



EPA Tools and Resources Webinar: Excess Food Opportunities Map

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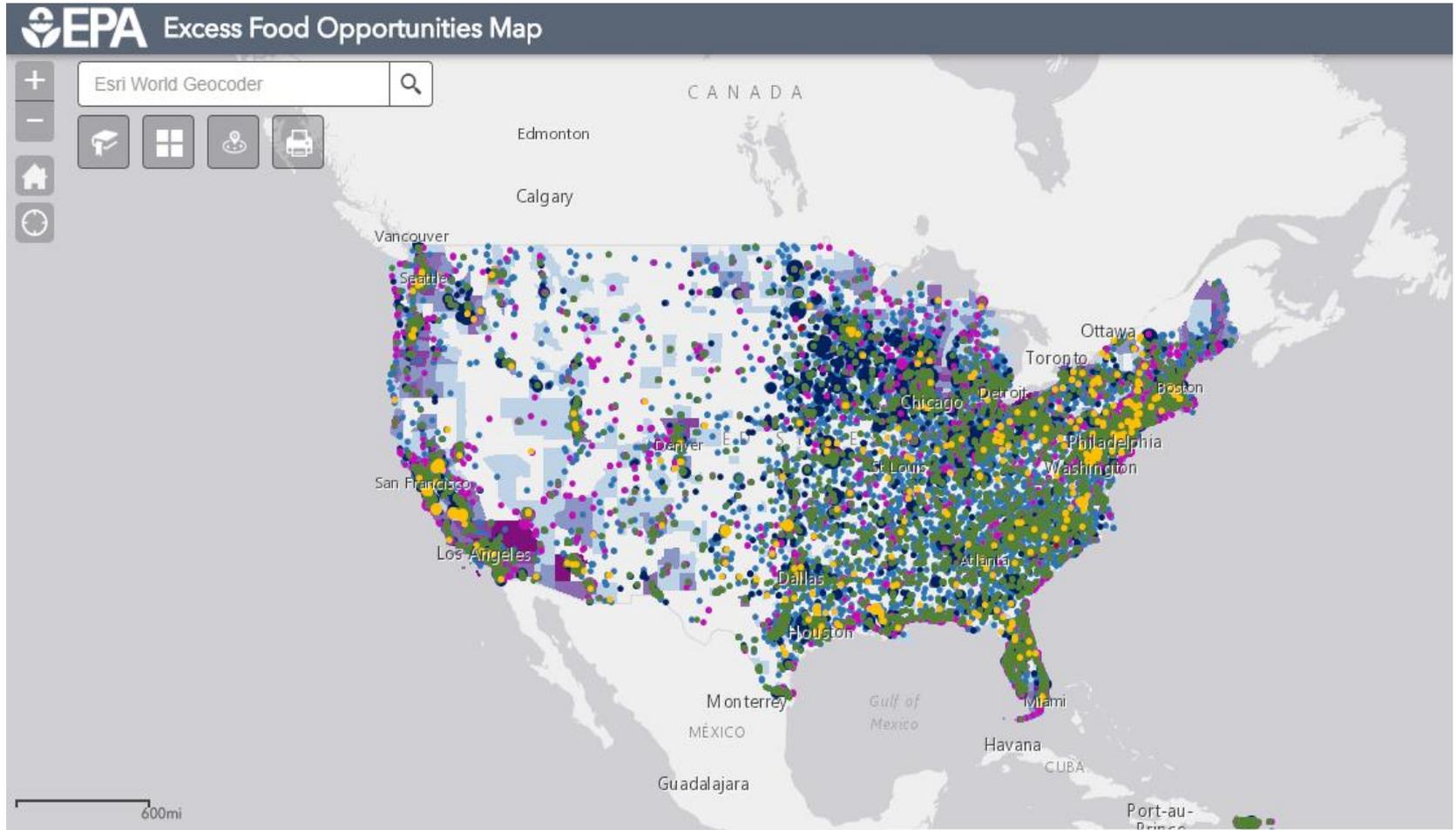
October 16, 2019

Problem

- 79 billion lbs of food waste generated in the U.S.
- Food makes up about 22% of municipal solid waste going to landfill.
- EPA and USDA announced national goal to cut food loss and waste in half by 2030.
- EPA's role is to provide information, data and tools; share best practices; and foster collaborative partnerships.



Excess Food Opportunities Map Version 2.0





Approach

- This map is an expansion of an EPA Region 9 project that was intended to show available feedstocks for anaerobic digesters.
- The EPA ORD and Region 9 team compiled the background for the Map for two years, collecting and sifting data from many sources, such as state-led and industry specific studies. We created formulas or found literature for how to make reasonable estimations for each type of generator.
- For example, we found studies on how much food waste is generated per student at elementary and secondary schools, then collected state by state enrollment data to determine how much excess food may be available at each school location.

Map Overview

- Identifies **potential excess food generators** and estimated quantities from institutional, commercial & industrial facilities
- Identifies **potential recipients** of excess food
- Can be used to identify strategic opportunities for location-specific management of excess food
- Potential users include:
 - State & local governments
 - Private sector and nonprofits
 - Prospective project developers (e.g., compost or anaerobic digester facility)
 - Businesses who generate excess food

Functionality of Map

The map **does** provide:

- Geographic locations of potential generators and recipients
- Estimates of excess food generation rates at the establishment level
- Service area for communities with organics collection programs
- Select contact information

The map **does not** provide:

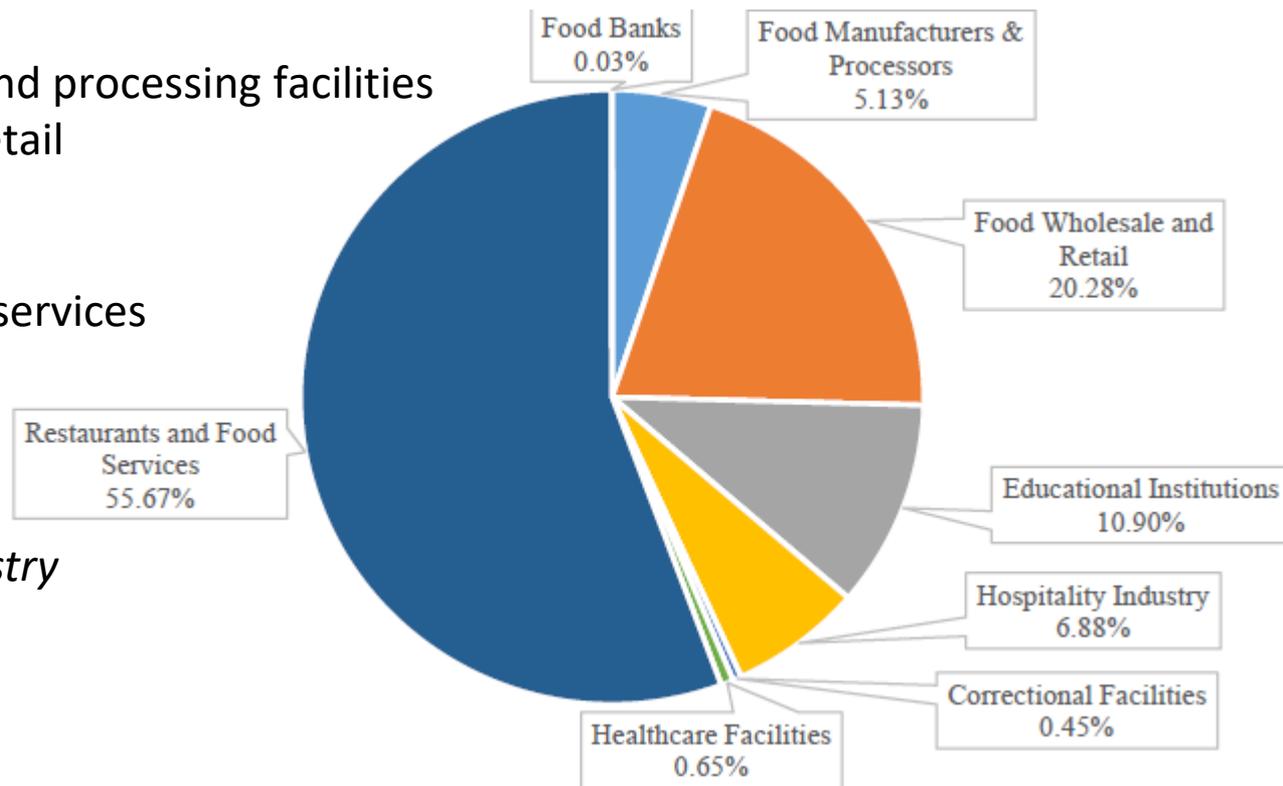
- Exact measurements of excess food
- Information on actual diversion activity
- Capacity of potential recipients to accept excess food
- Estimates of on-farm excess food

