



School Food Waste Reduction and Recovery



**Farm & Sea to School
Christine Beling
United States
Environmental
Protection Agency**

Wasted Resources

- **40% of food produced ends up in landfill**
- **Production of food waste uses**
 - 25% of fresh water supply
 - 19% of fertilizer use
 - 18% of U.S. cropland



USEPA Advancing Sustainable
Materials Management: Facts
and Figures Report; ReFED

Societal Costs

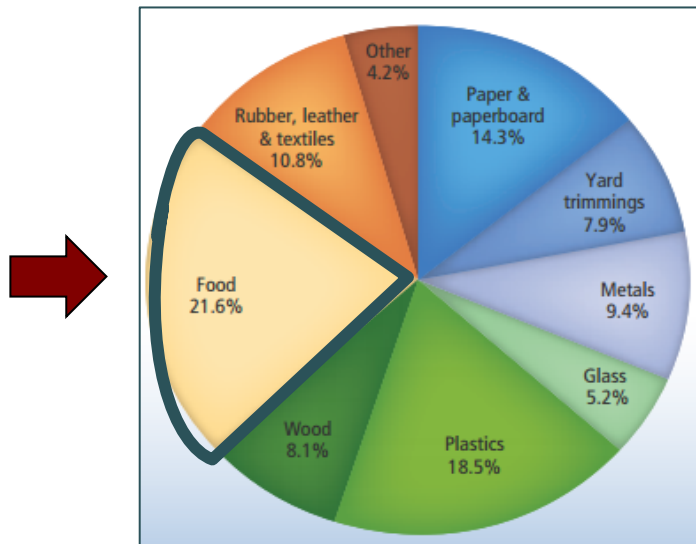
- **1 in 8 Americans are food insecure**
 - 42 million Americans
 - 5 million elderly
 - 1 in 6 children



Source: ReFED; Feeding America, ERS-USDA,

Environmental Costs

- Over 20% of our landfill material is food waste
- Decomposing food produces methane gas



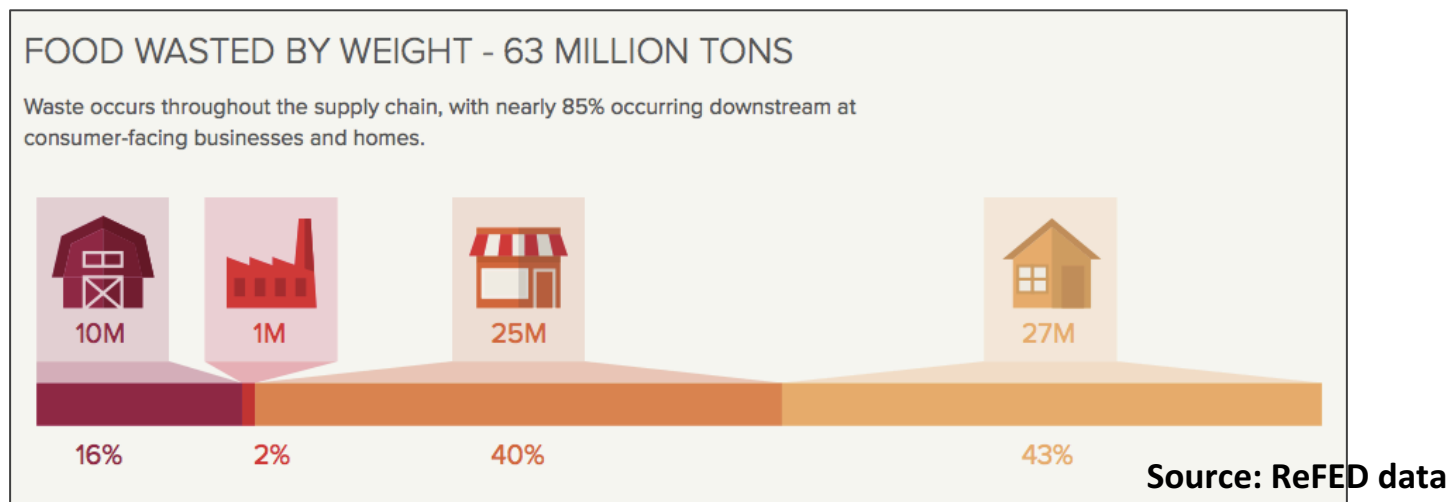
USEPA Advancing Sustainable Materials Management: Facts and Figures Report

