



US EPA

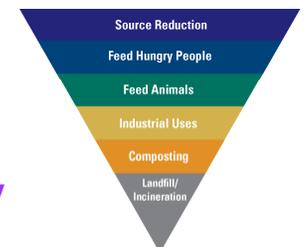
Sustainable Food Management

“Feed People Not Landfills”

September 29, 2011



www.epa.gov/foodrecovery



What is “waste”?

“to fail or neglect to use; squander”

Business 101:

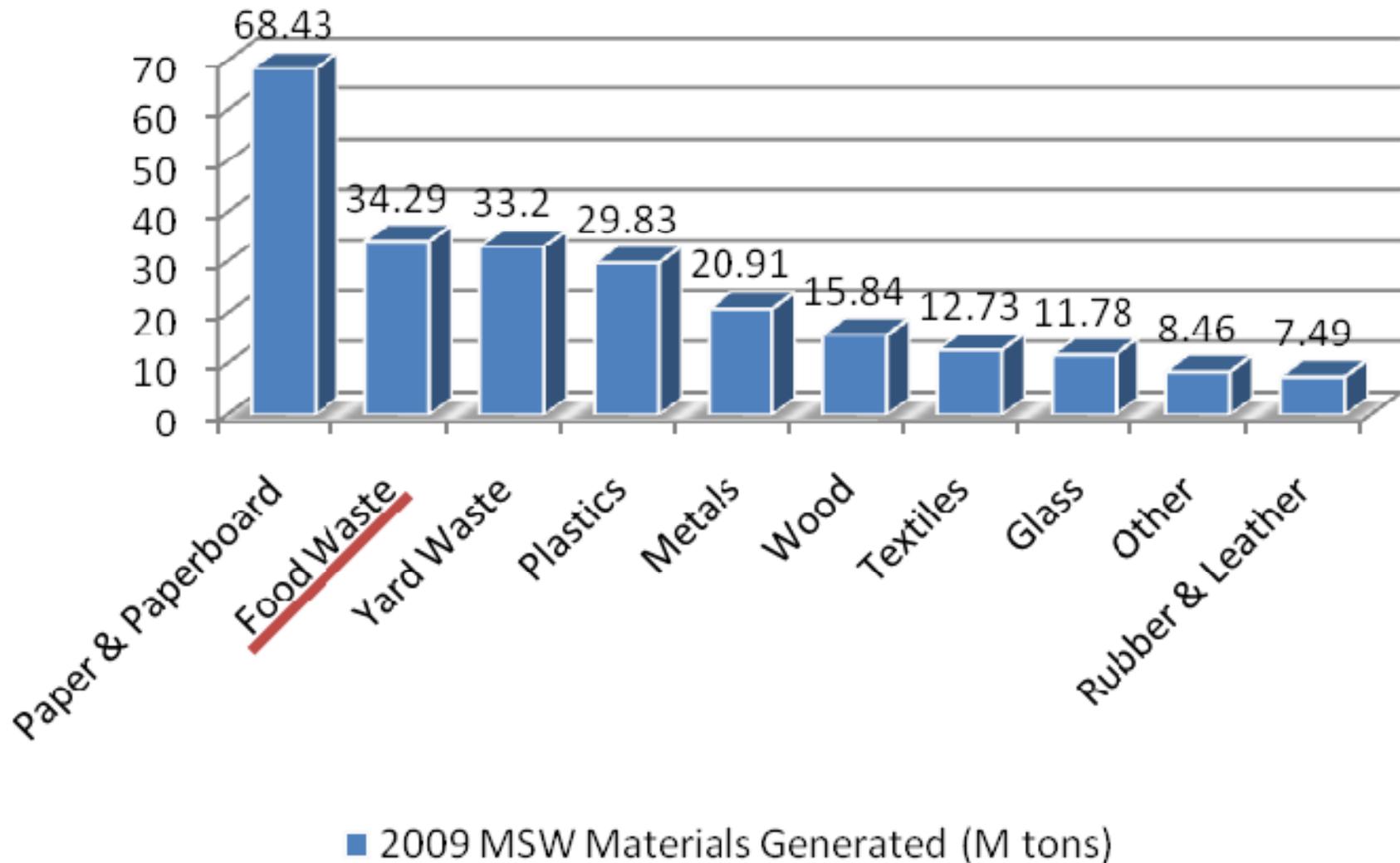