Potential Generators of Excess Food

Almost 1.2 million excess-food generating establishments mapped across 76 NAICS* codes and three school types

Industries grouped as follows:

- Correctional facilities
- Educational institution
- Food banks
- Food manufacturing and processing facilities
- Food wholesale and retail
- Healthcare facilities
- Hospitality industry
- Restaurants and food services



*NAICS= North American Industry Classification System

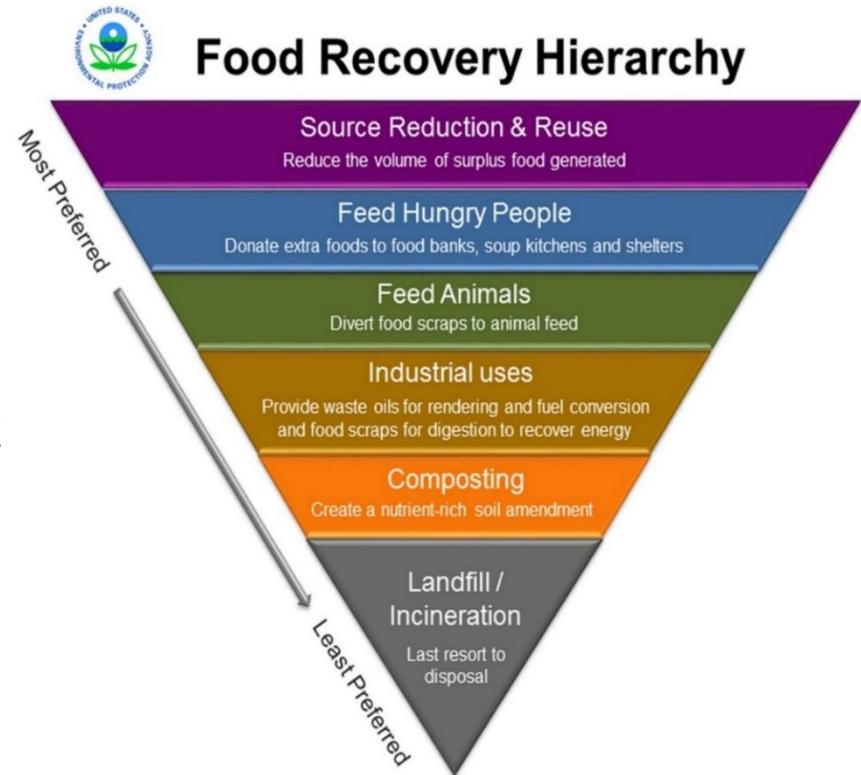
Potential Recipients of Excess Food

Recipients include approximately:

- 300 food banks
- 1,400 anaerobic digestion facilities
- 3000 composting facilities

Data sources include Feeding America, Water Environment Federation/American Biogas Council, EPA's AgSTAR program, BioCycle, and state composting registries.

Facilities mapped whether or not they currently accept excess food.





Examples* of Potential Excess Food Generators

NAICS Code	North American Industry Classification System (NAICS) Code Description
311230	Breakfast Cereal Manufacturing
452311	Warehouse Clubs and Supercenters
721110	Hotels and motels
922140	Correctional institutions
622110	General Medical and Surgical Hospitals
722511	Full-Service Restaurants

**There are 76 NAICS codes and three school types in total*

Estimated Excess Food Generation Rate Calculation

1. Identify industry-specific methodology/generation factor.
2. Acquire establishment-specific data (buy or download).
 - From Hoover’s, Inc.: Commonly available business statistics such as annual revenue and employee count
 - From National Center for Education Statistics: Number of students, type of schools
 - From Dept. of Homeland Security: Number of hospital beds
3. Plug establishment-specific data into identified methodology to generate estimate for each establishment.

Methodology:
FWRA, 2014

$$\text{Food Manufacturers and Processors Excess Food} \frac{\text{tons}}{\text{year}} = \text{Facility's Annual Revenue (\$)} \times 0.053 \frac{\text{lb}}{\text{Annual Revenue (\$)}} \times \frac{\text{tons}}{2,000 \text{ lb}}$$

Limitations

- Methodologies are based on sometimes dated and limited measured data.
- Excess food estimates don't distinguish between edible and inedible food.
- Generators – No information about actual excess food or diversion activity.
- Recipients – No indication of capacity to accept excess food.
- Farms aren't mapped.
- Food rescue data are limited.

EPA Excess Food Opportunities Map

Find address or place

Edmonton
Calgary
Vancouver
Seattle
Ottawa
Toronto
Chicago
Detroit
Boston
Philadelphia
Washington
St. Louis
Denver
San Francisco
Los Angeles
Dallas
Atlanta
Houston
Miami
Havana
Monterrey
Gulf of Mexico
MÉXICO
Guadalajara
CUBA

600mi

Esri, HERE | US EPA Region 9 GIS Center, US EPA

About

The EPA Excess Food Opportunities Map was developed to support nationwide diversion of excess food from landfills. The map identifies and displays facility-specific information about potential generators and recipients of excess food in the commercial, industrial, and institutional sectors, and also provides estimates of excess food for each facility. As a whole, the map helps users understand the geographic dimensions of excess food as a resource, and identify potential recipients, such as food banks and composting and anaerobic digestion facilities, in lieu of landfills. The map can also be used to identify infrastructure gaps and to assess the feasibility of developing new recipient facilities. [View instructions for using the map.](#)

The map displays the locations of more than a million potential excess food generators. These include correctional facilities; educational institutions; food banks; healthcare facilities; hospitality industry; food manufacturing and processing facilities; food wholesale and retail; and restaurants and food services. The map also displays the locations of more than 4,000 potential recipients of excess food. These recipients include anaerobic digestion facilities; composting facilities; communities with source separated organics programs; and food banks.

The methods used to develop the map as well as to calculate estimates of excess food are detailed in the [technical methodology](#). Up to 1000 records in the attribute

Direct link to map:

