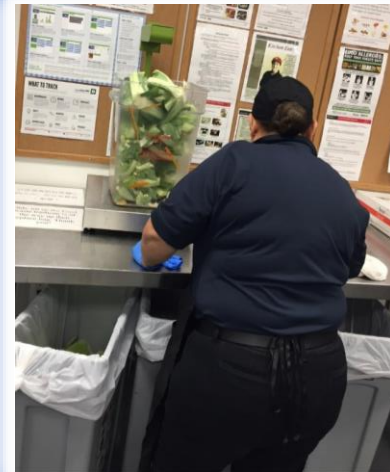


From Pen & Paper to Artificial Technology:



21st Century Methods for Measuring Excess Food



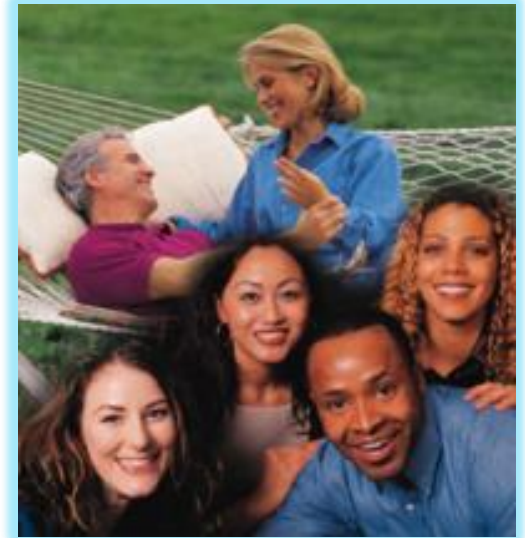
EPA SMM Web Academy – 12/19/19

EPA mission:

To protect human health and the environment.



*EPA's first Administrator,
William Ruckelshaus*



epa.gov/smm

Speakers

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phood
Max Mlinar,
Director of Operations

CMU
CENTRAL MICHIGAN
UNIVERSITY
Jay Kahn, Director of Facilities
Operations



SAVOR...Chicago
at McCormick Place
Catering • Concessions • Special Events
Douglas Bradley,
V.P. of Culinary
Excellence Every Day

winnow
Gina Sears, Business
Development Executive

 **Boulder Valley**
School District
Laura Smith, past Program & Grants
Coordinator and current contractor

Disclaimer

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Recover 15%
of excess food
to feed 25
million people

How much food is wasted in the U.S.?

Amount of food that goes uneaten each year:

1/3

Percentage of waste thrown away that is food:

21%

Cost of the food that goes uneaten each year:

**\$161
BILLION**

Amount of food waste that got diverted from landfills:

5%

Number of Americans from households that don't always have enough to eat:

**48
MILLION**



[NATION'S FIRST-EVER FOOD WASTE GOAL]

CUT FOOD WASTE IN HALF BY 2030

WINNING ON

REDUCING

FOOD WASTE


INITIATIVE



The Business Case for Reducing Food Loss & Waste:

\$1 invested \longrightarrow \$14 saved!