National Goal



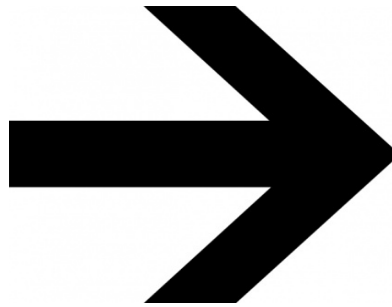
Food Waste from Farm to Table

- 40% at consumer facing and institutional level
- Prepared food waste is on the rise



Reaching the 2030 Goal

Baseline:
218.9 pounds
per person



Goal:
109.4 pounds per
person



A Call to Action by Stakeholders

launched 6/28/16

<https://www.epa.gov/sustainable-management-food/call-action-stakeholders-united-states-food-loss-waste-2030-reduction>



Sustainable Management of Food

Contact Us Share

You are here: [EPA Home](#) » [Sustainable Management of Food](#) » [A Call to Action by Stakeholders: United States Food Loss & Waste 2030 Reduction Goal](#)

A Call to Action by Stakeholders: United States Food Loss & Waste 2030 Reduction Goal

The federal government, led by EPA and the United States Department of Agriculture (USDA), is seeking to work with communities, organizations and businesses along with our partners in state, tribal and local government to reduce food loss and waste by 50 percent over the next 15 years. As an important stride in reaching the 2030 food reduction goal, EPA hosted the Food Recovery Summit where organizations across the food chain, from manufacturers to consumers, met to discuss the key challenges in reducing food loss and waste. Based on this summit and continued input, EPA, USDA and stakeholders from across the food chain have developed a collaborative Call to Action, which identifies current opportunities and challenges in reducing food loss and waste in the United States.

On this page:

- [Objectives](#)
- [Key Activities Identified by Stakeholders](#)
- [Opportunities and Actions Identified by Stakeholders](#)

Helpful Links

- Join the [U.S. Food Waste Challenge](#), and post activities/objectives your organization will undertake in the next year to reduce, recover, and recycle food waste in the United States.
- Join the [Food Recovery Challenge](#) and benefit from EPA's technical assistance to set specific quantitative food-waste goals and attain them!

