

# Wasted Food Solutions for NY Businesses

Assisting Food Businesses & Institutions with Prevention



# Outline:

- CET overview
- ReThink Food Waste NY
- Tools & resources
- Success stories
- Opportunities for collaboration

# We help people and businesses save energy and reduce waste

As a non-profit 501(c)(3), CET works with partners throughout the region to help transform the way we live and work for a better community, economy, and environment – now and for the future.”



# Wasted Food Solutions



Case Studies



Assistance for  
Service  
Providers



Partner With Us



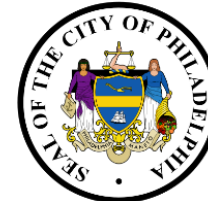
Toolbox

150,000 tons of food  
waste diverted

70,000 tons of CO<sub>2</sub>  
emissions avoided



# Center for EcoTechnology Partners





Deconstruction

Pick-up

Sale

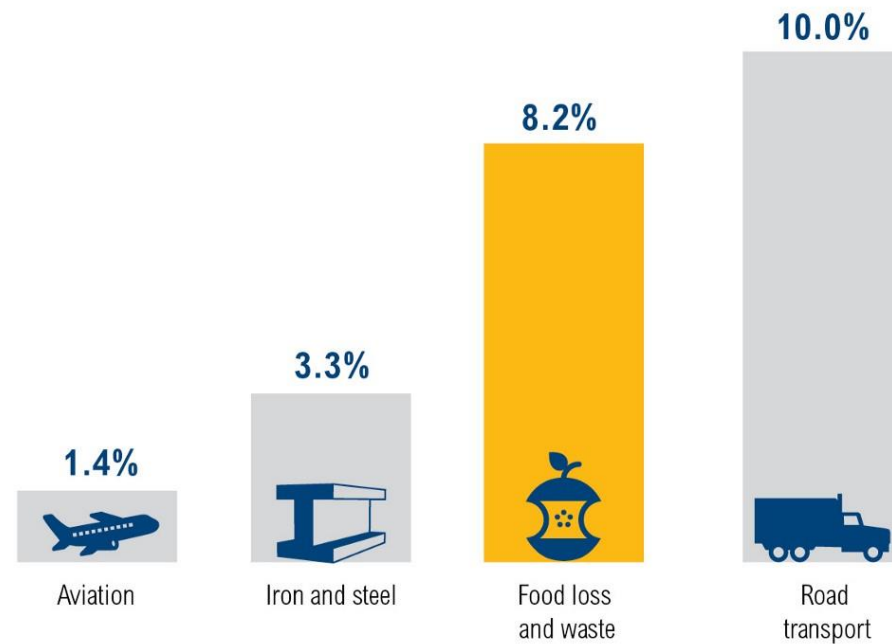




CET assists with inspection and verification of multiple PassiveHouse projects in Portland, Maine – most of which are affordable housing.

PassiveHouse is the most energy-efficiency building standard in the market today. Some of the principles incorporate solar orientation, continuous insulation, high performance doors & windows, airtight enclosure, and energy recovery ventilation.

## Greenhouse Gas Emissions from Food Loss and Waste Approach the Levels from Road Transport



### SHARE OF GLOBAL GREENHOUSE GAS EMISSIONS (2011/12)\*

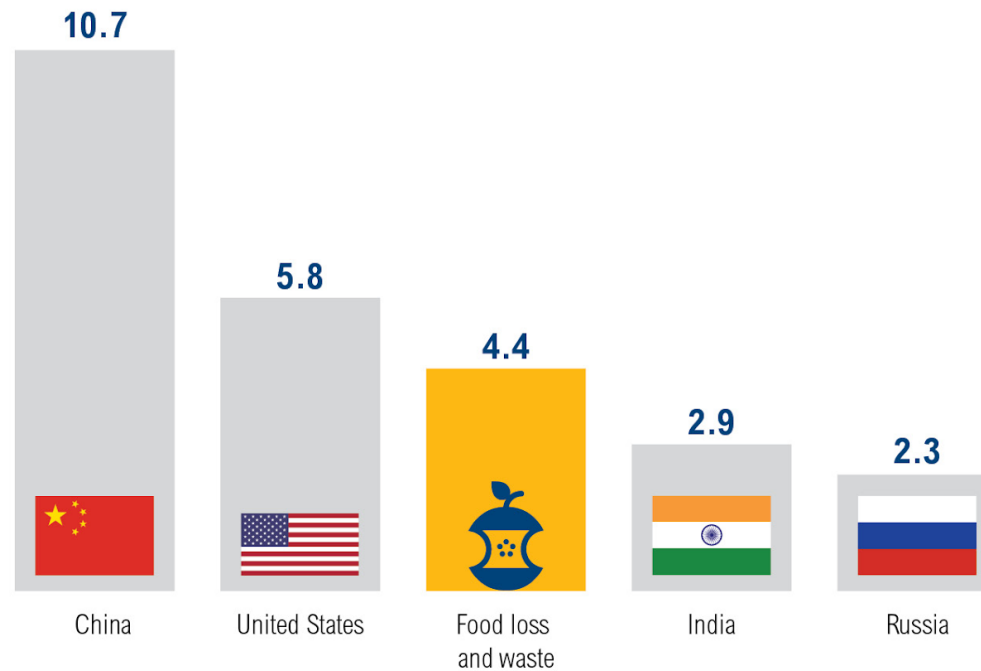
\* Sector data is for 2012 while the food loss and waste data is for 2011 (the most recent available). Since the food loss and waste data combines emissions from various lifecycle stages of the food that is ultimately lost or wasted (e.g., road transport, landfills), the food loss and waste figure should not be added to the sector figures in order to avoid double counting.

Source: International Energy Agency (IEA). 2014. *CO<sub>2</sub> Emissions from Fuel Combustion* (2014 edition). Paris: OECD/IEA; WRAP. 2014. *Strategies to achieve economic and environmental gains by reducing food waste*. Banbury, UK: WRAP; FAO. 2015. *Food wastage footprint & climate change*. Rome: FAO.



WORLD RESOURCES INSTITUTE

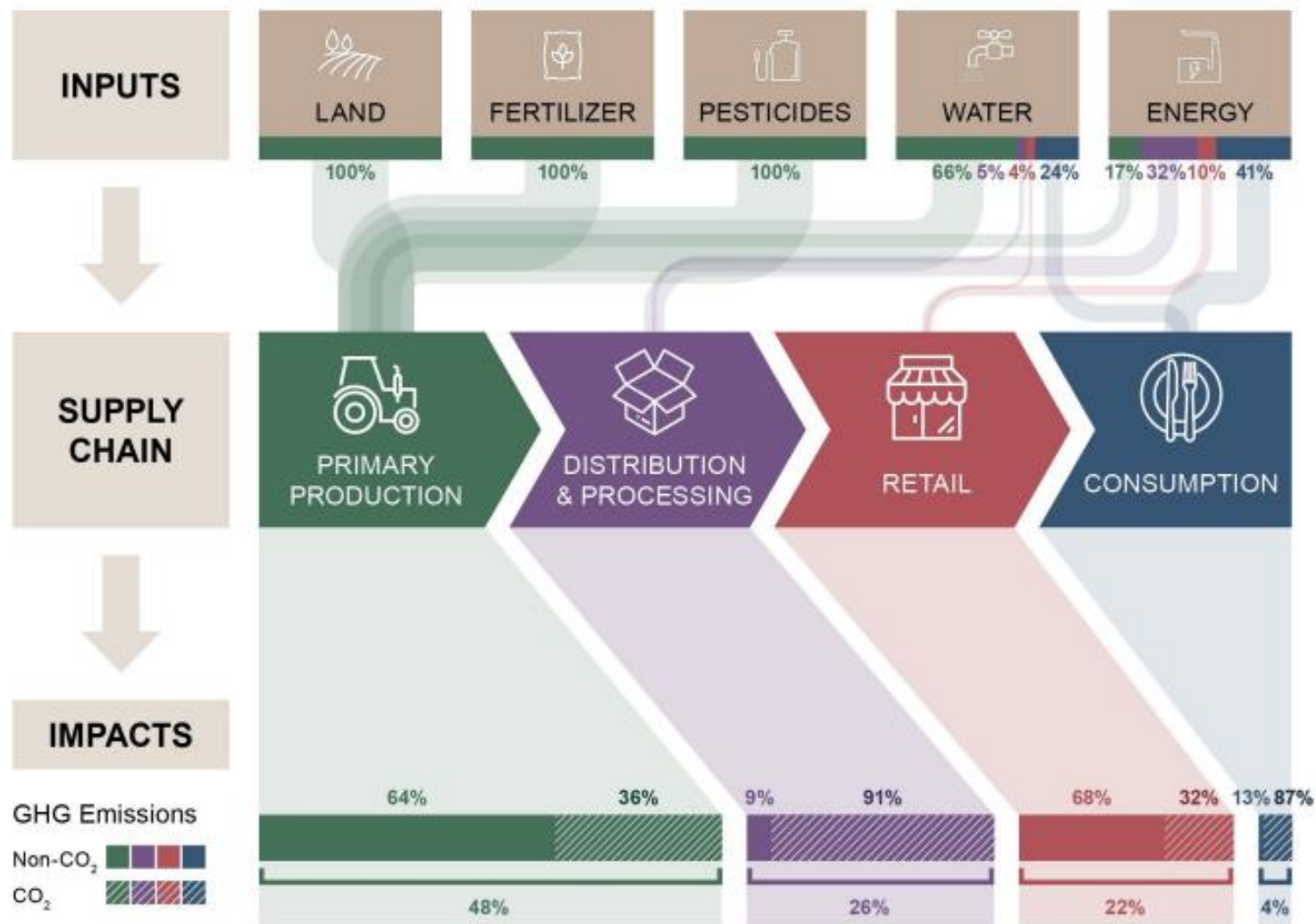
## If Food Loss and Waste Were its own Country, it Would Be the Third-Largest Greenhouse Gas Emitter



