

green
town

GreenTown Rockford

November 12 | Embassy Suites Rockford Riverfront

Climate Change

The Impact of Food

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

- Native American principle

GreenTown Rockford

November 12, 2021

Jen Nelson, Senior Program Manager, Seven Generations Ahead



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

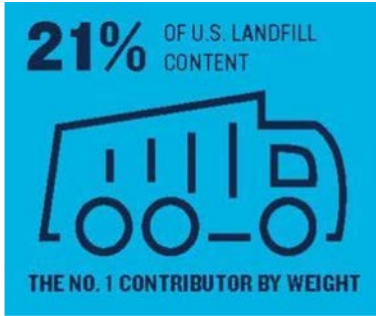
- 50% of our land
- 30% of all energy resources
- 80% of all freshwater

Economic Problem

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

-Photo credit: SCARCE

NRDC:
wasted food
makes up



When food breaks down in a landfill the lack of oxygen causes it to produce methane - a greenhouse gas.

Landfills are the 3rd biggest source of methane in the U.S.

Methane is 20 times more potent than carbon dioxide (CO₂)



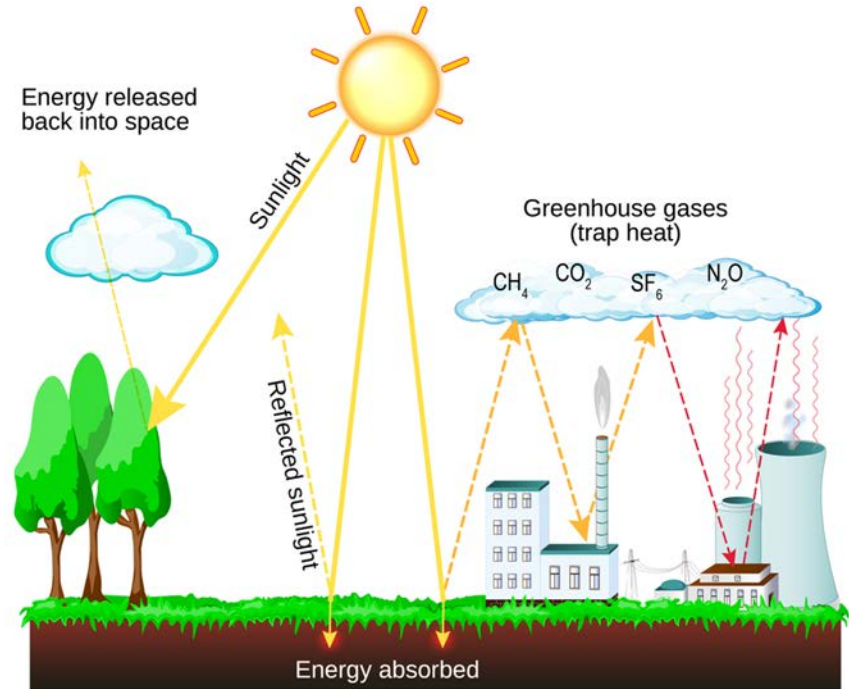
What are greenhouse gases?

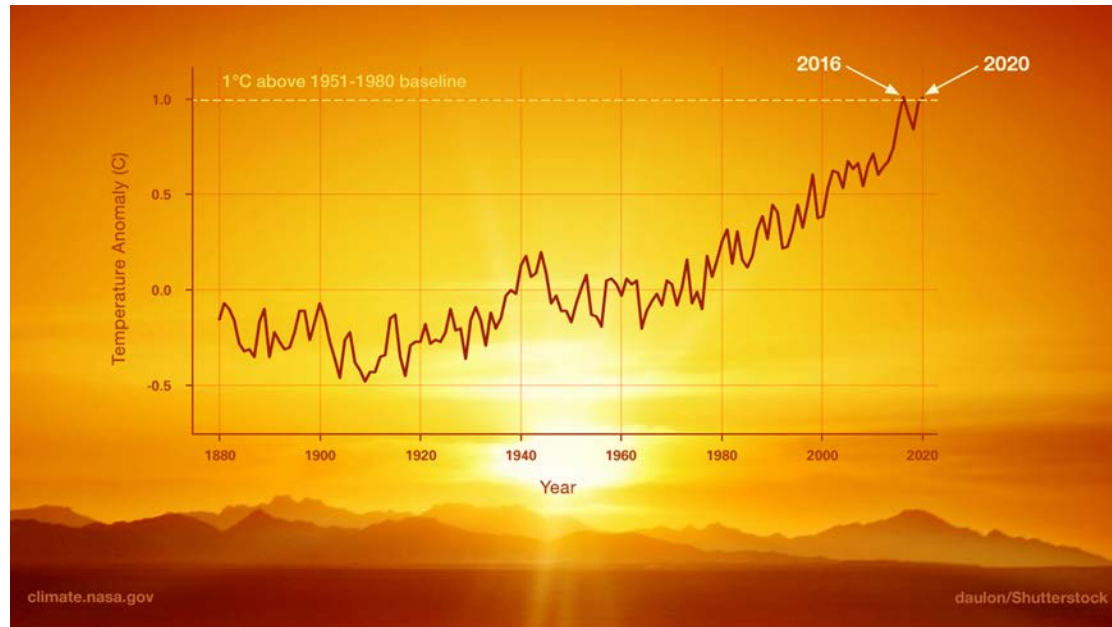
Gases that trap heat in the atmosphere are called greenhouse gases.