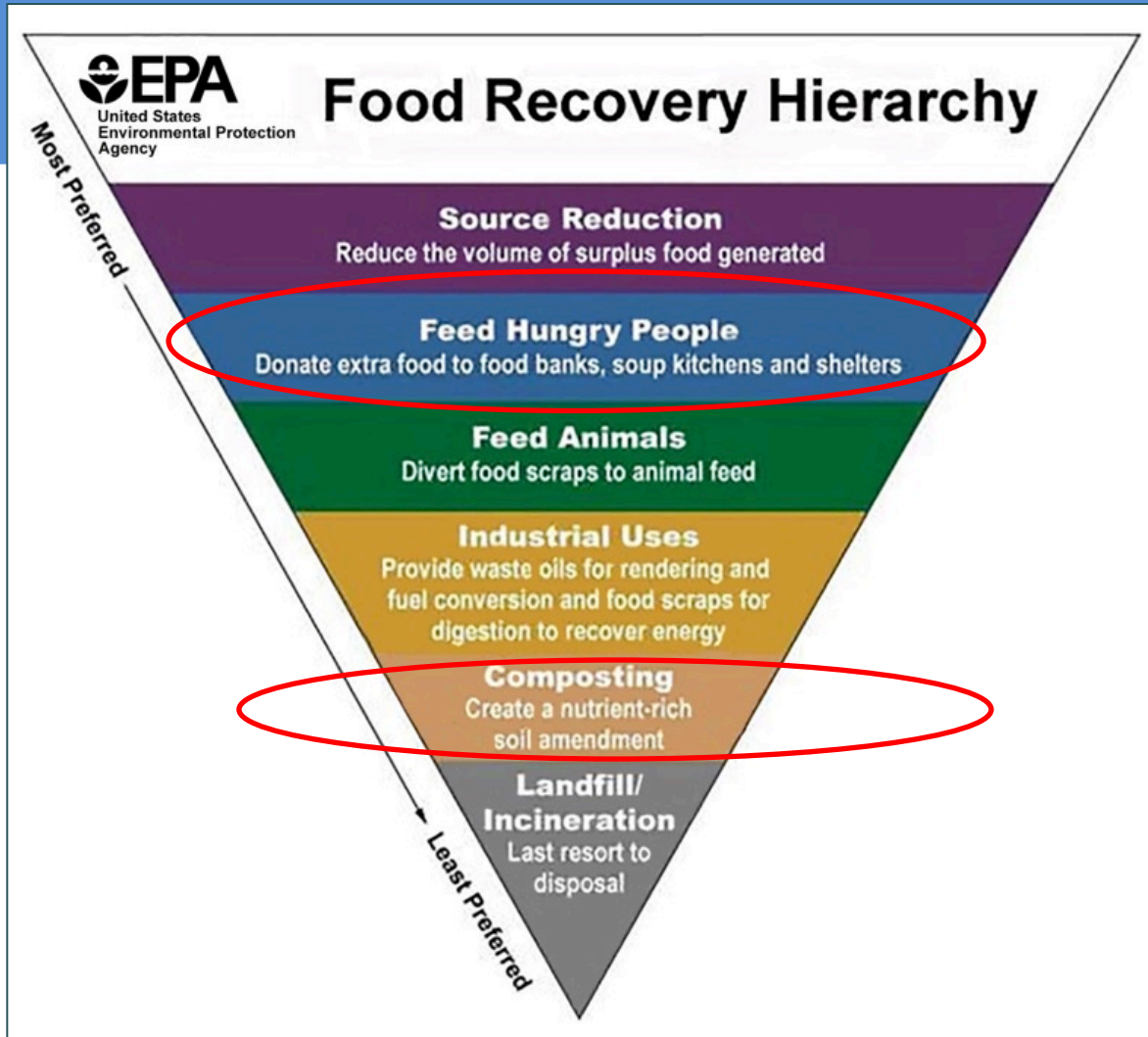
EPA's Food Recovery Challenge



Massachusetts Partners

Signature Breads
Big Y Foods, Inc.
BJ's Wholesale Club
Boston Organics
Whole Foods Market North Atlantic Region
Boston Green Tourism
Lord Jeffery Inn
Saunders Hotel Group: Comfort Inn & Suites
Saunders Hotel Group: The Lenox
Andover Public Schools
Katharine Lee Bates Elementary School
Westford Academy High School
City of Cambridge, Department of Public Works,
Recycling Division
Berkshire Health Systems, Berkshire Medical Center
Beth Israel Deaconess Medical Center
Boston Medical Center
Dana-Farber Cancer Institute
Fairview Hospital, Berkshire Health Systems
Raytheon Company & Eurest

Babson College
Boston College
Clark University
College of the Holy Cross
framingham State University
Harvard University
Lesley University
Massachusetts Institute of Technology
Massachusetts Maritime Academy
Northeastern University
Salem State University
Sodexo at Assumption College
Sodexo at Brandeis University
Sodexo at Emerson College
Sodexo at Merrimack College
Sodexo at Nichols college
Sodexo at University of Massachusetts Boston
University of Massachusetts Amherst (Physical Plant)
University of Massachusetts Dartmouth
University of Massachusetts-Lowell
Wellesley College
Worcester State University



Source: US Environmental Protection Agency

Liability Protection Laws

- **Federal:** Bill Emerson Good Samaritan Food Donation Act (1996)
- **State:** Massachusetts' Good Samaritan Food Donation Act