GT CO<sub>2</sub>E (2011/12)\*

\* Figures reflect all six anthropogenic greenhouse gas emissions, including those from land use, land-use change, and forestry (LULUCF). Country data is for 2012 while the food loss and waste data is for 2011 (the most recent data available). To avoid double counting, the food loss and waste emissions figure should not be added to the country figures.

Source: CAIT. 2015; FAO. 2015. *Food wastage footprint & climate change*. Rome: FAO.



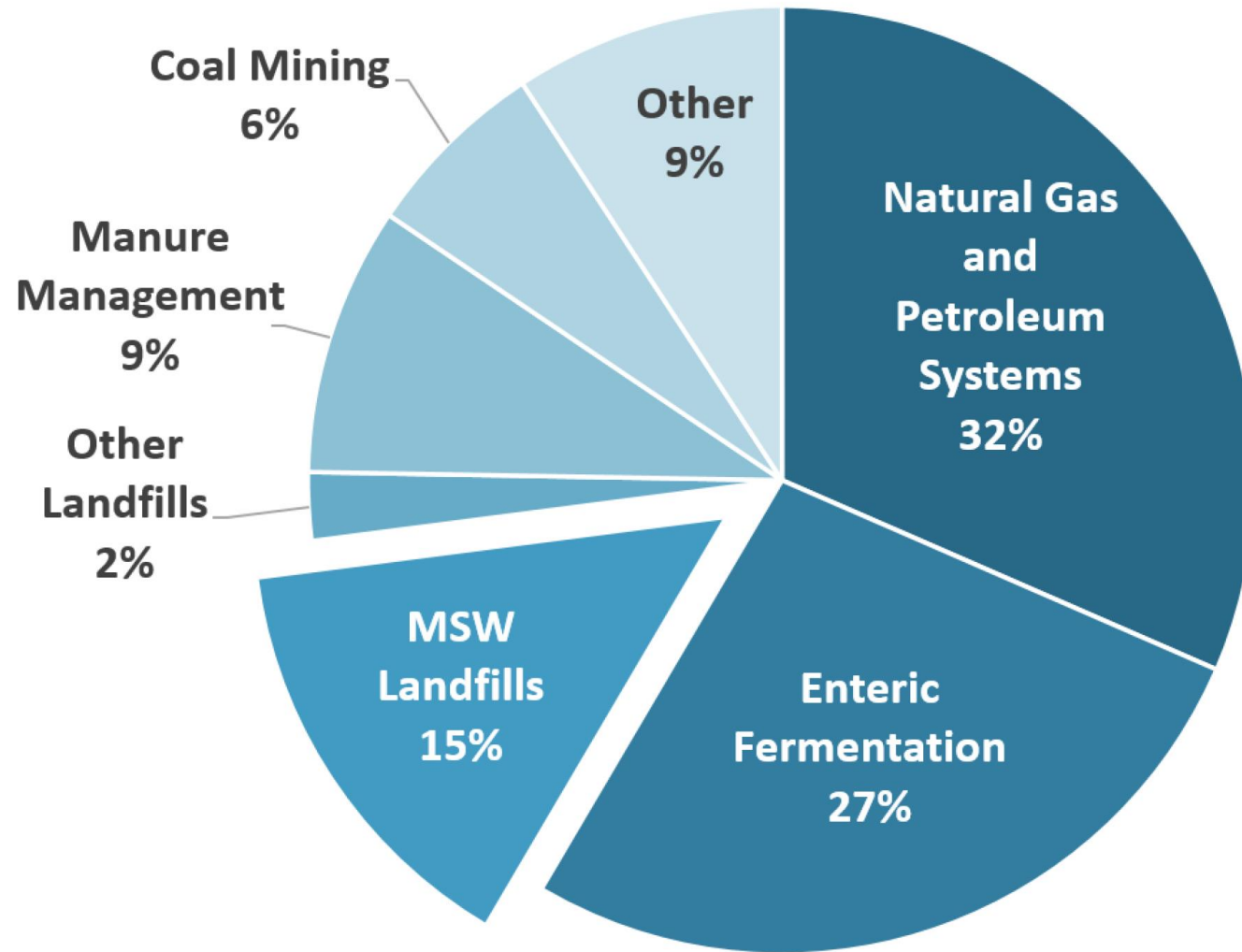
**FIGURE 2-1. ENVIRONMENTAL FOOTPRINT OF THE U.S. CRADLE-TO-CONSUMER FOOD SUPPLY CHAIN**

This figure portrays the use of five major inputs and the emission of greenhouse gases, by supply chain stage.

Data Source: Canning et al. (2020); Crippa et al. (2021)



## 2020 U.S. Methane Emissions, By Source



Note: All emission estimates from the *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020*. U.S. EPA. 2022.



# We're advancing data-driven solutions to fight food waste.

ReFED is working across the food system to cut food loss and waste in half by the year 2030.



About Food Waste

Find Solutions



# \$ 408 billion Dollars

in value of surplus food was generated in **All Sectors** across **All States** in **2019**