The primary greenhouse gases in Earth's atmosphere are

- water vapor (H_2O)
- carbon dioxide (CO_2)
- **Methane (CH_4)**
- nitrous oxide (N_2O)
- sulfur hexafluoride (SF_6)
- Ozone (O_3)

Greenhouse effect



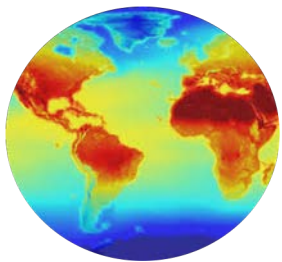


“**Global warming** is the long-term heating of Earth’s climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities”

- NASA's Goddard Institute for Space Studies

“**Climate change** refers to significant changes in global temperature, precipitation, wind patterns and other measures of climate that occur over several decades or longer.”

- University of California, Davis



WASTED FOOD

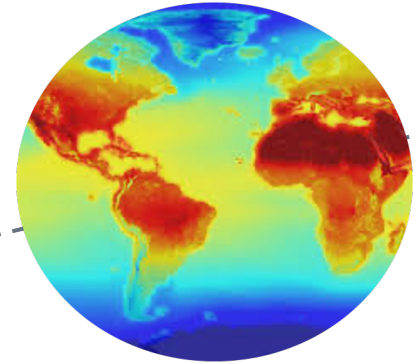
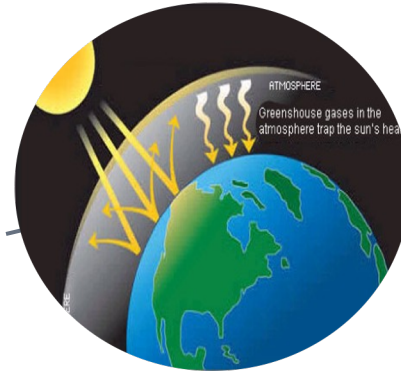
is 21% of material sent to landfills

Food waste is the single largest 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**

“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

ROADS

IMATE

LUTIONS

TULATOR

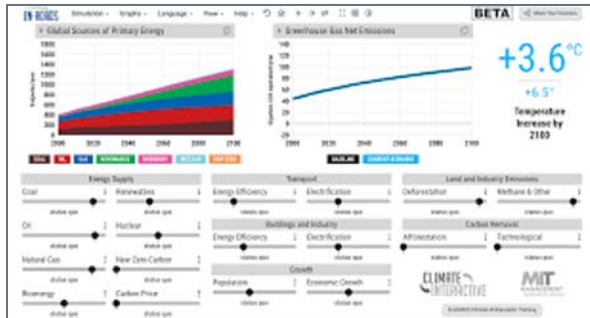
interactive.org

ads.org

CLIMATE
INTERACTIVE

MIT
MANAGEMENT
Sustainability Initiative

Climate Change Solutions Simulator



climateinteractive.org/tools/en-roads/



Greenhouse Gas Equivalencies Calculator



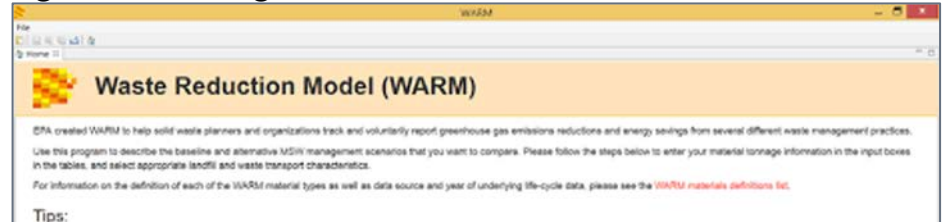
epa.gov/energy/greenhouse-gas-equivalencies-calculator

