

REDUCING FOOD WASTE FROM FARM TO FORK



Presenters

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Presentation Goals

- Describe the current landscape and impact of wasted food
- Address the policy levers and their impact on wasted food
- Discuss out-of-school time strategy for reducing wasted food
- Explore opportunities to reduce food waste.

The Impacts of Wasted Food



Life Cycle of Food

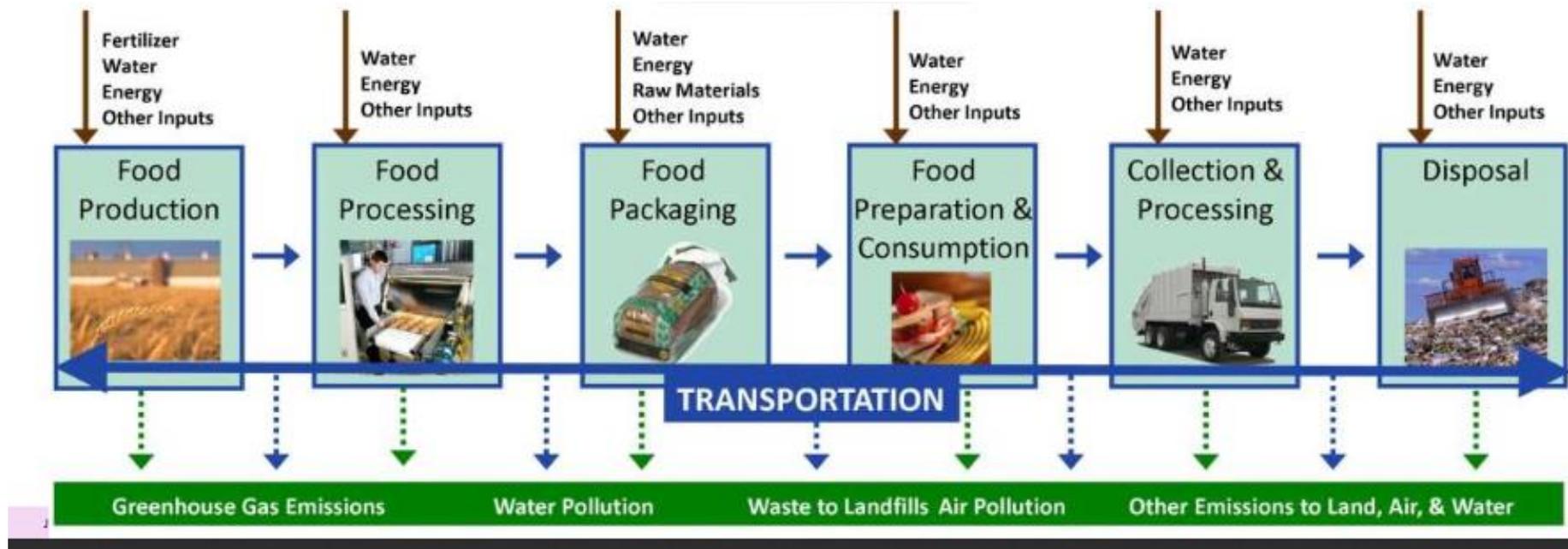
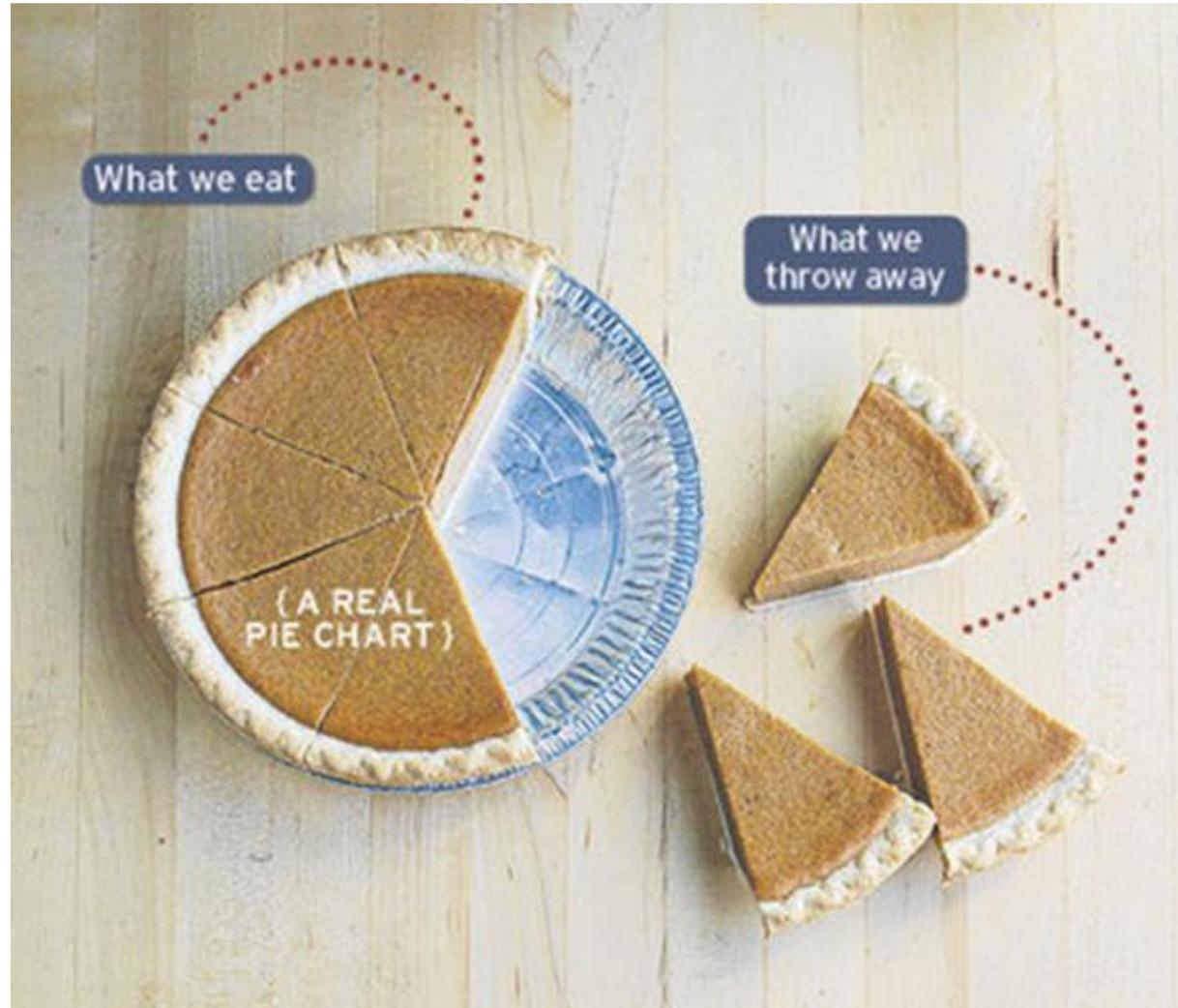
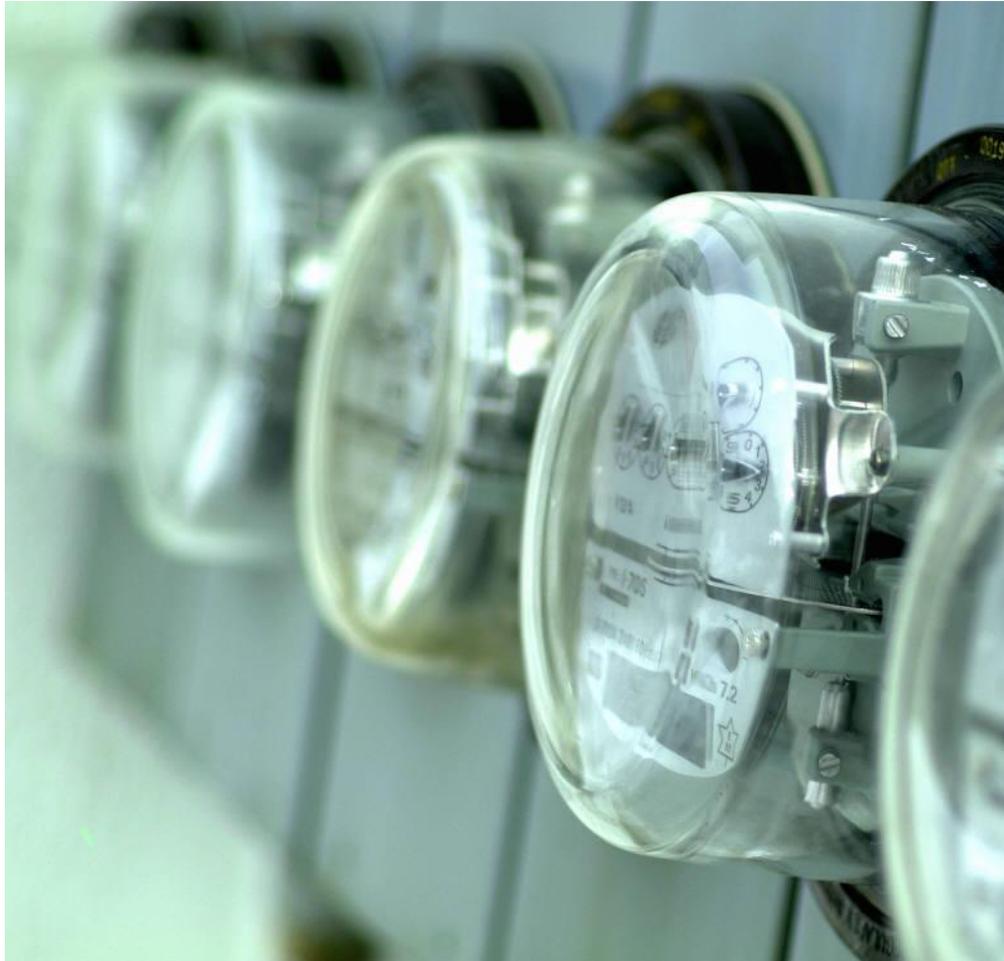