Destinations

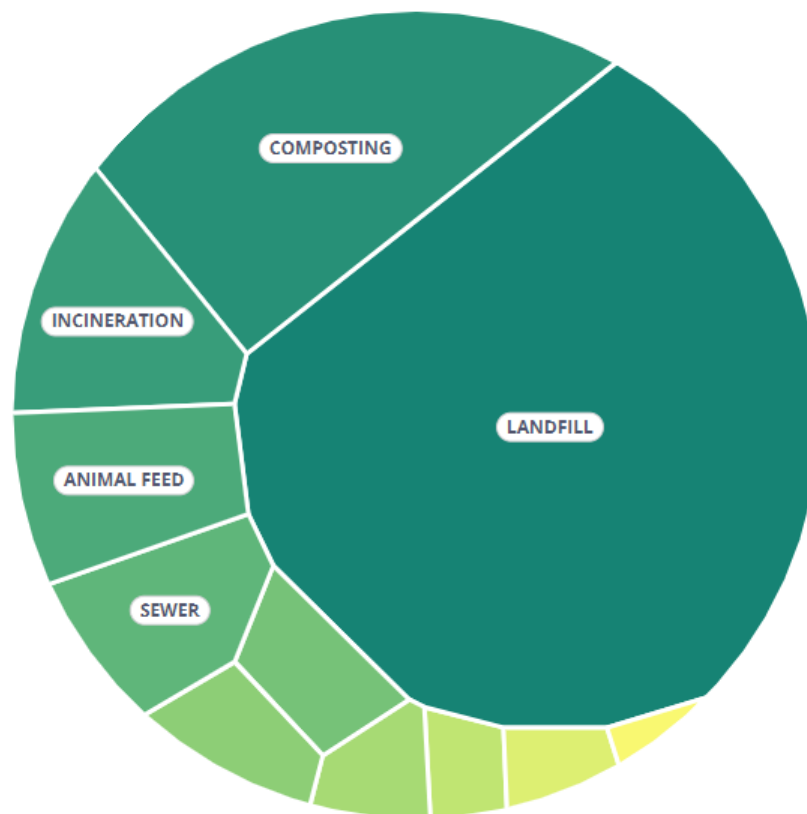
Food Types

Causes

Sectors

BACK

- Landfill  
\$ 217B - 53.3%
- Composting  
\$ 73.7B - 18.1%
- Incineration  
\$ 28.8B - 7.1%
- Animal Feed  
\$ 25.7B - 6.3%
- Sewer  
\$ 20.6B - 5%
- Not Harvested  
\$ 12.2B - 3%
- Donations  
\$ 10B - 2.5%
- Industrial Uses  
\$ 7.86B - 1.9%



Data Quality

1 2 3 4 5  
Low High



2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

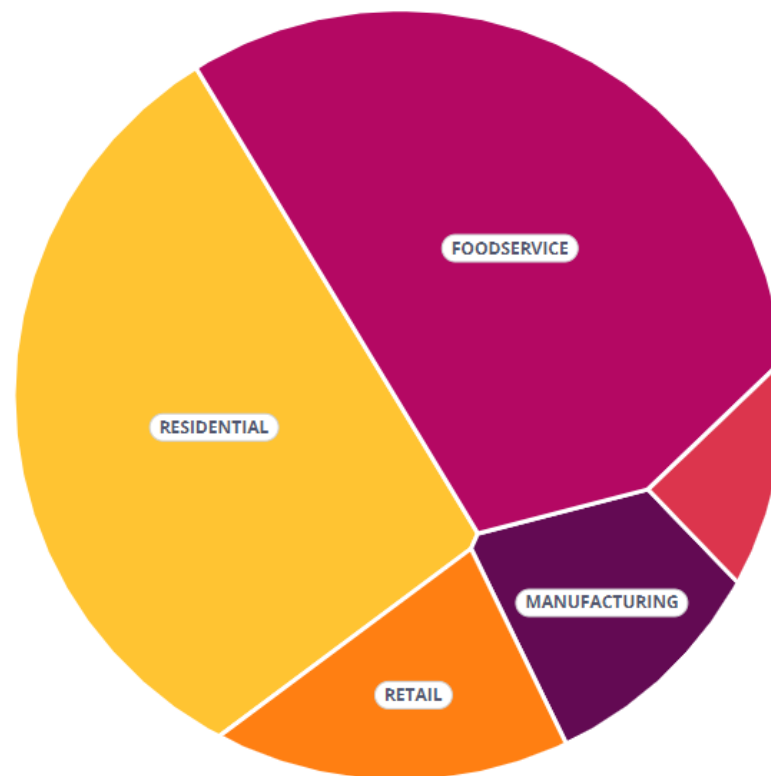
# \$ 408 billion Dollars

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Destinations Food Types Causes **Sectors**

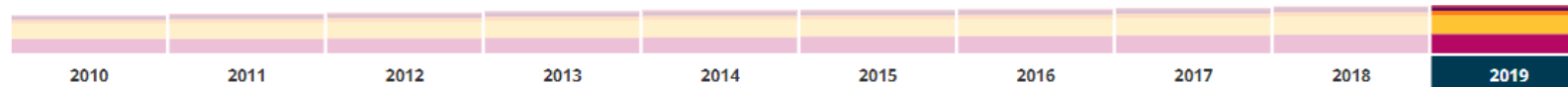
< BACK

- Foodservice**  
\$ 164B - 40.3%
- Residential**  
\$ 158B - 38.6%
- Retail**  
\$ 37.3B - 9.1%
- Manufacturing**  
\$ 34.8B - 8.5%
- Farm (Produce Only)**  
\$ 14B - 3.4%



Data Quality

1 2 3 4 5  
Low High



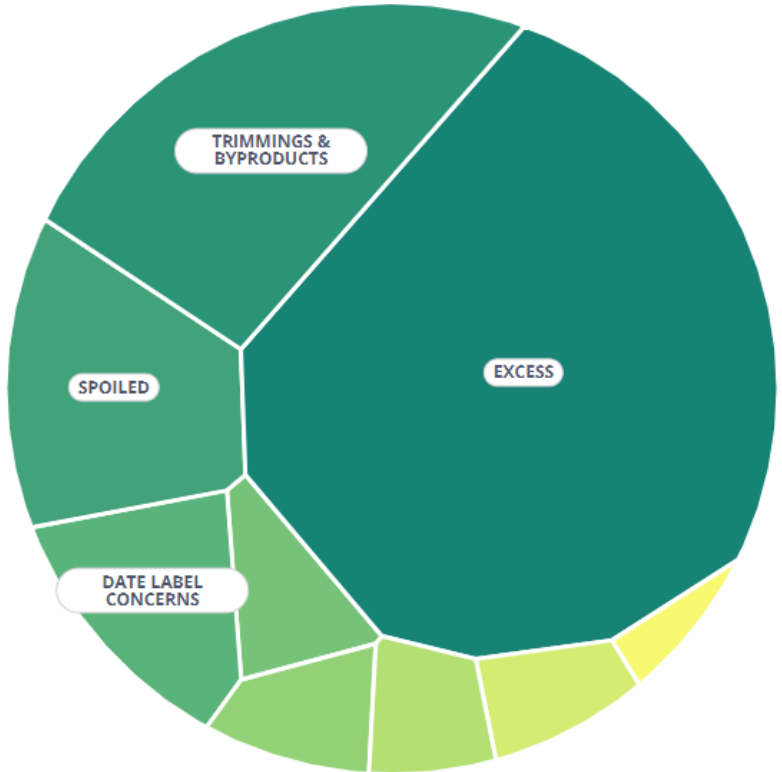
\$ 406 billion **Dollars** ▾

in value of surplus food was generated in **All Sectors** ▾ across **All States** ▾ in **2019** ▾

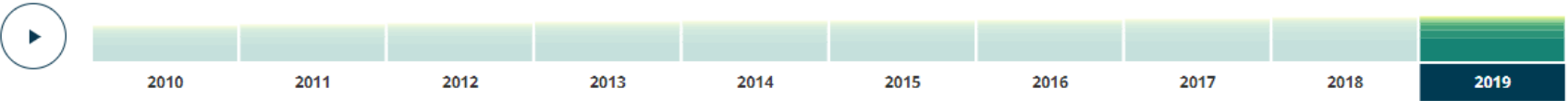
Destinations Food Types **Causes** Sectors

◀ BACK

- **Excess**  
\$ 206B - 50.7%
- **Trimmings & Byproducts**  
\$ 73.7B - 18.1%
- **Spoiled**  
\$ 45.9B - 11.3%
- **Date Label Concerns**  
\$ 27.8B - 6.8%
- **Mistakes & Malfunctions**  
\$ 14.7B - 3.6%
- **Not Harvested**  
\$ 12.2B - 3%
- **Food Safety**  
\$ 12B - 3%
- **Other**



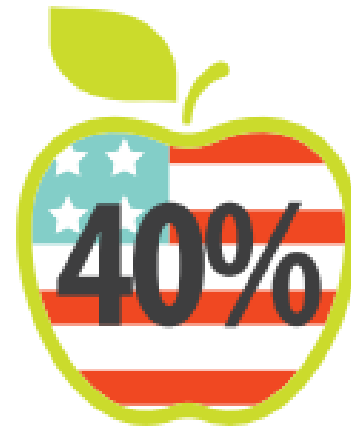
Data Quality **i**  
1 2 3 4 5  
Low High



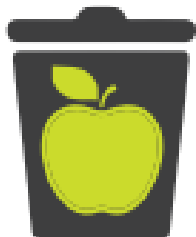
# THE FOOD WE WASTE



OF ALL FOOD  
PRODUCED IN THE  
WORLD IS WASTED



OF ALL FOOD  
PRODUCED IN THE  
U.S. IS WASTED



**1.3 Billion Tons**

Amount of good food that is wasted per year. That is enough to feed all the hungry in the world 4 times over.