<https://geopub.epa.gov/excessfoodmap/>



Find address or place



Near Me

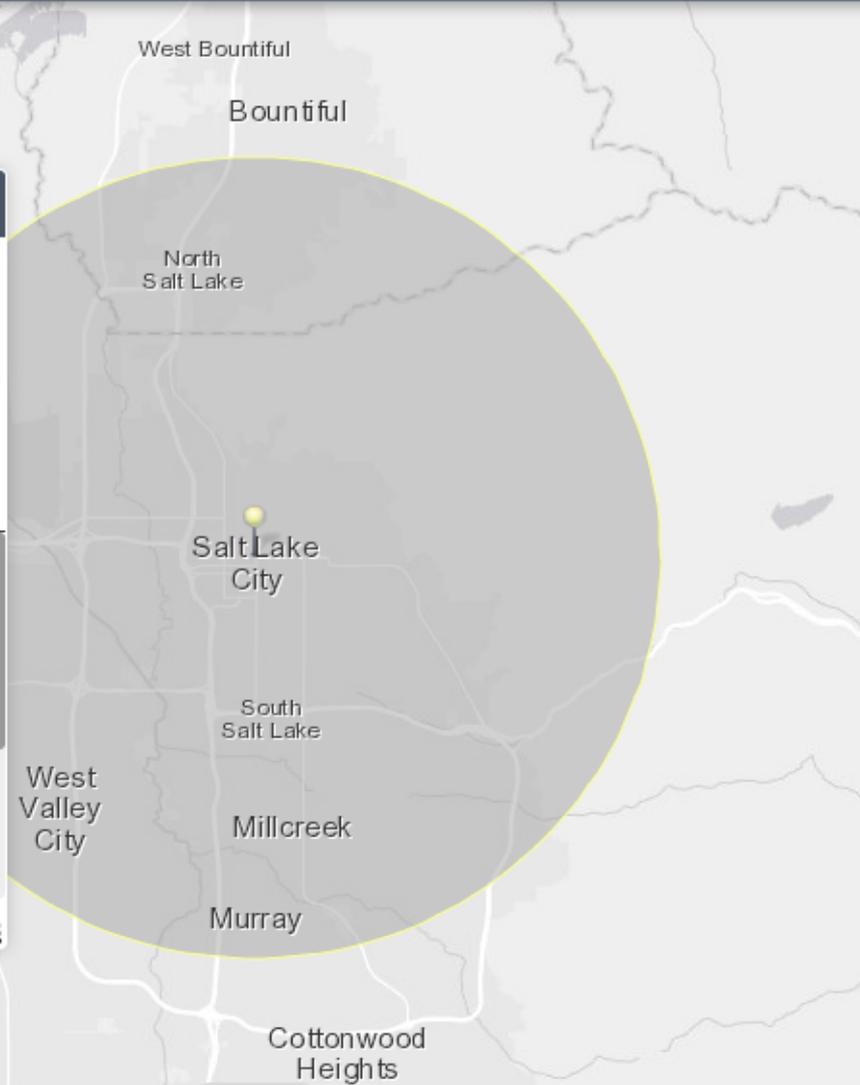
Search for an address or locate on map

Show results within 10 Miles

0 100

Correctional Facilities	(15)	>
Educational Institutions	(175)	>
Food Banks	(1)	>
Healthcare Facilities	(15)	>
Hospitality Industry	(144)	>

Great Salt Lake



13
4mi



EPA Excess Food Opportunities Map

Find address or place

Near Me

Search for an address or locate on map

Salt Lake City, UT, USA

Show results within 10 Miles

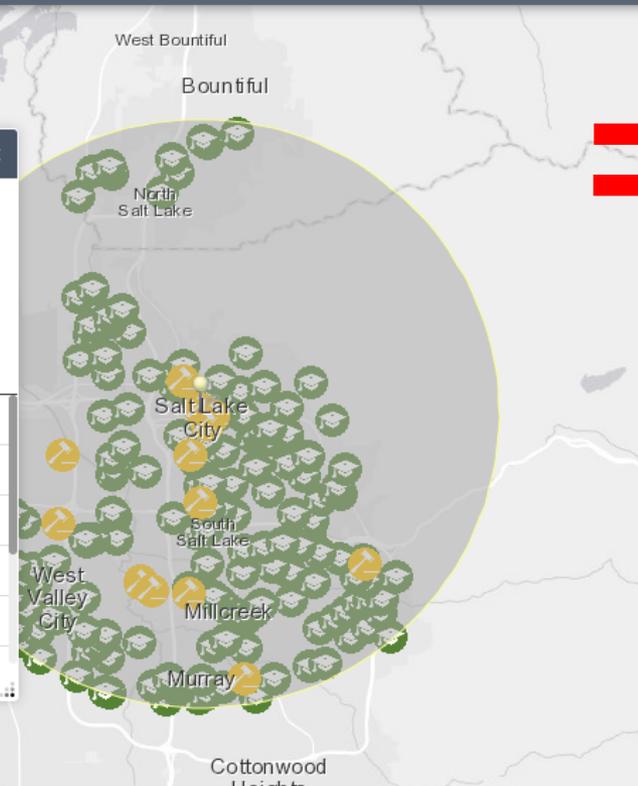
0 100

Correctional Facilities	(15)	>
Educational Institutions	(175)	>
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Healthcare Facilities	(15)	>
Hospitality Industry	(144)	>

Layer List

Layers

- Correctional Facilities
- Educational Institutions
- Food Banks
- Healthcare Facilities
- Hospitality Industry
- Food Manufacturers and Processors
- Food Wholesale and Retail
- Restaurants and Food Services
- Top Generators of Estimated Excess Food (Tons per Year)
 - Correctional Facilities
 - Educational Institutions
 - Food Banks



Find address or place

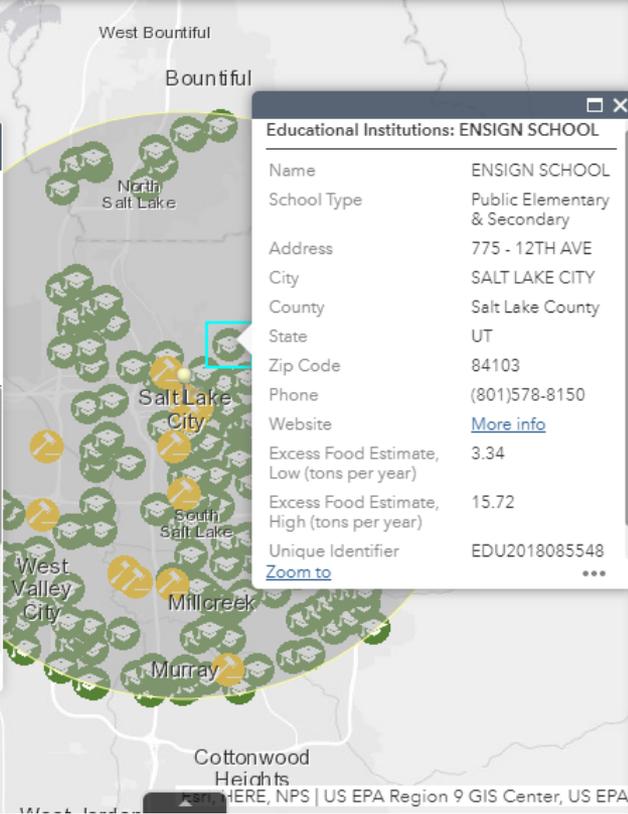
Near Me

Search for an address or locate on map

Show results within 10 Miles

0 100

Correctional Facilities	(15)	>
Educational Institutions	(175)	>
Food Banks	(1)	>
Healthcare Facilities	(15)	>
Hospitality Industry	(144)	>



Educational Institutions: ENSIGN SCHOOL

Name	ENSIGN SCHOOL
School Type	Public Elementary & Secondary
Address	775 - 12TH AVE
City	SALT LAKE CITY
County	Salt Lake County
State	UT
Zip Code	84103
Phone	(801)578-8150
Website	More info
Excess Food Estimate, Low (tons per year)	3.34
Excess Food Estimate, High (tons per year)	15.72
Unique Identifier	EDU2018085548
	Zoom to

Layer List

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- Correctional Facilities
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- Food Banks
- Healthcare Facilities
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- Food Wholesale and Retail
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- Top Generators of Estimated Excess Food (Tons per Year)
 - Correctional Facilities
 - Educational Institutions
 - Food Banks
 - Healthcare Facilities

EPA Excess Food Opportunities Map

Find address

Near Me

Search for an address or locate on map

Salt Lake City, UT, USA

Show results within 10 Miles

0 100

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- Healthcare Facilities (15) >

