

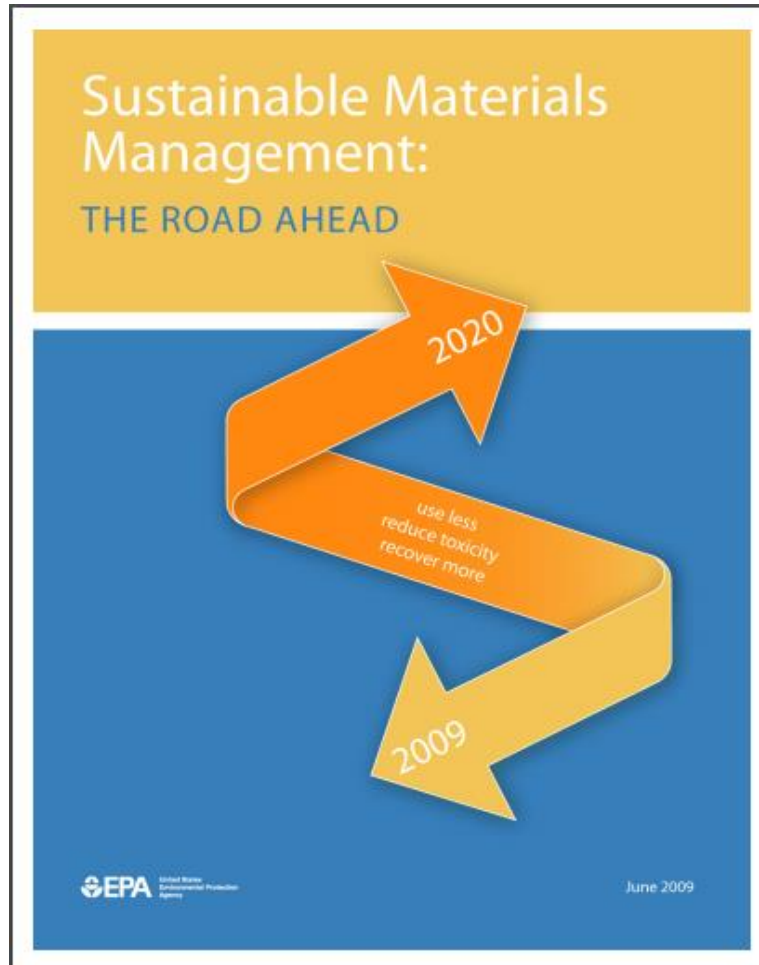
# Reducing Food Loss and Waste: A Workshop on Impacts

Impacts of Reducing Food Loss and Waste on the Environment  
October 17, 2018

Lana Suarez

Sustainable Management of Food  
US Environmental Protection Agency

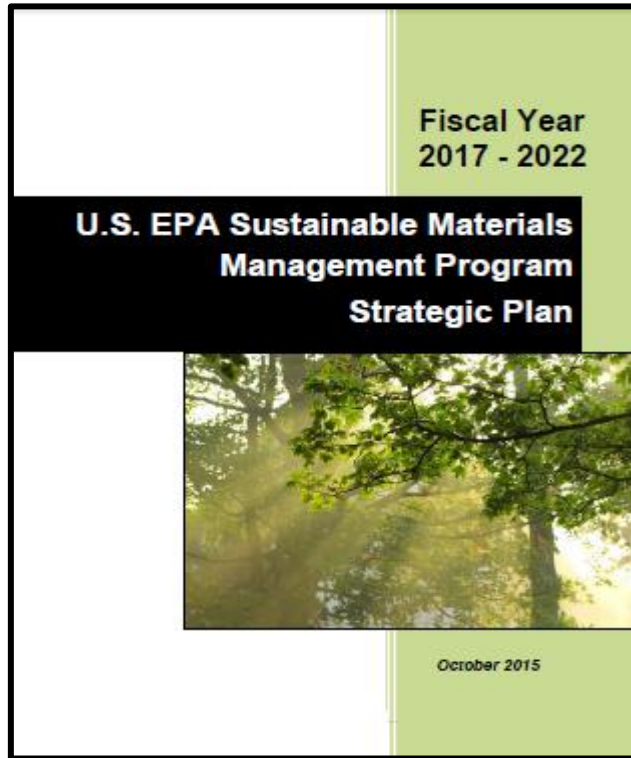
# Sustainable Materials Management



***“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 (2009)***

# Sustainable Materials Management



Built Environment (buildings, roads, bridges, infrastructure)