Household Carbon Footprint Calculator



epa.gov/carbon-footprint-calculator/

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



epa.gov/warm

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



“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

Collaborations Reduce Wasted Food in Illinois



COMPOSTING

Working to strengthen Illinois

- Policy
- Infrastructure
- Education



WASTED FOOD

Building connections across the food supply chain to

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

Website

illinoiscomposts.org

[Composting at Home](#) webpage

Infographic's

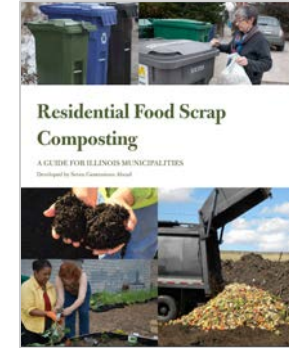
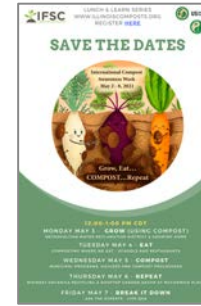
[Municipal Composting](#)

[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.



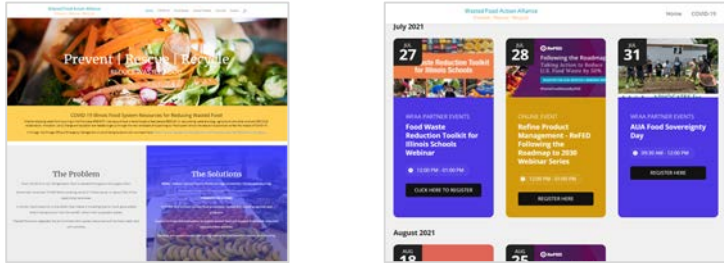
Illinois Municipal Residential Food Scrap Composting Programs									
Location		Program Information Basics							
County	Municipality	Location	Type	Acceptable Waste	Cost to Residents	Notes	Website	Phone	Municipal Website Link
Adams	Adams County	Adams County	Curbside	Household food scraps, yard trimmings, garden waste, and other organic materials.	Free	Program available year-round.	www.adamscounty.org	618-685-3300	www.adamscounty.org
Adair	Adair County	Adair County	Curbside	Household food scraps, yard trimmings, garden waste, and other organic materials.	Free	Program available year-round.	www.adaircounty.org	618-685-3300	www.adaircounty.org
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Resources - Composting Food Scraps

Wasted Food Action Alliance website resources

wastedfoodaction.org

- Collaboration and Networking
- Finding Food
- Event Calendar



Zero Waste Schools resources

[Zero Waste Schools website](#)

[Zero Waste Schools monthly e-newsletter](#)

[Food Waste Reduction Toolkit for Illinois Schools](#)



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

- 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

Speaker series at monthly meetings



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



Thank you!

Jennifer Nelson

Senior Program Manager

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

Wasted Food Action Alliance, Co-Facilitator

jennifer@sevengenerationsahead.org

708-660-9909, x7



Zero Waste Schools

Empowering students to
reduce food waste & GHG emissions

Susan Casey

Zero Waste Schools Program Manager
Seven Generations Ahead

GreenTown Rockford, November 12, 2021



Seven
Generations
Ahead



We work with school staff and students to shift operations and minds towards generating zero waste through **source reduction, recycling, composting, and food recovery.**

The Zero Waste Schools Program:

- Help schools plan waste reduction strategies
- Provide on-the-ground support for operational changes
- Educate students and staff about the How & Why of going zero waste
- Connect schools with local partners and opportunities
- Drive policy changes and infrastructure development that promote zero waste

We help lunchrooms that look like this....

