

US EPA ARCHIVE DOCUMENT



# Welcome to the Food Waste Management Cost Calculator Webinar

June 22, 2010

# Agenda

- Information about the call
- EPA's food waste management hierarchy, C. Newman, US EPA Region 5. Chicago
- The food waste management cost calculator, C. Newman, US EPA Region 5. Chicago
- Food waste management at the Swedish Medical Center in Seattle, WA, Eric Eisenberg, Swedish Medical Center. Seattle, Washington



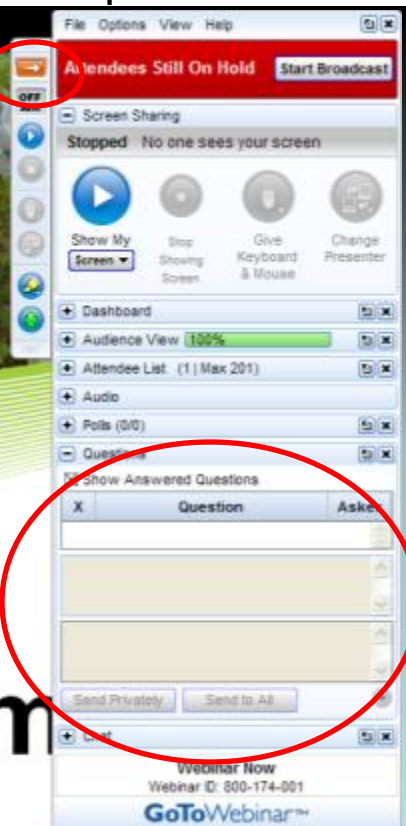

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Welcome to the  
Waste Management



# A few things worth mentioning

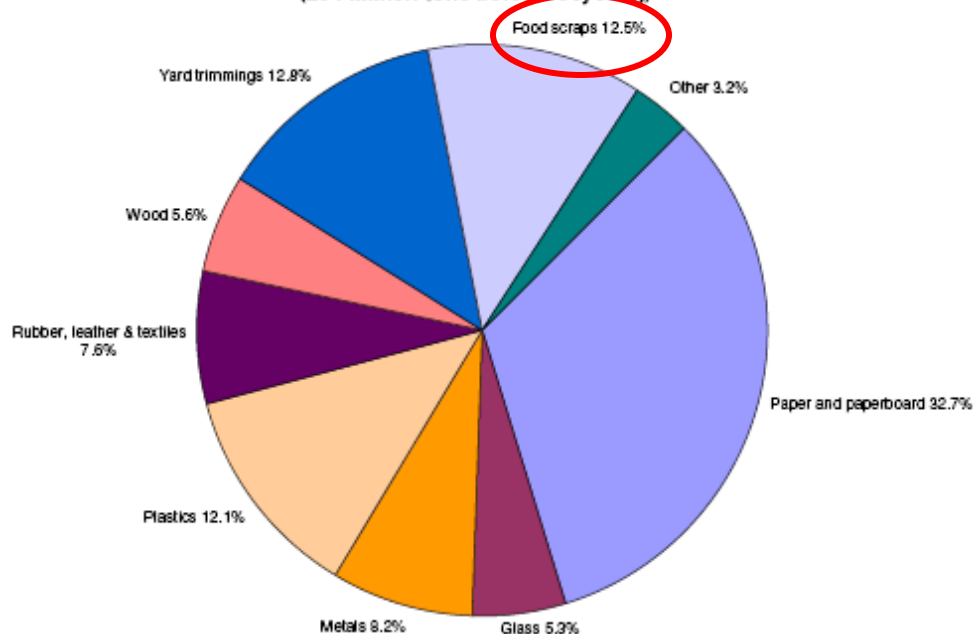
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# The Numbers

- Over *twenty five percent* of the food in the United States is lost
- Approximately 97 billion pounds of food—about 3,000 pounds per second—is wasted in the US each year
- Food waste is the third largest component of the waste stream by weight
- Food scraps make up almost 12 percent of all the MSW generated in the United States
- Less than 3 percent of food waste is recovered.