Waste = Inefficiency



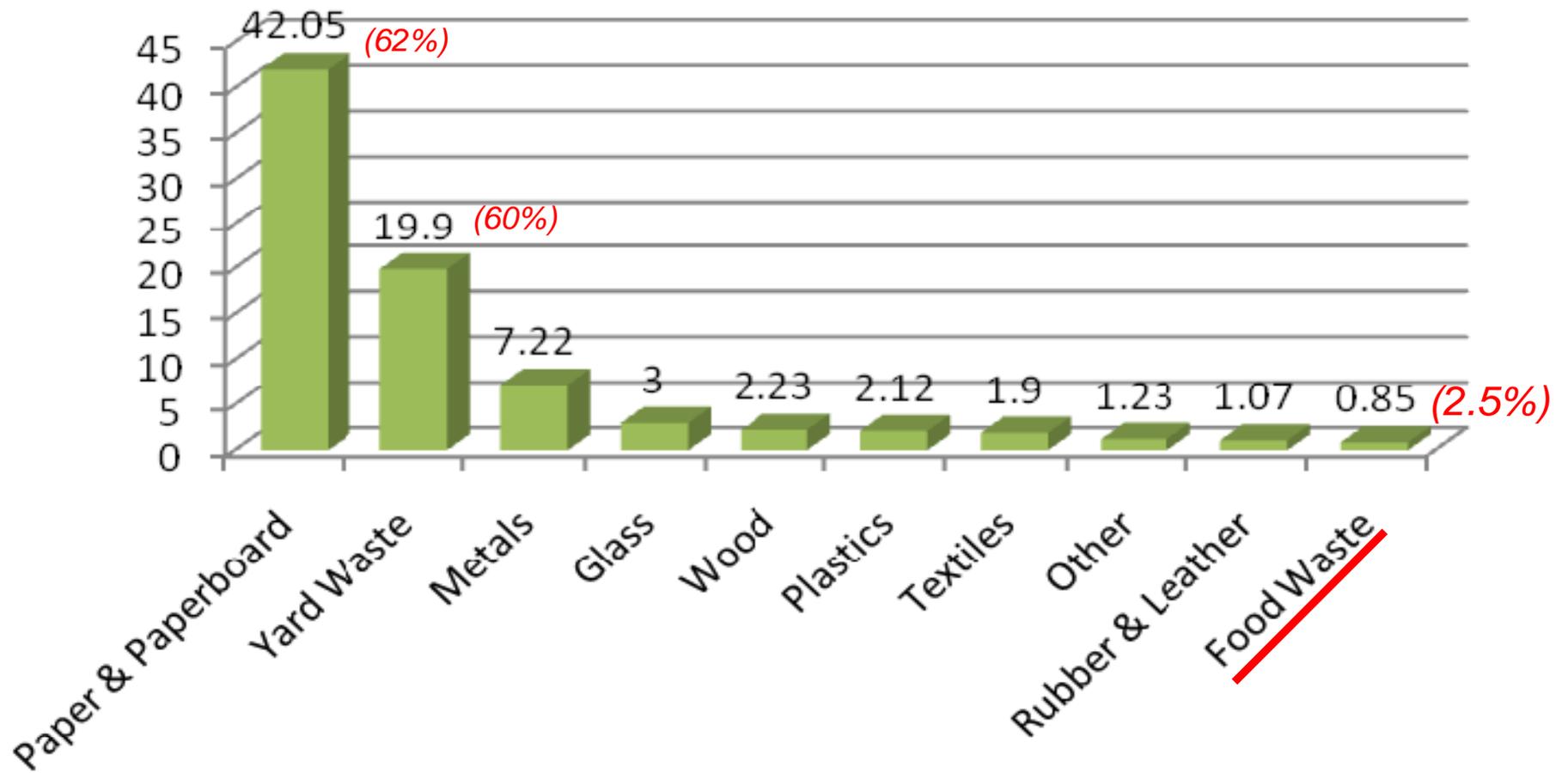
Waste Materials Generated

243 million tons total

34m tons are food waste



Materials Recycled / Composted



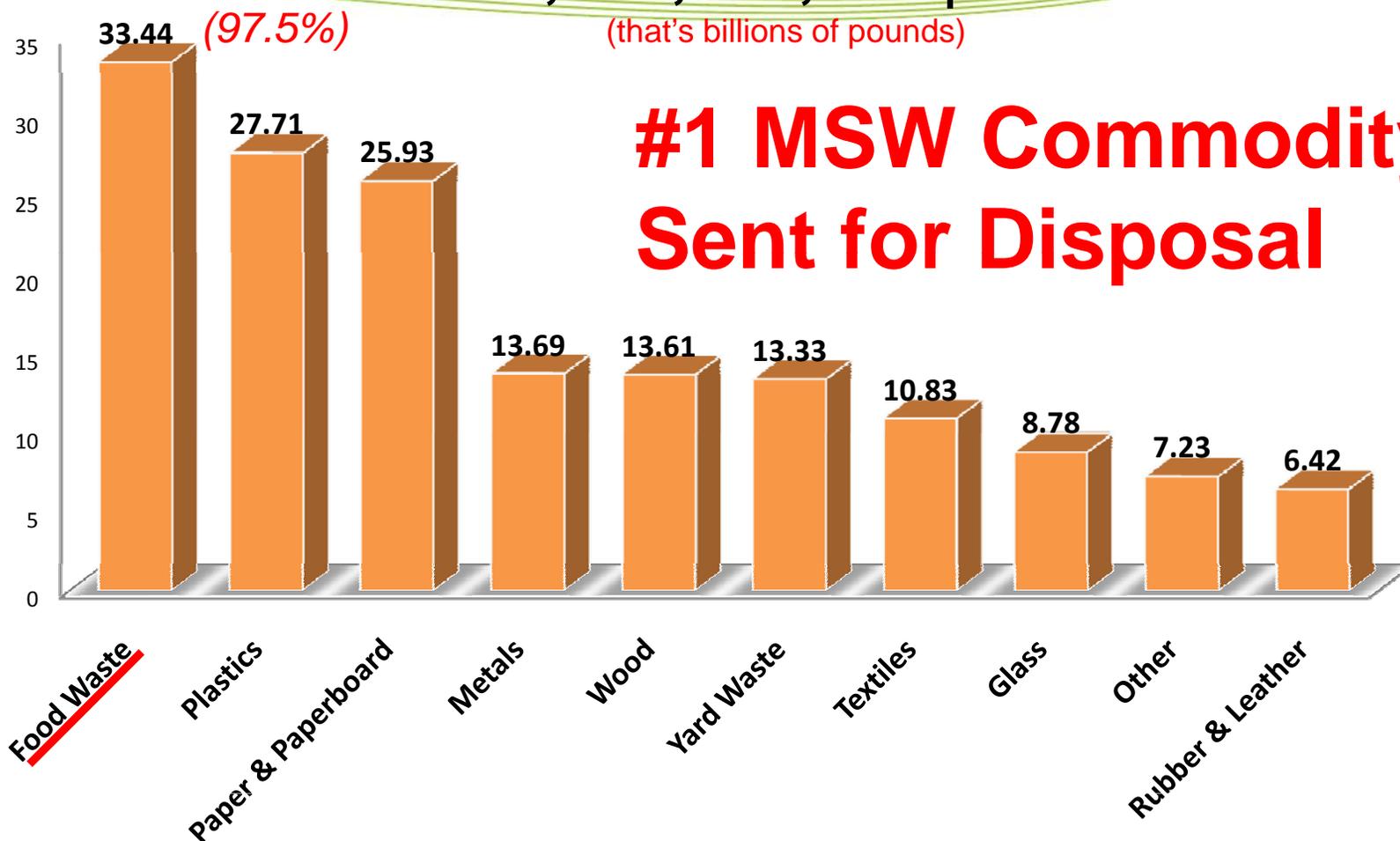
■ 2009 MSW Materials Recovered (M tons)