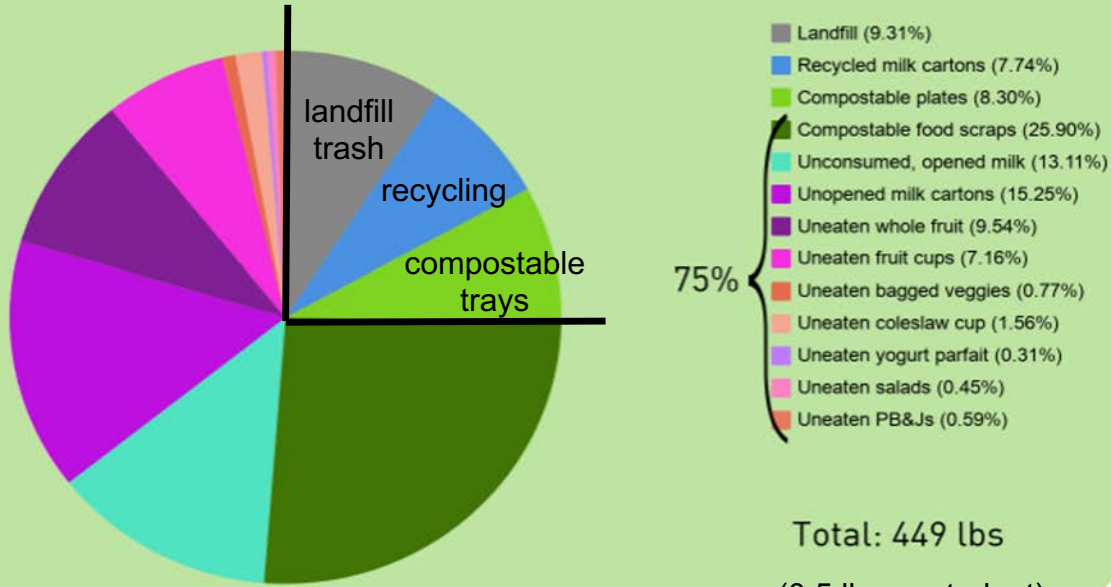


Become zero waste lunchrooms that look like this....



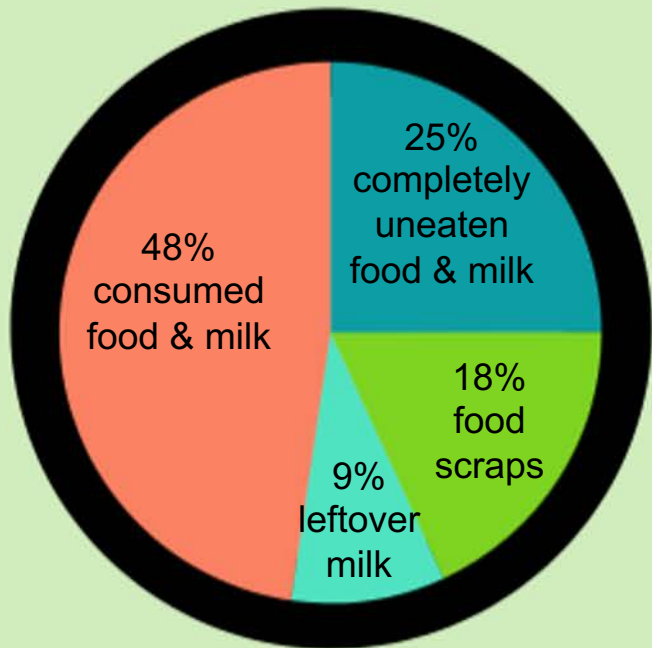
Snapshot: Lunch at a middle school with 980 students

Food waste comprised 75% of cafeteria waste in one day.



Total: 449 lbs
(0.5 lb per student)





52%

OF SERVED FOOD
WENT UNEATEN

Factors that can contribute to food waste in schools

- Seated lunch time not long enough
- Reimbursable meal requirements
- Lack of understanding about Offer versus Serve
- Heavily packaged foods
- Whole fruits can take longer to eat
- Portions can be too large for younger students

Student trying to finish her lunch at the waste station.