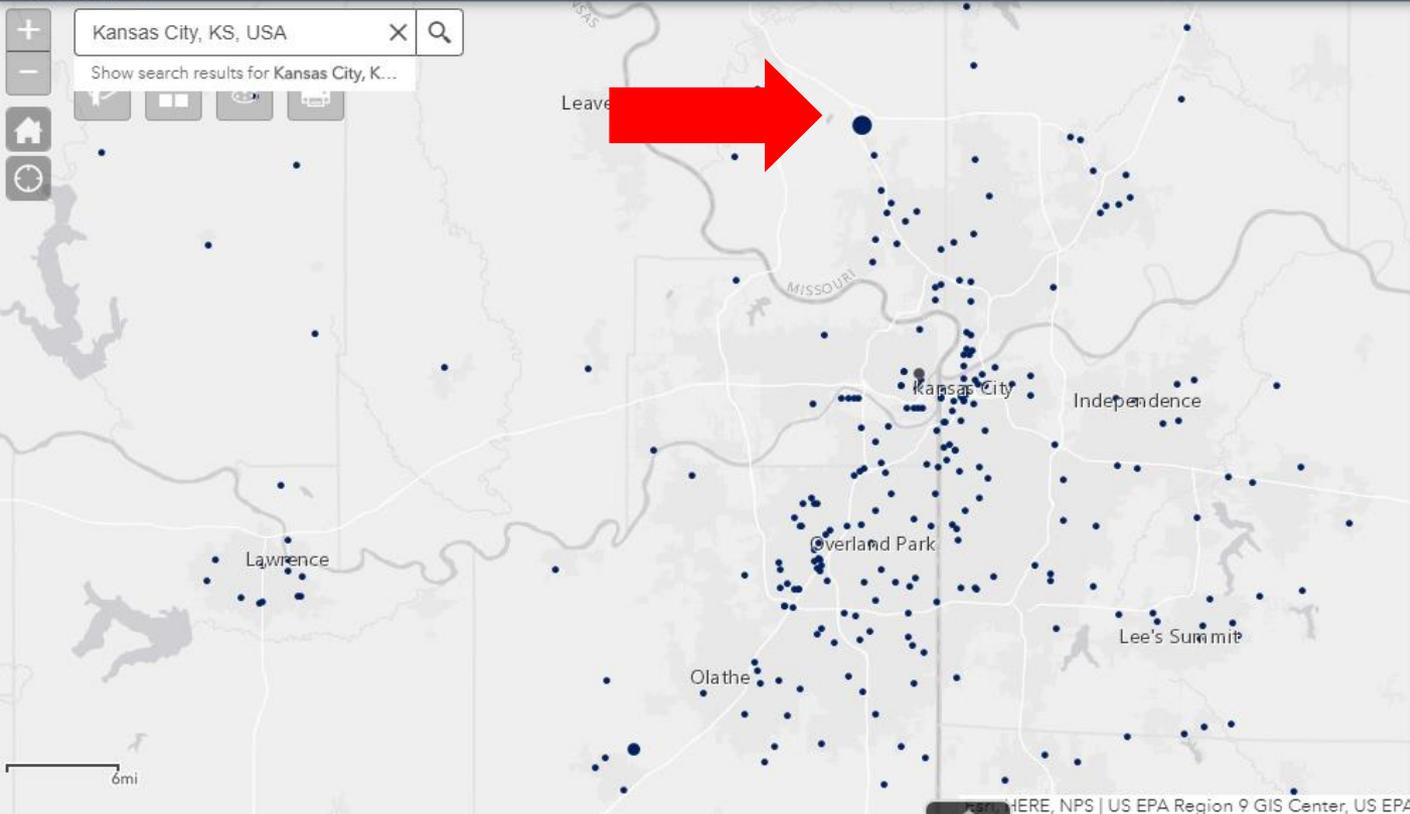


- Correctional Facilities
- Educational Institutions
- Food Banks
- Healthcare Facilities
- Hospitality Industry
- Food Manufacturers and Processors
- Food Wholesale and Retail
- Restaurants and Food Services
- Communities with Source

Options Filter by map extent Zoom to Clear selection Refresh

Name	NAICS Code Description	NAICS Code	Address	City	County	State	Zip Code	Excess Food Estimate, Low (tons per year)	Excess Food Estimate, High (tons per year)	Unique Identifier
Department of Corrections Utah	Correctional Institutions	922140	1141 S 2475 W	Salt Lake City	Salt Lake County	UT	84104	10.58	19.11	COR20180537
Utah Department of Corrections	Correctional Institutions	922140	1141 S 2475 W	Salt Lake City	Salt Lake County	UT	84104	12.02	21.72	COR20180538
Utah Department of	Correctional	922140	120 N 200 W Rm	Salt Lake City	Salt Lake County	UT	84103	14.91	26.93	COR20180639

15 features 0 selected

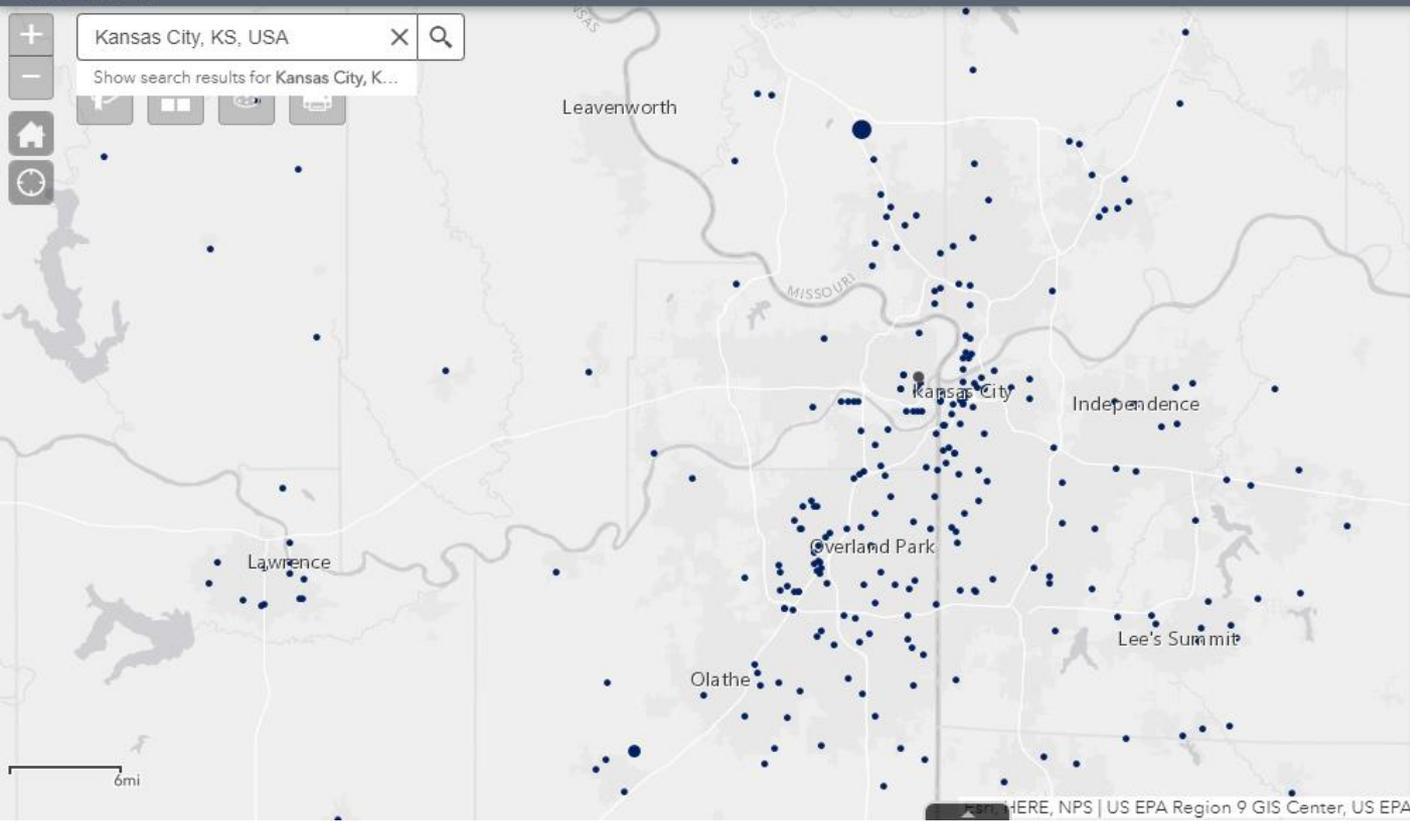


Layer List

- Top Generators of Estimated Excess Food (Tons per Year) ...
- Correctional Facilities ...
- Educational Institutions ...
- Food Banks ...
- Healthcare Facilities ...
- Hospitality Industry ...
- Food Manufacturers and Processors ...
- Food Wholesale and Retail ...
- Restaurants and Food Services ...
- Recipients of Excess Food ...
- Communities with Source Separated Organics Programs ...
- Composting Facilities ...
- Recipients by County ...