33.44 Million Tons Disposed

= 66,880,000,000 pounds

(that's billions of pounds)

#1 MSW Commodity Sent for Disposal



Where does it all go?

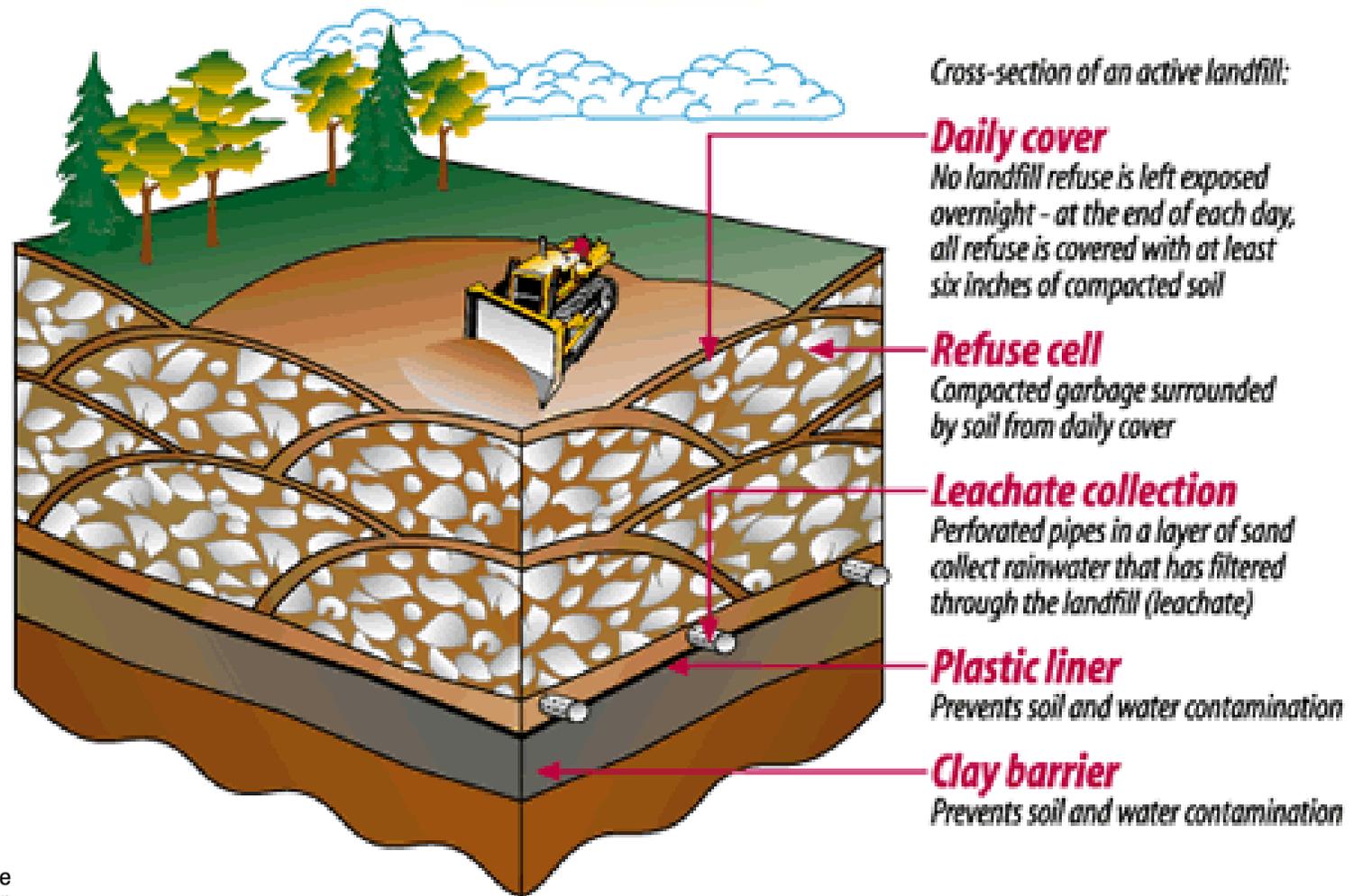
.....to a landfill
(a.k.a the dump)



And this is a landfill



It doesn't go away ...it's neatly and safely stored in the ground



Forever – there is no “*away*”

(even for “biodegradables & compostables”)