Figure ES-3: Materials Generated in MSW, 2007  
(254 Million tons before recycling)



# The Numbers

- The impact:
  - Food waste losses account for up to \$100 billion per year;
    - \$30-40 billion occurring within the commercial or retail sector (e.g., restaurants, convenience stores)
    - \$20 billion from farming and food processing.
  - The decomposition of food in landfills produces methane
    - Methane is 21 times more potent than carbon dioxide.
    - Landfills are the second largest human-related source of methane in the United States, accounting for greater than 20% of all methane emissions.





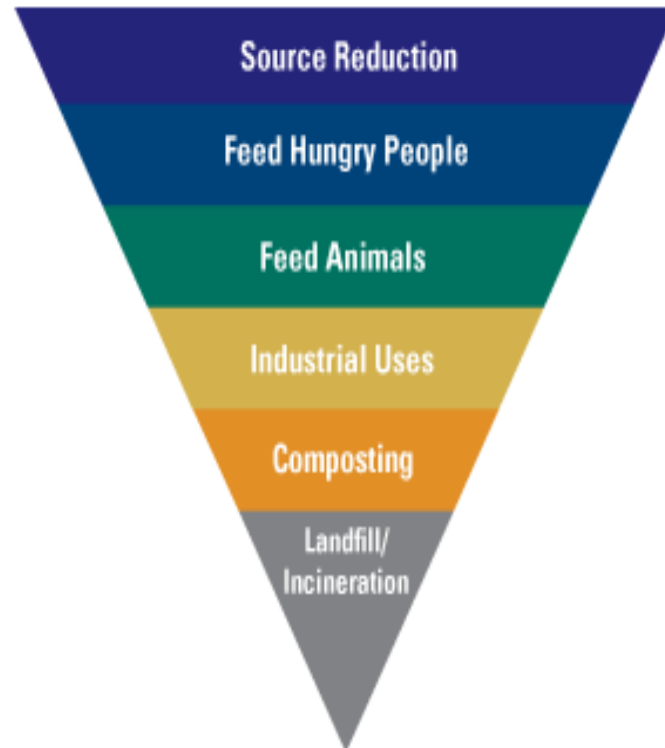
# Where is Food Waste Generated?

- Food waste is uneaten food and food preparation scraps from:
  - Residences or households
  - Commercial establishments like restaurants
  - Institutional sources like school cafeterias
  - Industrial sources like factory lunchrooms



# Food Waste Recovery Hierarchy

- **Promotes productive use of excess food**
  - **Source Reduction** – Reduce the volume of food waste generated
  - **Feed People** – Donate extra food to food banks, soup kitchens and shelters
  - **Feed Animals** – Provide food to farmers
  - **Industrial Uses** – Provide fats for rendering and food discards for animal feed production
  - **Composting** – Convert food scraps into a nutrient rich soil amendment
- [www.epa.gov/foodrecovery](http://www.epa.gov/foodrecovery)



# Food Waste Recovery Hierarchy

- **Source Reduction**
  - Conduct a waste audit
  - Reduce pre-consumer kitchen waste
    - 4% to 10% is wasted before it reaches the guest, i.e. spoiled, expired, trim waste
  - Reduce post-consumer waste
    - Portion control, trayless dining, menu modification
  - Resouce:
    - [Don't Throw Away That Food: Strategies for Record-Setting Waste Reduction](#)
    - [Putting Surplus Food to Good Use: A How-To Guide for Food Service Providers](#)



# Food Waste Recovery Hierarchy

- **Feed hungry people**
  - 49 million Americans at risk for hunger
  - Non-perishable and unspoiled perishable food can be donated
    - Food banks – warehousing
    - Food rescue – recovery and distribution of perishable and prepared food
  - Tax benefits
  - Protection from liability
    - Food donation act
    - Food bank quality control