Sustainable Management of Food

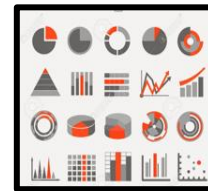
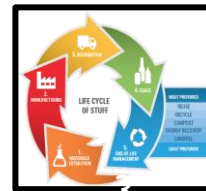
Sustainable Packaging

Sustainable Electronics Management

Life-Cycle Thinking

Measurement

International Efforts





# Food Recovery Hierarchy

[www.epa.gov/foodscraps](http://www.epa.gov/foodscraps)

## Source Reduction

Reduce the volume of surplus food generated

## Feed Hungry People

Donate extra food to food banks, soup kitchens and shelters

## Feed Animals

Divert food scraps to animal feed

## Industrial Uses

Provide waste oils for rendering and fuel conversion and food scraps for digestion to recover energy

## Composting

Create a nutrient-rich soil amendment

## Landfill/ Incineration

Last resort to disposal

# Waste Reduction Model (WARM)



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

EPA United States Environmental Protection Agency

Environmental Topics Laws & Regulations About EPA Search EPA.gov

CONTACT US SHARE

## Waste Reduction Model (WARM)

EPA created the Waste Reduction Model (WARM) to help solid waste planners and organizations track and voluntarily report greenhouse gas (GHG) emissions reductions from several different waste management practices. WARM calculates and totals GHG emissions of baseline and alternative waste management practices—source reduction, recycling, anaerobic digestion, combustion, composting and landfilling.

**Basic Information about WARM**

**Documentation**

**Related Programs**

- [Sustainable Materials Management](#)
- [WasteWise](#)
- [ENERGY STAR](#)
- [Climate Change](#)

**Other Tools**

**Waste Reduction Model (WARM)**

1 Scenarios 2 Further Characteristics 3 General Information 4 Calculation

Please enter data in short tons (1 short ton = 2,000 lbs.) and refer to the User's Guide if you need assistance.

**Baseline Scenario:** Describe the baseline generation and management for the MSW materials listed below. If the material is not generated in your community or you do not want to analyze it, leave it at 0.

**Alternative Scenario:** Describe the alternative management scenario for the MSW materials generated in the baseline.

Each input row will be validated to sum up correctly. The tons generated in the baseline scenario must match the tons generated in the alternative scenario.

A row is valid if the sum of tons entered in the Baseline Scenario columns, as shown in the Tons Generated column, is equal to the sum of tons entered in the Alternative Scenario columns. For example, if the Baseline Scenario assumes that 100 tons of aluminum cans are landfilled, this is the Tons Generated value. To generate valid results, all values entered in the Alternative Scenarios columns must add up to 100 tons to equal the Tons Generated value.

Material	Baseline Scenario					Tons Generated	Alternative Scenario					
	Tons Recycled	Tons Landfilled	Tons Comusted	Tons Composted	Tons Anaerobically Digested		Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Comusted	Tons Composted	Tons Anaerobically Digested
Aluminum Cans	0	0	0	N/A	N/A	0	0	0	0	0	N/A	N/A
Aluminum Ingot	0	0	0	N/A	N/A	0	0	0	0	0	N/A	N/A
Steel Cans	0	0	0	N/A	N/A	0	0	0	0	0	N/A	N/A
Copper Wire	0	0	0	N/A	N/A	0	0	0	0	0	N/A	N/A
Glass	0	0	0	N/A	N/A	0	0	0	0	0	N/A	N/A
HOPE	0	0	0	N/A	N/A	0	0	0	0	0	N/A	N/A

Best





#NoWastedFood



**Our country has a goal:  
Cut wasted food  
in half by 2030**

Learn how to do your part: [www.epa.gov/foodrecovery](http://www.epa.gov/foodrecovery)

How much food is  
wasted in the U.S.?