- * Landfills are the 2nd largest source of Methane
21+ times more potent carbon dioxide
- * Generating Methane gas for decades
... and food waste is a major cause of landfill Methane

Biggest Sources of Food Waste

(in order)

- **Commercial**

- **Restaurants**

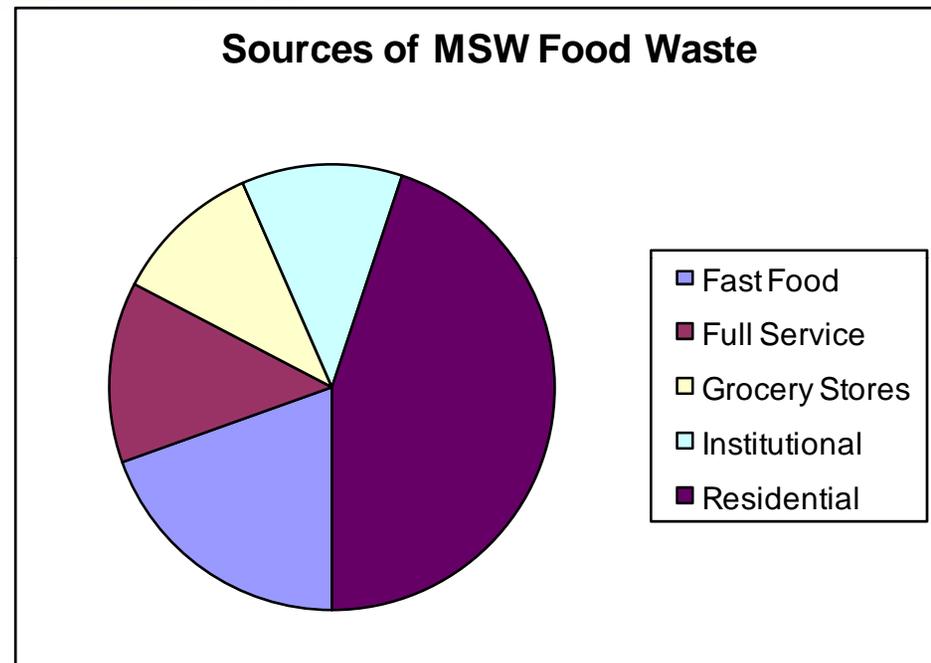
- Fast Food
- Full Service

- **Grocery Stores**

- **Institutional**

- K-12, Universities, Hospitals, Nursing Homes, Prisons

- **Residential**



HUGE wasted resource

- *Even a small percentage recovered could feed millions!*
- Let's first **Feed People – Not Landfills**



Then feed the soil



Which in Turn - Feeds People

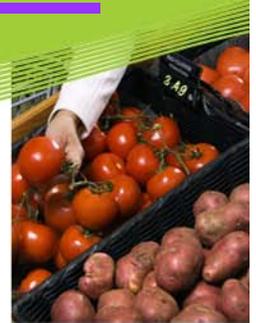
Model for Sustainability

Balancing **Profits, Planet, People**

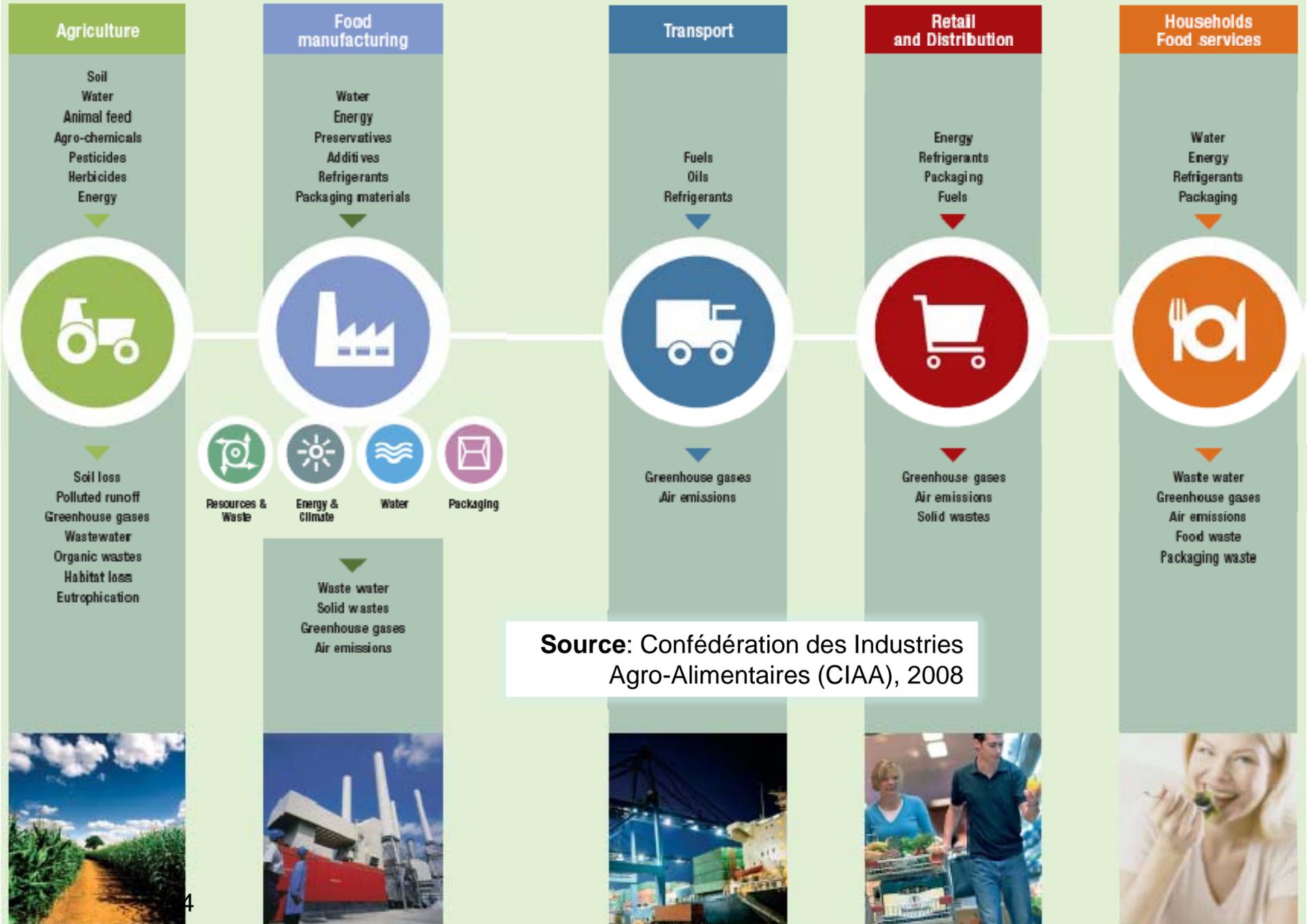
Save **Money** - Labor, Products, Waste disposal costs