Image credit & source: EPA's Toolkit for Reducing Wasted Food and Packaging A Guide for Food Services and Restaurants

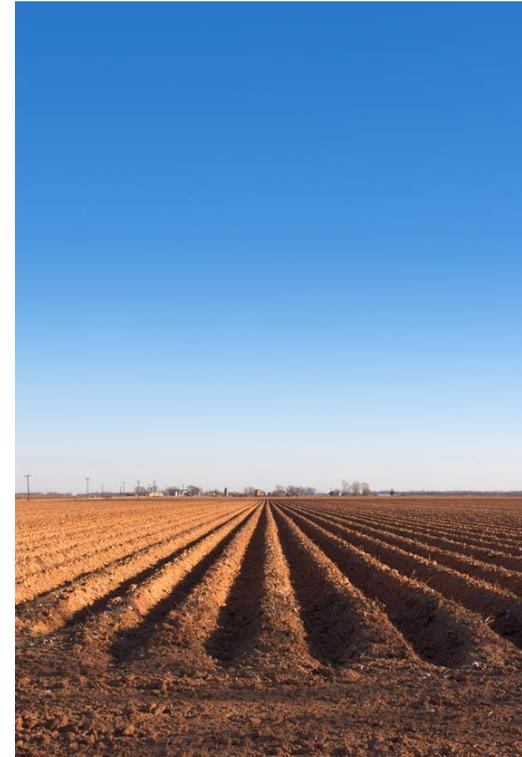
Why should we be concerned?



Wasted food costs 10% of the total U.S. energy budget



Wasted food uses 50% of U.S. land



Currently 25% of all freshwater supplies go to produce food that ultimately **gets wasted**



Environmental Benefits

- From farm to fork to landfill, food is 14% of our total domestic (GHG) emissions

Economic Benefits

- \$218 billion of food is thrown away each year, costing a household of four an average of \$1,800 annually.

Social Benefits

- 1 in 6 Americans lack a secure supply of food
- Reducing food losses across the supply chain by 15% could help feed more than 25 million Americans every year



How much of our waste stream is organics?

Food waste is the single largest and least recovered waste stream in the US and MN

- Over 30% of garbage is organics
- Food waste is 17%

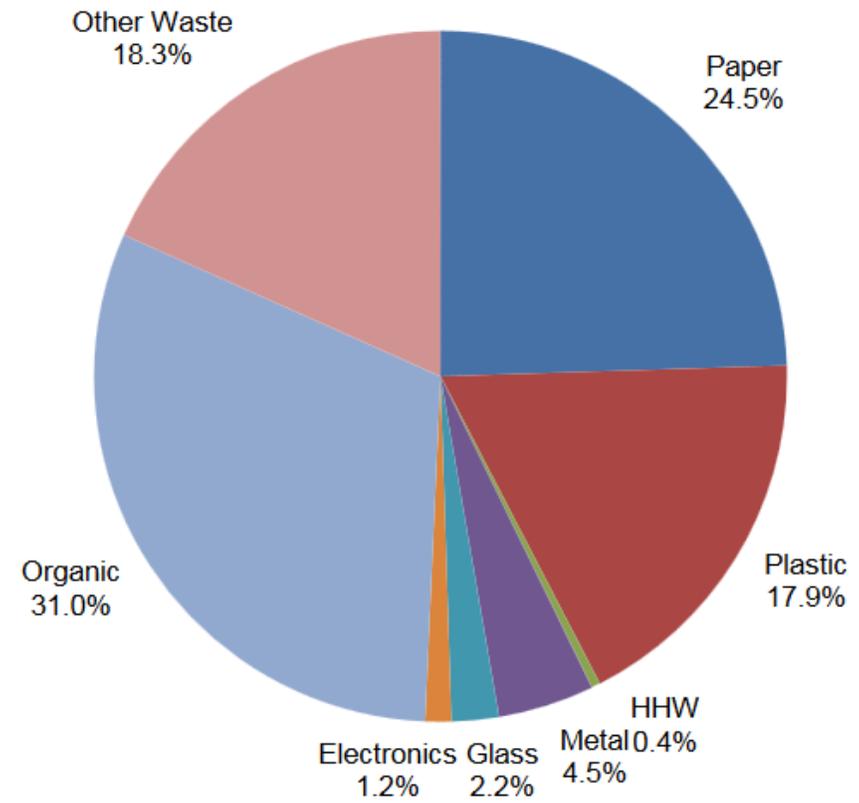
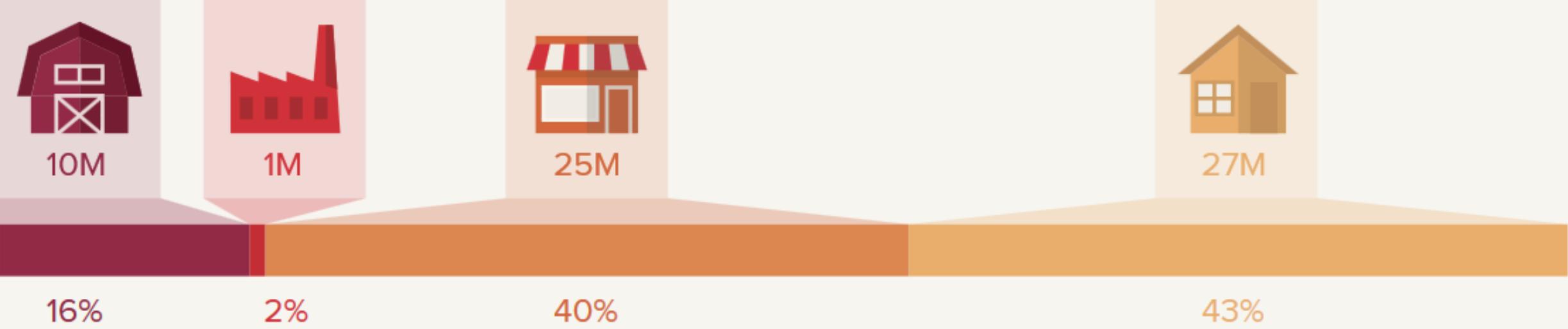