**“Waste really  
is a design  
flaw”.**

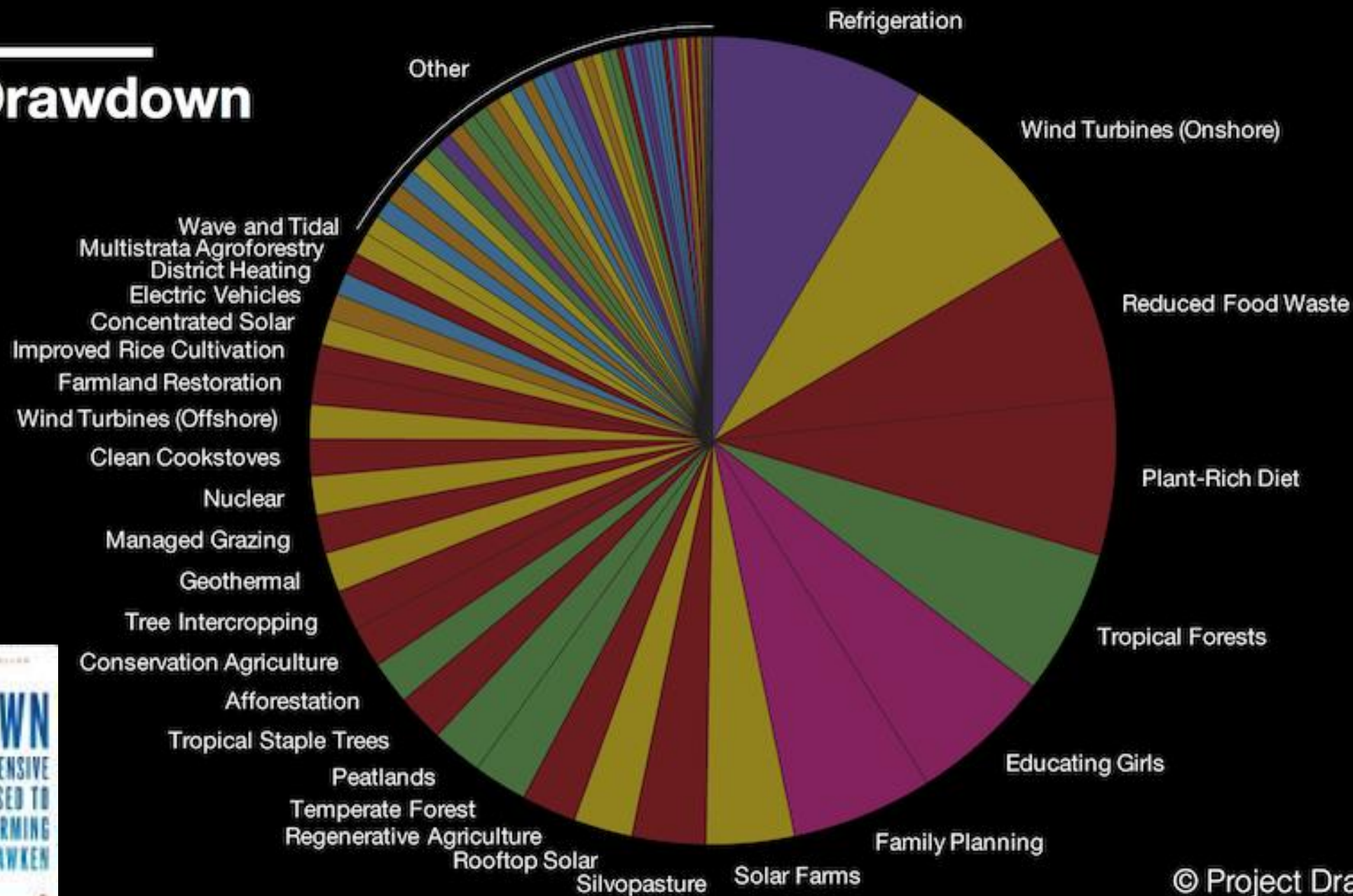
– Kate Krebbs (ANRC)

[www.greatrecovery.org.uk](http://www.greatrecovery.org.uk)

