# Reducing Wasted Food in Illinois Hospitals & Healthcare Systems

April 6, 2022





# Please share in the chat:

Name, pronouns, and organization

What is your role in food waste prevention, food rescue and/or food scrap recycling?



# Agenda

- I. Introductions and background
- II. Stories of success
  - A. Prevent
  - B. Rescue
  - C. Recycle
- III. Roundtable breakout groups
- IV. Next steps and wrap up







## **Lucy Peterson**

Program manager

Alliance for Health Equity

Illinois Public Health Institute

Email: <u>lucy.peterson@iphionline.org</u>

# Illinois Hospital Wasted Food Survey

#### Respondents in 2021:

- 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 Abilitylab
- Lurie Children's Hospital
- AMITA Saint Mary's and Elizabeth
- University of Chicago Medical Center
- University of Illinois

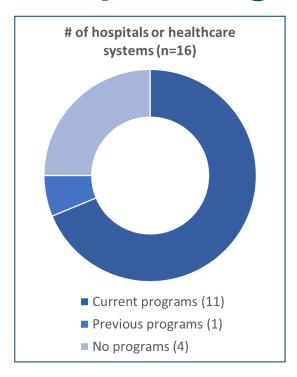


We welcome Illinois healthcare organizations to continue submitting responses to the survey!

https://forms.gle/rGuYje4cybMwEshe9



# Survey Findings - Prevent



### Types of programs & practices:

- Menu planning to reduce food waste
- Smarter purchasing plan
- Room service or cook to order
- Repurpose food

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



# **Survey Findings - Rescue**

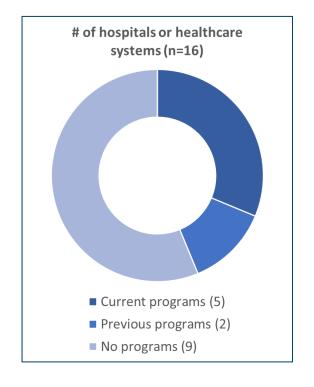
### Types of programs & practices:

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

#### Where food is rescued from:

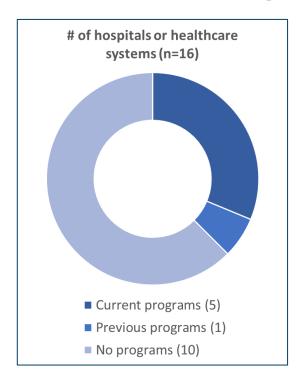
- Back of house (kitchen)
- Cafeteria (packaged food)
- Catered events & meetings

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





# Survey Findings - Recycle



### Ways food waste is handled:

- In sink garbage disposal
- Farm animals
- Garbage or landfill container
- Food scrap composting (1 hospital)

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



# **Speakers**

PREVENT | reduce

**RESCUE** | donate

**RECYCLE** | compost

**Jennifer Nelson** 

Wasted Food Action Alliance Seven Generations Ahead

**lan Hughes** 

Rush University Medical Center

Jennifer Grenier, DNP, RN, CENP, CNML

Loyola University Medical Center

**Nicole Wynn** 

Loyola University Medical Center

Luwana Johnson

Franciscan Shelter

Cosmos Ray and Graciela Guzman

Chicagoland Food Sovereignty Coalition Mary Niewski

University of Illinois Hospital

**Erlene Howard** 

Collective Resource Compost







### **Jennifer Nelson**

Seven Generations Ahead - Program Director

<u>Illinois Food Scrap Coalition</u> - Founding Board Member,
Education Committee Chair

Wasted Food Action Alliance - Co-Facilitator

Email: jennifer@sevengenerationsahead.org

Phone: 708-660-9909, x7







# How hospitals end up with wasted food

Hospitals generate approximately 3 pounds per bed per day of wasted food:

- Expired foods
- Overproduction
- Returned patient trays
- Poor preparation practices







## Waste Audit Tools

Practice Greenhealth has a robust set of tools and resources for assisting healthcare facilities in tracking, managing and minimizing their waste streams. Learn more at:

- Developing a Waste Baseline
- Setting Waste Goals
- Benchmarking Waste Performance
- Waste Categories and Types
- Waste Tools & Resources
- Greenhealth Tracker









# Hospitals and Food Waste Opportunities

PREVENT | reduce food waste

**RESCUE** | recover and donate food

**RECYCLE** | compost food scraps

EDUCATE staff and customers / visitors / patients about reducing food waste

PARTNER with community organizations to feed your neighbors and improve soil health





# Hospitals and Food Waste Prevention

### TOOLS TO PREVENT WASTED FOOD

Food purchasing and menu development

Invest in technology

Made-to-order stations

Catering sustainably

On-demand dining

# Please share in the chat:

How does your hospital prevent wasted food?





