

# Food Waste Reduction and Composting



**September 27, 2022**

Jennifer Nelson - Program Director, Seven Generations Ahead

*"In every deliberation,  
we must consider the  
impact on the seventh  
generation."*

- Native American principle



Seven  
Generations  
Ahead

Nonprofit serving Illinois and the  
Midwest since 2001

**Mission:** Promote ecologically  
sustainable and healthy communities



Fox Valley  
Sustainability  
Network



PlantGreen

OAK PARK-RIVER FOREST COMMUNITY FOUNDATION

# Agenda

- I. Introductions and background
- II. Institution opportunities
  - A. Prevent | reduce
  - B. Rescue | donate
  - C. Recycle | compost
- III. Institution and event spotlights
- IV. Resources
- V. Next steps





**Food waste is the single largest material sent to landfills.**

### **Social Problem**

- 40% of all food gets wasted
- 1 out of 7 Americans are food insecure

### **Environmental Problem**

Food production uses

- 50% of our land
- 30% of all energy resources
- 80% of all freshwater

### **Economic Problem**

For every dollar spent on food, society pays two dollars in health, environmental, and economic costs

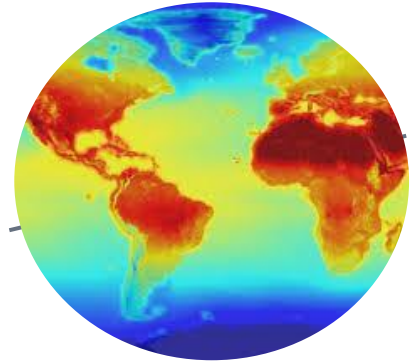
Photo credit: SCARCE

**WASTED FOOD** is  
21% of material  
sent to landfills



Wasted food in landfills  
creates **METHANE**, a  
greenhouse gas.

Increased  
**GREENHOUSE GASSES**  
cause  
**GLOBAL WARMING**



Global warming (due to  
human activities) leads  
to long term changes  
to weather known as  
**CLIMATE CHANGE**

# Illinois Landfills



- 14 million tons of waste landfilled annually
- Illinois' 36 permitted landfills have a cumulative life expectancy of approximately 20 years (Region 1 includes Rockford and has 21 years)
- Nearly 20% of what is landfilled is food scraps
- Of all compostable organics generated, only 15% were composted
  - o only 59% of yard waste
  - o only 1% of food scraps

# Reducing waste across the supply chain

PREVENT	RESCUE	RECYCLE
<p>Illinois landfills receive 14 million tons of waste annually.</p> <p>Nearly <b>20% of that is food scraps.</b></p> <p>That's 2.8 million tons of food scraps each year!</p>	<p>40% of all food in the US gets wasted, while <b>1 out of 7 Americans are food insecure.</b></p> <p>In Illinois more than <b>one million people struggle with hunger</b> and food insecurity.</p>	<p><b>Soil Quality</b> - recycle food scraps into compost to improve the health of our soils</p> <p><b>Energy-</b> Food scraps can be processed through anaerobic digestion to produce energy</p>

“The research shows that just showing people research doesn't work, but, give people the tools to learn for themselves, and that's when things get real.”

Jason Jay

Director of the Sustainability Initiative  
at MIT Sloan

# ONS ERSE OBAL RMING

drawdown.org

AT IN TIME WHEN  
GREENHOUSE GASES  
BEGIN TO DECLINE  
BASES.

Drawdown is the most comprehensive proposed to reverse global warming. zation did not make or devise the plan—we plan because it already exists. We gathered d and diverse group of researchers from he world to identify, research, and model the just substantive, existing solutions to address change. What was uncovered is a path forward an roll back global warming within thirty years. It is that humanity has the means to achieve it. We accelerate the knowledge and growth of what is sible. We chose the name Drawdown because it ent name the goal, we are unlikely to achieve it.

GREENHOUSE GASES BY AVOIDING  
EMITTING CARBON DIOXIDE  
IN THE ATMOSPHERE.

DRAWDOWN

# 100 SOLUTIONS TO REVERSE GLOBAL WARMING

drawdown.org

DRAWDOWN IS THAT POINT IN TIME WHEN  
THE CONCENTRATION OF GREENHOUSE GASES  
IN THE ATMOSPHERE BEGINS TO DECLINE  
ON A YEAR-TO-YEAR BASIS.



