

# Food Waste Prevention



*Sue Barns, presentation to ESB, Nov. 15, 2018*

# In one month, a family of 4 wastes 122lbs of food!



- **30-40% of food produced in US goes uneaten**
- **Most food is wasted at home; >25% of purchased food is disposed**
- **>100# per person/year; \$1500-\$2000/family/year**
- **17% of LAC waste stream, largest category of trash; FY18 cost approx. \$190,210**



# The True Cost of Food Waste

**Visible costs**

**Disposal costs**

← *You are here*

**Invisible costs**

Lost materials

**Energy cost**

Natural resources

**Deforestation/  
Species/  
Habitat loss**

Lost labor

Liabilities and risks

Nutrients /fertilizer

**80 million US acres  
(an area = 75% the  
size of CA)**

**25% of  
our  
fresh  
water!  
(= CA+  
TX+OH)**

*On average, the true cost of wasted materials is about 10 times the cost of disposal*

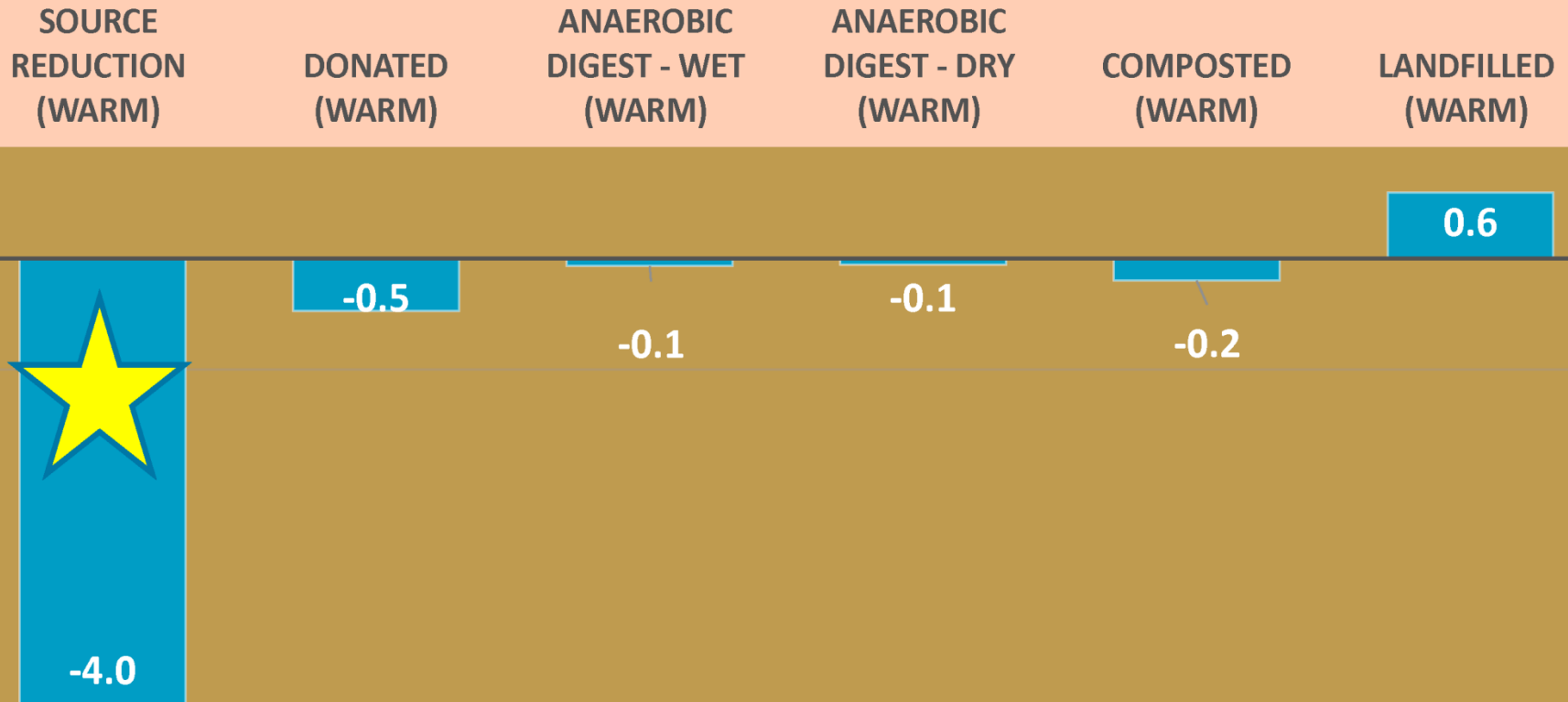
*(Hall, PLOS 2009)*

# Reducing wasted food ranks 3<sup>rd</sup> out of 100 for greenhouse gas reduction

Rank	Solution	Sector	TOTAL ATMOSPHERIC CO <sub>2</sub> -EQ REDUCTION (GT)	NET COST (BILLIONS US \$)	SAVINGS (BILLIONS US \$)
1	Refrigerant Management	Materials	89.74	N/A	\$-902.77
2	Wind Turbines (Onshore)	Electricity Generation	84.60	\$1,225.37	\$7,425.00