Protect **Natural Resources**

Help **People**



The Life Cycle of Food and Drink Products



Sustainable Food Management

- Instead of constantly trying to manage this fast growing waste stream ...

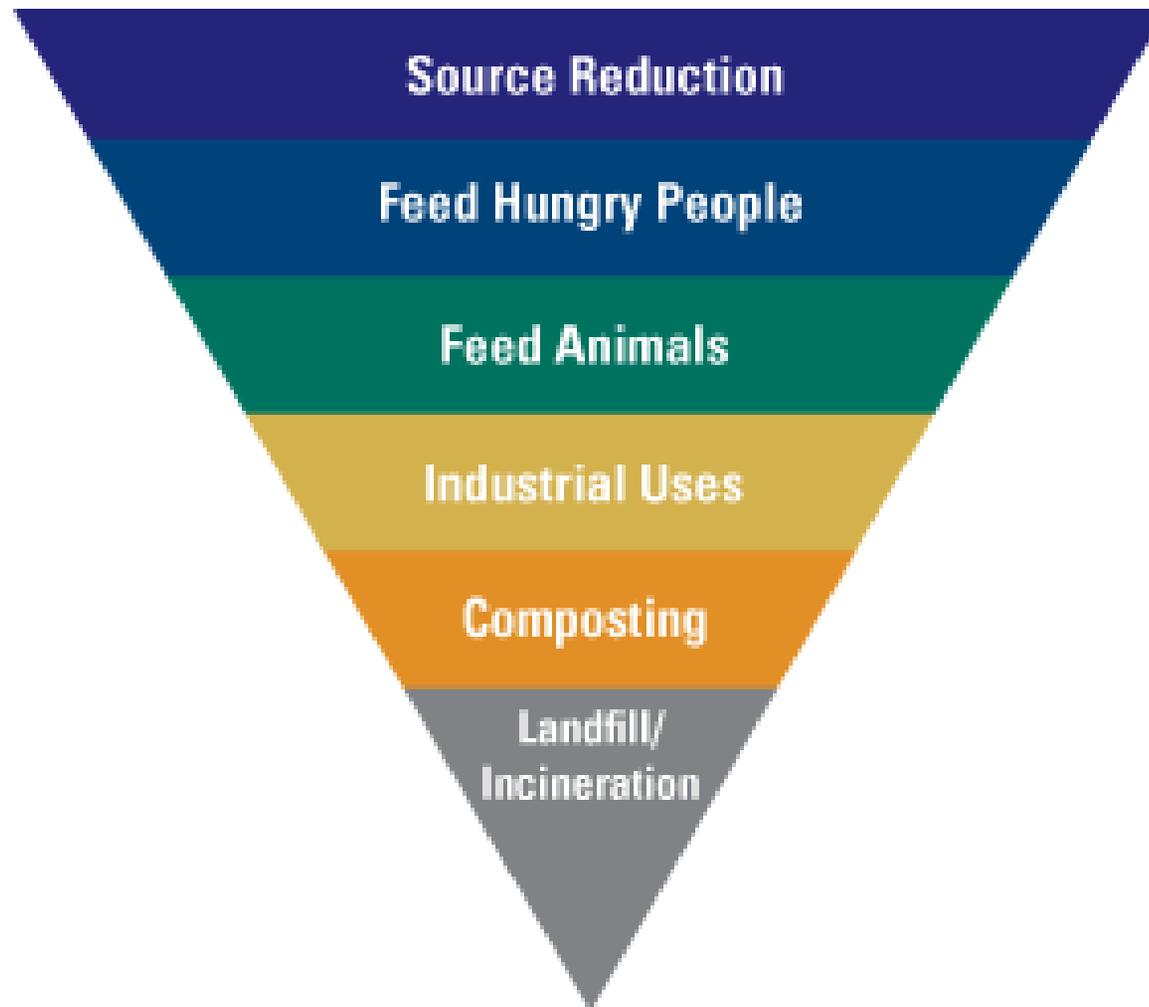
let's reduce it FIRST

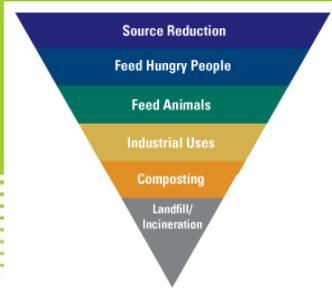


- **How?** follow the

Food Recovery Hierarchy

Food Recovery Hierarchy





Feed People:

Families / Customers & Those in Need

- **Step #1: Source Reduction** - reducing waste at the “source”
 - Reducing over-buying & processing wastes
 - Reducing over preps & plate waste
- **Step #2: Feed Hungry People**
 - Donating wholesome food, supplies and prepared foods to food banks, rescues, pantries, and kitchens

Source Reduction

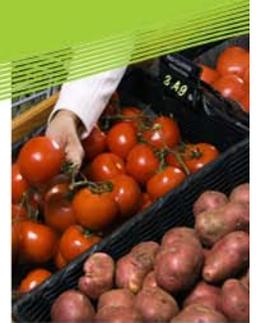
“Back of the house”

- **Sodexo**
 - 8 college campuses **cut kitchen waste by about one third**, simply by tracking and monitoring food waste

(2010 pilot)

“Front of the house”

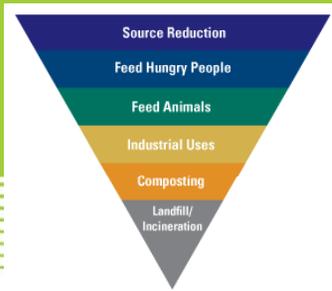
- **Virginia Tech**
 - **Trayless dining resulted in 38 % less food waste**
 - 2008 **Aramark** study on 25 campuses showed **25-30% less wasted food from trayless dining**



Donations Make a Difference!

- **Walmart**
 - 2010: donated **256 million pounds** (**128,000 tons**) of food to hunger relief organizations.* The equivalent of **197 million meals**
 - By 2013, the company expects to donate more than **1.1 billion pounds** of food.
 - **1.1 B lbs = 550,000 tons**
- **Rock and Wrap It Up**
 - For 2010-11 season, **NHL Clubs** provided **160,000 meals** while keeping more than **105 tons of food waste from landfills.**
- **Forgotten Harvest**
 - 2010 rescued & distributed nearly **19.4M lbs (9,700 tons)**
 - 2011 on track to rescue **25M lbs (12,500 tons)**





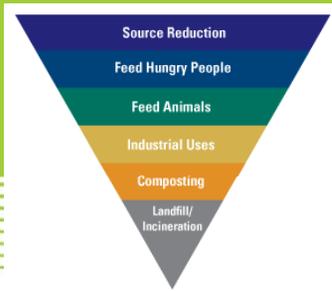
Making the Most of Your Resources

- **Step #3: Feed Animals**

- Local farmers or zoos use food scraps as animal feed; food scraps processed into animal feed

- **Step #4: Industrial Uses**

- Fat, oil and grease (FOG) can be converted into soaps, cosmetics, and biodiesel fuel; anaerobic digestion of food waste for energy production w/ residuals then being composted



Making the Most of Your Resources

- **Step #5: Composting**
 - Composting on-site or sending to off-site composting operation
- **Step #6: Landfill/Incineration**
 - **Last resort** is disposal
 - includes anaerobic digesters where the digestate (residual) is landfilled or WTE where the ash is landfilled

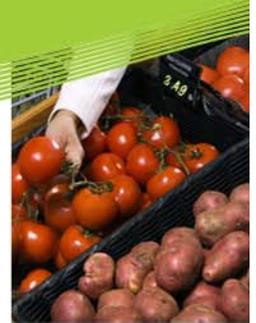
The Future?

- **Connecticut** - Starting Oct 2011
- Passed a law that requires companies to compost if they produce more than **104 tons** year of food waste & soiled unrecyclable paper. Applies to:
 - Commercial food wholesalers or distributors
 - Industrial food manufacturers or processors
 - Supermarkets
 - Resorts & conference centers

EPA Tools & Resources:

Web Page: www.epa.gov/foodrecovery

The screenshot shows a Windows Internet Explorer browser window displaying the EPA website. The address bar shows the URL: <http://www.epa.gov/epawaste/conserve/materials/organics/food/index.htm>. The page title is "Food Waste | Organic Materials | US EPA - Windows Internet Explorer provided by EPA". The main content area is titled "Wastes - Resource Conservation - Common Wastes & Materials - Organic Materials" and features a navigation menu with tabs for "Organics", "Yard Trimmings", "Food Waste", and "Wood Waste". The "Food Waste" tab is selected, and the page content includes a definition of food waste, a list of resources (Basic Information, Generators, Food Waste Recovery Hierarchy), and a sidebar with a "Food Waste" section containing links for Basic Information, Generators, Households, Food Waste Recovery Hierarchy, Source Reduction, and Feed People. The EPA logo is visible in the top left corner of the page content.



EPA Tools & Resources:

- Waste Audit Sheet

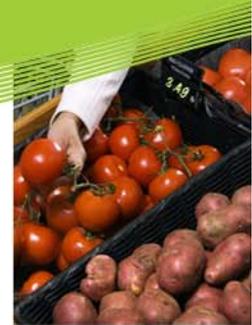
The screenshot shows a Windows Internet Explorer browser window displaying the EPA Waste Logbook form. The address bar shows the URL: <http://www.epa.gov/epawaste/conservematerialsorganicspubsfoodwastelog.pdf>. The browser interface includes a search bar, navigation buttons, and a toolbar with various icons. The main content area displays the EPA logo and the title "Waste Logbook - Facility: _____". Below the title are fields for "Date: _____", "Weather: _____", and "Notes/Special Events Today: _____". A table with the following columns is present: "Time", "Recorded By", "Food Type", "Loss Reason", "# of Portions", "# of Quarts", and "# of Pounds". The "# of Quarts" column has a sub-header "PICK ONE". The table has 10 rows. The browser's status bar at the bottom shows "Done" and "Unknown Zone". The Windows taskbar at the very bottom includes the Start button, several application icons, and the system clock showing "9:11 AM".