RUSH UNIVERSITY MEDICAL CENTER

## Ian Hughes

Sustainability Manager Rush University Medical Center

Email: <u>lan m hughes@rush.edu</u>

Hughes (he/him) has used a wide variety of megaphones to amplify sustainability initiatives over his career, including coal, water, beer, utility incentives, cost savings, and most recently human health. The most exciting of these, by far, has been tying his work directly to improving human health since he became Rush University Medical Center's sustainability manager two years ago. Ian and the environmental sustainability team focus their efforts on measuring, managing, and minimizing Rush's environmental footprint through a variety of collaborative projects across campus.



# Rush University Medical Center's Food Waste Journey

# **Rush University Medical Center**





## Rush Environmental Sustainability Team Objectives

#### Climate Change

Decrease Rush's direct and indirect GHG contributions through active emissions tracking, analysis, and targeted reduction projects.

#### Reduce Waste

Utilize a systemic, data driven approach to rethink waste, increase waste avoidance, and enhance landfill diversion efforts at Rush.

#### **Efficient Utilities**

Decrease our campus resource (electricity, natural gas, steam, water) consumption and costs through identifying, exploring, and implementing utilities efficiency projects.

#### **Supply Chain**

Reach upstream of onsite operations to infuse our procurement process with intentional and environmentally responsible best practices that positively influence the largest contributor to our environmental footprint.

#### Engage/Educate

Inspire Rush staff, students, and visitors to actively support our sustainability efforts and explore new projects through storytelling, sharing best practices, and hosting volunteer opportunities.















# **Getting to Know Our FNS Team and Their Work**





## **FNS Food Recovery**





## **FNS Collaboration – HAN IPC**







Healthcare Anchor Network Impact Purchasing Commitment

#### 3 IPC Focus Areas:

- Supplier Diversity
- · Community Wealth Building
- Sustainability!

## Early Signers to the HAN IPC















## FNS/Rush U/EST Collaboration - Food Waste Measurement











## **Green Era Partnership and Biodigester Tour**









## **Student Contributions**

#### Data Collection Protocol for BS-CHS Students

- 1. Come to central kitchen (Atrium Sub-basement) 30 minutes prior to the start of your data collection
- window. Data collection windows are from 12:00-12:30pm and from 4:00-4:30pm (finalized pick-ups). 2. Follow instructions on using an overhead paging system to contact FNS Supervisor on-Duty by dialing 3 (Blue label A on Map: White phone) on the wall to the left of the kitchen doors. Do not open doors



- 3. Check in with FNS Supervisor on Duty and let them know you are here to complete Kitchen Organic Waste Data Collection.
- 4. Put on hairnet (at kitchen entrance) before entering the production area. Wash hands at hand sink (located in kitchen entrance) for 20 seconds (time it takes to sing Happy Birthday once) with warm water and soap.
- Obtain iPad from supervisor's office (passcode: 1672) and sanitize with disinfecting wipes prior to use (wipes available in conference room 0090).
- Bring iPad to weighing station located in cold prep station (area 1).
- 8. Each food waste collection container will be in designated production areas of the kitchen and labeled "waste." There are 3 total areas (Area 1, Area 2, and Area 3) where waste containers are kept and need to be weighed (Figure 2. Area 1, Figure 2. Area 2, and Figure 3. Area 3). Obtain all food waste collection containers and bring them to the weighing station
- 9. Organize the containers by designated Area 1,2, or 3, using the laminated signs.
- 10. Turn on scale (Blue label B on Map: Scale) and tare (allowance made for the weight of the packaging to determine the net weight of goods) by weighing an empty food waste collection container 11. Place the filled food waste collection container on the scale and
- measure the total weight in lbs. 12. Open REDCap project on iPad and pull up data entry form.
- 13. Each container will be weighed twice. 14. Weigh the filled food waste collection container. Record weight #1 directly in REDCan.
- 15. Remove filled container from scale.
- 16. Weigh the filled waste collection container a second time. Record weight #2 directly in REDCap 17. Enter date, time, types of food in waste collection bin (protein/dairy/fruit/vegetable) information directly
- 18. Take 2 photos of EACH waste container using the iPad following examples provided. Figure 4. Side view of container, Figure 5. Top view of container