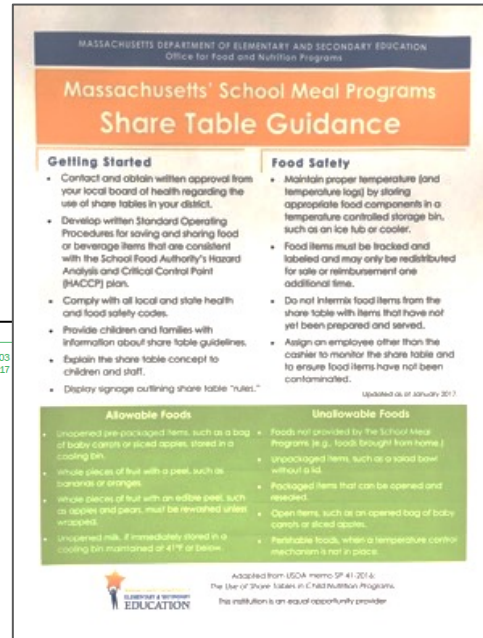
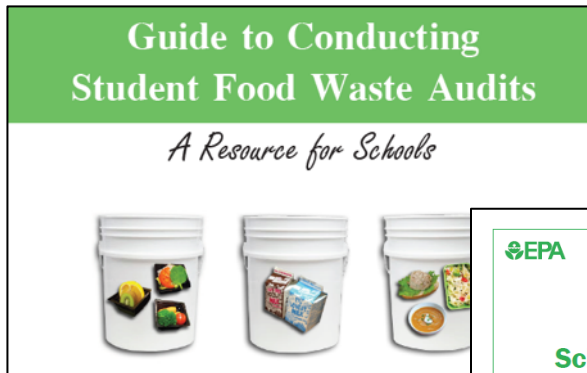
Legal Fact Sheet for Massachusetts Food Donation: Liability Protections - July 2015

Businesses and nonprofits that provide or receive donated food are generally well-protected by laws designed to provide immunity from liability related to such donations. The federal Bill Emerson Good Samaritan Food Donation Act provides liability protection for food donors; and Massachusetts' Good Samaritan law provides additional liability protection to businesses in the state.

https://recyclingworksma.com/wp-content/uploads/2015/07/Legal_Fact_Sheet_-_MA_Liability_Protections-FINAL_RWF.pdf

Guidance is Available

- EPA
- USDA – Share Table
- Local Health Dept



Town of Wellesley, Massachusetts
School-based Food Rescue Program
Standard Operating Procedures and Agreement

Agreement Authors:

Whitsons Food Services – Matt Delaney
Wellesley Director of Public Health – Leonard Izzo
Wellesley Sustainable Energy Committee – [Alison Cross](#),
Marybeth Martello

Partners

Bates Elementary School principal – Toni Jolley
Sprague Elementary School principal – Susan Snyder
Fiske Elementary School principal – Rachel McGregor
Wellesley Facilities Maintenance Department



ABOUT US

RECYCLE

PROGRAMS

FOOD WASTE

REUSE

BLOG/EVENTS

FOOD DONATION GUIDANCE

The RecyclingWorks in Massachusetts program has worked with state and local health officials, food rescue organizations, food banks, and organizations with established food donation programs to develop this Food Donation guidance document by holding three stakeholder meetings across the state in Springfield (March 25, 2015), Worcester (April 9, 2015) and Boston (April 29, 2015). The information gained from the meetings was used to create this guidance document.

The US EPA's Food Recovery Hierarchy ranks feeding hungry people near the top of its priorities as a strategy to reduce wasted food. Businesses should consider how each strategy on the EPA Hierarchy can contribute to a comprehensive food waste reduction plan.

This document is intended to provide guidance to organizations interested in establishing Food Donation programs by offering a broad overview of how successful food donation programs should be structured. In order to have a successful food donation program there are four major steps that must be taken:



Find A Recycler

Where

Location

All categories

or try with a Keyword

UPDATE

Upcoming Events

December 06, 2016

MassDEP C&D Subcommittee Meeting

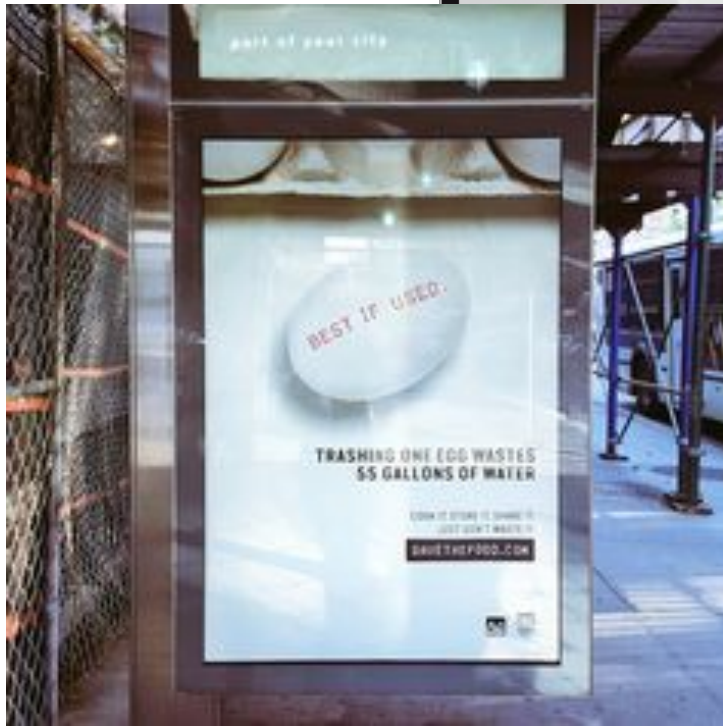
The MassDEP C&D Subcommittee is a subgroup of the Solid Waste Advisory...