# We can make a difference at home, at work and in our community

# Top 10 solutions to climate change

Total gigatons of CO2-equivalent emissions that could be reduced by 2050

SOLUTION		PLAUSIBLE SCENARIO		DRAWDOWN SCENARIO		OPTIMUM SCENARIO
Refrigerant Management	1	89.74	2	96.49	3	96.49
Wind Turbines (Onshore)	2	84.60	1	146.50	1	139.31
Reduced Food Waste	3	70.53	4	83.03	4	92.89
Plant-Rich Diet	4	66.11	5	78.65	5	87.86
Tropical Forests	5	61.23	3	89.00	2	105.60
Educating Girls	6	59.60	7	59.60	8	59.60
Family Planning	7	59.60	8	59.60	9	59.60
Solar Farms	8	36.90	6	64.60	7	60.48
Silvopasture	9	31.19	9	47.50	6	63.81
Rooftop Solar	10	24.60	10	43.10	13	40.34

Source: Project Drawdown

Vox

“The decisions we all make every day on the food we produce, purchase and consume is perhaps the single most important contribution an individual can make.”

Chad Frishmann  
Vice President and Research  
Director, Project Drawdown

# Institution Opportunities

# How Institutions Make a Difference

**USDA & EPA**  
**U.S. Food Waste**  
**Challenge:**  
Reduce food waste  
by 50% by 2030

## Institutions play a key role

- **reducing** food waste
- recovering/**donating** food
- recycling/**composting** food scraps
- **educating**  
staff/customers/visitors/patients/  
inmates about reducing food waste

## Program considerations

- Financial
- Operational
- Regulatory

# PREVENT wasted food

## Types of programs & practices:

- Menu planning to reduce food waste
- Smarter food purchasing plan
- Repurpose food
- Invest in technology
- Food service options
  - Made-to-order stations
  - On-demand dining
  - Room service or cook to order
- Catering sustainably



Photo credit: BioCycle

# RESCUE food to feed people



## Types of programs & practices:

- Surplus Project
- Donate to homeless shelters & others in community
- Work with food redistribution charities & community groups



## Where food can be rescued from:

- Back of house (kitchen)
- Cafeteria (packaged food)
- Catered events & meetings



# RECYCLE food scraps to return nutrients to soil

## **Ways food waste can be handled:**

- Food scrap composting
- Anaerobic digester
- In-sink garbage disposal
- Feeding farm animals
- Garbage or landfill

# The What and Where of Food Scrap Composting

## On-site:

Composting Bins/Tumblers

Vermicomposting

In-vessel composter

Dehydrator

Anaerobic digester



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## Off-site:

Commercial composting

Farm composting



# Commercial Composting



**1. Sort food scraps**



**2. Haul to a compost facility**



**3. Food scraps decompose**



**4. Finished compost sold**

# Institution and Event Spotlights

# Lake County Adult Corrections

## Environmental Benefits:

- 495 cubic yards of dining/kitchen materials diverted from landfills each year
- 361.35 cubic yards of food waste composted each year

## Economic Benefits:

- Lake County estimated annual savings: \$3900

## Educational Benefits:

- Engaging inmates on proper composting and recycling will provide job skills to support inmates post release



## Food waste in the prison system is significant:

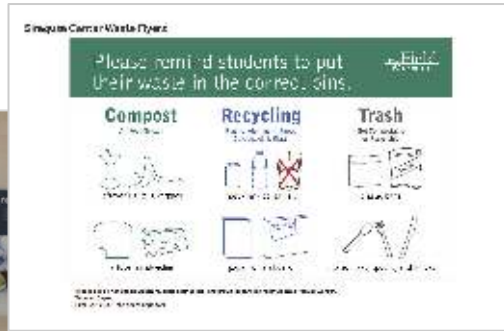
- An estimated 200,000 tons of food is wasted in American jails
- 65% of jobs in the green economy are accessible to people with criminal

# The Field Museum



Sustainable operations: recycling, food service, alternative transportation, urban agriculture/community gardening and renewable energy

- The Field Museum worked with Bright Beat to make the Chicago Community Climate Forum with 1,500 guests a Zero Waste event, achieving a 95% diversion rate
- The 2018 Greenbuild Celebration had 2,500 guests and achieved an 89% diversion rate