19. Repeat the same process (steps 9-15



outlined above) for the other containers. 20. Once weight measurements are completed, photos are taken, and data collection processes are complete and correctly documented

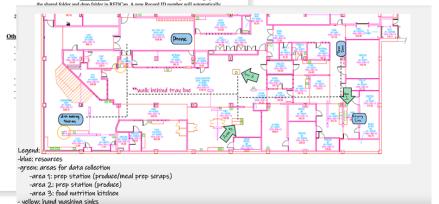
for all waste containers-sanitize scale (i.e., disinfecting wipes) and return to the appropriate storage

- 21. Dispose of waste from waste collection containers in several appropriate garbage cans, dispersing waste weight evenly. Additional garbage cans are located near Area 1 (Blue label C on Map: Garbage Cans)
- 22. Bring all waste containers to the dishwashing area (Blue label D on Map; Dishwashing station). A member of the kitchen staff will run the containers through dishwashing machine to wash, rinse, and
- 23. While containers are running through the machine (max 10 minutes), wash hands at hand sink (Map label: Sink) for 20 seconds (time it takes to sing Happy Birthday once) with warm water and soap.
- 24. Pick-up the clean/sanitized containers and lids from the dishwashing area.
- 25. Return one clean waste collection container with lid attached to each designated Area 1, Area 2 and Area
- 26. Check out with FNS Supervisor on Duty to let them know your process is complete.
- 27. Return to central kitchen for additional data collection as scheduled, repeating steps 1-24

#### Post-Data Collection Tasks

After your midday and afternoon data collection is complete, you can work on these tasks:

- 1. Upload photos onto the shared drive under the folder, Data Collection, in the folder marked for the photos' designated folder. Upload those same photos to REDCap according to Area and RECORD ID
  - a. Be sure to match the RECORD ID from each data collection with the photos being uploaded to





## **Trainings and Measurements in Progress**

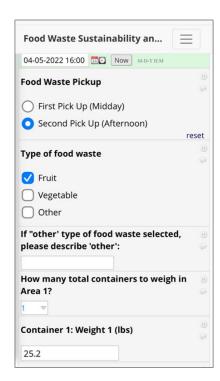






## **Data Collection Platform - RedCap**









# **Data Collection - Photos for Additional Insight**











## **Weekly Data Report Outs**

A	В	С	D	E	F	G	Н	1	J	K	L	M	N	0	P	Q	P
KW WEEKLY REPORT: March 26-April 3, 2022																	
																	$\parallel$
record_id	date_of_data_collection_1		food_waste	type_food_	type_food_					mean_wt_c	mean_wt_c	mean_wt_c	nean_wt_c n	nean_wt_c	mean_wt_c	mean_wt_	910
42		2	1	1	0			21	22.2								4
43	-,,	5		0		C		13.2	13.6	14.4	19.8	12					#
44	-,,	6		1		C		21.6	19.8	17	10.4	7	7.2				4
45	-,,	0	2	0			None	0									4
46	-,,	3	1	0		C		2.2	12	11.2							4
47	-,,	1	2	1		C		21									4
48	.,,	7	_	1		C		11.4	13	8.2	10.8	0.8	10.4	10.8			#
49	-,,	2		0		C		8.6	1.2								#
50	-,,	2	1	0		C		13.8	10								4
51		2	2	1		C		20.2	9.8								4
52		4	1	1		C		11.4	24.2	17.6	9						#
53		0		0			None	0									#
54		6	2	1		C		10.6	8.2	13.6		18.8	24.6				#
Marshin Tatala (aussa)	4/3/22 16:05	7	2	1	1	C		8.8	9.4	9.2	19	11	5.8	21.0			
Weekly Totals (sums)		47						163.8	143.4	91.2	69	49.6	48	21.8	0		
Total number of containers collected:	59																+
Total number of containers collected:	39																$^{+}$
Totals per Week	Weight (lb)																$^{\dagger}$
Weekly Weight Area 1	586.8																#
Weekly Weight Area 2	53.8																Ħ
Weekly Weight Area 3	0																#
Weekly Total Weight (overall)	640.6																
																	#
																	#



## What's Next?







An average 50% reduction in food waste per site.



An average 2-8% reduction in food purchases.



2-7X ROI on Leanpath purchase.