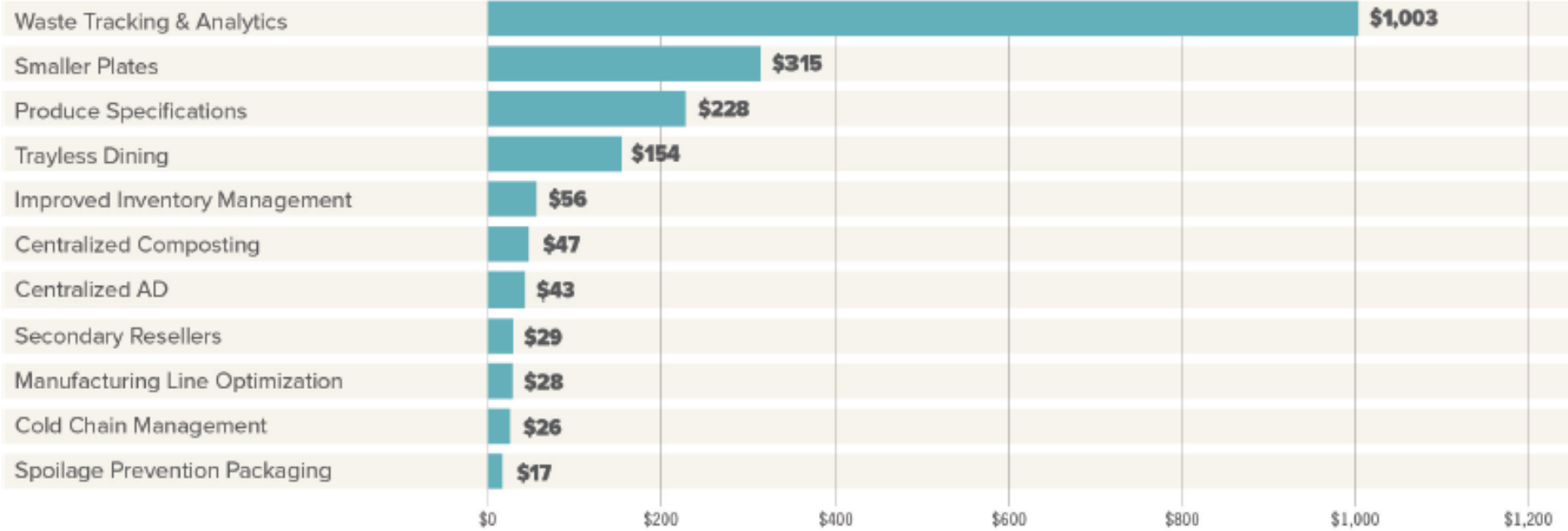


- | | |
|---|--|
| Measuring waste  |  Selling imperfect produce |
| Training staff  |  Creating new products |
| Improving inventory management  |  Reducing waste management costs |
| Changing packaging  |  Avoiding cost of food not sold |

https://champs123blog.files.wordpress.com/2017/03/report_-business-case-for-reducing-food-loss-and-waste.pdf

The Business Case for Sustainable Management of Food: \$1.9 Billion in Annual Profit Potential

ANNUAL BUSINESS PROFIT POTENTIAL (\$M)



Waste Tracking & Analytics:
\$1 billion profit potential.



ReFED

refed.com

Excess Food Measurement

Paper Tracking Food Waste Log

epa.gov/sites/production/files/2015-08/documents/food-waste-log.pdf

| Recorded by | Time | Food type | Surplus reason | # of portions | # of quarts | # of pounds |
|-------------|----------|-----------|-------------------------|---------------|-------------|-------------|
| Employee 1 | 12:45 pm | Broth | Too salty | n/a | 10 | n/a |
| Employee 2 | 5:30 pm | Guacamole | Over-stock turned brown | n/a | n/a | 20 |
| Employee 3 | 8:03 pm | Lasagna | Made too much | 15 | n/a | n/a |

Excess Food Measurement



Reducing Wasted Food & Packaging:
A Guide for Food Services and
Restaurants

United States Environmental Protection Agency



PDF guide:

http://www.epa.gov/foodrecovery/docs/reducing_wasted_food_pkg_tool.pdf

Excel tracking spreadsheet:

http://www.epa.gov/waste/consERVE/foodwaste/docs/foodwaste_audit_tool.xlsm

Excess Food Measurement

cec.org/measurement

Commission for Environmental Cooperation



Why and How to Measure Food Loss and Waste

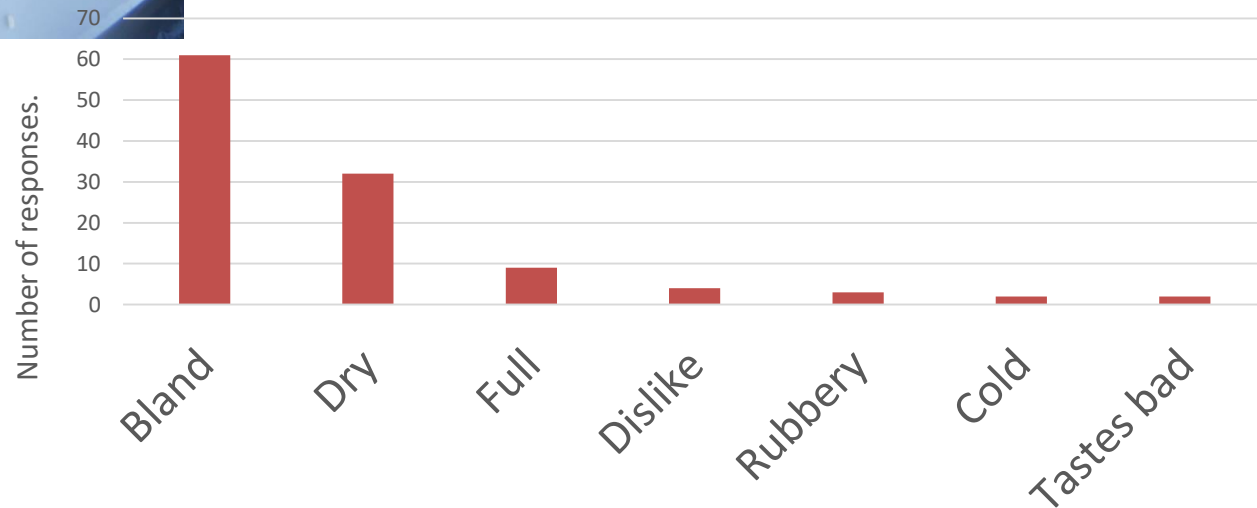
A PRACTICAL GUIDE

Excess Food Measurement at a High School



A five-gallon bucket full
of leftover rice.

Reasons for Leftover Brown Rice 103 lbs.



Excess Food Measurement Audit Tool



Guide to Conducting Student Food Waste Audits

A Resource for Schools



epa.gov/sustainable-management-food/guide-conducting-student-food-waste-audits-resource-schools

Food Recovery Challenge (FRC)

epa.gov/foodrecoverychallenge

□ Participants:

- Track and measure their surplus food.
- Move toward their food recovery goals.