EPA Excess Food Opportunities Map



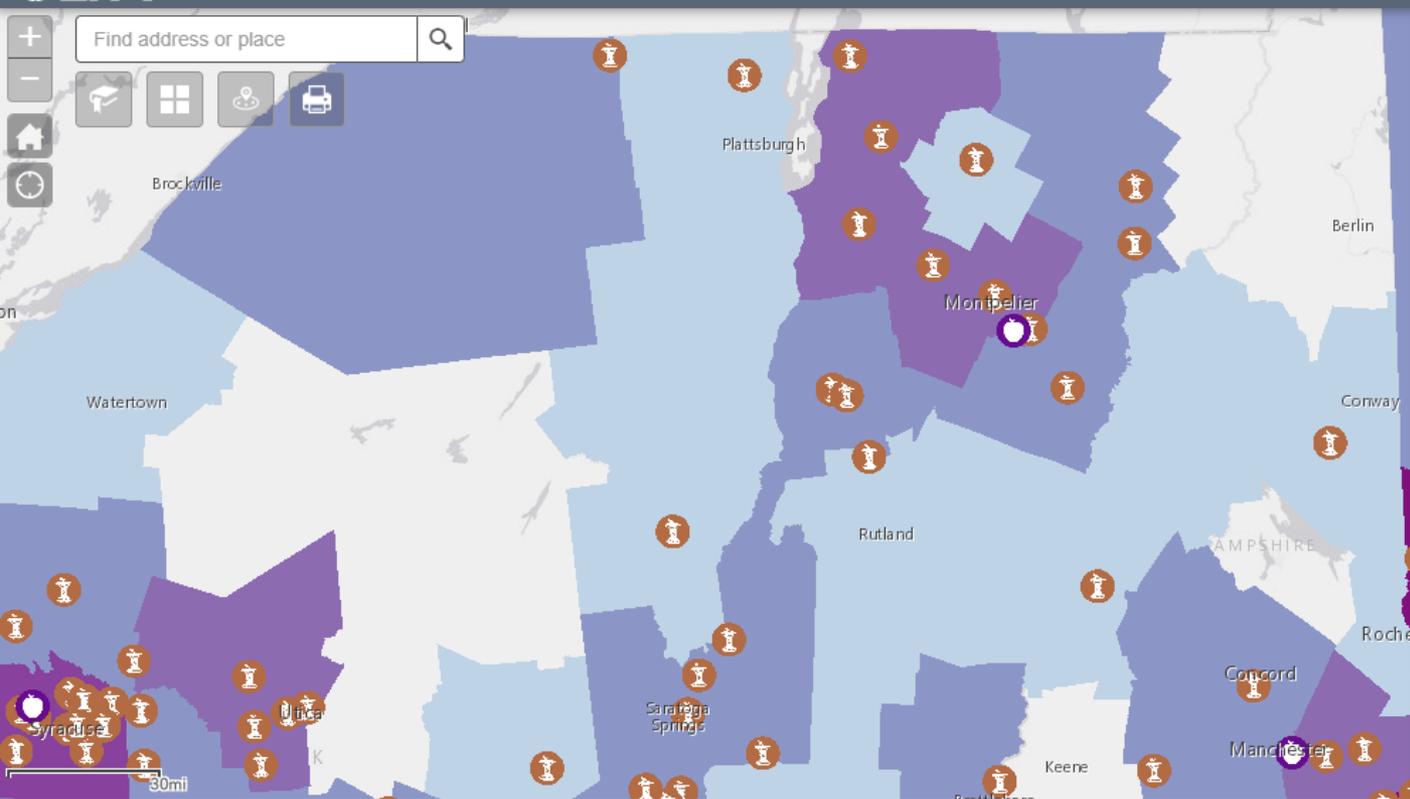
Legend

Top Generators of Estimated Excess Food (Tons per Year)

Food Manufacturers and Processors

- <10 - 1,000
- 1,001 - 5,000
- 5,001 - 50,000
- 50,001+

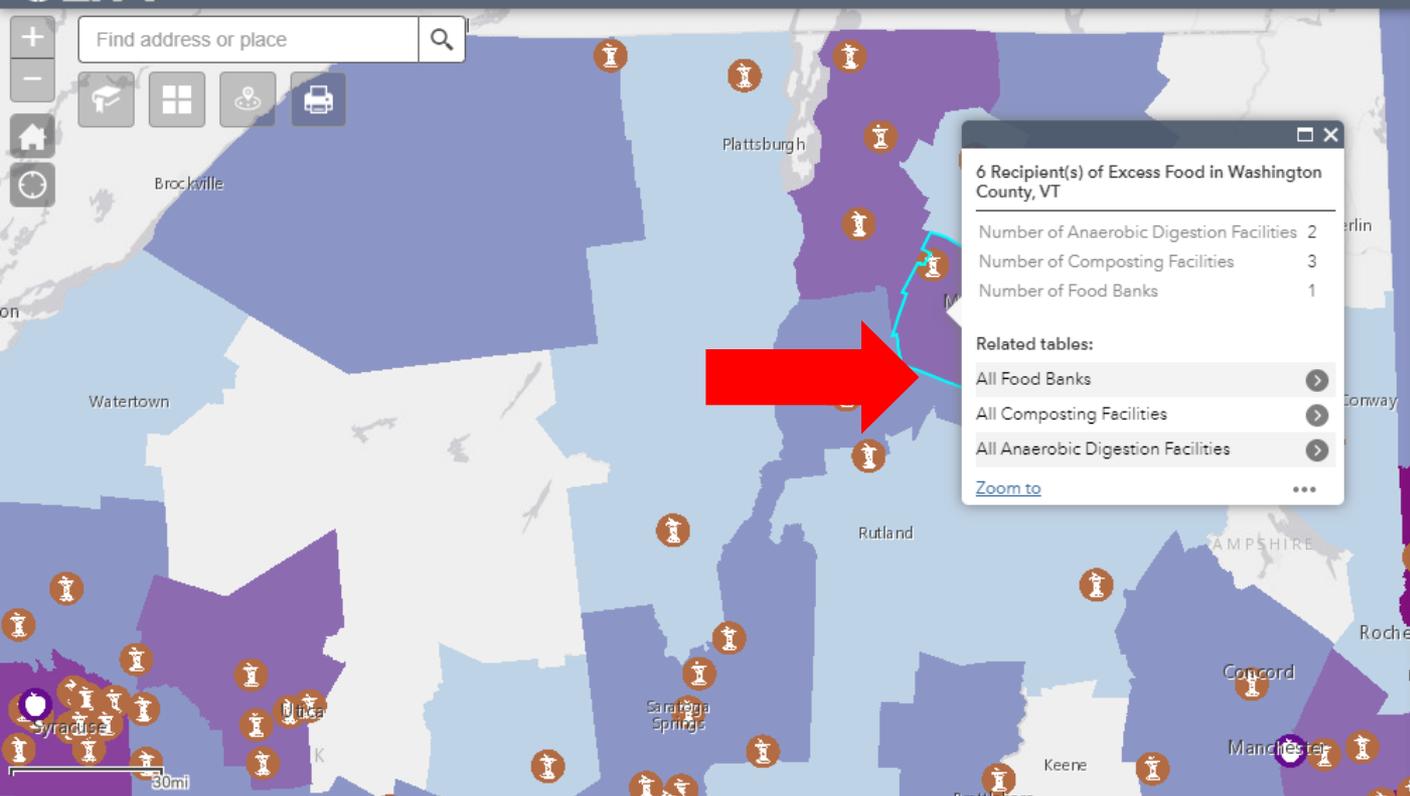
EPA Excess Food Opportunities Map



Layer List

- Food Wholesale and Retail ...
- Restaurants and Food Services ...
- Top Generators of Estimated Excess Food (Tons per Year) ...
- Recipients of Excess Food ...
- Communities with Source Separated Organics Programs ...
- Composting Facilities ...
- Recipients by County ...
 - All Recipients of Excess Food ...
 - Composting Facilities ...
 - Anaerobic Digestion Facilities ...
 - Food Banks ...
- Recipients by Zip Code ...
 - All Recipients of Excess Food ...