December 08, 2016

What gets Wasted?

- Food waste in schools
 - Elementary = 1.13 pounds/student/week
 - Middle School = .73 pounds/student/week
 - High School = .35 pounds/student/week
 - Example:
 - 1,770 elementary school students x 1.13 lbs/wk = 2,000 lbs = 1 ton of food waste
 - 25-40% is serviceable
- The cost of hauling away food waste
 - 45% of commercial waste is food waste

Source: RecyclingWorks Ma; Vermont Agency of Natural resources



Food

- 1 - buy it with thought
- 2 - cook it with care
- 3 - serve just enough
- 4 - save what will keep
- 5 - eat what would spoil
- 6 - home-grown is best

don't waste it

Christine Beling
beling.christine@epa.gov
617-918-1792

Food Waste and Rescue Workshop

The Environmental
Protection Agency,
Food For Free, and
Wellesley Public Schools
and
Whitsons Culinary Group
December 6, 2018

Introduction

- **Wellesley Experience**
 - **Bates School Audit and Program**
 - Secretary's Award for Energy and Environmental Education
 - **Wellesley Schools and Area Colleges Food Rescue**
 - 20,000 meals donated
 - EPA's Environmental Merit Award
 - **MassBay meals distribution**
 - **WMS food waste diversion**

Secret to Success

○ Collaboration

- School Administration
- Facilities Management
- Food Services
- Health Department
- Students
- Volunteers
- An Initiative Owner