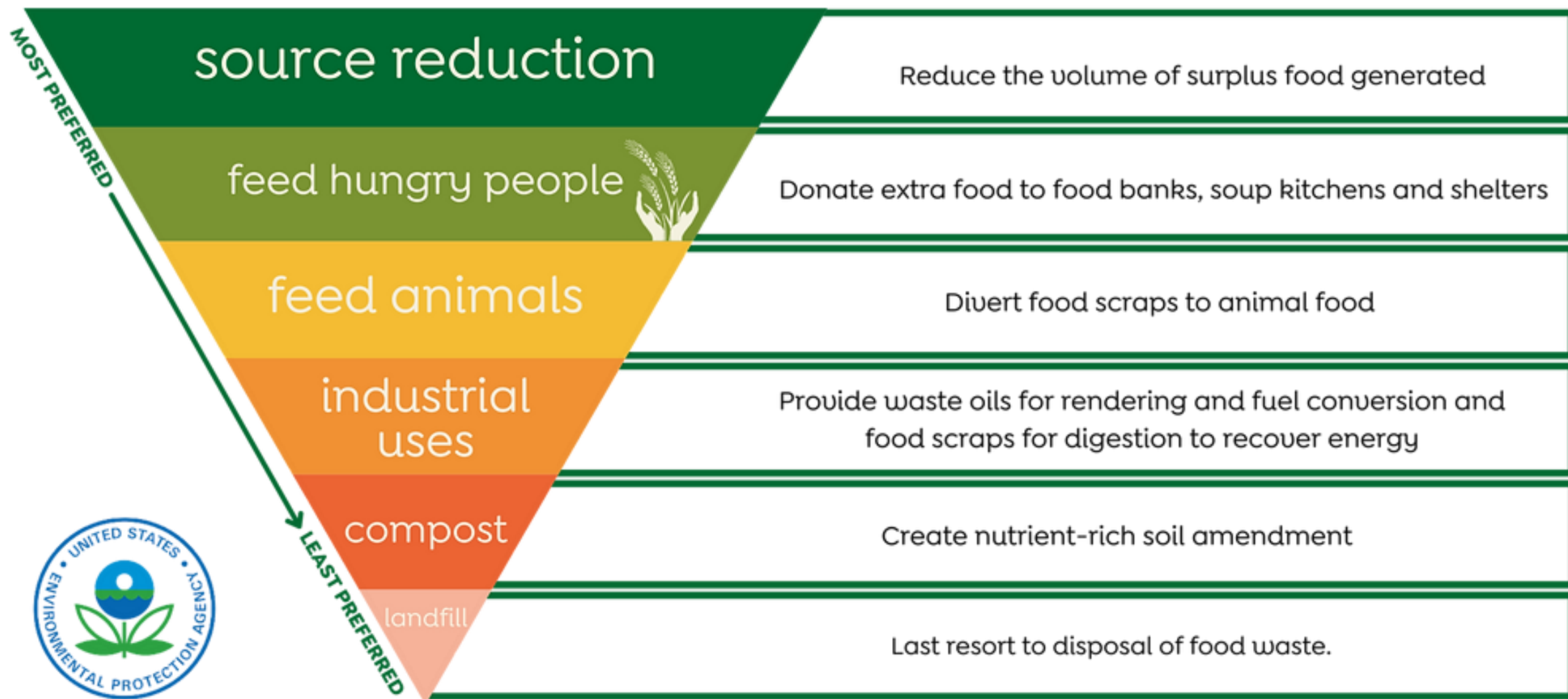




# Drawdown



# FOOD RECOVERY HIERARCHY:



# A Global Movement...

## Quick-view food donation policy atlas

Roll over or click countries for more information

Choose a policy area ▼

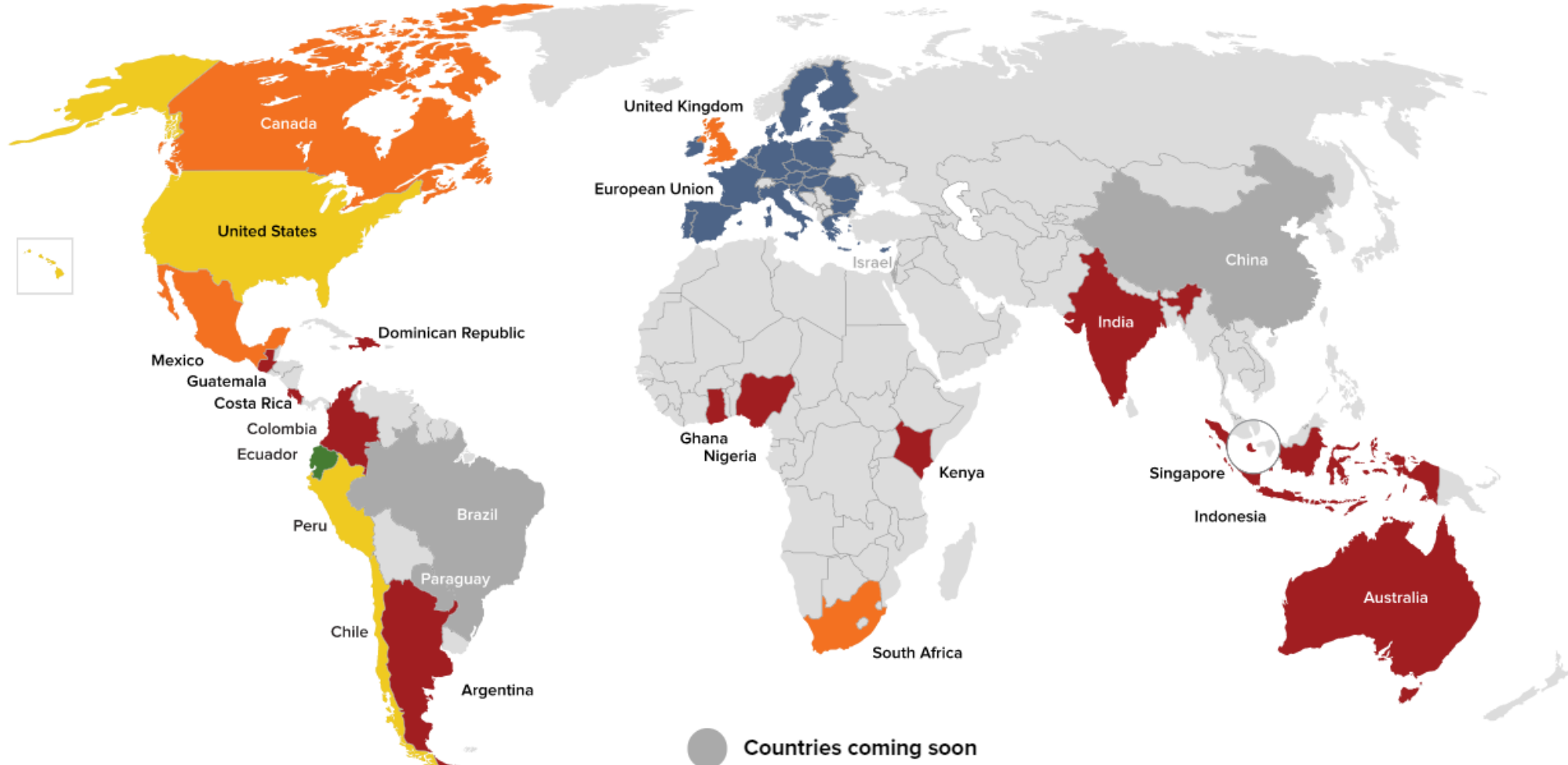
### Donation requirements or food waste penalties

Some countries have employed food donation requirements or impose monetary penalties for food that is sent to landfills (often known as organic waste bans or waste taxes) in order to influence business behavior and promote more sustainable food systems.

[BACK TO MAIN MAP](#)

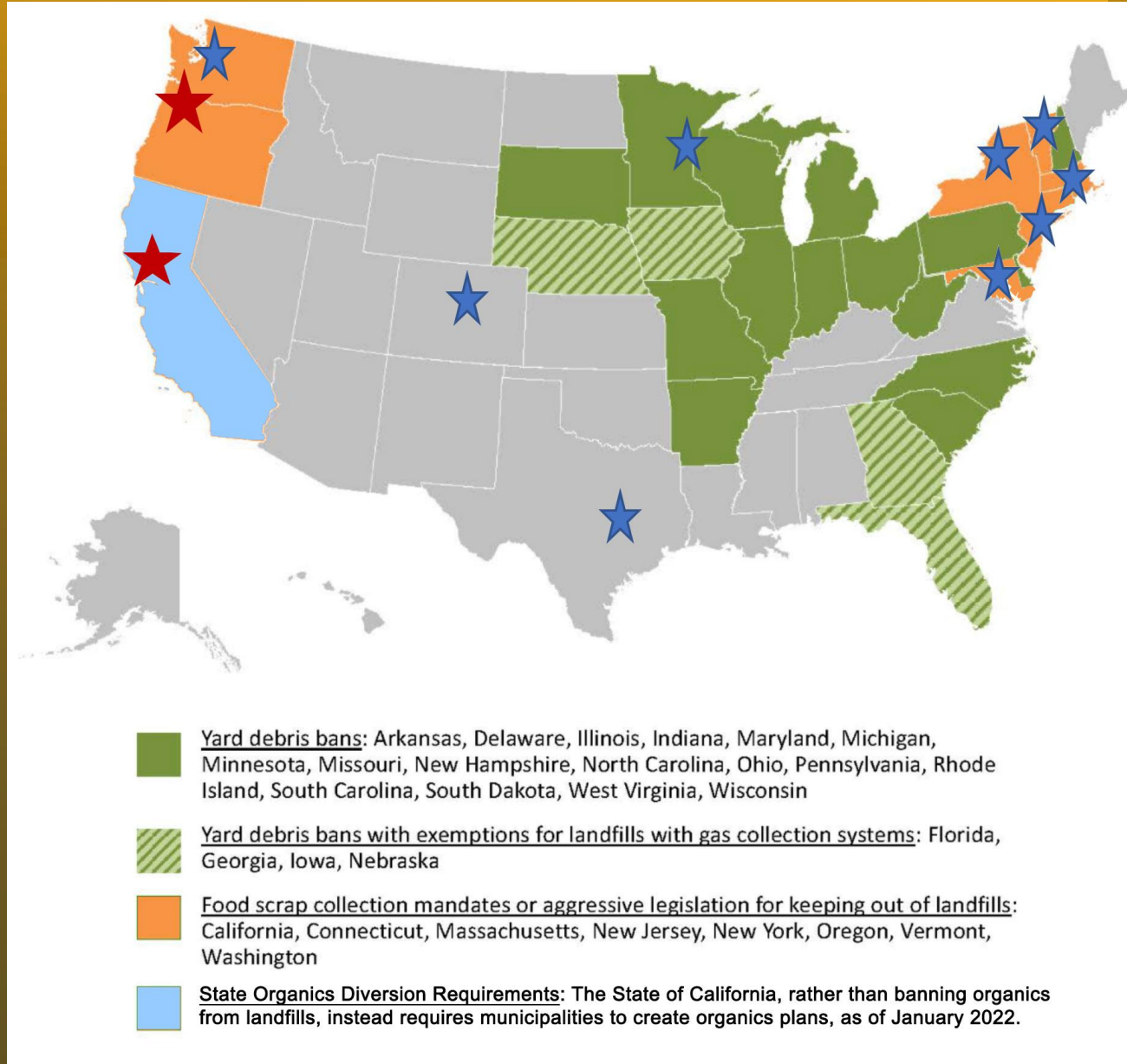
-  Strong policy
-  Moderate policy
-  Limited policy
-  No policy
-  Third-party research

[Methodology](#)





# ADDRESSING FOOD WASTE ACROSS THE COUNTRY



Source: <https://www.compostingcouncil.org/page/organicsbans>

# COMMERCIAL ORGANIC WASTE BANS AND SUBJECTIVITY

## **Massachusetts (2014)**

Recently lowered to  
½ ton/week

no exceptions to ban  
based on a business's  
proximity to a processing  
facility

## **Rhode Island (2016)**

2+ tons food  
waste/week

Located within 15  
miles of facility that  
has capacity

## **Connecticut (2017)**

1+ ton food  
waste/week (2020)

Located within 20  
miles of facility



# Food Waste in New York



Amount of food wasted  
each year in New York:  
**7.8 billion pounds\***

As heavy as **17,333** Statues of Liberty\*\*

Financial value of food wasted across  
the U.S. each year: **\$218 billion**

Nearly **6.5 billion** meals'  
worth of food is wasted in  
the U.S. each year.