Figure ES-1-1: 2013 Statewide Characterization Results
(mean by weight)

Where is food waste happening?

FOOD WASTED BY WEIGHT - 63 MILLION TONS

Waste occurs throughout the supply chain, with nearly 85% occurring downstream at consumer-facing businesses and homes.

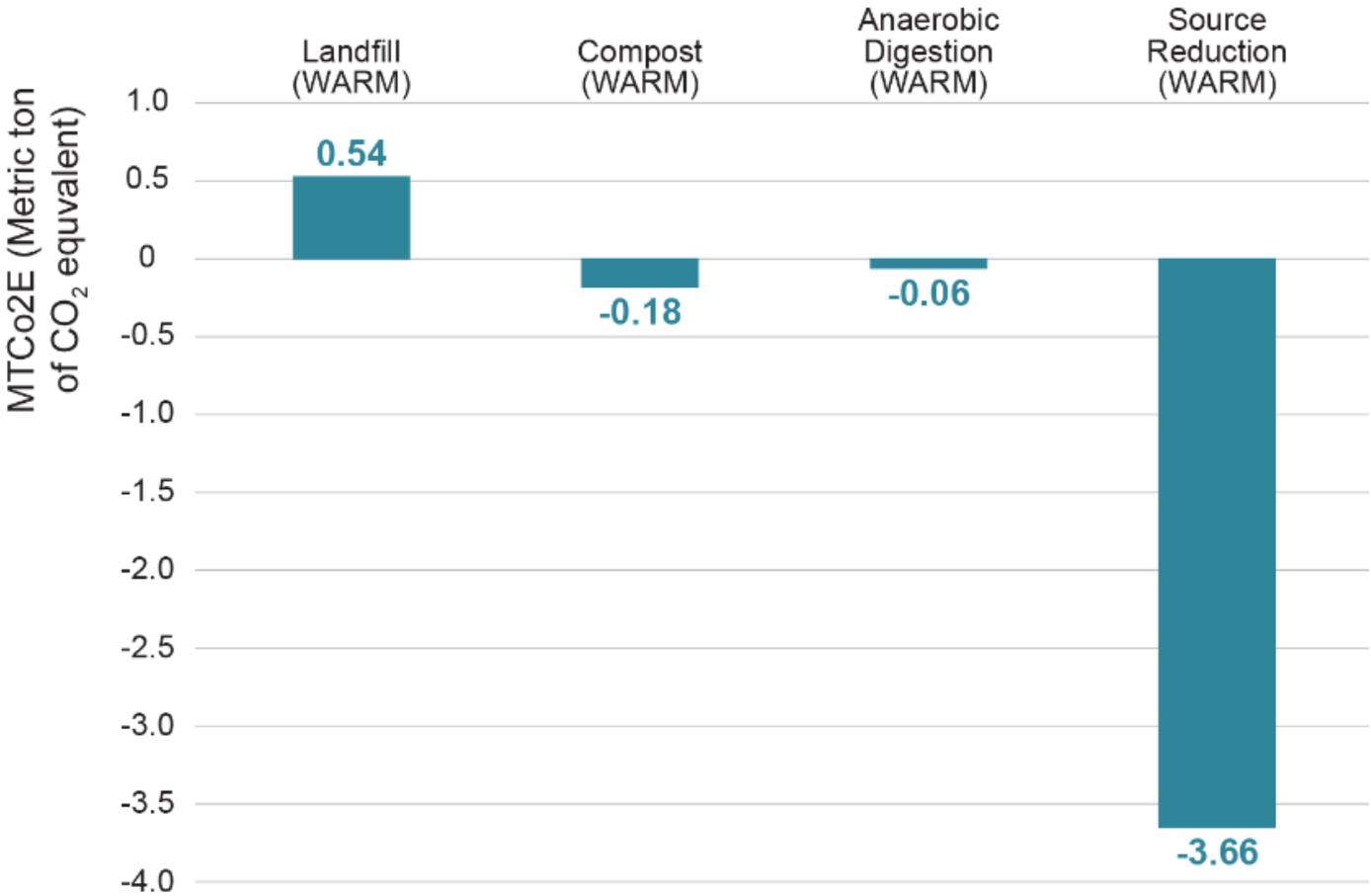


Management Strategies – EPA hierarchy

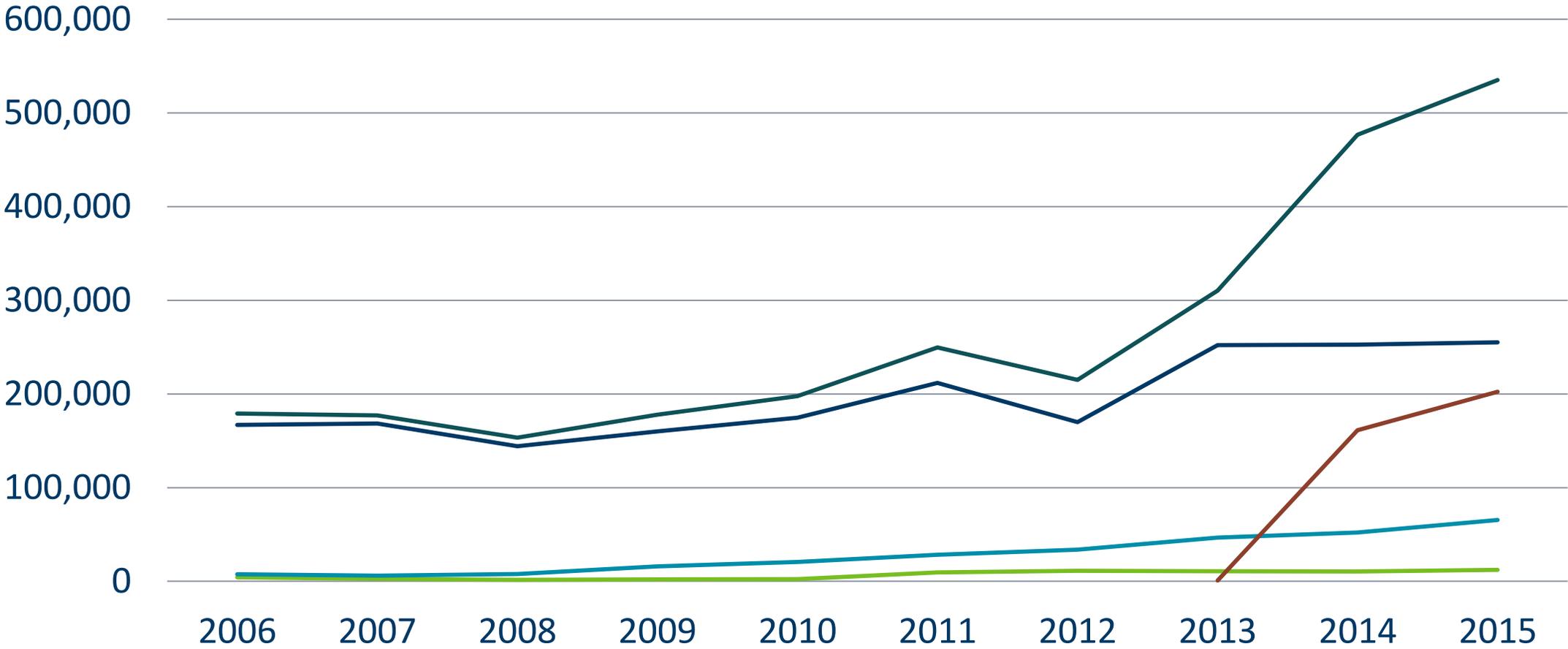


Relative GHG Impacts

Food Waste Management Activities



Organics: by management method (tons)



- Food to livestock
- Food to people
- Source-separated organics
- Yard Waste
- Total Organics

Food to Livestock

- Accepts all types of food waste. Typically from large quantity generators (grocers, cafeterias, etc)
- Farmers cook food prior to feeding animals.
- Regulated by Board of Animal Health
- Food waste must not have contaminants (plastic, utensils, etc)
- Currently limited options in Minnesota
 - ~ 13 farmers mostly in central portion of the state



Source Separated Organic Material (SSOM) Composting



- SSOM Rule was formally adopted in December of 2015
- Currently around 10 facilities in MN
- Limited transfer capacity
- Capacity in metro area is a major challenge currently
- Also ~ 115 yard waste sites and some small compost sites
- MPCA working on a capacity analysis currently



Reduce,



reuse, *then*



recycle.