Percentage of food that  
goes uneaten each year:

**31%**

Percentage of waste thrown  
away that is food:

**22%**

Cost of the food that  
goes uneaten each year:

**\$161.6  
BILLION**

Amount of food waste that  
is composted:

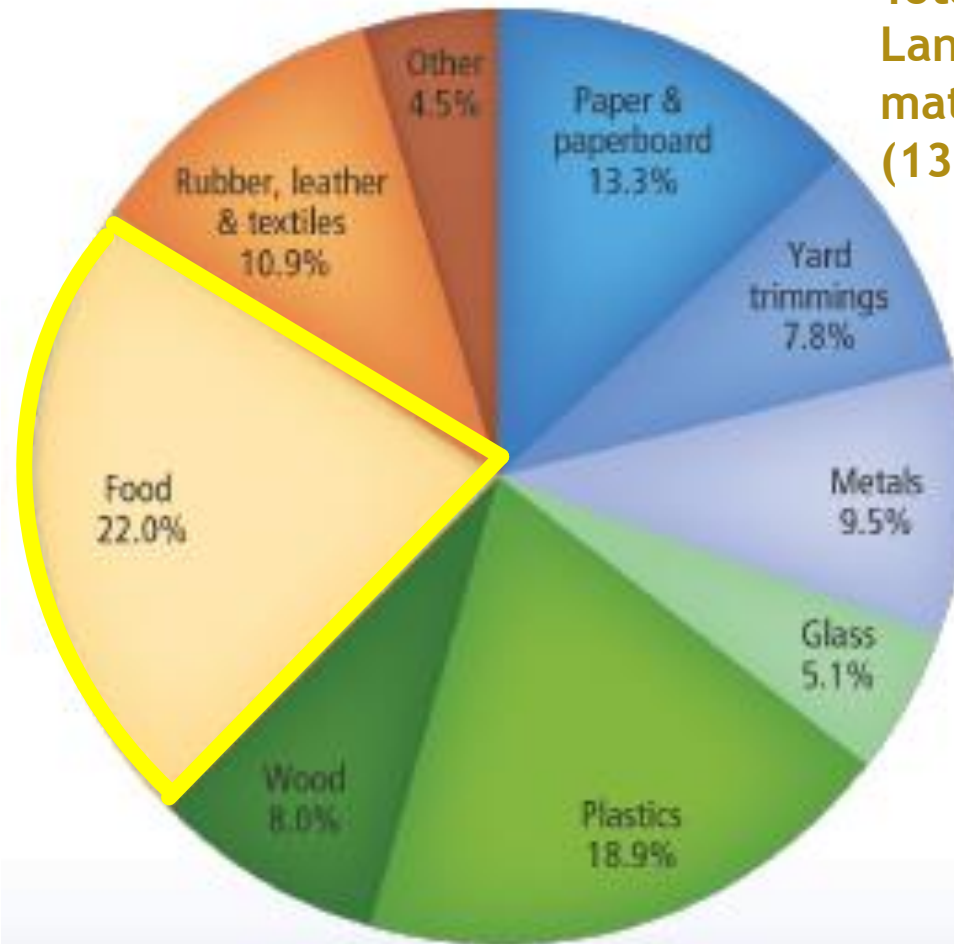
**2.1  
MILLION TONS**

Number of Americans from households  
that don't always have enough to eat:

**40  
MILLION**

# EPA's Facts and Figures Food Waste Estimates

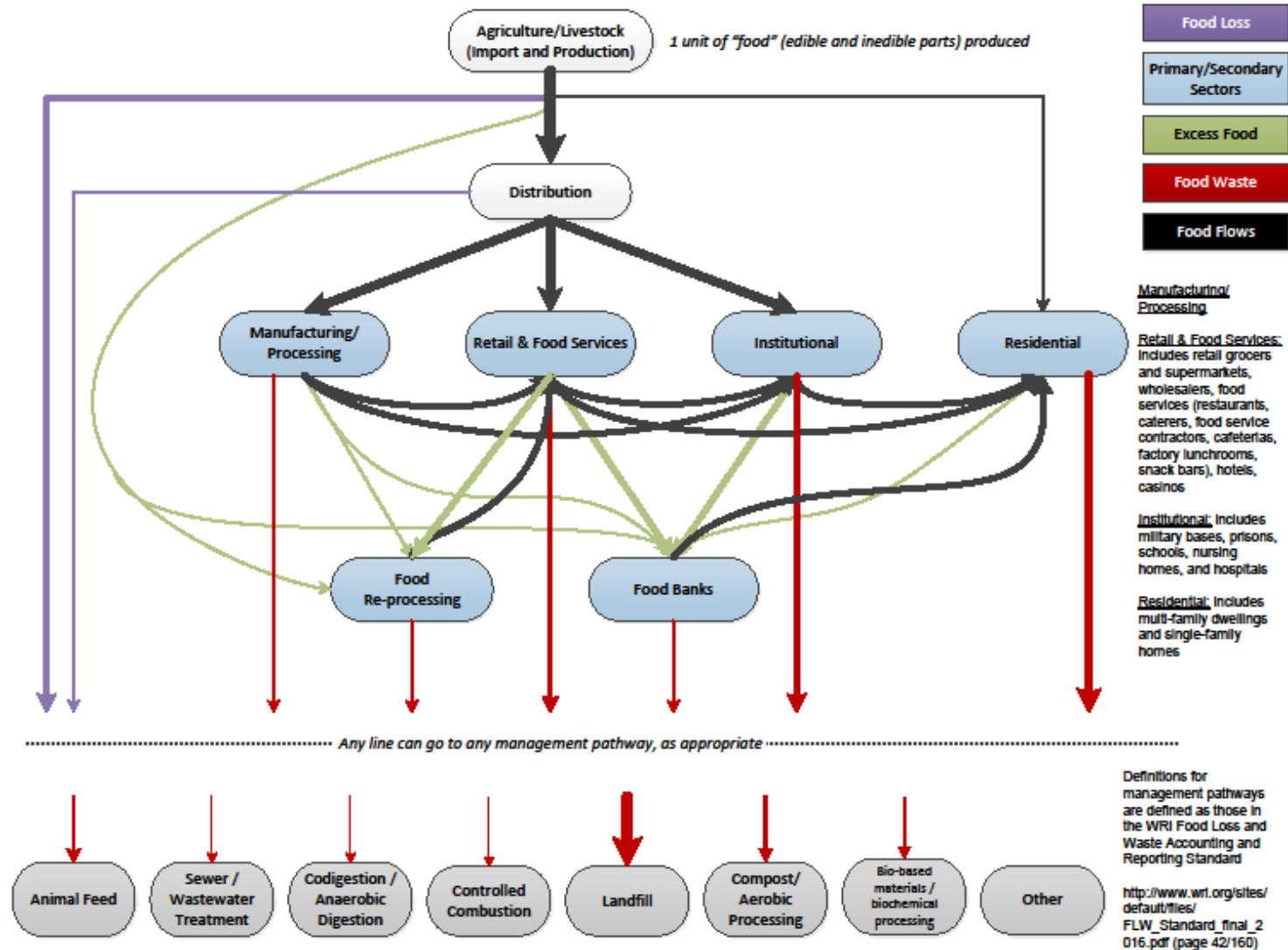
Total MSW  
Landfilled (by  
material), 2015  
(138 million tons)