The problem with food waste in schools

- Over 7 billion school meals are served each year in the United States
- Much of this food is feeding landfills instead of nourishing students
- One in six children is food insecure
- Wasting food wastes the water & energy used in farming, processing, transporting & preparing the food
- Wasting food wastes money and labor along entire supply chain
- Methane is created when food decomposes in a landfill, contributing to climate change



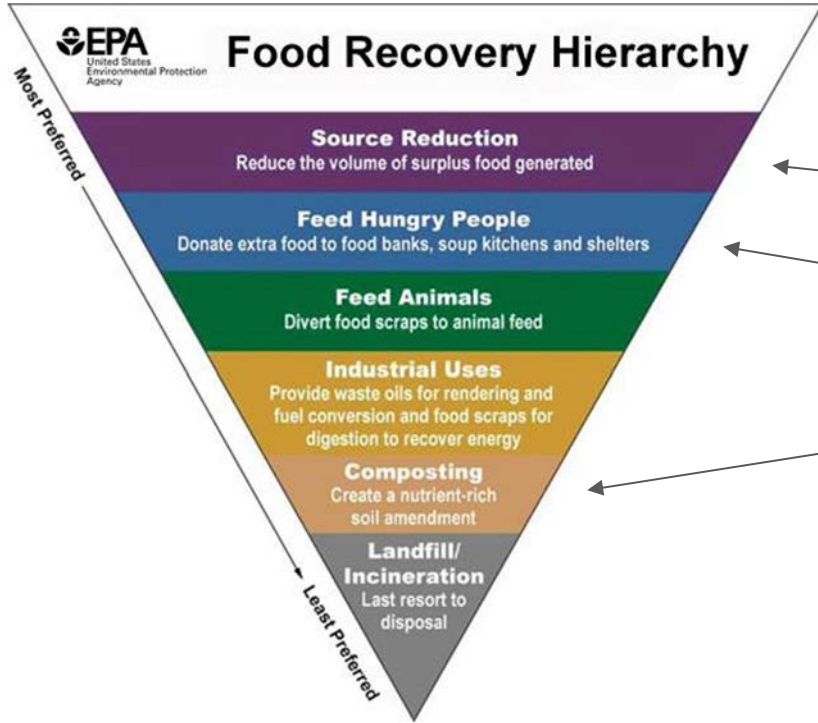


Food Waste Reduction Toolkit for Illinois Schools



- A comprehensive resource to help schools take action to reduce wasted food
- Identifies the main sources of wasted food
- Provides strategies that are relatively quick and easy, as well as longer term, multi-step initiatives
- Includes case studies highlighting inspirational efforts in schools across Illinois
- Links to lots of resources

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



Toolkit sections:



Measuring Food Waste



Preventing Food Waste



Food Recovery & Redistribution



Composting Food Scraps



Education & Engagement



Communicating & Celebrating Success



Preventing food waste

- Scheduling (longer seated lunch time; recess before lunch)
- Enhancing the cafeteria experience
- Sourcing from school gardens & local farms to encourage consumption of healthy foods
- Menu planning & food preparation (student taste tests; provide fewer menu options)
- Preventing food waste at the serving line (Offer versus Serve; bulk milk dispensers)



Photo credit: Healthy Schools Campaign



Food recovery & the redistribution of returned food

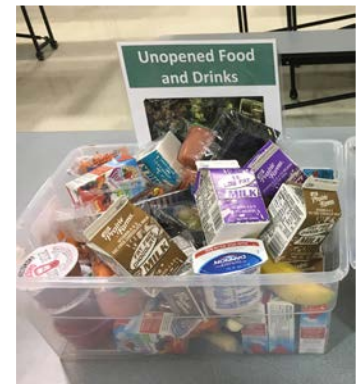
Share tables

Share tables are where students may place school food items (unopened, factory-sealed items or whole fruit) they did not eat.

These items are then available to other students during or after the meal service (pre-COVID).

Leftover food from a share table may be:

- Used in future reimbursable meals
- Used for school backpack programs or for snacks
- Donated to a food pantry

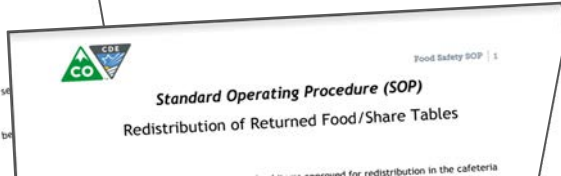


Policies and laws regarding share tables

- 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
- New IL law: [School Unused Food Sharing Plan](#)

Check with your local health department for regulations around share tables.