# Thank you! ian\_m\_hughes@rush.edu





## Jennifer Grenier, DNP, RN, CENP, CNMLr

Associate Chief Nursing Officer MacNeal Hospital

Email: jennifer.grenier@luhs.org

Jennifer has been a nurse for over 20 years and is the founder of The Surplus Project. She has progressive nurse leadership experience, and currently serves as the Associate Chief Nursing Officer at MacNeal Hospital. Jen is passionate about mentoring new nurses, Social Determinants of Health, in particular food insecurity, which led her to creating The Food Surplus Project. She founded the Surplus Project in 2015 when she realized how much waste her hospital cafeteria was generating.





## **Nicole Wynn**

Manager of Nursing Excellence and Magnet Program Director Loyola University Medical Center

Email: nicole.wynn@luhs.org

Nicole has been a nurse for 10 years and is the co-founder of The Surplus Project. She currently works as the Manager of Nursing Excellence and Magnet Program Director at Loyola University Medical Center. Nicole is dedicated to nurses working at the top of their licenses and making sure they are recognized for their hard work. She is passionate about food insecurity and caring for those on the West Side.



# **The Surplus Project**

Jennifer Grenier, DNP, CNML, CENP Nicole Wynn, DNP, RN-BC



## The Surplus Project



- Growing number of individuals who are food insecure, leading to increase in health disparities for patients (USDA, 2017).
- Hunger exacerbates health issues for older adults and the elderly. A food insecure 50-59 year old has a cholesterol rating that is similar to a food secure 14 year-old, and is almost twice as likely to be diabetic, half as likely to be in excellent or very good health, over five times more likely to suffer from expression, and over twice as likely to have at least one ADL limitation (Ziliak, 2011).
- The American Hospital Association (AHA) recognizes the need for interventions to decrease food insecurity for all people, especially those being admitted to the hospital (Health Research & Educational Trust, 2017).



## **Mission & Vision**



#### MISSION

The Surplus Project aims to improve the nutritional health of the community through the distribution of surplus food from hospital cafeterias to food insecure individuals and families.

#### VISION

The overarching goal is to eliminate food insecurity and food waste by creating collaborative relationships between hospital cafeterias and food banks. This collaborative effort to redistribute food from hospital cafeterias to families is a business-friendly environmentally-sensitive, socially responsible alternative to wasting food.

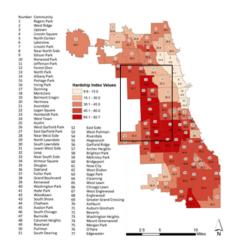


## **Social Determinants of Health**



 Social Determinants of Health (SDoH) are the conditions in which people are born, grow, live, work and age. The circumstances are shaped by the distribution of money, power and resources at global, national and local levels.

- Examples Include:
  - Food Insecurity
  - Housing
  - Transportation
  - · Primary Care/Insurance
  - Utilities



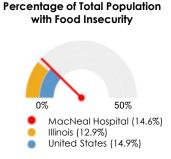
- Through The Surplus Project, we aim to have a collaborative approach to being connected and active in the community we serve to:
  - Actively reduce inequities caused by social, economic and structural determinants of health



### Why Implement a Project like this?



- Currently, there is a large amount of food waste generated in the hospital cafeterias across the regions
- There is an increasing number of individuals suffering from food insecurity (and other Social Determinants of Health (SDoH) in the communities we serve, especially now post-COVID.
- Through implementation of this program, we are decreasing the amount of food going to landfills and helping to feed people who are hungry.





#### **Detailed Process**



- Interdisciplinary Leadership Team Meetings
  - · Meet with the team to develop timeline
  - Since this is not the first implementation, the process is pretty simple and well developed
  - Walk-through the kitchen and determine locations for packaging and the best work-flow for this site
- Meet with Hospital Senior Leadership Teams
  - Present to group to work out finalized details
  - · Achieve buy in
- Present to Food and Nutrition Staff
  - · Teach them the process
- Work collaboratively with Community Health and Well-Being to determine the best recipient sites
  - Determine the recipient that would bene
- Recruit Volunteers



#### **Detailed Process**



- Work collaboratively with Community Health and Well-Being to determine the best recipient sites
  - Determine the recipient that would benefit the most, and how they would like to receive the food, schedule, etc.
  - Would like to select a site that is within the community to benefit the community we serve and care for, in alignment with mission, vision and values.
- Recruit Volunteers
  - How would we like to obtain volunteers?
  - What departments are interested?
  - All volunteers need to obtain their Serv-Safe Certification prior to working with the food.



#### **Current Status**



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.