# Surplus Project



## Current Status



LOYOLA  
MEDICINE

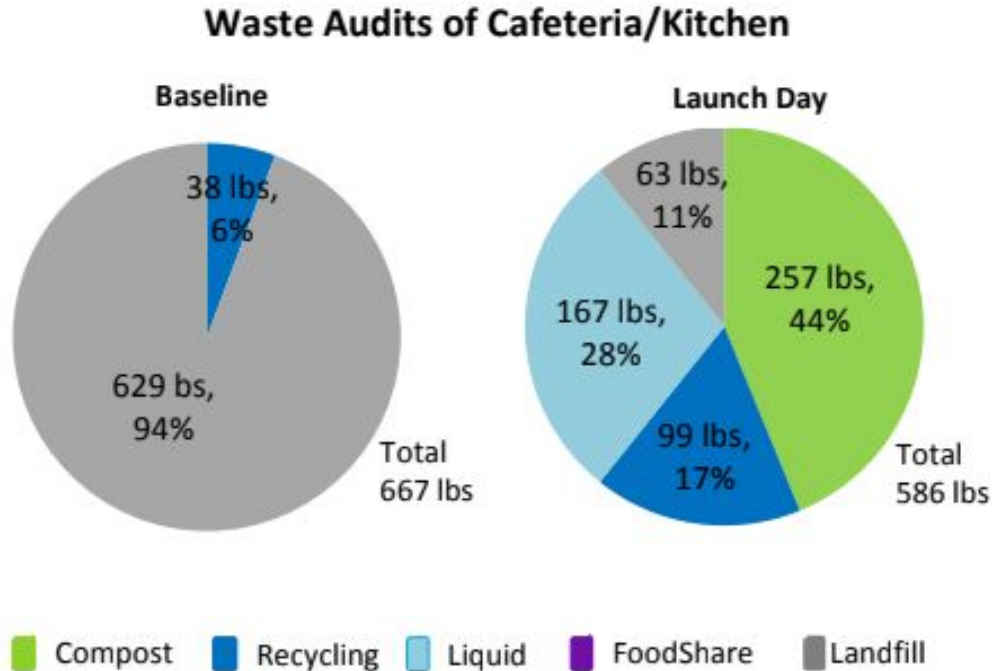
Currently, there are 14 Hospitals/Organizations across the nation who have implemented this program. In the Loyola Medicine System, all three hospitals will have the program implemented by May 2022.

Recently received a \$50,000 grant from Trinity Health to continue to expand the program and provide resources to our donation sites.



# Zero Waste Schools

Launch day at Sandoval Elementary (1,015 K-5 students)



The lunchroom went from 25 trash bags per day to 2 bags per day.

# Impact of 14 Chicago Public Schools

**10,300** students composting & recycling per day

**1** ton food scraps & trays composted per day

**3,800** pounds of materials kept out of landfills per day

**6,500** milk cartons recycled per day

**376 MTCO<sub>2</sub>E/year\*** of greenhouse gas emissions avoided through food recovery, recycling, and composting

Equivalent to preventing 12,140 ft<sup>2</sup> of arctic sea ice from melting per year.\*\*



*At my elementary school, we didn't do this. The fact that we're sharing this experience is amazing. We didn't do anything at home before either-- no recycling, nothing. You'd be surprised; a lot of kids do care. Once they see the impact, they want to be on the Zero Waste Team.*

- CPS high school student

\* Based on school waste audit data entered in the EPA WARM tool

\*\*Based on 1 MTCO<sub>2</sub>E : 3m<sup>2</sup> arctic sea ice, as published in Science, D. Notz & J. Stroeve, Vol. 354, No. 6313. Nov. 11, 2016.



# University of Illinois at Chicago



## RESCUE

- Surplus Project (2018)
- UIC Campus Pop Up Pantry
- UIC Medical Center Kitchen Waste Audit (2018)
- Food recovery pilot (Spring 2017)
- UIC Campus Food Recovery Network (2014)



## RECYCLE

- UIC Medical Center compost program launched (2019)
- Campus composting

# Institution Actions to Reduce Wasted Food

## 1. Establish a food recovery and donation program

- a. Include food waste reduction goals in food service RFP
- b. Identify food to be recovered
- c. Identify partner to distribute food
- d. Determine volunteer and transportation needs

## 2. Establish a food scrap composting program

- a. Require haulers to provide pricing for organics/compost service in RFP
- b. Require reusable, recyclable or compostable items for events and food service
- c. Require the use of compost in procurement and landscaping RFPs