FOOD WASTE: POLICY AND SYSTEMS CHANGES TO KEEP FOOD OUT OF LANDFILLS

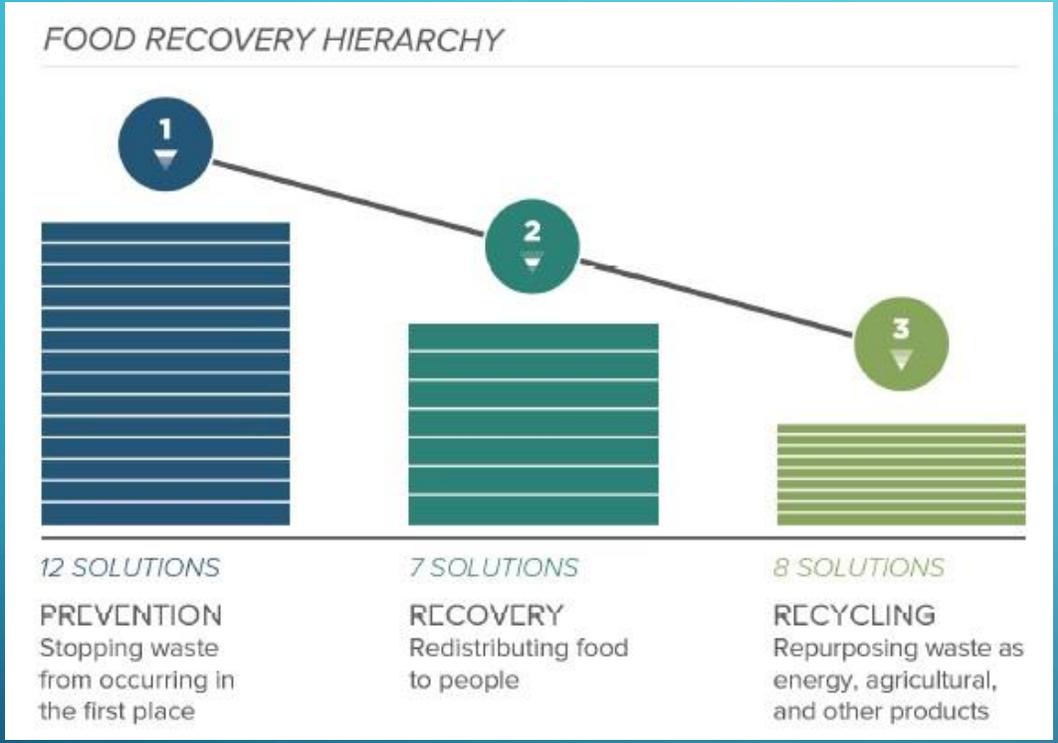
ANDREA HILLS

MSC. INTERNATIONAL FOOD BUSINESS AND CONSUMER STUDIES
SOURCING SPECIALIST – THE FOOD GROUP

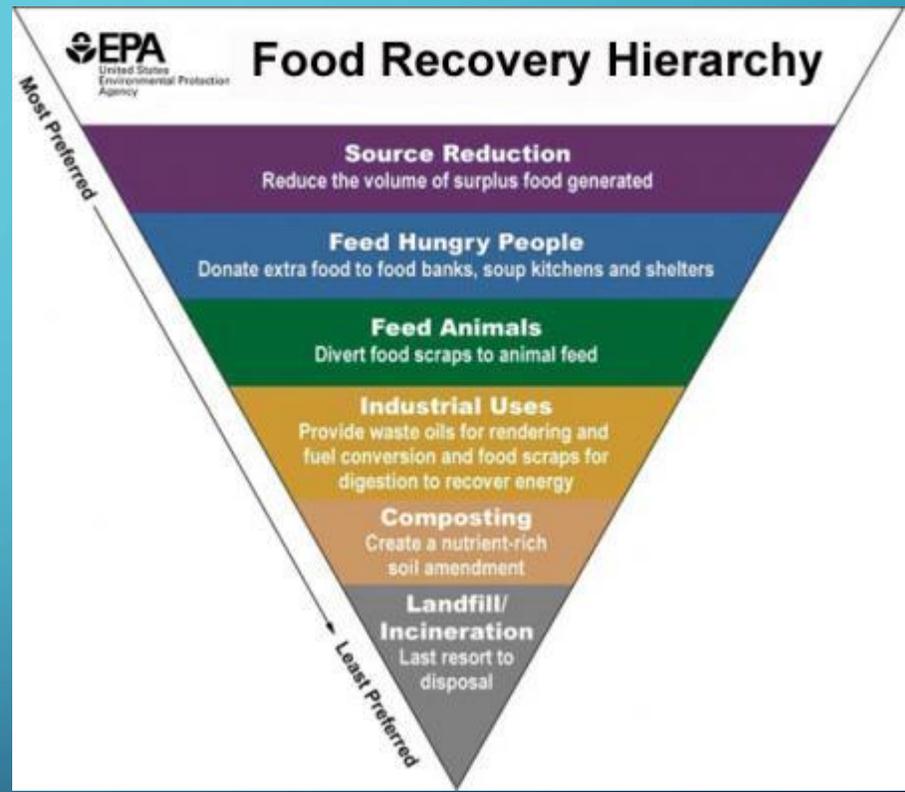
KEY SOURCES OF INFORMATION

- ReFED Report 2016
 - ReFED is a collaboration of over 30 business, nonprofit, foundation and government leaders committed to reducing food waste in the United States.
 - Roadmap to reduce food waste in the US by 20% by 2030
- Keeping Food Out of the Landfill: Policy Ideas for States and Localities
 - October 2016
 - Harvard Food Law and Policy Clinic
- The Dating Game: How Confusing Food Date Labels Lead to Food Waste in America
 - September 2013
 - Harvard Food Law and Policy Clinic and Natural Resources Defense Council





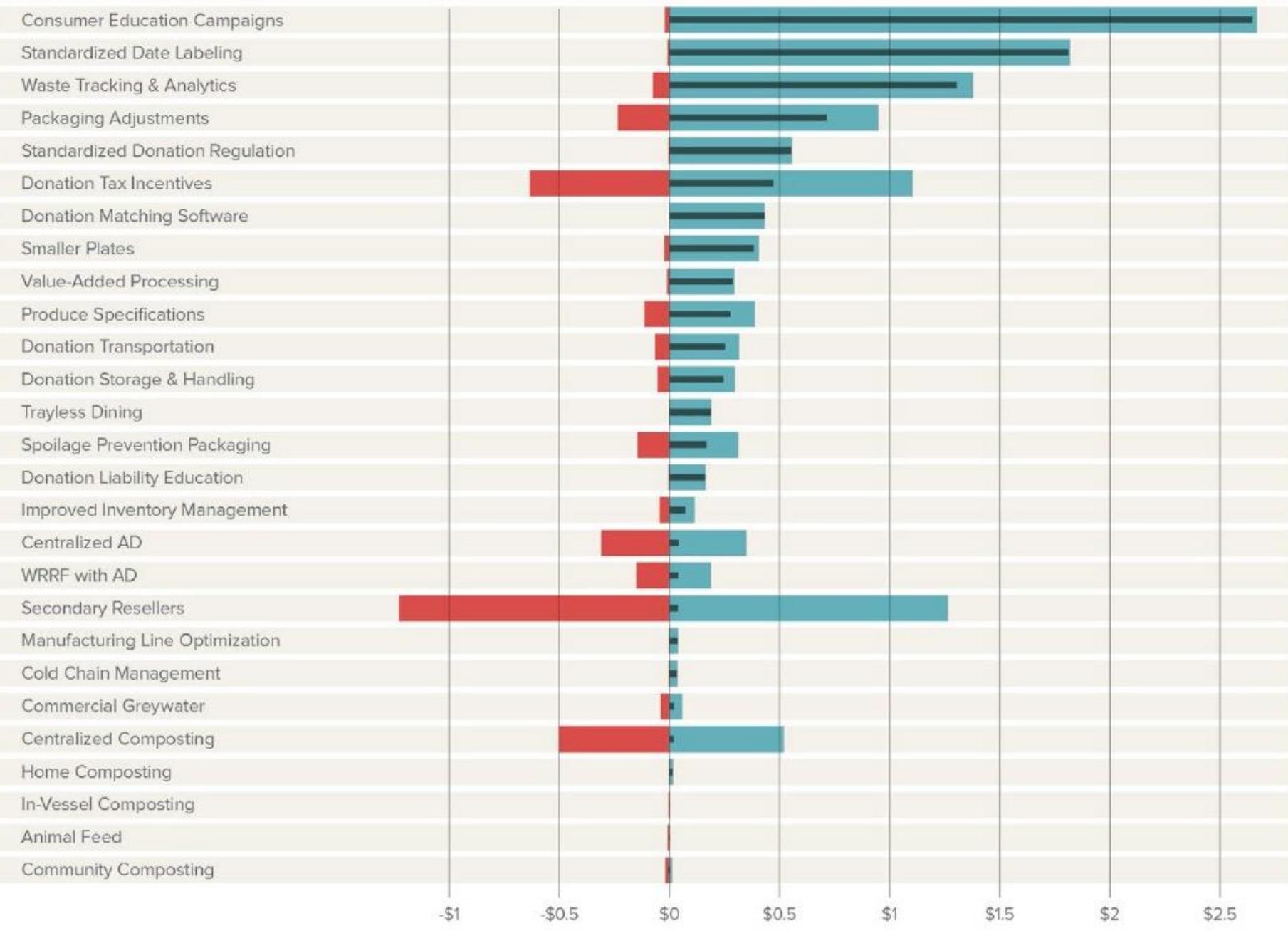
Source: ReFED Report



Source: EPA Website

ECONOMIC VALUE (\$B)

COST (upfront and operating expenses) **BENEFIT** (cost savings and revenues) **ANNUAL NET ECONOMIC VALUE**



Source:
ReFED Report

POTENTIAL AREAS FOR CHANGE

- Prevention:
 - Consumer education campaigns
 - Standardized food date labeling
- Recovery
 - Tax incentives
 - Donation liability protection
- Recycling:
 - Livestock feeding
 - Commercial Composting and Anaerobic Digestion

The background is a dark teal gradient. In the corners, there are decorative white line-art patterns resembling circuit traces or neural network connections, with small circles at the end of the lines.

PREVENTI ON

CONSUMER EDUCATION CAMPAIGNS

- Definition: Conducting large-scale advocacy campaigns to raise awareness of food waste and educate consumers about ways to save money and reduce wasted food
- Diversion Potential: 584K Tons (Highest Diversion Potential for Prevention Solutions)
- Economic Value: \$2.65B
- Who Can Take Action:
 - Consumer-facing Businesses
 - Municipalities
 - Nonprofits

SAVE THE FOOD

- Natural Resources Defense Council and the Ad Council
- National public service campaign to combat food waste
- Website has tips for cooking, preserving, storage and more
- Resources available to be adapted and used as desired



Consumer Perceptions of Date Labels

A National Survey



84% of consumers at least occasionally discard food close to or past the date on the label.



37% of consumers always or usually discard food close to or past the date on the label.