[https://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/excessfoodbusinesshandbook.pdf](https://www.dec.ny.gov/docs/materials_minerals_pdf/excessfoodbusinesshandbook.pdf)



# NYS Food Donation and Food Scraps and Recycling Law Effective January 1, 2022:

Businesses and institutions that generate an average of two or more tons/week must:

Donate excess edible food; and

Recycle all remaining food scraps\*

\*If they are within 25 miles of an organics recycler

Link to DEC list of Designated Generators:

[https://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/dfsglist2023.pdf](https://www.dec.ny.gov/docs/materials_minerals_pdf/dfsglist2023.pdf)

# ReThink Food Waste NY

CET is under contract with the New York State Department of Environmental Conservation (NYSDEC) to provide food waste assistance to businesses and institutions

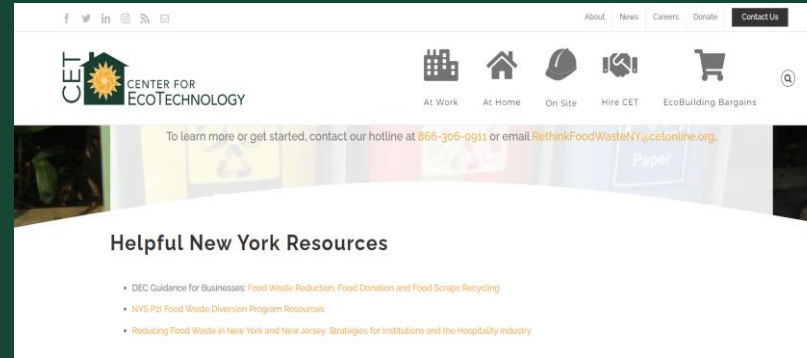
**866-306-0911**

**RethinkFoodWasteNY@cetonline.org**

**centerforecotechnology.org/nywasteassistance**



# Resources



# Tool for Estimating Wasted Food

Food Waste Estimator | New York State Pollution Prevention Institute

rit.edu/affiliate/nysp2i/food-waste-estimator

**New York State**  
Pollution Prevention Institute

About ▾ Our Work ▾ Services ▾ Training **Resources**

## Food Waste Estimator

RIT / New York State Pollution Prevention Institute / Resources / Food Waste Estimator

**Pick A Category**

- Colleges and Universities - Residential
- Colleges and Universities – Non-Residential
- Corporate Cafeterias
- County Jails and Other Institutions
- Food Wholesale and Distribution

To get started, select a category

Food Waste Estimator | New York State Pollution Prevention Institute

rit.edu/affiliate/nysp2i/food-waste-estimator

**Pick A Category**

- Colleges and Universities - Residential
- Colleges and Universities – Non-Residential
- Corporate Cafeterias
- County Jails and Other Institutions
- Food Wholesale and Distribution
- Grocery, Specialty Foods, and Convenience Stores
- Hospitals
- Lodging and Hotels
- Nursing Homes
- NYS Correctional Facilities
- Residential Households
- Restaurants - full service
- Restaurants - limited service
- Schools - elementary**
- Schools - middle
- Schools - high