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

# SMF Measurement Improvement

DRAFT

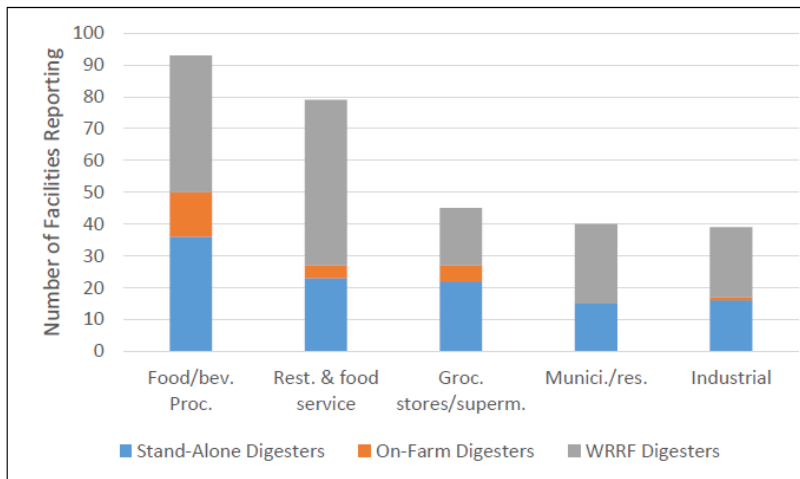
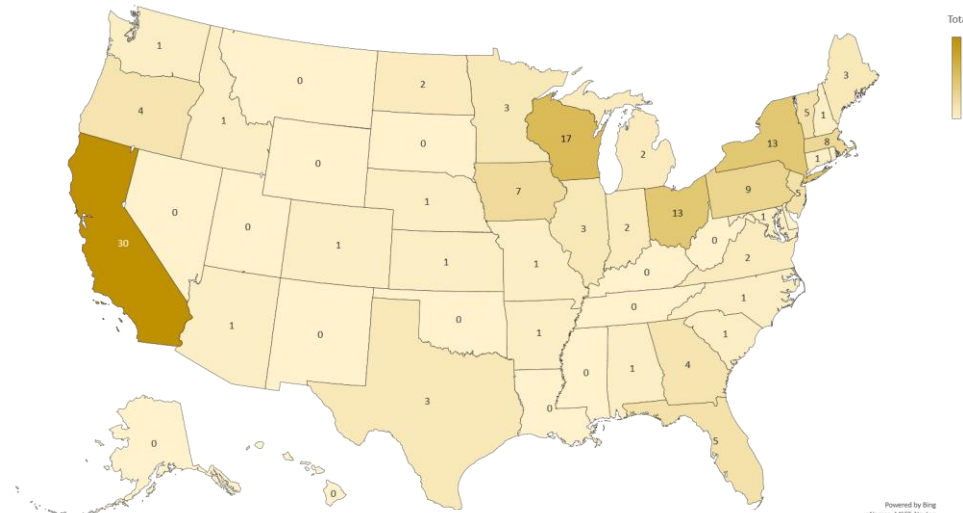