1% of consumers correctly answered that date labels are regulated only for specific foods



Millennials (age 18-34) were most likely to discard food based on the date label, while Baby Boomers (65+) were the least likely to do so.

26% of consumers don't know if date labels are federally regulated

36% of consumers think date labels are federally regulated

37% of consumers think date labels are not federally regulated



For most foods, the date label is a manufacturer's best guess as to how long the product will be at its peak quality. With only a few exceptions, food will remain wholesome and safe to eat long past its expiration date.

STANDARDIZED FOOD DATE LABELING

- Definition: Standardizing food label dates and instructions, including eliminating 'sell by' dates, to reduce consumer confusion
- Diversion potential: 398K Tons
- Economic Value: \$1.8B (most cost effective food waste prevention strategy)
- Who Can Take Action:
 - Consumer-facing businesses
 - Municipalities
 - Nonprofits

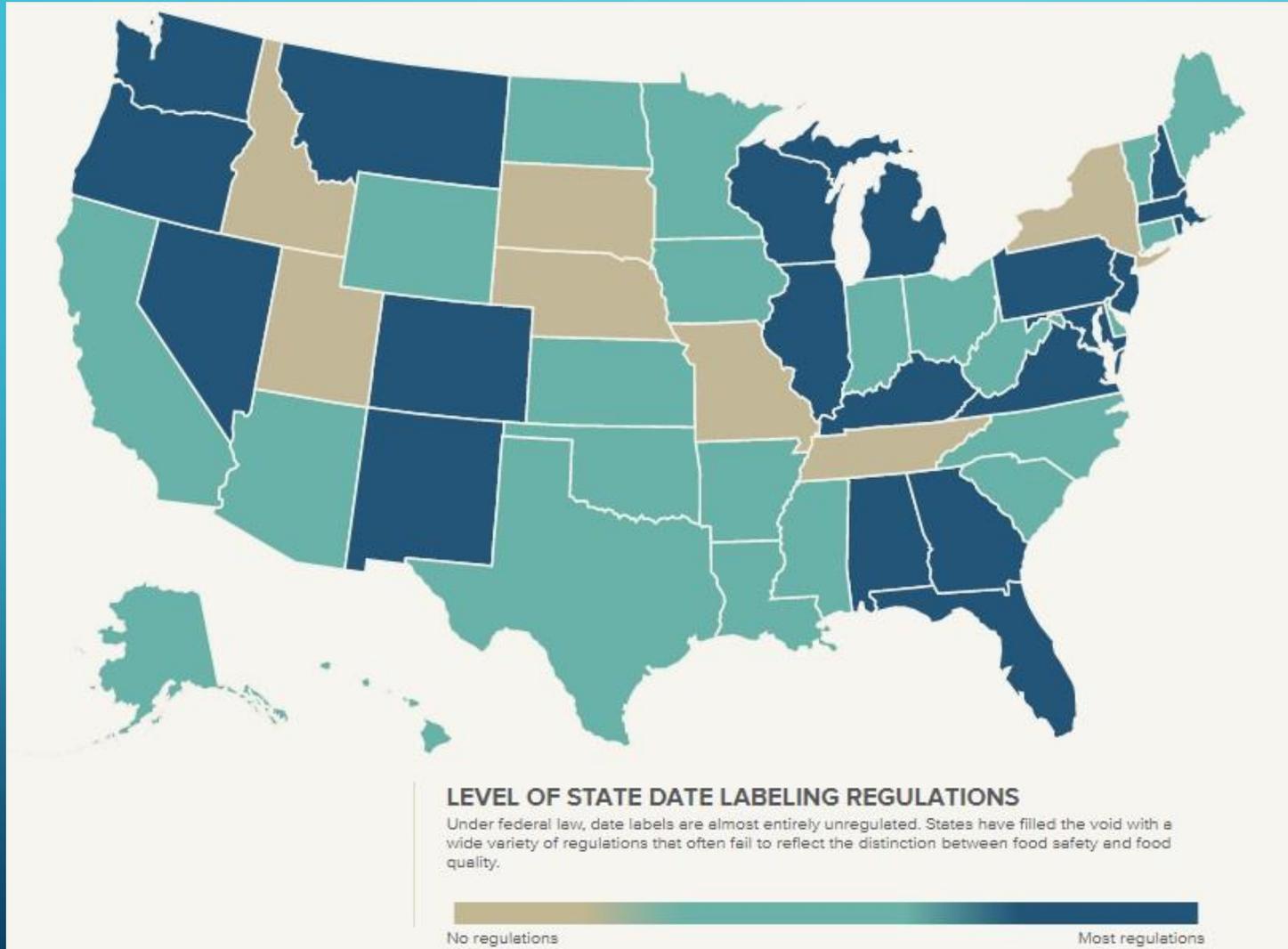


FEDERAL FOOD DATE LABELING ACT OF 2016

- Introduced in May of 2016
- Calls for standardized language for two types of date labeling
 - Quality Date (voluntary): “Best if used by”
 - Safety Date (required for some foods): “Expires on”
 - To be determined by Administering Secretaries
 - Particularly ‘ready to eat’ products
- Calls for no prohibition on sale or donation of items past quality date
 - Local governments can still determine laws regarding products with food safety dating
- Calls for consumer education around date labeling
 - Within 1 year of adoption of Act
- Calls for FDA and USDA to establish guidance for determining quality and safety dates for food products
- Has not moved beyond introduction phase in Congress



STATE LEVEL FOOD DATE LABELING



MN requires date labeling for:
Eggs
Perishables*
Shellfish

NO law that prohibits sale or donation of food past quality date.

*Defined as: “any food intended for human consumption (other than meat and poultry, frozen food, or fresh fruit and vegetables) which has a quality assurance date.”
Perishable foods having quality assurance dates of more than 90 days need not

The image features a teal-to-blue gradient background. In the corners, there are decorative white line-art elements resembling circuit traces or neural network connections, with small circles at the end of the lines. The word "RECOVERY" is centered in a large, white, sans-serif font, split into two lines: "RECOVE" on the top line and "RY" on the bottom line.

RECOVE RY

DONATION TAX INCENTIVES

- Definition: Expanding federal tax benefits for food donations to all businesses and simplifying donation reporting for tax deductions
- Diversion Potential: 383K Tons
- Economic Value: \$470M
- Meals Recovered: 638M
- Who can take action:
 - State and Federal Government
 - Research and Advocacy Organizations
 - Businesses
 - Foundations

EXISTING DONATION TAX INCENTIVES



- Standard Deduction
 - (Basis Value)
- Enhanced Deduction
 - (Basis Value x 2 OR Basis Value + ½ expected profits)
- PATH Act of 2015 made enhanced tax deductions for food donations permanent and expanded which types of business are eligible

SUGGESTIONS FOR DONATION TAX INCENTIVES

- State level tax initiatives would allow for more suitable incentives, given each state's unique agricultural and economic landscape
 - Currently only 9 states offer additional tax incentives for food donation
- Additional tax incentives for areas such as storage, transportation and labor could help offset costs associated with food donation
- Tax credits may be more appealing to donors than tax deductions
- Providing tax incentives on donations that will later be resold may increase the number of organizations that