□ Endorsers:

- Educate on the sustainable management of food.
- Conduct Food Recovery Challenge outreach.



FRC Participant Annual Data Form

Food Waste Prevention and Recycling - Summary Activities

| DIVERSION CATEGORY | AMOUNT | UNIT (TONS/LBS) | TONS |
|---|--------|--|---------------|
| Food Waste Prevention | 322.00 | Tons <input checked="" type="checkbox"/> | 322.00 |
| Food Recovery Donation and/or Animal Feed (add destination in comments) | 244.00 | Tons <input checked="" type="checkbox"/> | 244.00 |
| Food Recycling (e.g. composting, anaerobic digestion). Please consult your FRC representative for new technologies that are not composting or anaerobic digestion. | 159.00 | Tons <input checked="" type="checkbox"/> | 159.00 |
| Total Diverted | | | 725.00 |

Food Waste Disposed - Optional

| ACTIVITY | AMOUNT | UNIT (TONS/LBS) | TONS |
|-----------------------|--------|--|---------------|
| Landfilled | 400.00 | Tons <input checked="" type="checkbox"/> | 400.00 |
| Total Disposed | | | 400.00 |

Total Tons Diverted:

725.00

Total Tons Generated:

1,125.00

Reported Waste Diversion Rate:

64.44

%

epa.gov/foodrecoverychallenge

FRC Participant Annual Climate Profile

Environmental Benefits Analysis (Domestic Equivalencies)

January 01, 2018 - December 31, 2018

1 results

Search:

| MATERIALS | MTC02E | PASSENGER VEHICLES TAKEN OFF THE ROAD FOR ONE YEAR | HOMES WORTH OF ELECTRICITY USE PER YEAR SAVED | HOMES WORTH OF ENERGY USE PER YEAR SAVED |
|---------------|----------|--|---|--|
| Food Donation | 8,611.52 | 1,828.35 | 1,501.83 | 1,031.32 |
| Total: | 8,611.52 | 1,828.35 | 1,501.83 | 1,031.32 |

epa.gov/foodrecoverychallenge

Benefits for Food Recovery Challenge Participants & Endorsers

- SMM Data Management System account.
- Measurement tools & reporting assistance.
- Sustainable Management of Food webinars.
- Awards & recognition.



Food Recovery Challenge 2017 Achievements

- Source reduced 18,000 tons of excess food.
- Saved \$37.4 million in avoided tipping fees.
- GHG benefit=removing 96k cars from the road.



Photo by SDUSD.

CUT FOOD WASTE IN HALF BY 2030

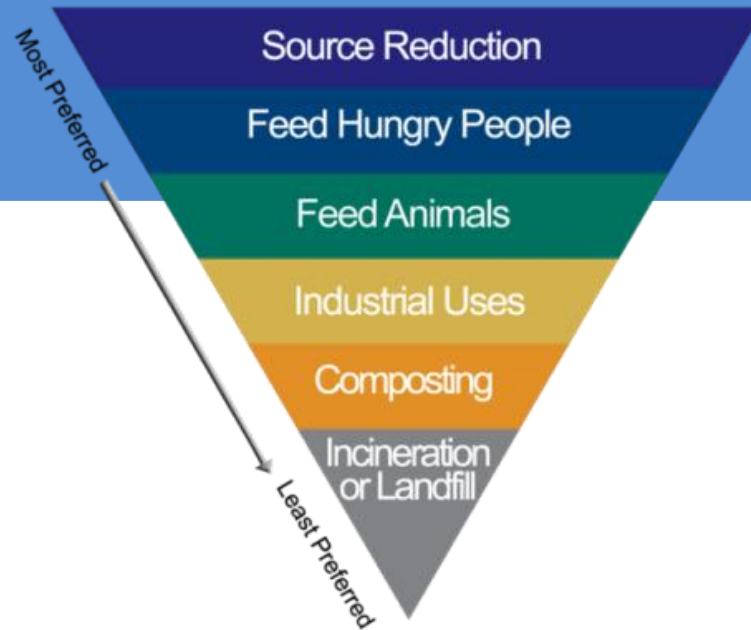
- Measure your excess food, then source reduce.



- Leverage the Food Recovery Hierarchy.
- Participate in the Food Recovery Challenge.



Food Recovery Hierarchy



[EPA.GOV/SUSTAINABLE-MANAGEMENT-FOOD](https://www.epa.gov/sustainable-management-food)

[epa.gov/sustainable-management-food/forms/contact-us-about-sustainable-management-food](https://www.epa.gov/sustainable-management-food/forms/contact-us-about-sustainable-management-food)

Sustainable Materials Management

Food Recovery Challenge



Changing how we think about our resources today for our children's tomorrow

Thank you, speakers.

phood

Max Mlinar,
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SAVOR...Chicago
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Boulder Valley
School District

Laura Smith, past Program & Grants
Coordinator and current contractor

Next on the EPA Sustainable Materials Management Web Academy:

Safe Packaging and Transportation of Lithium Batteries: What You Need to Know



January 23rd, 2020

R.S.V.P. at epa.gov/smm