# Anaerobic Digestion Data Collection Project

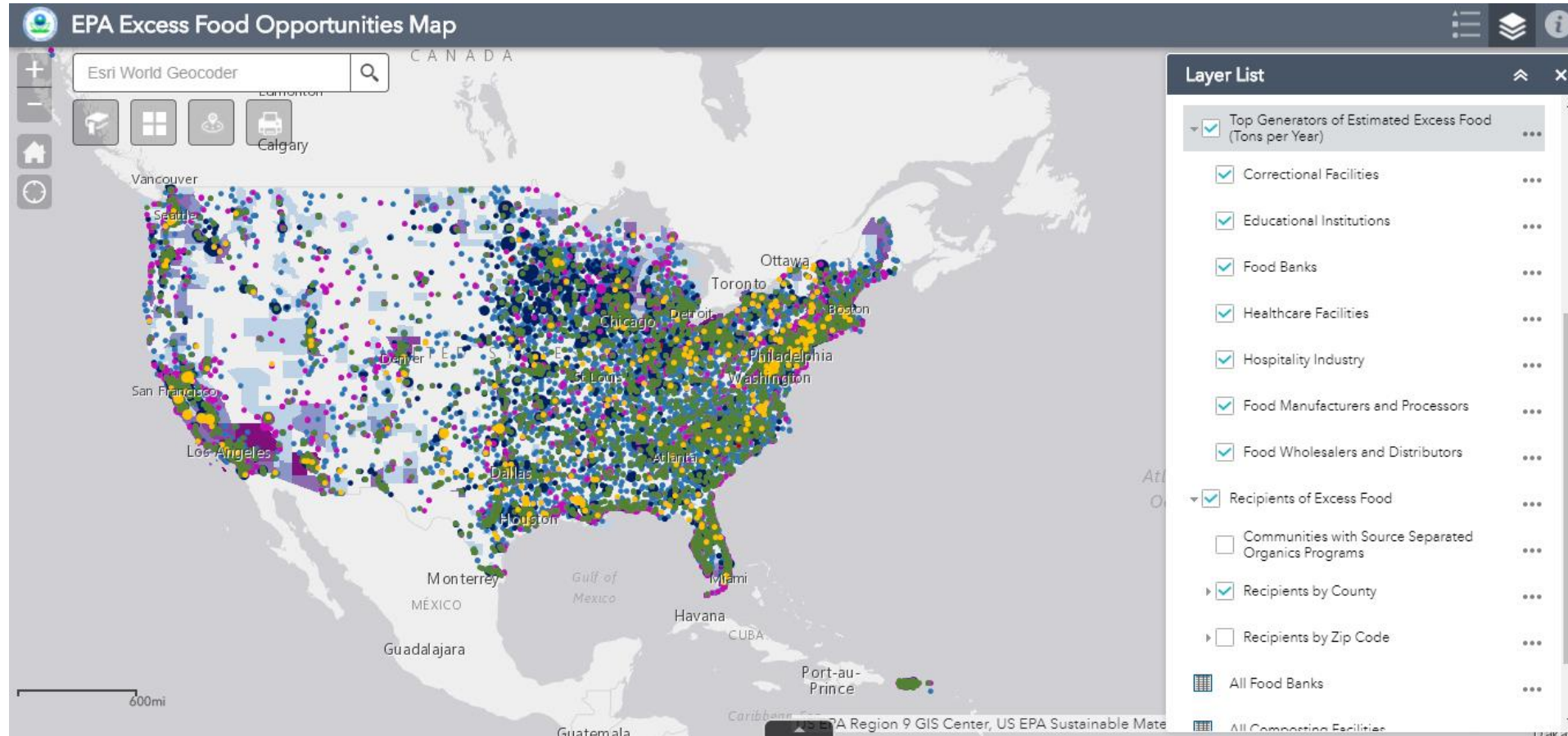
## Anaerobic Digestion Facilities Processing Food Waste in the United States (2015)