**Food Waste Generation Factor**

1.13 lb/student/week

0.43 lb/meal

**Input Fields**

Number of Students

Number of Meals

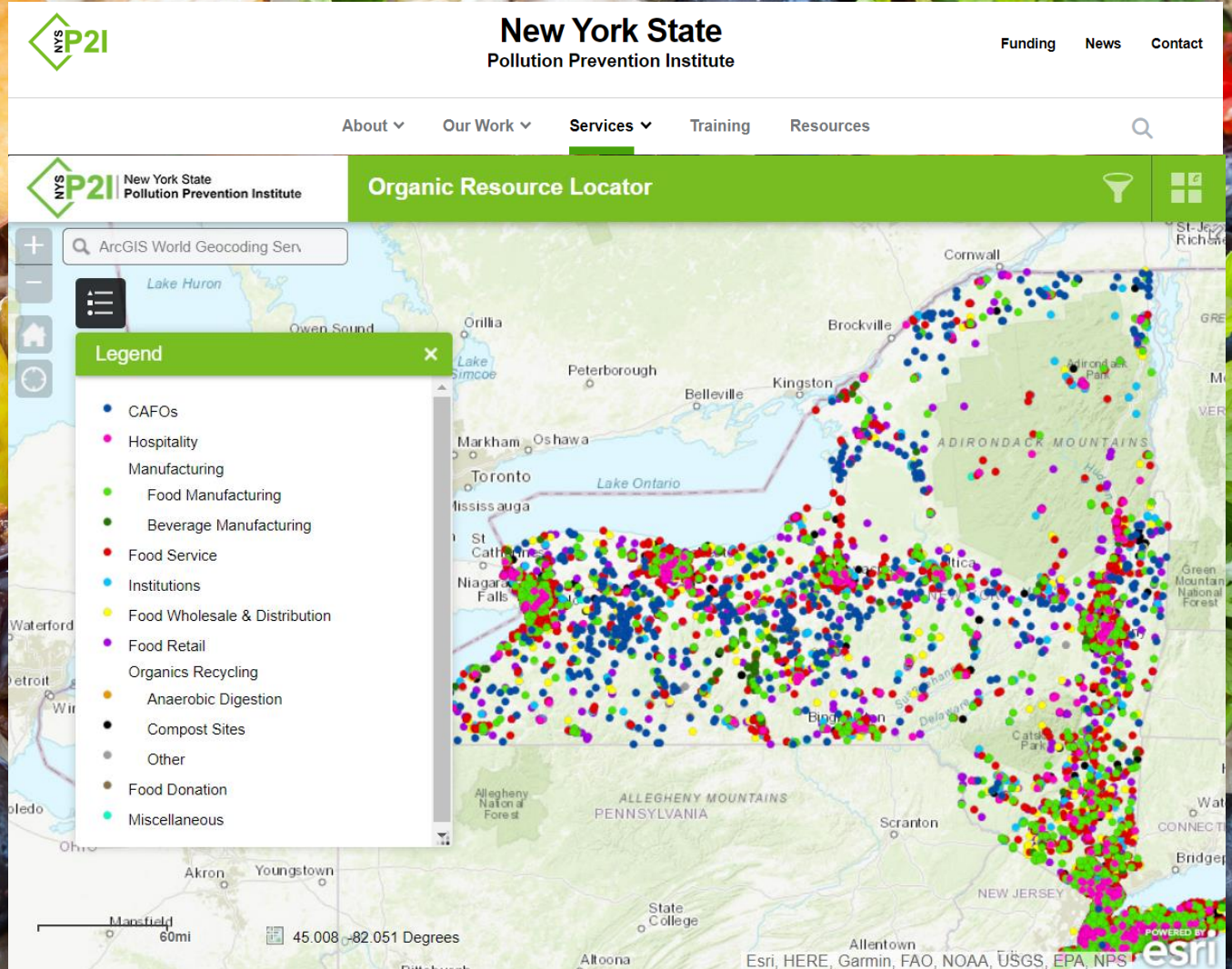
0 lb/week

0 tons/week



# NYS Pollution Prevention Institute

## Organic Resource Locator





# Meeting You Where You Are:

Evaluate  
existing  
waste  
streams

Identify  
opportunities  
to prevent,  
recover, and  
divert waste

Create  
customized  
waste bin  
signage

Conduct cost  
analysis &  
provide staff  
training

**No-Cost Waste Reduction Assistance**

MA, CT, RI, ME, NH, NY, NJ, PA, MD, & OH

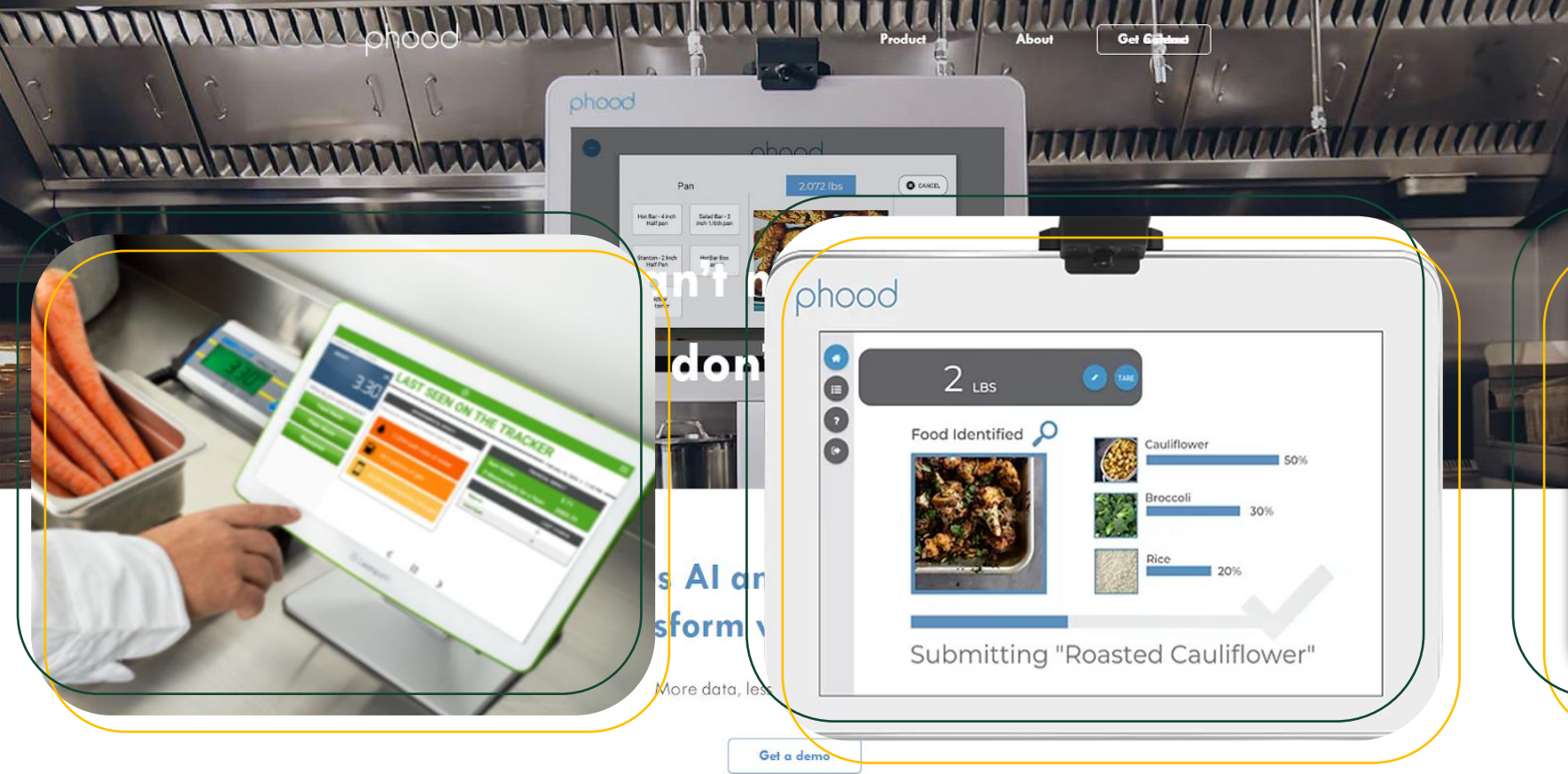


# Food Waste Prevention

Waste Tracking  
Meal Planning  
Food Purchasing and Procurement  
Back-of-House Reduction Strategies  
Front-of-House Reduction Strategies  
Dining Area Design

[wastedfood.cetonline.org/source-reduction-guidance](https://wastedfood.cetonline.org/source-reduction-guidance)





[www.leanpath.com/](http://www.leanpath.com/)



[www.phoodsolutions.com/](http://www.phoodsolutions.com/)



[www.winnowsolutions.com/](http://www.winnowsolutions.com/)

# Food Waste Tech Companies



# UMass Amherst



UMass Dining saved more than  
\$750,000 over 3 years

Follows the EPA Food Hierarchy  
in prioritizing food recovery  
efforts

Rate of food waste is down to 9%

[recyclingworksma.com/umass-amherst/](https://recyclingworksma.com/umass-amherst/)



## Food Waste Diversion

RIT / New York State Pollution Prevention Institute / Services / Food Waste Diversion

### Why it matters

- It's expensive: Food waste costs U.S. businesses nearly \$59 billion annually.
- It's unnecessary: One-third of all food produced globally never gets eaten.
- It's a missed opportunity: Organic waste is a valuable resource that could fuel a more sustainable, circular economy.
- It's the law: Under the **NYS Food Donation and Food Scraps Recycling Law**, starting January 1, 2022 large food waste generators are required to donate excess food and recycling remaining food scraps.

Every year, 63 million tons of food go to waste in the United States—that means 40% of all food that's produced is thrown away. The New York State Pollution Prevention Institute (NYSP2I) connects businesses, municipalities, and communities across New York State with the funding, expertise, and practical tools they need to manage food waste.

#### Why it matters

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#### Who is eligible

Our services are available to any New York State-registered business or organization that generates or manages food waste in its activities, such as those in:

#### What do we do

NYSP2I collaborates with businesses, municipalities, and community organizations in New York State to identify practical, cost-effective solutions for preventing, donating, and diverting wasted food from landfills. We provide our clients with expertise and guidance in strategy development and implementation, technology assessments, and process improvement.

In addition to field projects, NYSP2I maintains a growing archive of guidance documents, success stories and do-it-yourself tools that are designed to increase your knowledge and aid in your implementation of improvements across the food system.

#### How much it costs

Funding from New York State is available for each project, and can cover a

## Food Waste Reduction and Diversion Reimbursement Program

The Food Waste Reduction and Diversion Reimbursement Program is an innovative partnership between New York State and Rochester Institute of Technology (RIT) focused on incentivizing the reduction of food waste in the state. The program provides reimbursement to New York State businesses or not-for-profits that generate, haul or recycle large amounts of food waste to offset the cost of select technologies and equipment that promise to reduce or divert that food waste from landfill or incineration.

