, commercial and institutional excess food generators and more than 4,000 potential recipients. [Learn more about this map and its uses.](#)

Below are tips about how to use the map and generate commonly requested views.

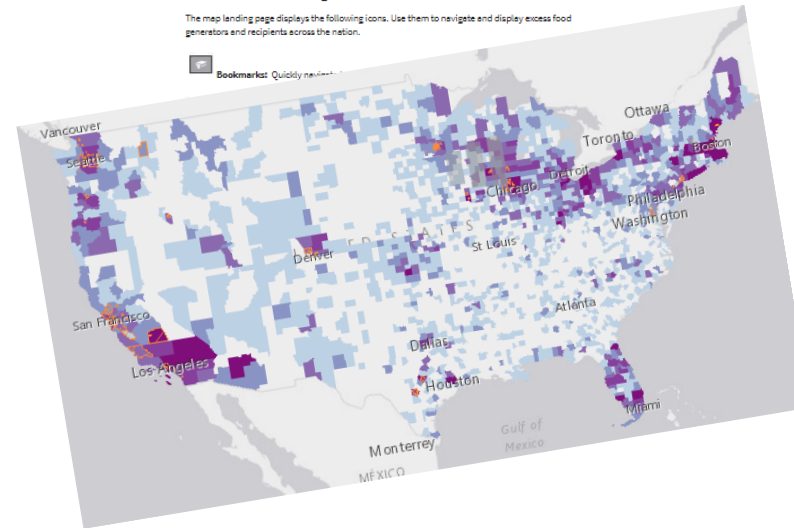
- [Overview of Map Icons](#)
- [Creating Map Views](#)
- [Viewing and Filtering Establishment-Level Data](#)
- [Downloading Data](#)

RESOURCES

- [List of types of excess food generators and recipients found in this map](#)
- [Answers to frequent questions](#)
- Direct any questions to 311@epa.gov. Please include "Excess Food Opportunities Map" in the subject line.

Overview of Map Icons

The map landing page displays the following icons. Use them to navigate and display excess food generators and recipients across the nation.





Thank you!

Questions? Map uses you'd like to share?

smmfood@epa.gov

fabiano.claudia@epa.gov

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

<https://www.epa.gov/sustainable-management-food>