Waste Logbook - Facility: _____

Date: _____ Weather: _____

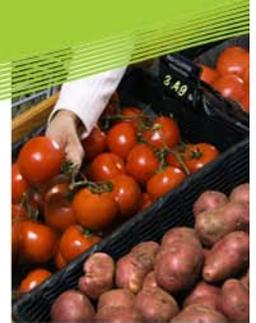
Notes/Special Events Today: _____

Time	Recorded By	Food Type	Loss Reason	# of Portions	# of Quarts	# of Pounds
					PICK ONE	



EPA Tools & Resources:

• Food Waste Management Cost Calculator



Microsoft Excel - foodcost.xls [Read-Only]

File Edit View Insert Format Tools Data Window Help Adobe PDF

Type a question for help

A1 Food Waste Management Inputs

Food Waste Management Inputs		
Source Reduction		
4	What type of facility are you?	Grocery Store
6	How many pounds of non-perishable food waste do you generate per week?	0
7	What percentage of non-perishable food waste are you willing to source reduce?	0%
8	How many pounds of pre-consumer prepared/whole food waste do you generate per week?	0
9	What percentage of pre-consumer prepared/whole food waste are you willing to source reduce?	0%
10	How many pounds of pre-consumer trim waste do you generate per week?	0
11	What percentage of pre-consumer trim waste are you willing to source reduce?	0%
12	How many pounds of post-consumer plate waste do you generate per week?	0
13	What percentage of post-consumer plate waste are you willing to source reduce?	0%
14	How much yellow grease do you generate per week?	0
15	What is your average purchasing cost per pound for non-perishables?	\$0.00
16	What is your average purchasing cost per pound for pre-consumer prepared/whole foods?	\$0.00
17	What is your average purchasing cost per pound for foods that comprise trim and plate waste?	\$0.00
Non-Perishable Food		
19	Does your facility have access to a local food bank that will accept non-perishable foods?	No
Pre-Consumer Prepared/Whole Foods, Trim Waste, and Plate Waste		
Food Rescue		
34	Does your facility have access to a local food rescue service that accepts prepared meals?	No

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 trays 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 i typically result in source reduction of 3% or more. **The costs of food tracking i 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. Yelow 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>

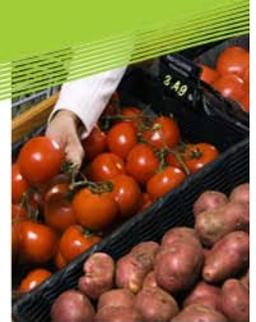
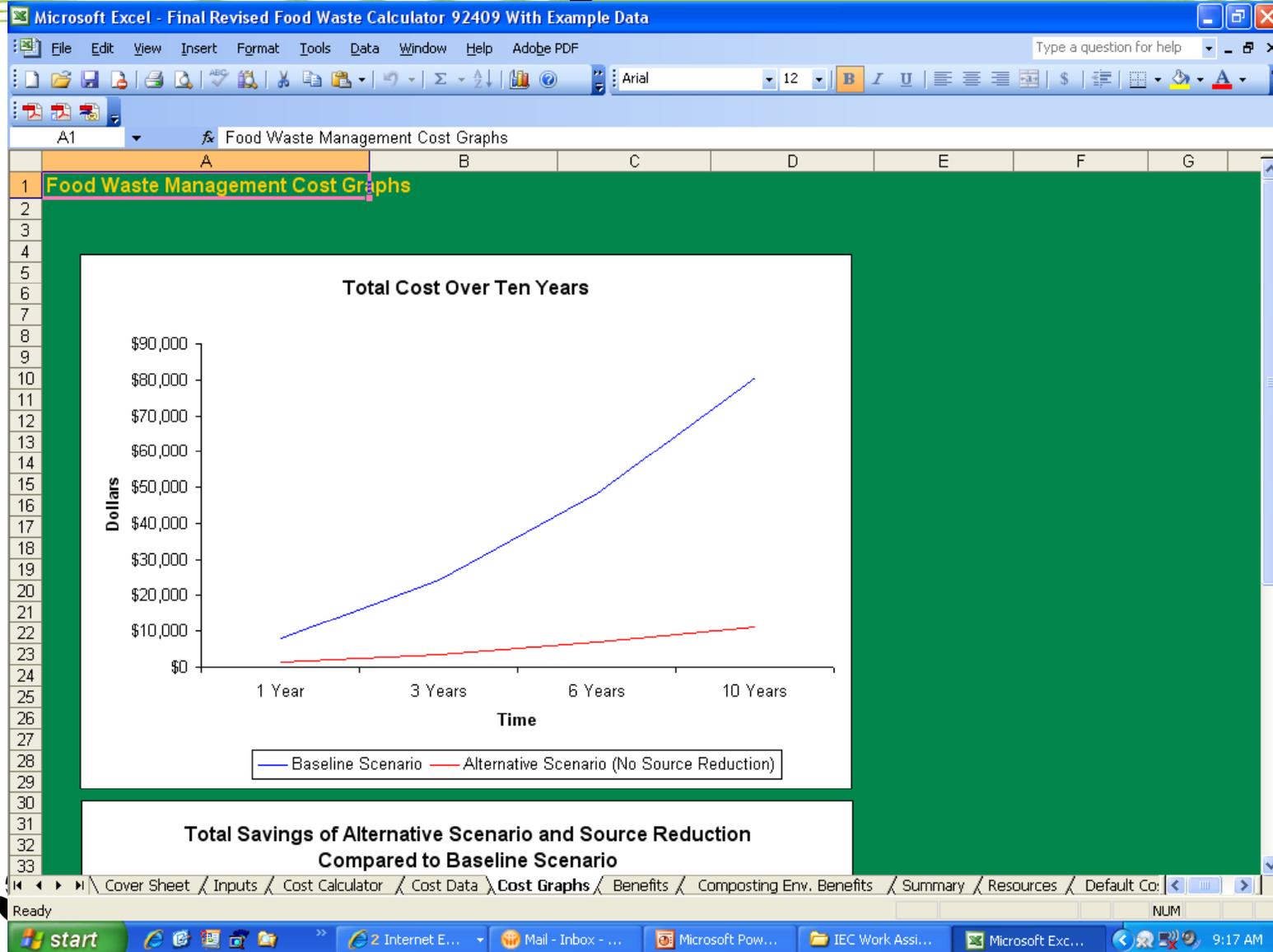
Food rescue, also called food recovery, is the practice of safely retrieving edible food those in need. For more information, see Food Rescue on the Resources tab or cli