3	Reduced Food Waste	Food	70.53	N/A	N/A
4	Plant-Rich Diet	Food	66.11	N/A	N/A
5	Tropical Forests	Land Use	61.23	N/A	N/A
6	Educating Girls	Women and Girls	59.60	N/A	N/A
7	Family Planning	Women and Girls	59.60	N/A	N/A
8	Solar Farms	Electricity Generation	36.90	\$-80.60	\$5,023.84
9	Silvopasture	Food	31.19	\$41.59	\$699.37
10	Rooftop Solar	Electricity Generation	24.60	\$453.14	\$3,457.63

# Source Reduction produces biggest GHG benefits on the Food Recovery Hierarchy

Food Recovery Activities compared to landfill  
(lbCo2E per lb of food)



# Food Recovery Hierarchy

Most Preferred

## Source Reduction

Reduce the volume of surplus food generated

## Feed Hungry People

Donate extra food to food banks, soup kitchens, and shelters

## Feed Animals

Divert food scraps to animal feed

## Industrial Uses

Provide waste oils for rendering and fuel conversion and food scraps for digestion to recover energy

## Compost

Create a nutrient-rich soil amendment

## Landfill/ Incineration

Last resort to disposal

Least Preferred





[NATION'S FIRST-EVER FOOD WASTE GOAL]

# CUT FOOD WASTE IN HALF BY 2030

[epa.gov/sustainable-management-food/united-states-2030-food-loss-and-waste-reduction-goal](https://epa.gov/sustainable-management-food/united-states-2030-food-loss-and-waste-reduction-goal)