## 3. Join collaborative efforts in Illinois

- a. Illinois Food Scrap Coalition
- b. Wasted Food Action Alliance

# Resources

# Reducing Wasted Food and Composting



## COMPOSTING

Working to strengthen Illinois

- Policy
- Infrastructure
- Education



## WASTED FOOD

Building connections across the food supply chain to

- PREVENT/reduce
- RESCUE/donate
- RECYCLE/compost



**Food:Land:Opportunity**  
Localizing the Chicago Foodshed

# Wasted Food Action Alliance

- **PREVENT** | reduce - stopping waste from occurring in the first place
- **RESCUE** | donate - making sure food is redistributed to feed people
- **RECYCLE** | compost - repurposing waste as energy, agricultural, and other products

**MISSION** to develop a working strategy and action platform that makes Illinois a leader in reducing wasted food by connecting and building on current wasted food initiatives, education, and policy in unified ways that holistically promote source reduction; food recovery for hunger relief and other uses; and recovery of food scraps for composting and creating healthy soil.



# Wasted Food Action Alliance website resources

[wastedfoodaction.org](http://wastedfoodaction.org)

- Collaboration and Networking
- Finding Food
- Event Calendar



## Zero Waste Schools resources

[Zero Waste Schools website](http://Zero Waste Schools website)

[Zero Waste Schools monthly e-newsletter](http://Zero Waste Schools monthly e-newsletter)

[Food Waste Reduction Toolkit for Illinois Schools](http://Food Waste Reduction Toolkit for Illinois Schools)



# Wasted Food Action Alliance

## 2021-2022



**Illinois Food Waste Action Plan 2021** - A plan to strengthen and improve our food system through collaboration, innovation, policy change and education.

**Grocery Chain Warehouse and Store Resources and Recommendations**

**Hospital Survey and Roundtable**

**ChiFLoW Asset Mapping**

**Local, Regional and National Connections**

- City of Chicago Food Matters
- Food Waste Prevention Week
- ReFED Food Summit

**Speakers and networking at monthly meetings**





A comprehensive resource to help schools take action to reduce wasted food.

Provides strategies that are quick and easy, as well as longer term, multi-step initiatives.

Includes case studies highlighting inspirational efforts in schools across Illinois.

Available for free download from [Seven Generations Ahead](#) and the [Wasted Food Action Alliance](#).

# Policies and laws regarding share tables

- USDA Memo SP 41-2016: The Use of Share Tables in Child Nutrition Programs
- Bill Emerson Good Samaritan Food Donation Act
- IL State Board of Ed's School Nutrition Programs Administrative Handbook (Section J-8)
- New IL law: School Unused Food Sharing Plan  
"School districts shall incorporate a food sharing plan for unused food into their local wellness policy"



# Compostable foodware & liner bags



- Look for products that are Biodegradable Plastics Institute (BPI) certified
- Check with your hauler or composting facility to find out which, if any, compostable products they accept



WASTED FOOD ACTION ALLIANCE

PREVENT | RESCUE | RECYCLE

April 6, 2017



ALLIANCE  
for HEALTH  
EQUITY

Respirant and Communities:  
Improving Health Across  
Chicago and Cook County

Continue the conversation.

Share a best practice!  
Connect to an expert.

[- CLICK HERE FOR FORM TO JOIN THE PA](#)

Can you find the speaker's focus and then use another happy memory to show the process again? You can use the sample P2/P3/P4/P5.

[illegible]

How can I learn more about implementing the Surplus Project at my organization?

**Jean Litman**, the founder of The Savings Project, has developed resources and models for health-care partners interested in implementing the food rescue program. Please email [jan@jeanlitman.com](mailto:jan@jeanlitman.com)

What partners are working on food rescue mapping?

- National EPA - [EatenFood.org](#)
- Chicago & Cook County - [Food Access Map](#)

How can I support local food rescue initiatives in Chicago?

Sign up to volunteer with the [CU Kingdom Food Investments Gridline](#) or support your local food business.

#### Who is funding food rescue initiatives at hospitals and healthcare systems?

Aviation Credit Fund has several funding opportunities available for partners.

**Who can I go to for technical assistance for my hospital-based food rescue program?**

**Annals** has been founded to support North American hospitals and healthcare systems working on workload reduction programs. Please email [jen@annals.org](mailto:jen@annals.org) to learn more!