DONOR LIABILITY PROTECTION EDUCATION

- Definition: Education for potential food donors on donation liability laws
- Diversion Potential: 57K Tons
- Economic Value: \$159M
- Who Can Take Action:
 - Nonprofits
 - Researchers
 - Businesses



FEDERAL LIABILITY PROTECTION

- Bill Emerson Good Samaritan Act
- Provides a federal floor of civil and criminal liability protections
- Donation must meet the following requirements:
 - Donated to a nonprofit in good faith
 - Food must meet all federal labeling requirements OR must be reconditioned to meet requirements
 - The nonprofit recipient organization must distribute the food to those in need
 - The ultimate recipient of the food must not pay for it

THE FOOD DONATION ACT OF 2017

- Introduced in Feb, 2017 by Reps Fudge, Newhouse, Pingree, and McGovern
- Identifies authority of the Act as USDA
- Expands liability protections to food donations sold at a reduced price
- Expands liability protections to donors who donate food directly to individuals*
- Explicitly addresses liability coverage for past-date foods

ADDITIONAL SUGGESTIONS

- Expands liability protections to mislabeled food as long as the mislabeling does not relate to food safety
- Generate more awareness around existing federal and state liability protections
- Develop 'Best Practices Guide' for food donation

* Minn. Stat. Ann. § 604A.10 does this

The background is a dark teal gradient. In the corners, there are decorative white line-art patterns resembling circuit boards or neural networks, with lines connecting to small circles.

RECYCLIN G

FOOD WASTE RECYCLING

- Currently in the US, less than ten percent of food waste is recycled
- Options for recycling:
 - Livestock Feeding/Animal Feed Processing
 - Diversion Potential: 49K Tons
 - Economic Value: \$-3M
 - Commercial Composting (roughly 500 sites nationwide)
 - Diversion Potential: 5M Tons
 - Economic Value: 18M
 - Anaerobic Digestion (roughly 40 facilities nationwide)
 - Diversion Potential: 1.9M Tons
 - Economic Value: \$40M

SUGGESTIONS FOR FOOD WASTE RECYCLING

- Livestock Feeding:
 - Eliminate any laws that ban feeding food scraps to animals
 - Eliminate laws requiring heat treatment of non-animal derived food waste
 - Encourage partnerships between food waste generators and local farms

• Commercial Composting

- Target areas with diversion mandates
- Focus on converting more commercial generators to accept food waste



• Commercial Anaerobic Digestion

- Further development of AD in agricultural settings
- Improve markets for digestate products/biogas
- Offer more funding opportunities for AD projects



REDUCING FOOD WASTE IN OUT-OF-SCHOOL TIME: BEST PRACTICES

SUSAN R. WEISMAN, SENIOR STAFF ATTORNEY

MINNESOTA FOOD SUMMIT, OCTOBER 27, 2017



PUBLIC HEALTH
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Healthy Eating | Active Living



10/27/2017

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OVERVIEW

- Importance of addressing food waste in Out-of-School Time (OST)
- How to tackle food waste in ways that benefit the children served
- Evidence-influenced policies
- Implementation challenges & strategies
- Recommendations for reducing food waste in food service operations
- Examples of best practices drawn from programs leading the way
- Links to resources

RATIONALE

FOR REDUCING FOOD WASTE IN OUT-OF-SCHOOL TIME

- ✓ **Food waste affects all parts of OST food operations**
- ✓ **Taking active steps to reduce food waste benefits the children served**
- ✓ **Money saved from reducing food waste can be used to improve food quality**
- ✓ **High-quality meals & snacks can improve participation rates & expand program reach and impact**
- ✓ **Children who participate can learn about food production, composting, recycling, & healthy eating**

FEDERAL CHILD NUTRITION PROGRAMS



Participating programs must comply with all applicable USDA nutrition standards & portion sizes for food served.

Child & Adult Food Care Program (CACFP) – At-Risk Afterschool

- Up to one free snack & one free meal per child in programs in attendance areas where at least 50% of children qualify for free or reduced-price school meals
- During the school year, including weekends & holidays

National School Lunch Program (NSLP) – Afterschool Care Snack Service

- School district operated or sponsored programs
- One snack may be served on regular school days

Summer Food Service Program (SFSP)

- Open sites – free meals & snacks for all children in a low-income area
- Enrolled sites – free meals for all children enrolled in programs where at least 50% of children qualify for free or reduced-price school meals
- Camps – reimbursable free meals based on an individual child's eligibility

OST FOOD OPERATIONS

Conducting Assessments & Planning for Change

Ordering, Purchasing & Procurement

Successful Serving

Food Re-use: Storage & Handling of Uneaten Items

Food Donations

Waste Diversion: Composting

Ongoing Monitoring

BEST PRACTICES

CONDUCTING ASSESSMENTS & PLANNING FOR CHANGE

Step 1 – Identify options for diverting food waste

Step 2 – Review your current practices

- What food is being wasted?
- How much?
- Why?
- When?

Step 3 – Analyze and report your results to:

- Pinpoint problems
- Establish a baseline for planning
- Help gauge future success

Disposal & Diversion Options

Hauling costs & services

Food recovery

Supplies & logistics

BEST PRACTICES

ORDERING, PURCHASING & PROCUREMENT

AT SITES THAT PREPARE MEALS & SNACKS:

- **Focus on quality** – Whole fruits & veggies; nutrient-dense foods; seasonal produce
- **Engage children in menu planning** – Survey to discover likes, dislikes
- **Offer children choices** – May increase consumption
- **Assign fun names to food items & market / promote the menu**
- **Track popular & unpopular items and report this information to vendors**
- **Coordinate with other programs using the same vendor** – Compare notes and work together to communicate concerns and craft solutions

Food Prep & Ordering Tips

- **Order frequently to maximize fresh produce**
- **Order only what is needed, when it is needed** – using “just-in-time” ordering system
- **Serve made-from-scratch food in small batches**
- **Prepare food shortly before serving time**
- **Re-purpose leftovers, when able**
- **Use FIRST IN, FIRST OUT (FIFO) rotation system**

BEST PRACTICES

ORDERING, PURCHASING & PROCUREMENT

AT SITES THAT ORDER MEALS & SNACKS THROUGH A SPONSOR OR VENDOR:

- Choose a high-quality vendor that offers ordering flexibility, e.g., adjusting orders when program enrollment fluctuates
- Adjust order amounts frequently – order daily, if possible
- Maintain accurate attendance records & daily counts
- Use First In, First Out (FIFO) inventory system

Criteria for Selecting a Food Vendor

- Does the vendor meet USDA nutrition standards & guidelines?
- Does the food delivery system ensure timely arrival?
- Will the vendor let a program order daily? Weekly?
- Does the vendor supply high-quality meals and snacks?
- Does the vendor have a food waste reduction plan in place?