Bates School Cafeteria Audit



Town of Wellesley
SUSTAINABLE ENERGY COMMITTEE
25FDC9948XX8

Whitsons - Food Services

FMD/ Custodial Staff

Board of Health

DPW/Recycling & Disposal Facility



WPS Food Services
The Green Collaborative



Bates School Cafeteria Audit - Process

Sorting Categories



Sharing
Items



Animal
Feed



Simple
Compost



Complex
Compost



Recycle



Trash



Liquid

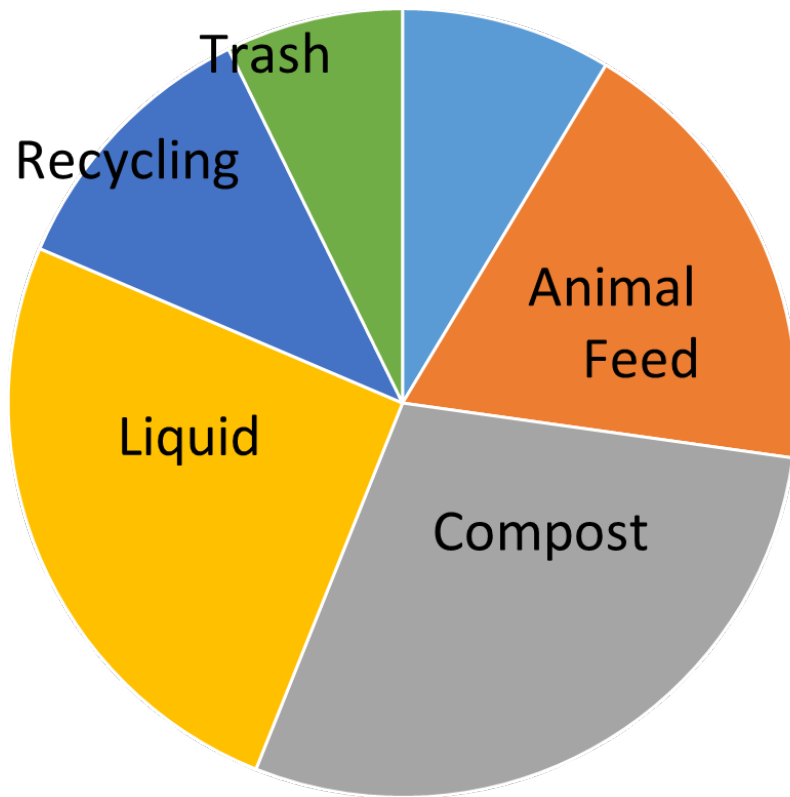


Napkin
Packets

Bates School Cafeteria Audit - Process

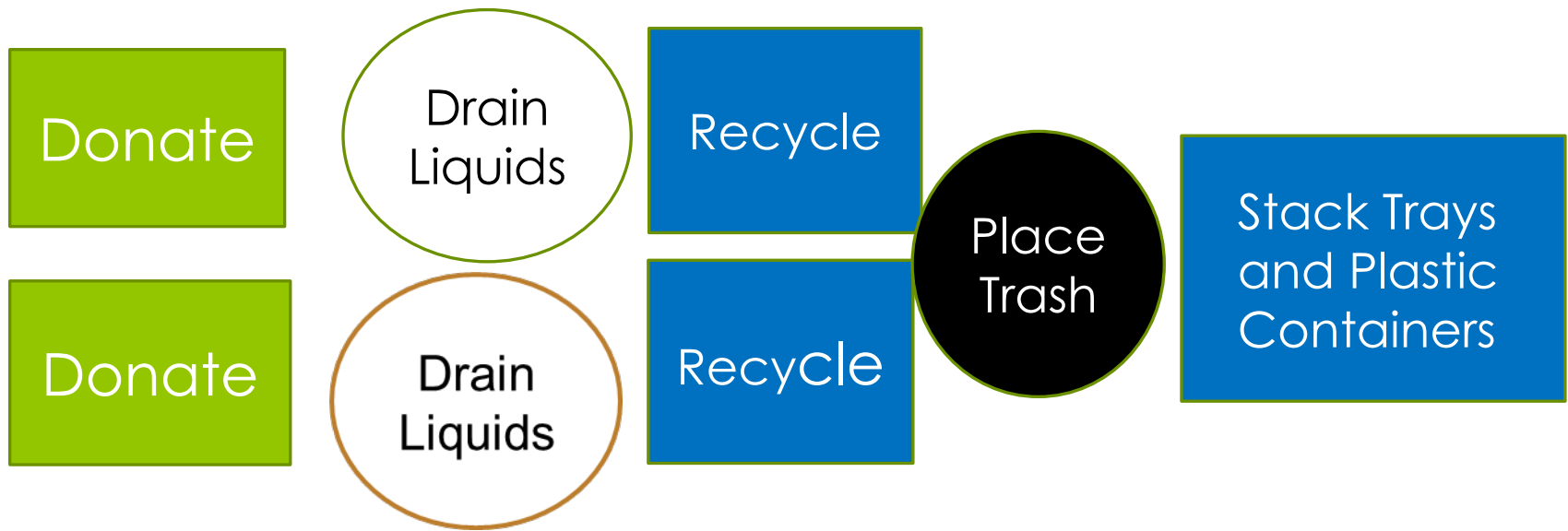


Bates School Cafeteria Audit - Results



Item	Weight (lbs/week)	%
Donation	32	9
Animal Feed	69	19
Compost	107	29
Liquid	94	25
Recycling	42	11
Trash	27	7

Bates School Recycling and Food Recovery Program



Food Rescue Process

◉ Prepared food donation

- ◉ During preparation, food scraps are composted
- ◉ Following lunch period food is “triaged” for
 - ◉ Reuse – stored in refrigerators
 - ◉ Donation - collected and chilled overnight
 - ◉ Compost - non-servable food composted
- ◉ Next day
 - ◉ Donation food bagged and frozen
- ◉ Elementary schools - bagged frozen food
 - ◉ Stored in dedicated freezers
 - ◉ Trucked back to Middle School in Cambro units
- ◉ All food is labeled and temperatures are logged
- ◉ FFF picks up in refrigerated trucks
 - ◉ Donations are logged