**What networks can I join to learn more about food rescue in the Midwest?**

- [Anne Stuedli from Aditya Kumar](#)
- [Anne Fred Soren Coordinator](#)
- [HDA Mysore Healthcare Partners Helpline](#)

What partner can support me in learning more about how to compost food scraps at my organization?

**John Howard**, the founder of **John Deere Equipment**, has worked with Mary Hoshai and hundreds of other women on land conservation. (Email: [john@johndeere.com](mailto:john@johndeere.com))

Where else can I go to learn about innovative feed rescue solutions?

The Center for Connectivity has special interests and experience with wireless fixed solutions.



Authors are invited to  
submit to the **Health  
Hospital Wasted Food Survey**



## Respondents in 2021-2022:

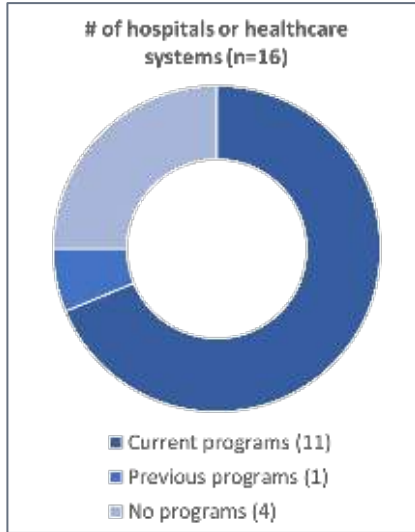
- Humboldt Park Health
- Advocate Christ Medical Center & Illinois Masonic Medical Center
- Harrisburg Medical Center
- Stroger and Provident Hospitals
- Swedish Hospital
- Memorial Hospital
- OSF Saint Clare Medical Center
- Rush University Medical Center
- Shirley Ryan Ability Lab
- Lurie Children's Hospital
- AMITA Saint Mary's and Elizabeth
- University of Chicago Medical Center
- University of Illinois Medical Center



**We welcome Illinois healthcare organizations to continue submitting responses to the survey!**

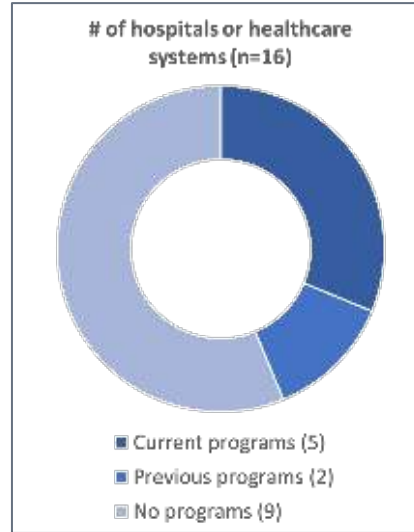
<https://forms.gle/rGuYie4cybMwEshe9>

## PREVENT



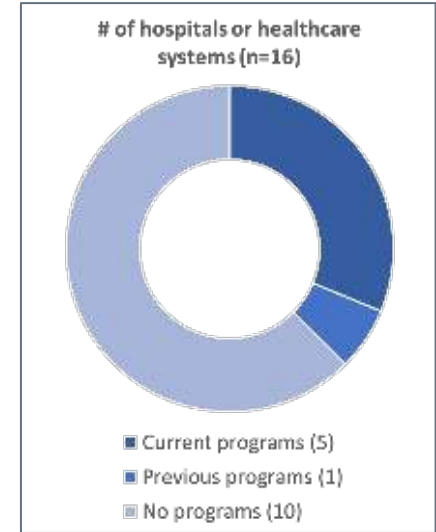
***44% of hospitals indicated they'd like to learn more about preventing surplus food***