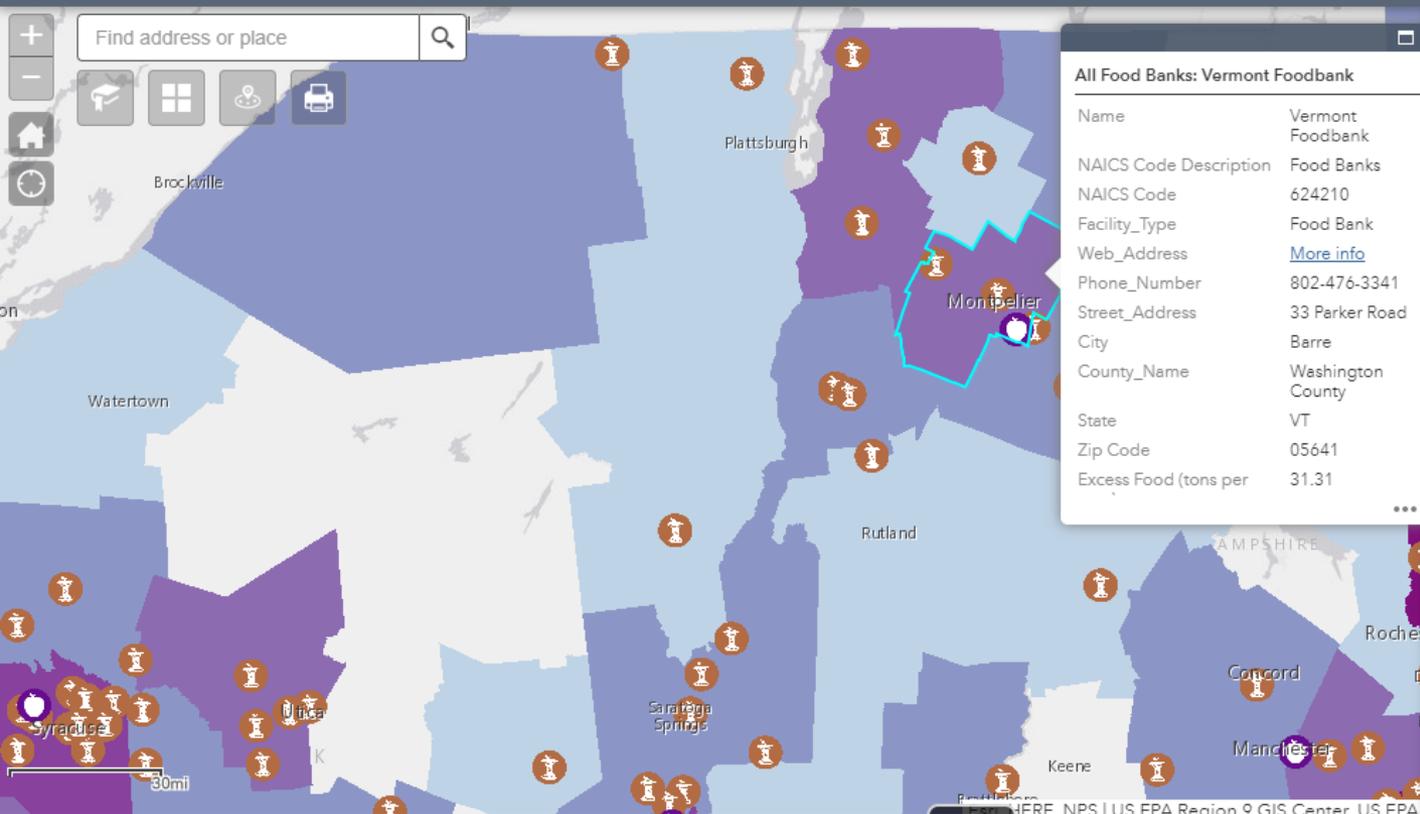
EPA Excess Food Opportunities Map



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 - Anaerobic Digestion Facilities
 - Food Banks
- Recipients by Zip Code
 - All Recipients of Excess Food

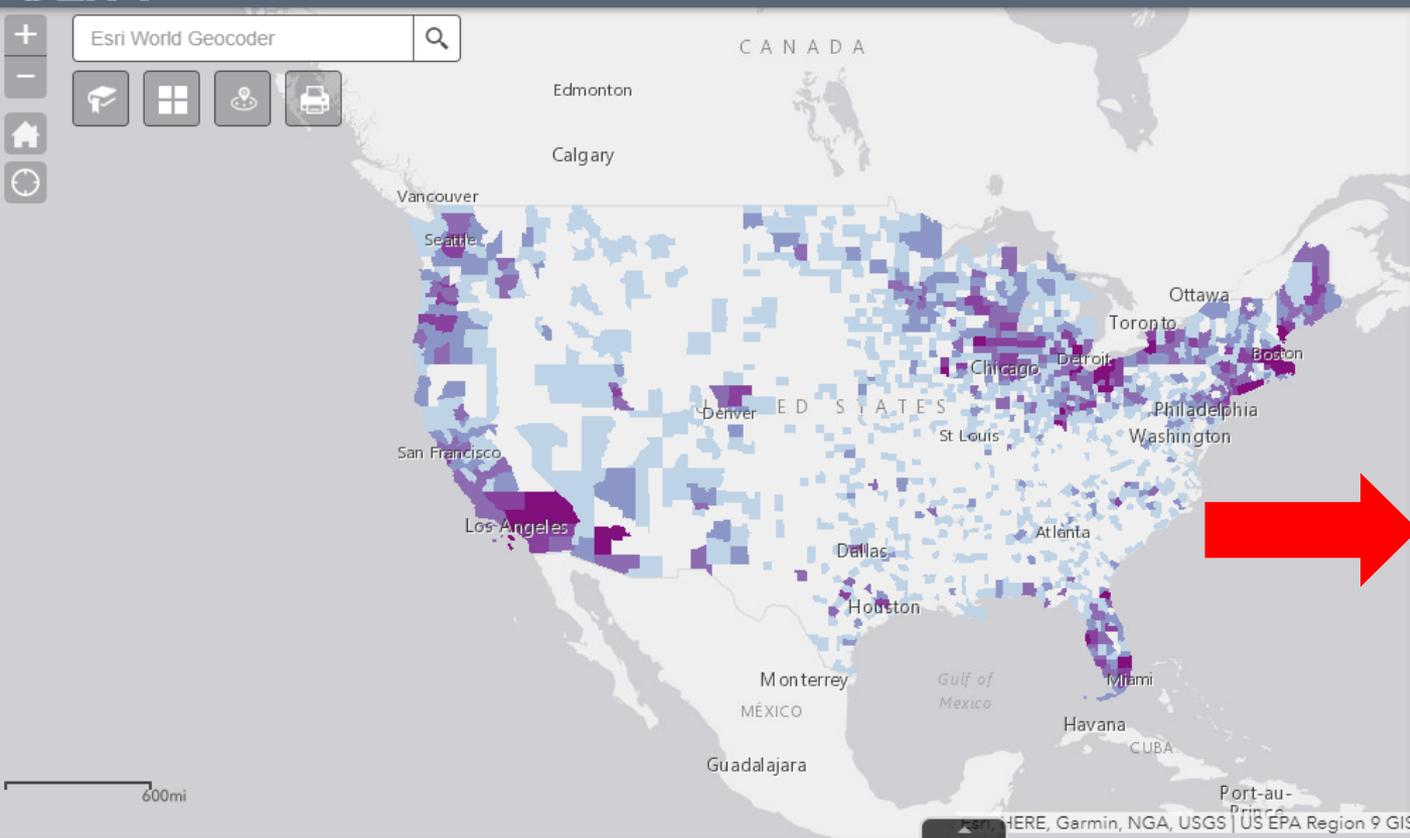
EPA Excess Food Opportunities Map



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 - Recipients by Zip Code ...
 - All Recipients of Excess Food ...