Ready NUM

start Food Waste ... BIG 100.3 Wa... Mail - Inbox - ... Microsoft Pow... Microsoft Exc... 9:15 AM

EPA Tools & Resources:

- Food Waste Management Cost Calculator



Re-TRAC thru WasteWise

What WasteWise Re-TRAC does:

- Compiles and analyzes your waste management data and maintains historical files.
- **Submits your annual data to the Food Recovery Challenge with just a click.**
- Generates instant reports on program performance and trends, and calculates GHG emission reductions associated with your activities.
- **Provides your official EPA Climate Profile report on an annual basis.**



"The new Re-TRAC system is beyond fabulous. It really improves the data entering experience. Thank you, thank you, thank you!!!!" - Mariah Titlow Tinger, Senior Environmental Program Coordinator, Genzyme Corporation



We Need Champions Join Us!

- **Food Waste: Huge Problem & Opportunity**
- Take the **Food Recovery Challenge** and together – *let's take a bite out of food waste!*
- Participating organizations can receive **national recognition** for their outstanding Challenge achievements & leadership

www.epa.gov/foodrecoverychallenge



Current Participants

38 Food Recovery Challenge Participants

- **Big Y Foods, Inc.**
- Boston Organics
- Camp Ramah New England
- **Canon U.S.A., Inc.**
- Chumash Casino Resort
- **Clark University**
- **Colorado State University**
- **Courtyard by Marriott & Grappone Conference Center**
- **Grand Hyatt New York**
- **Harvard University**
- Johnson County
- K2 Sports
- Lathrop Retirement Communities
- Marathon Petroleum Company-Findlay Office Complex
- Massachusetts Department of Conservation and Recreation
- **Massachusetts Institute of Technology (MIT)**
- Mel Trotter Ministries
- Mercury Cafe
- **MGM Resorts International**
- Mohegan Tribe of Indians of CT
- **National Hockey League**
- **Ohio University**
- PRIZIM Inc.
- Recycle Across America
- Recycle Used Cooking Oil from Home, LLC.
- Rock and Wrap it Up!
- **Rutgers University**
- Saint Paul RiverCentre/Xcel Energy Center
- **San Diego Padres**
- Shaw's Supermarkets, Inc.
- Sheridan School
- **St. Louis Cardinals**
- TD Garden
- The DOE Princeton Plasma Physics Lab
- **U.S. Coast Guard Academy**
- **University of Tennessee at Martin**
- Waste Less Living, Inc.
- **Weis Markets**

Food Recovery Challenge

Four Easy Steps

1. **Assess It!** - Conduct baseline food waste assessment
1. **Plan It!** - Create a food waste reduction plan
2. **Track It!** - Report annually using Re-TRAC
3. **Do It!** - Undertake at least three food waste reduction & recovery activities!

What We Can Do For You...

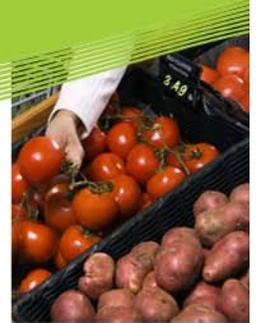
Recognition

- Website
 - Tools & Resources
- Awards
- Case Studies



What You Can Do ...

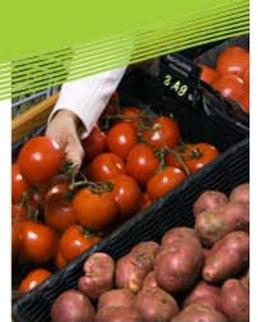
- ❖ Reduce your costs
- ❖ Improve your image
- ❖ Feed your communities
- ❖ Protect your environment



We Need Champions - *Join Us!*

To Do List:

- Join Us at:
www.epa.gov/foodrecoverychallenge
- **Do a Waste Audit – *Know What You Throw***
(free tools on Food Recovery & WasteWise web pages)
- **Contact Your Local Food Bank & Rescues**
- **Find a Local Composter** (www.FindAComposter.com)
- **Modify Your Service Contracts**



Thank You

Questions?

For more info ...

www.epa.gov/foodrecovery

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(703) 308-8669

www.epa.gov/foodrecoverychallenge