Standard Operating Procedures (SOPs)





Composting food scraps

Onsite Composting (backyard composting)

- Fruit & vegetable scraps only
- Mixed with yard trimmings in outdoor compost bin
- Great learning activity for students

Commercial Composting

- Typically ALL food scraps (inc. meat & dairy) & food-soiled paper
- Hauled to a commercial facility for composting
- Significant waste diversion
- Relatively easy to manage once in place



Zero Waste Schools Program



Sorting station example



The process for each school

- Form a Zero Waste Team to plan implementation and ensure ongoing success
- Baseline waste audit
- Coordinate operational changes
 - Compost hauling
 - Sorting stations - cafeteria & kitchen
- Educate about the How & Why
 - All students and teachers
 - Train student Zero Waste Ambassadors
 - Kitchen/facilities staff
- Launch day
 - New sorting routine starts
 - Waste audit
- Communicate & celebrate impact (one-pager)



Zero Waste Team meeting



Compost/Organics hauling



Waste audit

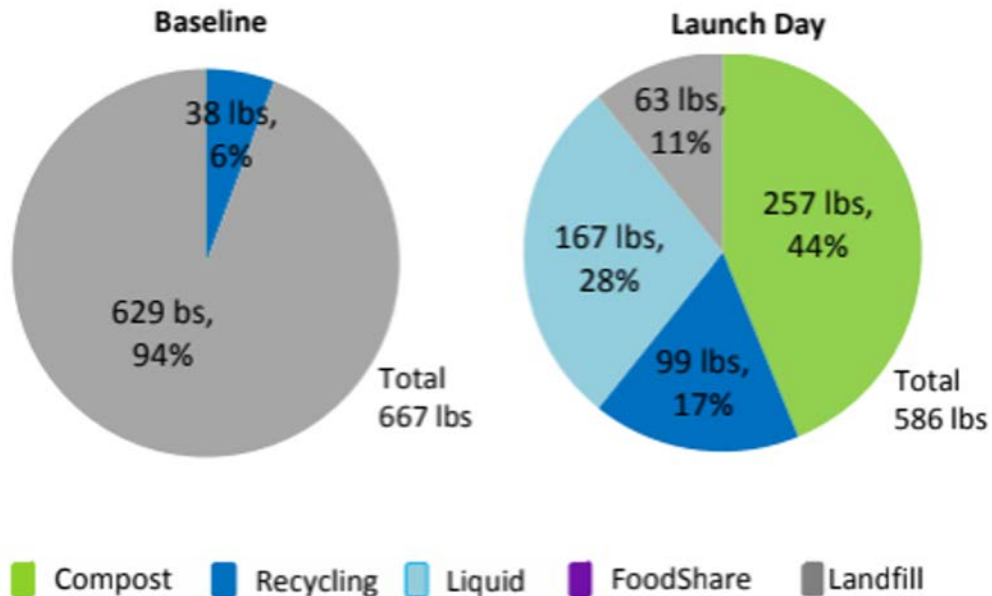
Impact: Waste diversion

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



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

Waste Audits of Cafeteria/Kitchen



Impact of 14 Chicago Public Schools

10,300 students composting & recycling per day

1 ton food scraps & trays composted per day

3,798 pounds of materials kept out of landfills per day

6,500 milk cartons recycled per day

82% of cafeteria/kitchen discards diverted from landfills

376 MTCO₂E/year* of greenhouse gas emissions avoided through food recovery, recycling, and composting

That's equivalent to preventing 12,142 ft² of arctic sea ice from melting per year!**

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

**Based on 1 MTCO₂E : 3m² arctic sea ice, as published in Science, D. Notz & J. Stroeve, Vol. 354, No. 6313. Nov. 11, 2016.



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

Thank you!