EPA Excess Food Opportunities Map



About

The map displays the locations of more than half a million potential excess food generators. These include correctional facilities; educational institutions; food banks; healthcare facilities; hospitality industry; food manufacturing and processing facilities; and, food wholesalers and distributors. The map also displays the locations of more than 4,000 potential recipients of excess food. These recipients include anaerobic digestion facilities; composting facilities; communities with source separated organics programs; and, food banks.

The methods used to develop the map as well as to calculate estimates of excess food are detailed in the [technical methodology](#). Up to 1000 records in the attribute table may be exported to csv directly from the web map. Complete tabular and GIS datasets are available for download from the [EPA Environmental Dataset Gateway](#).

Security classification: Public. Access constraints: None. Use constraints: This data is shared by the US EPA as an interactive web map application. Data should be used only for Food Recovery purposes promoted by the EPA's Sustainable Materials Management Program (SMM). Please check sources, scale, accuracy, currency and other available information. Please confirm that you are using the most recent copy of both data and metadata. Acknowledgement of the EPA would be appreciated.

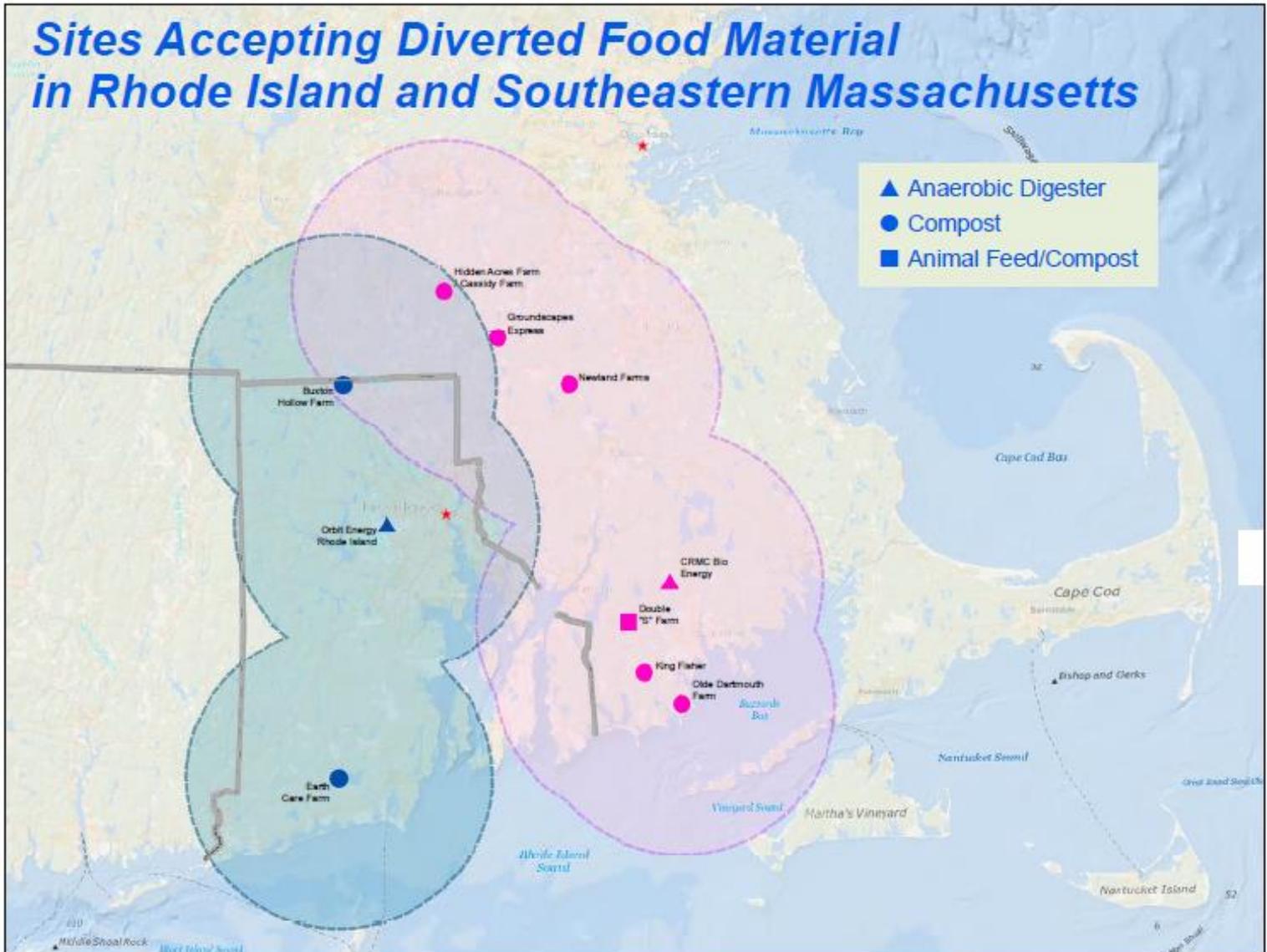
To report an issue with this application, contact us at SMMFood@epa.gov.

https://edg.epa.gov/data/PUBLIC/R9/ExcessFoodPublic_USTer_2018_R9.gdb.zip

How Users Can Leverage the Map

- **Identify strategic opportunities** for location-specific management of excess food
- **Support decision-making** through identification of:
 - Potential sources of food for rescue and reuse
 - Feedstocks for compost, anaerobic digestion, or other excess food processors
 - Potential infrastructure gaps for managing excess food
 - Alternatives to sending excess food to landfill
- **Download data**, and adapt/adopt methodology, if desired

Case Study: Rhode Island



Case Study: Rhode Island Impacts

- More businesses and institutions will take action to reduce food waste, as they are now subject to Rhode Island's Refuse Disposal Law and can access the free food waste assistance program
- More businesses donating excess food

With your help, we
can eliminate food
waste in Rhode Island

Rhode to End Hunger: Donate surplus food from your business



About CET

States

Toolbox

Service Providers

Partner With Us

CONTACT

- Center for EcoTechnology
- Wasted Food Resources
- Regulatory Requirements
- Toolbox