BEST PRACTICES SUCCESSFUL SERVING



Veggie names: Cornell University, Smarter Lunchroom Movement, <https://www.smarterlunchrooms.org/scorecard-tools/print-your-own-smarter-lunchrooms-signs-and-labels>

FOOD WASTE REDUCTION STRATEGIES

- Use OFFER vs. SERVE (OVS) for meal programs
 - **Note: USDA does not allow OVS for snack program**
- Provide choices – encourage children to try new things
- Post signs to describe menu items
- Use fun names – ***X-RAY VISION CARROTS***
- Schedule physical activity before meals and snacks
- Schedule a generous amount of time (20-30 min.) to eat
- Confer often with vendor to ensure choice and quality
- Use your past order history to adjust amounts ordered

BEST PRACTICES

FOOD RE-USE: STORAGE & HANDLING OF UNEATEN ITEMS

Compliance with policies is essential:

- USDA
- State & local health, sanitation, and food safety codes
- Sponsor and vendor requirements

Three effective strategies (if policies allow):

- Share tables – very popular & successful
 - USDA allows for Summer Food Service Program (SFSP)
- Children may take home one item
 - USDA allows for CACFP At-Risk Afterschool and SFSP
 - A leftover from one's meal or a share table item
- Transfer extra meals to a site that has a shortage



BEST PRACTICES

FOOD RE-USE: STORAGE & HANDLING OF UNEATEN ITEMS

Share Table Implementation Steps:

- Follow all federal, state, local requirements
- Establish clear guidelines re: items to be shared
- Establish strict food safety guidelines to avoid foodborne illnesses
- Ensure that share table set-up follows food allergen policies and protocols
- Supervise the share table at all times
- Promote share table to children and families



BEST PRACTICES

FOOD DONATION

FOOD CAN SOMETIMES BE DONATED TO NONPROFIT CHARITIES – FOOD BANKS & HOMELESS SHELTERS:

- Must exhaust other ways to reduce waste and follow all federal, state & local health and sanitation codes
- **Bill Emerson Good Samaritan Food Donation Act** – offers federal protection from civil and criminal liability when donating wholesome-appearing food, in good faith, to feed the needy; states may offer more protection
- Plan carefully – ensure food is stored properly, supplies are stocked, laws are met, and someone is responsible for the logistics
- Arrange for collection and distribution through local food recovery groups or establish a direct relationship with a food bank, shelter, or another organization
- Check with your local health department to verify what foods can be donated, *e.g., yogurt, milk, fruit cups, produce*

A few words about peer pressure and building a caring culture about food waste

Building a caring culture is a key to success ...

but take care to ensure children are not:

- Pressured to donate their food to please others
- Taking food they do not plan to eat, simply to donate it
- Prevented from eating foods

BEST PRACTICES

WASTE DIVERSION - COMPOSTING



Composting is a popular strategy for reducing food waste and for teaching children about nutrition, gardening, and ecological sustainability.

COMPOSTING IMPLEMENTATION STEPS:

- Involve students in planning and implementation
- Establish collection points, e.g., kitchen & eating areas
- Decide how often to collect food waste
- Decide how to transport waste from collection points and who will transport it
- Decide who will be responsible for keeping the collection system clean and orderly – implement a plan and use signage
- If composting on-site, develop a management plan
- Seek resources from city/county, garden clubs, etc.

BEST PRACTICES MONITORING

WITH CAREFUL UPFRONT PLANNING AND IMPLEMENTATION, FOOD WASTE REDUCTION EFFORTS CAN BE INTEGRATED INTO OVERALL PROGRAMMING

- **Set clear goals**
- **identify who will be responsible for maintaining the program**
- **Develop strategies for educating children and staff year-to-year**
- **Provide new staff with written instructions and resources, and teach lessons learned**
- **Track the volume of food waste prevented or composted and use for assessments**
- **Make use of online tools, like meal-tracking software, to document waste in real time**
- **Document all program successes**

**ASSESS.
EVALUATE.
MEASURE.
SUSTAIN.**

TAKE-AWAYS

EIGHT STEPS TO SUCCESSFUL FOOD WASTE REDUCTION IN OST

1. Address root causes of food waste through accurate meal counts and adjustments to food orders.
2. Improve the quality of food served by sourcing local produce and reporting unpopular items to your vendor or sponsor.
3. When preparing your own meals or snacks, only order what you need and use the FIFO inventory system.
4. Serve meals that offer children choices, and use *Offer-versus-Serve* (OSV), if permissible.
5. Market healthy foods with fun names, signage, and menu postings.
6. If allowed, use a sharing table and let children take one food item home.
7. If allowed and if it is safe to do so, donate excess food.
8. Compost food waste on-site or through a community partner.



*“We continue to emphasize trying new foods and not wasting food taken. By emphasizing [this],...it is becoming a part of the culture at our youth centers.”
– OST program leader*

RESOURCES

FOR ADDITIONAL RESOURCES, PLEASE SEE THE WEB LINK TO THE FOOD WASTED IN OST BEST PRACTICES GUIDE, BELOW.

1. OFF. OF SOLID WASTE & EMERGENCY RESPONSE, U.S. EPA, EPA-530-F-15-003, A GUIDE TO CONDUCTING AND ANALYZING A FOOD WASTE ASSESSMENT (2014), https://www.epa.gov/sites/production/files/2015-08/documents/r5_fd_wste_guidebk_020615.pdf.
2. U.S. EPA, EPA-909-K-14—002, REDUCING WASTED FOOD AND PACKAGING: A GUIDE FOR FOOD SERVICES AND RESTAURANTS (2015), https://www.epa.gov/sites/production/files/2015-08/documents/reducing_wasted_food_pkg_tool.pdf.
3. THE GREEN TEAM, MASS. DEP'T OF ENVTL PROTECTION, FOOD WASTE DIVERSION GUIDE FOR SCHOOLS, [http://thegreenteam.org/wp-content/uploads/2015/08/Food_Waste_Diversion_Guide_for_Schools_\(1\).pdf](http://thegreenteam.org/wp-content/uploads/2015/08/Food_Waste_Diversion_Guide_for_Schools_(1).pdf).
4. EPA, SUSTAINABLE MANAGEMENT OF FOOD (Webpage), <https://www.epa.gov/sustainable-management-food>.
5. IOWA, DEP'T OF EDUC., FOOD WASTE REDUCTION IN SCHOOL MEALS, <https://www.educateiowa.gov/pk-12/nutrition-programs/quick-links-nutrition/learning-tools-nutrition/food-waste-reduction-school>.
6. FOOD & NUTRITION SERVS., USDA, SP41-2016, SFSP 15-2016, THE USE OF SHARE TABLES IN CHILD NUTRITION PROGRAMS (June 22,2016), <https://www.fns.usda.gov/use-share-tables-child-nutrition-programs>.

Web links to additional resources:

1. Reducing Food Waste in Out-of-School Time, BEST PRACTICES GUIDE, a joint publication project of NRPA & PHLC, <http://www.publichealthlawcenter.org/resources/reducing-food-waste-out-school-time-best-practices-2017>
2. K-12 Schools Reducing, Recovering, and Recycling Food Waste Webinar, USDA, https://www.usda.gov/oce/foodwaste/resources/K12_schools.html.
3. U.S. Food Loss and Waste Challenge, USDA, Off. of the Chief Economist, <https://www.usda.gov/oce/foodwaste/Challenge/index.htm>.
4. Food Recovery Challenge, EPA, Sustainable Mgt. of Food, <https://www.epa.gov/sustainable-management-food/food-recovery-challenge-frc#whocanjoin>.

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Reduce

Reuse

Recycle

THANK YOU!

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