Susan Casey

Zero Waste Schools Program Manager

Seven Generations Ahead

susan@sevengenerationsahead.org

www.sevengenerationsahead.org





**BRIGHT
BEAT**



Greentown Rockford 11/12/2021

**Stephanie
Katsaros**

PARTNERSHIPS: PREVENTING WASTED FOOD

Helping partners strategize, reuse, rescue, recycle, compost & donate



4 Million Pounds of Resources Redirected since 2010



IT'S ABOUT THE PEOPLE

**CHICAGO
SUSTAINABILITY
TASK FORCE**



WASTED FOOD ACTION ALLIANCE



PREVENT | RESCUE | RECYCLE



COLLABORATION WITHIN & ACROSS ORGANIZATIONS



PREVENT | RESCUE | RECYCLE





TOOLKIT FOR GROCERY CHAIN WAREHOUSE & STORE



wastedfoodaction.org/grocery-retail/

Challenges

According to ReFED, a national nonprofit working to end food waste, "It is estimated that retailers generated 10.5 million tons of food waste, sending along one-third of wasted food to the landfill...waste is built into the supermarket retail strategy."

Opportunities

Food retailers and grocery chains have opportunities for food waste prevention, rescue/donation to feed people, and to recycle/compost food scraps on both a warehouse-level and in stores.

They have the opportunity to work along the food supply chain to influence suppliers, drive efficiency with operations, and engage with customers about the value of their food to reduce grocery waste.



PREVENT / reduce

RESCUE / donate

RECYCLE /
compost

A community-led initiative to:

- identify neighborhood-based resources and needs
- reduce wasted food through rescue from local stores
- establish physical hubs to support programs and compost food scraps
- provide resources and strengthen communication across the system





CHICAGO FOOD RESCUE ASSESSMENT

With the City of Chicago and other partners, we are mapping the current food rescue infrastructure and identifying gaps and opportunities, to increase responsiveness to community needs.





COMPOSTING OUTREACH & EDUCATION

1. Identify + Promote Local Composting Champs

- Targeting restaurants, institutions, grocery stores
- Marketing successes, we address concerns, highlight benefits, demonstrate feasibility

2. Target Leaders + Large Generators

3. Provide + Promote Tools and Direct Support

- Workshop, Toolkit, Technical Assistance

4. Track Success and Impact

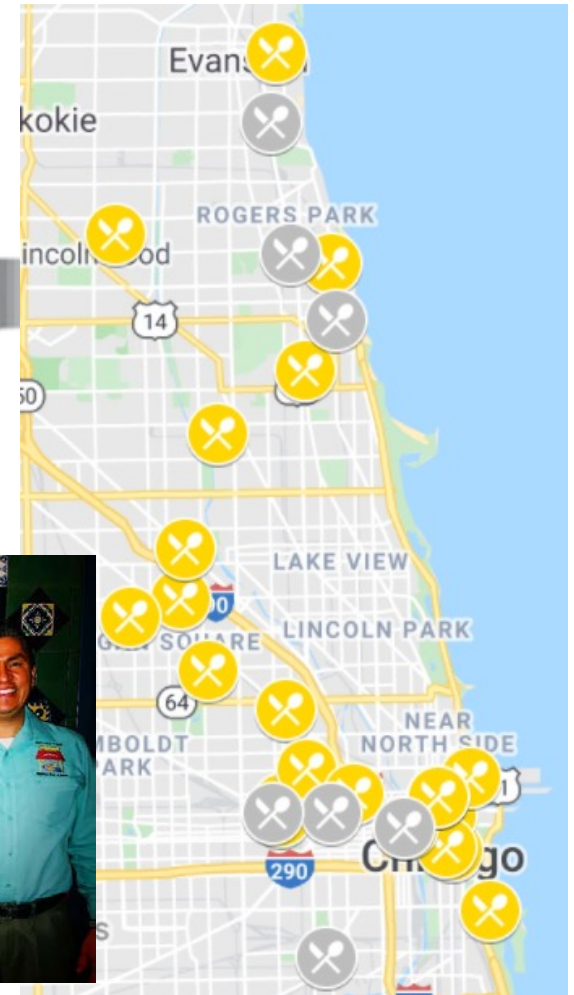
5. Communicate Outcomes





We Compost Program Over 220 Partners!

- 52 Businesses
- 11 Grocery Stores & Farmers Markets
- 59 Municipalities
- 16 Organizations & Institutions
- 55 Restaurants & Caterers
- 57 Universities & Schools





THANKS FOR LISTENING

Stephanie Katsaros

steph@brightbeat.com



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GreenTown Rockford

November 12 | Embassy Suites Rockford Riverfront