[www.feedingamerica.org](http://www.feedingamerica.org)

**FOOD + RESCUE**

[www.foodrescue.net](http://www.foodrescue.net)



[www.win4hunger.org](http://www.win4hunger.org)



# Food Waste Recovery Hierarchy

- **Feed animals**
  - A variety of foods can be used
  - Meat or animal material must be boiled at a registered facility
  - State regulations may apply
- **Industrial uses**
  - Rendering of meats and fats
  - Fats oils and greases to energy



# Food Waste Recovery Hierarchy

- **Composting**
  - Aerated Windrow/Pile
  - In-vessel
  - Un-aerated static pile
  - Vermicomposting
  - Anaerobic digestion
- Interest is increasing
- Food waste:
  - improves compost recipe
  - increases anaerobic digestion gas production



# Food Waste Management Cost Calculator

- Calculator estimates the cost competitiveness of alternatives to food waste disposal
  - Source reduction, donation, composting, and recycling of yellow grease.
- Develops an alternative food waste management scenario based on:
  - Your waste profile
  - Availability of diversion methods
  - Preferences



# Food Waste Management Cost Calculator

- Compares cost estimates for a disposal versus an alternative scenario.
- Demonstrates that environmentally and socially responsible food waste management is cost-effective for many facilities and waste streams.
- Good information about current waste management costs improve accuracy
  - Default values are provided
- <http://www.epa.gov/epawaste/conserve/materials/organics/food/tools/index.htm>





# Calculator Link

<http://www.epa.gov/epawaste/consERVE/materials/organics/food/tools/foodcost.xls>



# EPA Tools & Resources:

- Food Waste Management Cost Calculator

**Food Waste Management Inputs**

Facility Type	Non-perishable food waste (pounds/week)	Pre-consumer prepared/whole food waste (pounds/week)	Pre-consumer trim waste (pounds/week)	Post-consumer plate waste (pounds/week)	Yellow grease (gallons/week)	Non-perishables (cost/pound)	Pre-consumer prepared/whole foods (cost/pound)	Foods that comprise trim and plate waste (cost/pound)
Grocery Store	0	0	0	0	0	\$0.00	\$0.00	\$0.00

**Notes and Instructions**

Choose the facility type that best fits the description of your business.

**Food Waste Definitions:**

- Non-perishable food waste - surplus food that does not require refrigeration. Non-
- Pre-consumer prepared/whole food waste - surplus cooked foods and prepared m
- Pre-consumer trim waste - food waste generated during food preparation, such as f
- Post-consumer plate waste - food that is plated, but not eaten by the consumer.

If you are having trouble determining the quantity of food waste your facility generates Cost Data tab for suggested rates by facility type. Click on this cell to go directly to t

**Source Reduction and Food Waste Tracking:**

Source reduction, the practice of reducing the overall volume of food waste generate subsequent waste hauling fees. Many institutions have succeeded at source reductio traps in cafeterias, and using a la carte menus. To achieve source reduction, many fa Paper tracking is simple and inexpensive, but may be time consuming and less accur: more expensive, but is likely more effective at targeting wasteful practices. A typical: typically result in source reduction of 3% or more. **The costs of food tracking t calculator; however, facilities looking to achieve cost savings from costs.** Enter your source reduction goals for each food waste category in the cells and Food Waste Tracking on the Resource tab, or click this cell.

Pounds - Yellow grease consists of used frying oils. Yellow grease does not in generated per week can be entered in pounds or gallons. Choose the.

Purchasing costs per pound by food category may vary greatly depending on the size you determine your facility-specific costs per pound. LeanPath, Inc. estimates that r If costs per pound data is not available for your facility, you may wish to enter LeanPa

To locate a local food bank near you, visit <http://feedingamerica.org/foodbank-result>

Food rescue, also called food recovery, is the practice of safely retrieving edible food those in need. For more information, see Food Rescue on the Resources tab or cli



# EPA Tools & Resources:

- **Food Waste Management Cost Calculator**