*Survey Results*  
EPA/903/S-18/001



<https://www.epa.gov/anaerobic-digestion>

# Excess Food Opportunities Map

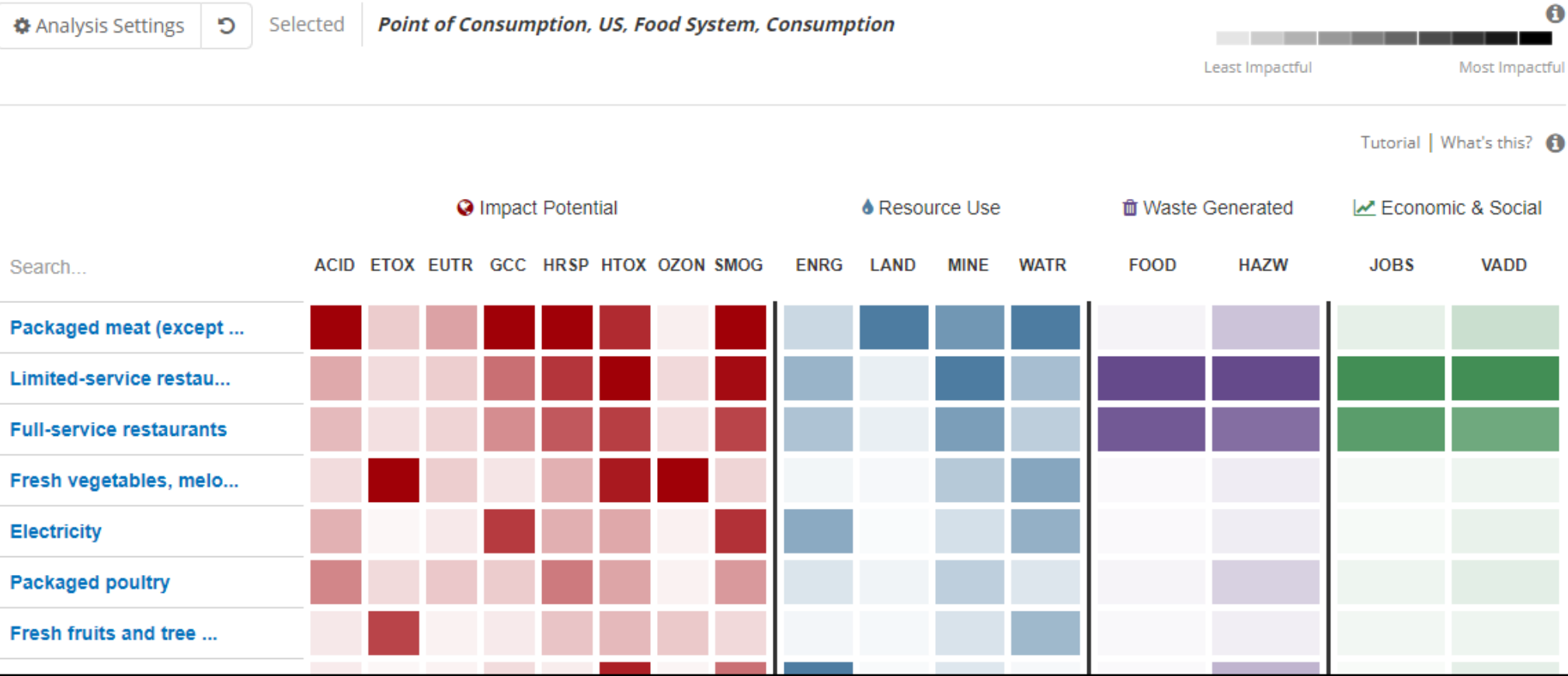


<https://www.epa.gov/foodmap>

# SMM Prioritization Tool Suite

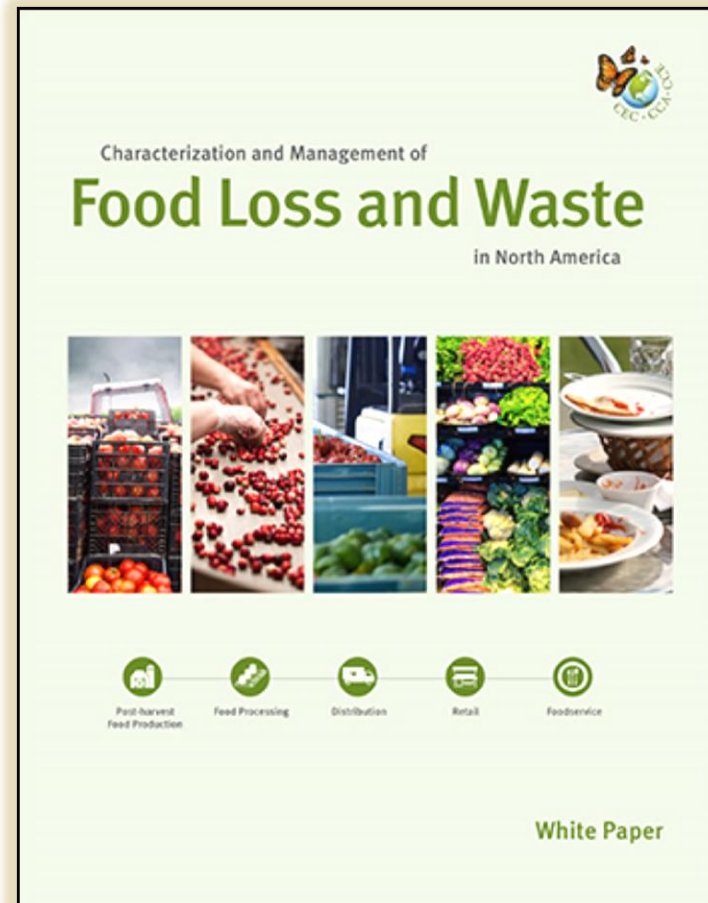
## Potential Areas of Opportunity: US

The heatmap below shows goods & services (down the left side) ranked by overall environmental, human health and socioeconomic impacts (across the top) based on the selected analysis settings. Click a good or service name to learn more about it, click an indicator name to sort by that indicator, and check out the comparison analyses below the heatmap. Click a "What's this?" link for more information.