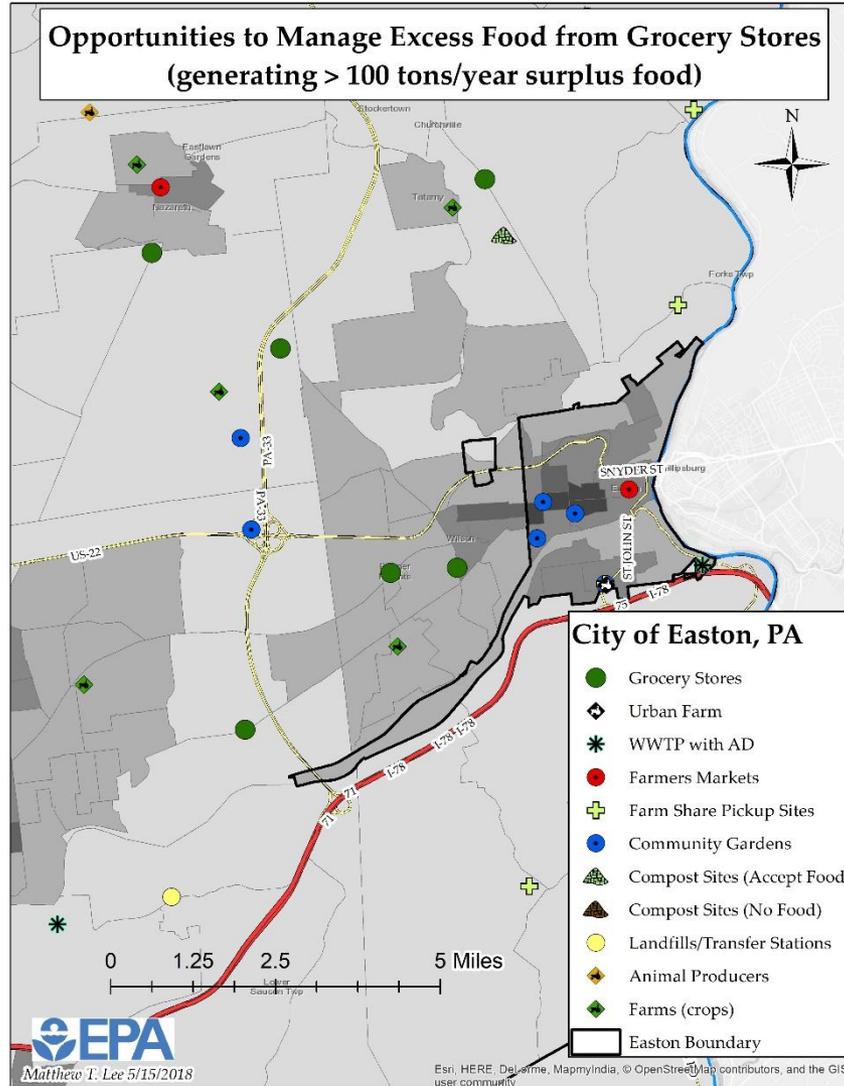


We can help you take the next step!

The [Center for EcoTechnology](#) (CET) helps Rhode Island businesses and institutions divert wasted food and supports the growth of the service providers marketplace. CET builds awareness of the RI Food Waste Recycling Law and has partners with service providers such as Phood to support their source reduction technologies in dining halls across the state. These efforts and others are in partnership with Rhode Island Department of Environmental Management, Rhode Island Department of Health, Rhode Island Resource Recovery Corporation, and the Director of Food Strategy to support the goals of the Relish Rhody plan to reduce wasted food.

CET provides [free direct assistance](#) to businesses and service providers. Businesses receive help to maximize the financial, environmental and social benefits of wasted food diversion programs, and training for staff to ensure successful program implementation. On-site assistance may also include technical advice to compost sites to help expand operations. To learn more or to request assistance, contact CET today at [888-813-8552](tel:888-813-8552) or e-mail wastedfood@cetonline.org.

Case Study: Lehigh Valley, PA





Case Study: Lehigh Valley, PA

Impacts

- Increased composting by businesses
- Community composting pilot
- Schools implementing share tables

Version 2.1 Underway

- Updating anaerobic digester data set
- Updating communities with source separated organics
- Expanding food bank layer

Take Home Messages

- Use the map on its own, or in combination with other data
- Technical methodology presents up-to-date equations to estimate excess food
- Data sets can be downloaded for your own use

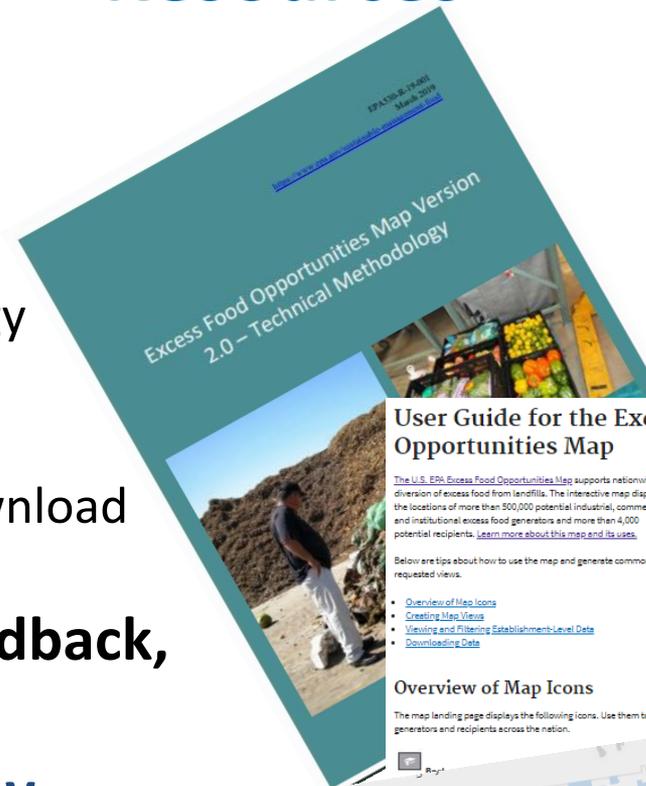
Resources



Map & resources:

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

For questions and feedback,
email:
SMMFood@epa.gov



User Guide for the Excess Food Opportunities Map

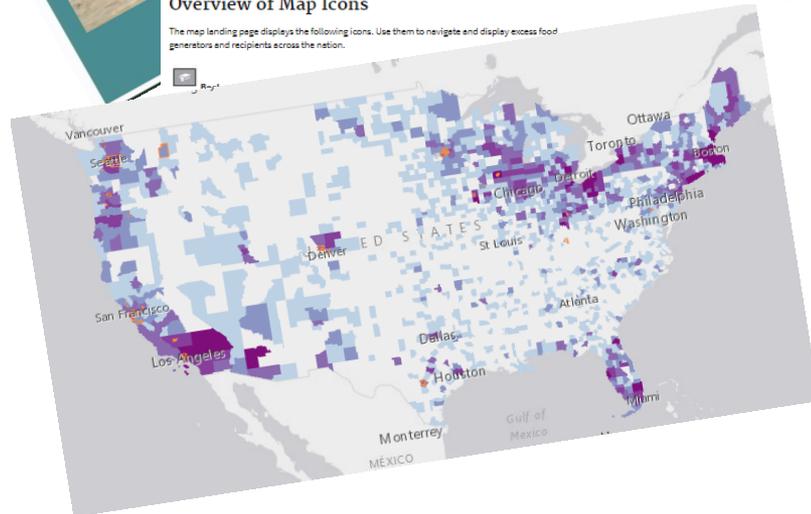
The U.S. EPA Excess Food Opportunities Map supports nationwide diversion of excess food from landfills. The interactive map displays the locations of more than 500,000 potential industrial, commercial and institutional excess food generators and more than 4,000 potential recipients. [Learn more about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

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.



Frequent Questions about the U.S. EPA Excess Food Opportunities Map

The U.S. EPA Excess Food Opportunities Map supports nationwide diversion of excess food from landfills through the identification and display of establishment-specific information about potential generators and recipients of excess food. Through analysis of the data presented in the map, users may be able to identify infrastructure gaps, assess the feasibility of developing new recipient facilities and identify alternatives to landfill disposal. If your question is not answered below, please contact SMMFood@epa.gov.

On this page:

- [Map Background](#)
- [Technical specifications](#)

Map Background

1. Who is the intended audience for the map?
2. How does U.S. EPA define excess food for the map?
3. Does the map...

...state of total excess food in the United States?

...recipient capacity for excess food?

...maps detailing excess food generators and recipients in Massachusetts, South Carolina, Vermont?

Resources

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



Contacts

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