## RESCUE



***50% of hospitals indicated they'd like to learn more about rescuing surplus food***

## RECYCLE



***50% of hospitals indicated they'd like to learn more about recycling food***

# Grocery Chain Warehouse and Store Resources & Recommendations

Food Waste Reduction FAQs & Strategies

Food Donation FAQs & Strategies

Food Scrap Composting FAQs & Strategies

Store Resources for Surplus Food Management

- Best Practices Guide
- Self Assessment Form
- Get Started E.A.T.S. Checklist

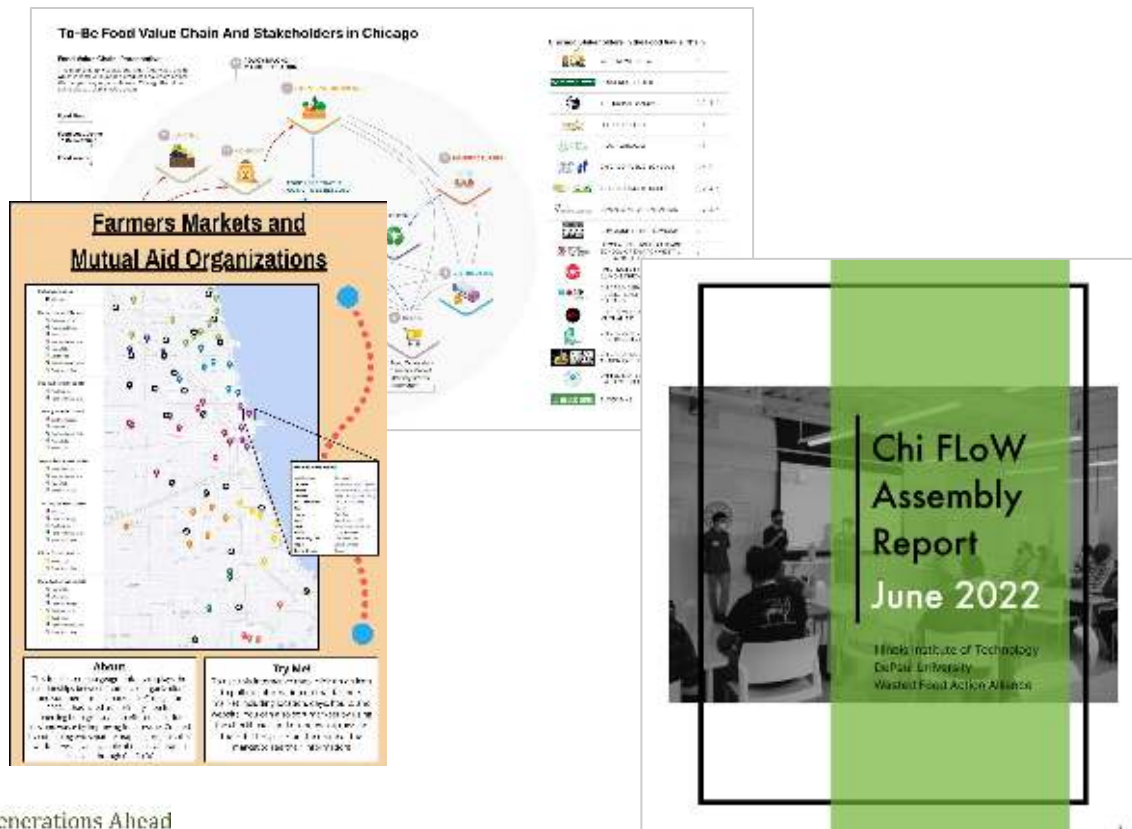
Warehouse Resources for Food Recovery

- Grocery Warehouse Food Recovery



The screenshot shows the 'Grocery &amp; Food Retail' section of a website. At the top, there's a navigation bar with links for 'Home', 'Resources', 'Contact', and 'Event Calendar'. Below the navigation bar is a large banner image of grocery store shelves. The main content area is titled 'Grocery &amp; Food Retail' and contains sections for 'Challenges', 'Opportunities', and 'Resources'. The 'Challenges' section discusses the difficulty of reducing food waste in grocery stores. The 'Opportunities' section highlights the potential for food recovery and composting. The 'Resources' section provides links to various tools and guides. At the bottom, there are two columns of buttons: 'Store Resources' and 'Warehouse Resources'. The 'Store Resources' column includes buttons for 'SELF-ASSESSMENT FORM - GROCERY SURPLUS FOOD MANAGEMENT', 'GETTING STARTED E.A.T.S. CHECKLIST - GROCERY SURPLUS FOOD MANAGEMENT', and 'COMING SOON - BEST PRACTICES GUIDE FOR SURPLUS FOOD MANAGEMENT'. The 'Warehouse Resources' column includes a button for 'WAREHOUSE FOOD LOSS IN RECOVERY - A GUIDE TO GROCERY CHAIN FINDINGS &amp; RECOMMENDATIONS'.