Screenshot: Food System Results from National SMM Prioritization Tool

# CEC Food Loss & Waste Projects



[www.cec.org](http://www.cec.org)



# Food Recovery Challenge

## 2017 Results:

**719,000 tons**

of food waste prevented and diverted

Composted  
**225,000 tons**  
of food

Recovered  
**286,000 tons**  
of food

Anaerobically digested  
**179,000 tons**  
of food

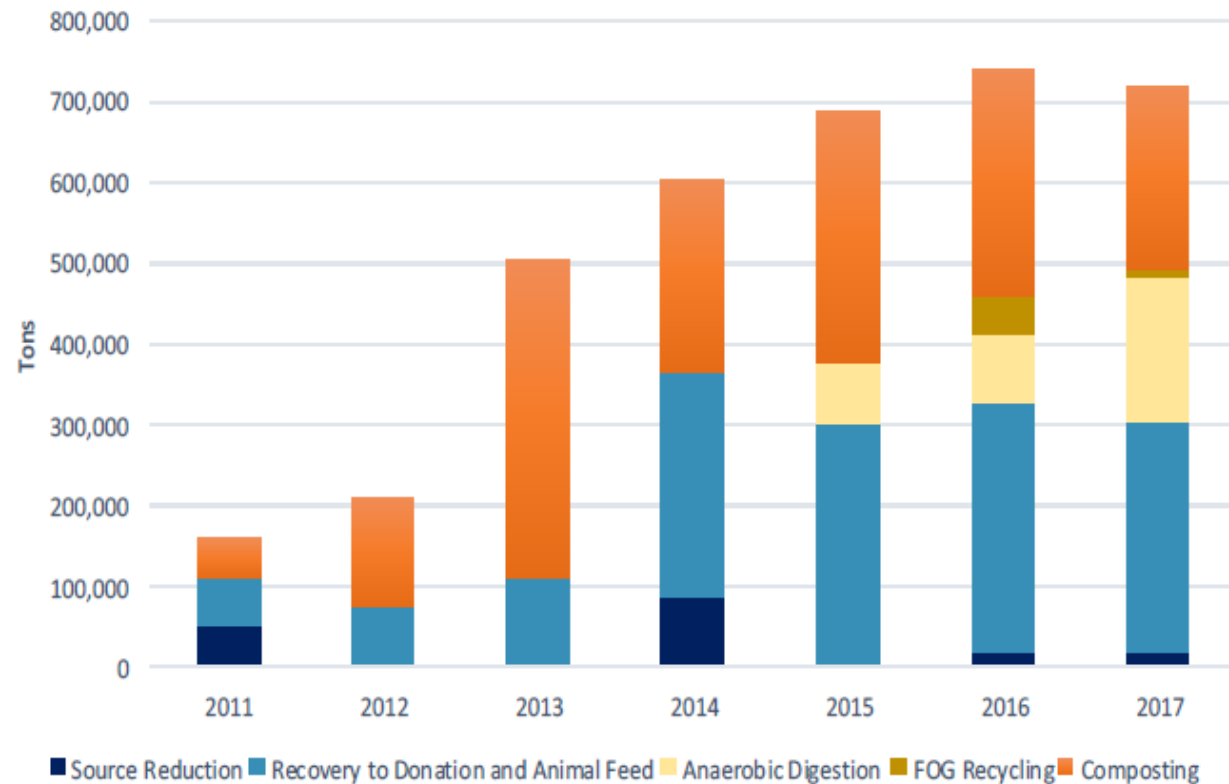
Reduced  
**18,000 tons**  
of food at the source

FRC participants saved up to

**\$36.4 Million**

in avoided tipping fees

FRC Diversion and Recovery 2011-2017



# U.S. Food Loss and Waste 2030 Champions

<https://www.epa.gov/sustainable-management-food/united-states-food-loss-and-waste-2030-champions>

**Thank you!**

**Please visit our website:**

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

Follow us **@EPAland** using **#nowastedfood**

**Join the Food Recovery Challenge**

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



Center for Food Loss  
and Waste Solutions

<https://furtherwithfood.org>