**ReFED**

## FOOD WASTE SOLUTIONS DATA SET

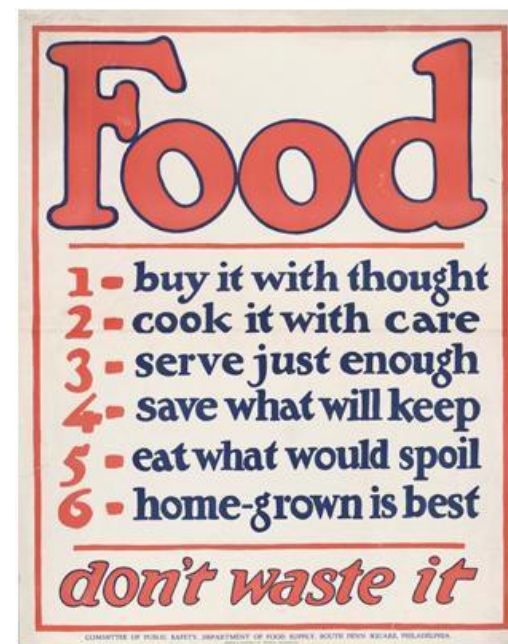
TYPE	SOLUTION	DIVERSION POTENTIAL (K TONS / YEAR)	ECONOMIC VALUE PER TON DIVERTED	ECONOMIC VALUE (\$M / YEAR)	BENEFIT (\$M / YEAR)	COST (\$M / YEAR)	BUSINESS PROFIT POTENTIAL (\$M / YEAR)
Prevent	Consumer Education Campaigns	584	\$4,531	\$2,648	\$2,669	(\$22)	
Prevent	Waste Tracking & Analytics	571	\$2,282	\$1,303	\$1,378	(\$75)	\$1,003
Prevent	Standardized Date Labeling	398	\$4,547	\$1,812	\$1,820	(\$8)	
Prevent	Produce Specifications	266	\$1,039	\$277	\$389	(\$112)	\$228
Prevent	Packaging Adjustments	208	\$3,443	\$715	\$949	(\$234)	
Prevent	Smaller Plates	178	\$2,147	\$382	\$407	(\$25)	\$315
Prevent	Secondary Resellers	167	\$218	\$37	\$1,265	(\$1,229)	\$29
Prevent	Trayless Dining	83	\$2,253	\$187	\$190	(\$3)	\$154
Prevent	Spoilage Prevention Packaging	72	\$2,326	\$167	\$312	(\$145)	\$17
Prevent	Improved Inventory	59	\$1,194	\$71	\$114	(\$44)	\$56



# Food: Too Good to Waste (FTGTW)

toolkit is designed to change key behaviors:

- **Get Smart:** See how much food (& money) you're throwing away
- **Smart Shopping:** Buy what you need
- **Smart Saving:** Eat what you buy
- **Smart Storage:** Keep fruits and vegetables fresh
- **Smart Prep:** Prep now, eat later



**West Coast Climate  
& Materials Management Forum**



# FTGTW Toolkit components



- **Main message:** *Food is too essential to throw away.*
- **Implementation guide** shows agencies how to implement toolkit in their community
- **Behavior change tools**, including:
  - fruit and vegetable storage guide
  - shopping list template with meals in mind
  - “eat first” refrigerator prompt



## **Outreach Tools**, including:

- Infographics/posters
- workshop presentation for community residents



# FTGTW pilot results (2012-2014)

Tested initially in 17 communities in 10 states; local gov't and community groups

- **It is possible for households to reduce preventable food waste 50% and more by weight.**
  - **A 50% reduction is roughly ½ pound per person per week or 20% of total food waste.**
- Creating food waste awareness is key to lasting impact in food waste reduction – **measurement is key!**
- People change behavior when benefits outweigh costs/barriers, through implementation (education is not enough)
- **FTGTW behavioral changes are relatively easy for households to make (95%).**
- There are strong indications that households have a significant interest in reducing their wasted food.
- **96% of the participants said they are likely to continue to use the strategies and tools**





- Videos, PSAs, social media content, radio spots
- Print media: ads, articles
- At-home aids: signs to print, Alexa skills, tips
- Flyers, posters, food-service signage
- “Media Tips & Tactics”, will work with orgs

*“Consumer education campaigns offer highest return on investment in reducing food waste”*

*“CBSM campaigns can bring about a notable reduction in preventable food waste at the household level.”*

# *Take Aways*

- Prevention of food waste has HUGE benefits for people and planet.
- Locally, food waste prevention can reduce our waste stream, reduce size of composting program needed, reduce GHGs, save LAC \$\$, feed the hungry.
- Data show that people don't know how much food they waste, but education and interventions can succeed in changing behavior to waste substantially less.
- Many possible focus areas: consumers (residents), schools, restaurants, groceries, other businesses, food recovery programs (food banks), composting, etc.
- LOTS of effective resources and campaign tools available from EPA, USDA, Ad Council, other agencies. Very hands-on, but no new facilities needed, not expensive.

# Questions?

*All the resources -  
land, water, transportation -  
wasted, discarded.*



Heather Ward