# Chi FLoW Assembly - People & Projects



WASTED FOOD ACTION ALLIANCE

PREVENT | RESCUE | RECYCLE

# Social media engagement via Twitter and LinkedIn

## Website

[illinoiscomposts.org](http://illinoiscomposts.org)

[Composting at Home](http://illinoiscomposts.org) webpage

## Infographics

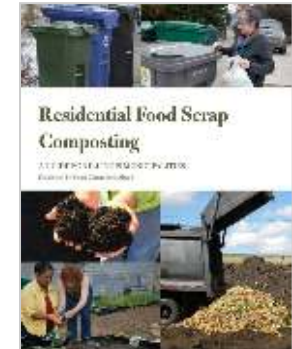
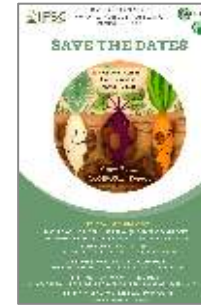
[Municipal Composting](#)

[Impact](#)

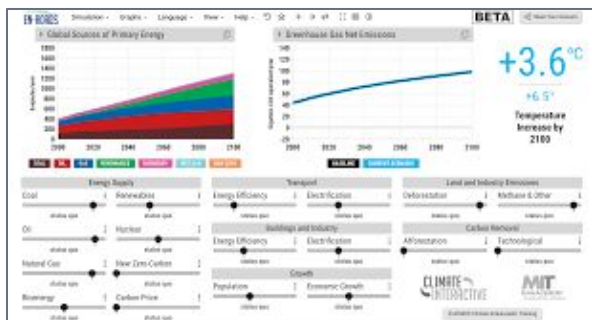
## Guides and Toolkits

[Residential Food Scrap Composting: A Guide for Illinois Municipalities](#)

[Illinois Composting Municipalities by County](#)- Spreadsheet of municipalities with available residential curbside food scrap composting programs.

A screenshot of a spreadsheet titled 'Illinois Composting Municipalities by County'. It lists various municipalities across different counties, including Cook, DuPage, Kane, Kendall, Lake, Madison, McHenry, and Will. The spreadsheet includes columns for the county, municipality, and whether they have a residential food scrap composting program.

## Climate Change Solutions Simulator



[climateinteractive.org/tools/en-roads/](https://climateinteractive.org/tools/en-roads/)



## Greenhouse Gas Equivalencies Calculator



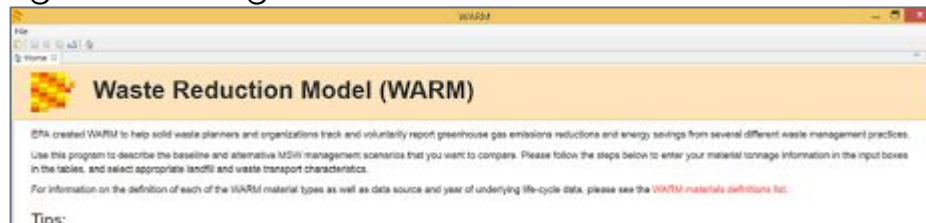
[epa.gov/energy/greenhouse-gas-equivalencies-calculator](https://epa.gov/energy/greenhouse-gas-equivalencies-calculator)

## Household Carbon Footprint Calculator



[epa.gov/carbon-footprint-calculator/](https://epa.gov/carbon-footprint-calculator/)

## WARM waste reduction model -track and report greenhouse gas (GHG) emissions reductions



[epa.gov/warm](https://epa.gov/warm)

# Progress on local, regional and state level in Illinois

Three Illinois reports (July 2021) address climate action through waste and materials management, all of which include reducing wasted food and composting:

[Illinois Materials Management Advisory Committee \(MMAC\) Report](#)

[2021 Climate Action Plan for the Chicago Region](#)

[City of Chicago Waste Strategy - Materials Management Strategies](#)



# Rock River Valley Compost Facility



The Rock Valley Compost Facility only accepts landscape waste. This includes grass clippings, weeds, tree trimmings, and stumps. All bagged landscape waste needs to be in paper landscape bags, landscape waste in plastic bags is not accepted. Food waste, refuse, rocks and all other non-landscape compostable materials are not accepted.

Price: \$50/ton with a 2 ton minimum charge.

# Thank you!

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## Jennifer Nelson

Program Director

**Illinois Food Scrap Coalition**, Founding Board Member; Education Committee Chair

**Wasted Food Action Alliance**, Co-Facilitator

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