**Applications for grant funding are now being accepted. Please note that this is a rolling application.**

### Eligible projects must meet the following criteria:

- Will result in an increase of food waste diversion from landfill or incineration through the use of equipment or technologies.  
*Note: Purchases that improve existing food waste diversion methods but do not result in increased amount of food waste diverted are not eligible.*
- Are led by New York State businesses or not-for-profits that produce, haul, or recycle greater than one ton of food waste per week
- Implemented after June 1, 2017

### Upon completion of contract requirements, reimbursement will cover:

- The purchase and installation of eligible equipment and technologies
- Up to 44% of eligible project costs, in most cases not to exceed \$100,000

[Download Application](#)

**Note:** Please download the application in word format (.docx)





# Working With Haulers

Know Your Waste

Review Contracts

Comply with Waste  
Disposal Regulations

Communicate Effectively





# Customizable Waste Bin Signage



## FOOD SCRAPS RESTOS DE ALIMENTOS



### ALL FOOD SCRAPS

Fruit & vegetable peels  
Dairy, eggs, grains, bread  
Meat, fish, poultry  
Bones, shells



### NO

Tissues, napkins, paper towels  
Compostableware  
Coffee cups, wrappers  
Plastic, metal, glass



### TODOS LOS RESTOS DE ALIMENTOS

Pieles de frutass y vegetales  
Lácteos, huevos, granos, pan  
Carne, pescado, aves  
Huesos, cáscaras

### NO

Pañuelos de papel, servilletas,  
papel toalla  
Utensilios compostables  
Taza de café, envoltorios  
Plástico, metal, cristal





# Who Do We Help?

Organics  
Recyclers

Transporters,  
Depackagers  
and  
transfer facilities

Small  
& Exempt  
Generators

Generators

Compost  
&  
Digestate  
Markets

# Success Stories





# Jungle Jim's Fairfield, OH



**Reduced Deals** section  
reduces food waste

Opportunity to  
**repurpose food  
packaging**



# America's Food Basket Supermarkets

- America's Food Basket Supermarkets in Boston divert 4.5 tons per week of source separated organics, totaling 234 tons annually.
- RecyclingWorks assisted CERO, an employee-owned organics hauler, with planning logistics to collect food scraps from America's Food Basket stores.



Fresh produce at America's Food Basket.



CERO workers collect compost from America's Food Basket.



# Hingham High School



Composts food scraps from the cafeteria on-site

Transitioned from polystyrene trays to compostable trays

Compostable trays are used in the on-site composters as layering/"browns"



# Apponaug Brewing Company

Warwick, RI

Rethinking portion sizes

Creative upcycling of  
ingredients

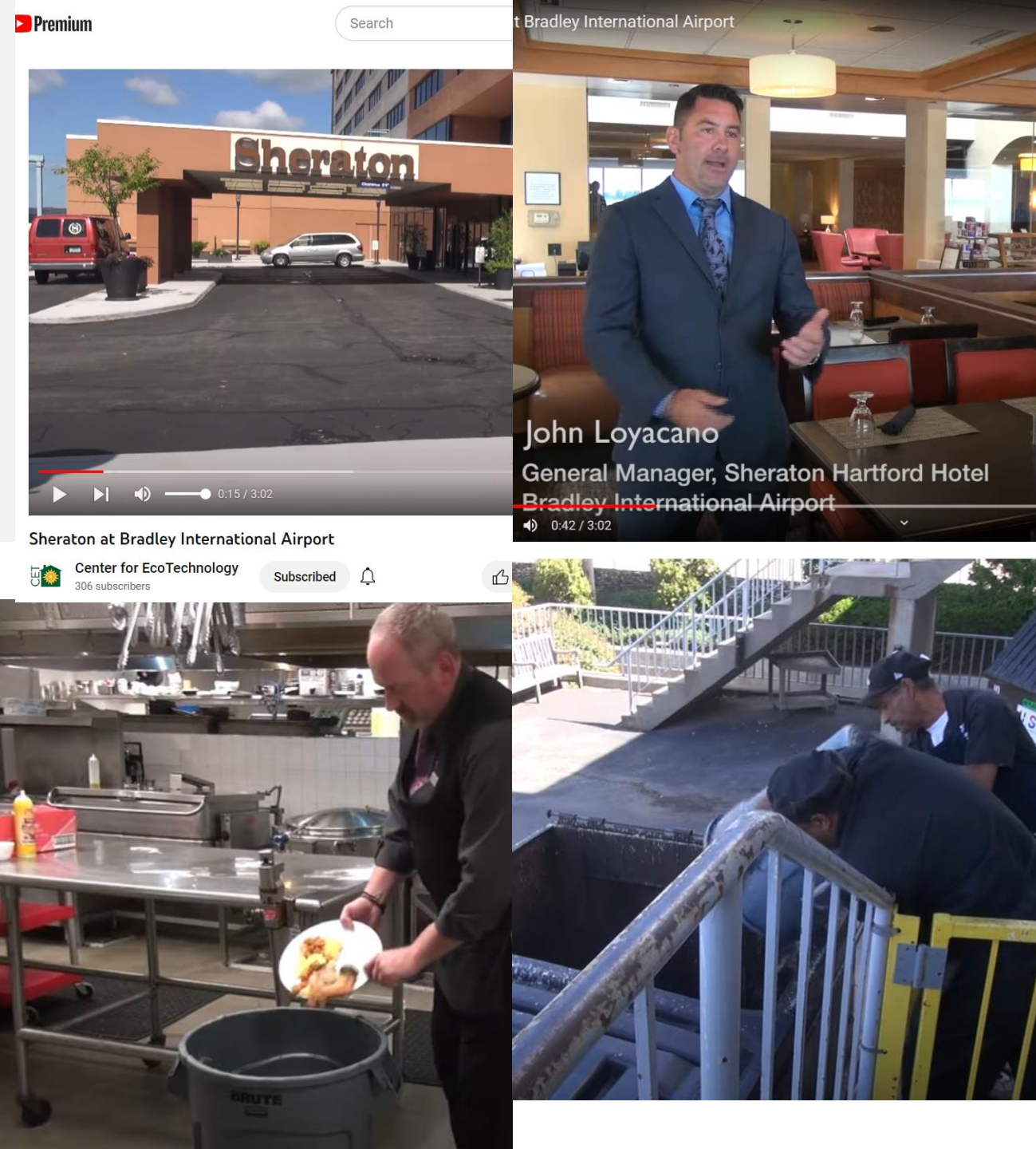
“Share Shelf” for staff





# Sheraton Hotel at Bradley International Airport

- The Sheraton Hotel at Bradley International Airport took advantage of technical assistance through CET to create an effective composting program.





# SPOTLIGHT Success Stories

## Big Y World Class Markets

Big Y donated more than 3,100 tons of food in 2020 across their 80 locations providing more than 5,000,000 meals to those in need. A portion of this food is protein which is badly needed by the food banks to provide for those who are food insecure. Additionally, Big Y saved more than \$390,000 from avoided hauling and decreased disposal costs when compared to the alternative of disposing of this surplus food.



## Village Market Wilton, Connecticut

Village Market in Wilton, Connecticut has an extensive program to prevent and reduce wasted food. The grocery store sets strong goals to reduce waste and spoilage, provide their customers with the freshest products possible, and contribute to those in need in the community. To extend the life of products while meeting these goals, the business utilizes a handful of strategies, such as: incorporating surplus veggies in stocks and soups, turning stale bread into croutons, and using overripened bananas to make banana breads. All of these efforts help Village Market maintain their expected profit margin and cut back on ordering costs.

With the prevention and donation programs Village Market is currently operating, it is estimated that the business is preventing 26 tons per year of waste, which represents approximately **\$2,500 per year in avoided disposal costs**. The team at Village Market is motivated by moral and environmental factors to expand their programs that reduce their footprint and open opportunities to avoid costs. Looking to further divert food waste, CET is working with Village Market to explore options for separating food scraps for composting.







## New London School District

Director of the Child Nutrition Program

### Samantha Wilson



- Helped bring BRIGAD & FoodCorps to NLPS
- Hosting monthly CommUNITY meals
- Started source separation of food scraps at Jennings Elementary School, in 2022, expanded it to 2<sup>nd</sup> elementary school, and about to expand to 3<sup>rd</sup>. Also planning to implement reusables.



**HELP  
WANTED**



# Recap:

- CET overview
- ReThink Food Waste NY
- Tools & resources
- Success stories
- Opportunities for collaboration





# Lisa Pellegrino

Business Recycling Specialist

[lisa.pellegrino@cetonline.org](mailto:lisa.pellegrino@cetonline.org)

## QUESTIONS?

[centerforecotechnology.org/nywasteassistance](https://centerforecotechnology.org/nywasteassistance)



CALL US: (866) 306-0911



EMAIL: [RethinkFoodWasteNY@cetonline.org](mailto:RethinkFoodWasteNY@cetonline.org)