### **Helpful Links & Testimonials**

Beyond Hunger and The Surplus Project

Surplus Project

The Surplus Project and Rush University Medical Center









### **Contact Us**



For any questions or to get started, please contact us for assistance and the toolkit.

Jennifer Grenier

Jennifer.Grenier@luhs.org

Nicole Wynn Nicole.wynn@luhs.org







#### **Luwana Johnson**

Director of Shelter Operations Franciscan Outreach

Email: <u>luwana.johnson@franoutreach.org</u>

Luwana is the Director Shelter Operations for Franciscan Outreach. Franciscan Outreach is a leading provider of homeless services in Chicago and operates as a system of support for men and women who are marginalized and homeless. We empower people to gain the stability they need to transition into permanent housing. Luwana is passionate about helping those in need and has dedicated her life over the past 23 years to the mission. Luwana embodies the core value of Franciscan Outreach: hospitality, spirituality, community, sustainability and opportunity.

## Franciscan Outreach

Franciscan Outreach is a leading provider of homeless services in Chicago. We operate as a system of support for men and women who are marginalized and homeless. We empower people to gain the stability they need to transition into permanent housing.

Through four service sites, we provide a diverse array of programs and services to our most vulnerable neighbors. Every day, we offer healthy meals to those who are hungry, a warm bed for those who need shelter, vital case management for those who need guidance, and access to critical resources for those who need specialized services such as health care, mental health counseling, and substance use disorder treatment.

As we know food insecurity is one of the main issues that homeless individual and families face.



# **Food Insecurity**

Food insecurity rates are highest for single mother households and households with incomes below poverty line.

Food insecurity means you lack reliable access to a sufficient quantity of affordable, nutritious food.



### **Food Desert**

Just a mile a so away, in the Garfield Park Community, an ALDI's just abruptly closed it's doors.

People who live in food deserts often experience food insecurity because food is harder to get.

As a result of food deserts, many people do not have access to healthy foods, leading to malnutrition and vitamin deficiencies, which have serious consequences. Malnutrition is the cause of almost half of all deaths of children under five and the primary cause of many chronic diseases in adults. This also leads to a shorter life span of those in poverty communities like the East Garfield community than in other communities.

Food insecurities and food deserts make it essential for the survival of many that rely on food rescue program.



# Hospitality

Hospitality is one of Franciscan Outreach's Core Values.

When a new or returning guest arrives to the shelter the very first thing we do is assure the guest is able to shower, change into fresh clothing and EAT before intake as we understand that most times the guest has been out on the streets with no food to eat.

The food that we receive through food rescue programs provide an opportunity for us to have readily available healthy food choices for our guest outside of regular food service times.

Although, we are not a soup kitchen or pantry, Franciscan Outreach is a beacon of hope in the East Garfield Park community. Often times the food items we receive through food rescue programs, we are able to share and feed our neighbors who may just need a few days of food to get them through until their link card is restored.



## **Working Together**

Food Rescue Programs through the GCFD – Greater Chicago Food Depository that rescue food from major brand companies like Starbucks, Rush with Panera Bread, UIC and many other food rescue programs has been Franciscan Outreach's strongest and most reliable donor partnerships.

The guest are able to get fresh vegetables, fruits and snacks which are some of the food items the guest are not otherwise privy to when out on the streets.

Franciscan Outreach rely on food rescue programs and are especially grateful to the program that service our guest – RUSH, UIC, CGFD to name a few...





### **Cosmos Ray**

Bronzeville Kenwood Mutual Aid Chicagoland Food Sovereignty Coalition

Email: cosray@gmail.com

Cosmos (he/him/él) is a neighbor and organizer with Bronzeville Kenwood Mutual Aid and the Chicagoland Food Sovereignty Coalition.







### Graciela Guzman

Belmont Cragin Mutual Aid
The Northwest Side Mutual Aid Coalition
Chicagoland Food Sovereignty Coalition

Email: guzmangr22@gmail.com

Graciela Guzman (she/her/ella) is a member of the Chicagoland Food Sovereignty Coalition, an organization of sisterhood mutual aids supporting food organizing hyper-locally. She also organizes with Belmont Cragin Mutual Aid and the Northwest Side Mutual Aid Coalition. Her interest in reimagining the systems that oppress Chicagoans through radical action have expanded her work in other spaces around community organizing, political mobilization, policy transformation, and healthcare coordination.



Graciela Guzman--Belmont Cragin Mutual Aid Cosmos Ray--Bronzeville Kenwood Mutual Aid



https://www.chifoodsovereignty.com/

# Calls to Action

- Donate time and skills: bit.ly/CFSCvolunteer
- Donate food: bit.ly/CFSC-Food-Donation
- Donate funds: bit.ly/DonateCFSC
- Stay in touch: chifoodsovereignty.com





#Ul Health | ••



Director of Clinical Nutrition, Director of Food and Cafeteria Services University of Illinois Hospital

Email: mniewins@uic.edu

Mary has been overseeing the Food and Cafeteria Services at UI Health for the past 8 years. Over that time, collaborations have been formed to repurpose food scraps and leftovers that would have otherwise been wasted. These collaborations include Collective Resources and the UIC Office of Sustainability.





#### **Erlene Howard**

Founder/Owner Collective Resource Compost

Email: erlene@collectiveresource.us

Erlene Howard is founder and owner of Collective Resource Compost (CRC), a food scrap hauling company based in Evanston that mitigates climate change by recovering organic resources through commercial composting and zero waste education. Erlene also serves on the board for the Illinois Food Scrap Coalition, a not-for-profit organization that brings together stakeholders from all aspects of the commercial composting industry in Illinois.

# Compost makes everything better

Partners = Solutions









## How we got here?

- CRC wanting to make composting easy
- Residential since 2010 & Cafeterias/restaurants 2011
- UIC Student Center 2018 & UI Health January 2019
- CRC total tons diverted: 8,700 from June 2010 March 2022
- Education of methane reduction COMPOST









### **UI Health**

- Desire to rescue food waste
- Wasted Food Action Alliance education
- Built on UIC Student Center success with CRC
- Implementation and training
  - Sustainable Food Waste Policy
  - And training again...and again









# **UI Health in Action - Food Waste Policy**

#### **Diverting Food Scraps into Composting**

**Pre-Consumer Food Scraps (Prep Scraps):** All prep stations will have their own green compost bin. The healthcare personnel prepping the food will separate all compostable items and place them in the compost bin.

#### Post-Consumer Food Scraps (Food Waste):

- o <u>Pots and pans</u> used in preparing food are cleaned by scraping compostable food scraps into the compost bins and non-compostable food scraps into the garbage.
- o In the dish room, all patient meal trays are cleaned after each meal.
  - · all compostable food scraps will be discarded into the green compost bins
  - · all non-compostable food scraps will be discarded into the garbage bins.









### **UI Health**

<u>Compostable</u> - Food prep scraps/peelings, expired/unused foods, any food that cannot be rescued for reuse, napkins, paper towels, food soiled cardboard, tea bags, coffee grounds

Non-compostable - metals, cans, plastics, styrofoam, food packaging, latex gloves, liquids









# **UI Health Challenges**

- Coordinating with other departments Accountability
- Consistent use of totes
- Contamination of compost totes
- Liquids
- Training













## How it works:







WWW.COLLECTIVERESOURCE.US









# Why it works:

- Container swap, no spillage
- No dirty containers, no bugs
- 32-gallon totes not climbable by squirrels or rats
- Education, Education, Support









### **UI Health is a Success!**

- 111 tons diverted 2019-2021, on track to divert 70 tons in 2022
- Average of 18 totes filled per week
- Awareness and appreciation









# **Community regeneration**

- Local composting
  - Green Era
- Community gardens
- Healthy local food
- Repeat with partnerships



#### COMPOST MAKES EVERYTHING BETTER

Our gardens, our communities, our planet

Evanston-based & woman-owned since 2010

Composting made easy with our door-to-door, container-swap food scrap hauling service













### **Stephanie Katsaros**

Founder and President Bright Beat

Email: <a href="mailto:steph@brightbeat.com">steph@brightbeat.com</a>

Stephanie is a social entrepreneur who founded Bright Beat in 2010 to activate environmental stewardship and social responsibility across sectors and up the value chain. Bright Beat has built a legacy of impactful programs with municipalities, non-profits, facilities, events and corporations — raising awareness while raising the bar for responsible operations in food rescue, composting and recycling. Stephanie dedicates much of her time to collaborating with partners via the Wasted Food Action Alliance, Chicago Sustainability Task Force, Illinois Food Scrap Coalition, Plant Chicago Circular Economy Advisory Committee, and iHeart Media Local Advisory Board.

# **Breakout Groups**

**Guidelines for Discussion** 

# **Next Steps**

Jennifer Nelson
Jennifer@SevenGenerationsAhead.org

Lucy Peterson

Lucy.Peterson@IPHIonline.org