Food Rescue Process

o Prepared food – Do and Don't Donate

Pre-consumer foods to be included	Pre-consumer foods to be excluded
<ul style="list-style-type: none">• Lasagna• Noodles with sauce• Rice dishes• Pizza• Hamburgers• Hot dogs• Cooked vegetables	<ul style="list-style-type: none">• Salads• Dishes made with previously canned fruit• Dishes deemed past their serviceability

Food Rescue Process

◉ **Share Table donation**

- ◉ Unpackaged foods
- ◉ Collected throughout lunch period
 - ◉ Designated cooler with signage for students
 - ◉ Food from school only
 - ◉ Shared among students during lunch period
- ◉ End of lunch period, food services removes foods from home and any opened product
- ◉ Stored in designated bins in refrigerator
- ◉ Collection cooler gets wiped down
- ◉ On Mondays, transportation cooler delivered to Food Pantry by Green Schools team
 - ◉ Checks expiration dates
 - ◉ Labels cheese sticks
 - ◉ Logs donated food

Food Rescue Process

o Share Table – Do and Don't Donate

Share Table foods to be included (all from Food Services only)	Share Table foods to be excluded (includes all foods from home)
<ul style="list-style-type: none">• Single-serve milk cartons• Single-serve juice cartons• Cheese sticks (in sealed packaging)• Yogurts• Sealed fruit cups• Bagged baby carrots (provided that the bag is intact)• Apples (which will be washed)• Oranges (with peel intact)• Bananas (provided that they are not overripe)	<ul style="list-style-type: none">• School-provided items with lids that can be opened and resealed, such as fruit cups, yogurt parfaits and salad bowls• Foods from home requiring refrigeration, are perishable or potentially hazardous• Baked goods, including brownies, cookies, cupcakes• Over-ripe bananas or apples• Grapes• Packaged foods from home including granola bars, non-school-provided yogurt, hummus, any food with nuts such as Kind bars• Foods from home stored in baggies, eg cheddar cheese cubes, carrot or celery sticks or granola

Food Rescue Programs

- 58,000 food rescue programs in the U.S
 - Prepared food waste is on the rise
 - 1/3 distribute prepared meals
- 50 agencies in Greater Boston area in need of food



Food Rescue Programs

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Food For Free

- Established in 1981 to improve access to healthy food among underserved communities
- A 501(c)(3) non-profit organization
- Food rescue, farming and transportation services improve food access and availability
- Support food programs year-round and deliver food directly to individuals in need



Food For Free

Food For Free

- Last year
 - Distributed 2 million pounds of food
 - Diverted 1.8 million pounds from the waste stream
 - Partnered with more than 100 programs in Greater Boston
 - Helped to feed 30,000 people
- Produce Rescue Program
- Family Meals Program



Food For Free

Wellesley Area Schools Food Rescue

- **A collaborative process**
 - Food service providers
 - School communities
 - Sustainability groups
 - Health departments
 - Food rescue organizations



Wellesley Area Schools Food Rescue

- Wellesley Area Schools Food Rescue

Food Services	Schools (admin, FMD)	Colleges (sustainability)	Sustainability	Health	Food Rescue
Whitsons	Wellesley Middle School	Wellesley College	3R Working Group (SEC, DPW, NRC)	Health Department	Food For Free
AVI Food Systems	Bates Elementary	Babson College	Green Schools	Board of Health	Wellesley Food Pantry
Rebecca's Café	Sprague Elementary	Olin College of Engineering			
Chartwells	Fiske Elementary	Bentley University			
Sodexo		(MassBay Community College)			

Wellesley Area Schools Food Rescue

- **Prepared food donation** – Food For Free
 - Surplus frozen prepared food
- **Share Table program** – Food Pantry
 - Packaged foods in Elementary Schools
- **Distribution of frozen meals** – Food For Free
 - MassBay Community College

Implementing Food Rescue Programs

1. **Assess waste**
2. **Research food rescue options**
3. **Create a network of schools**
4. **Conduct on-site visits**
5. **Create Standard Operating Procedures**
6. **Communicate regularly with collaborators**
7. **Give the program visibility**
8. **Track progress**

Implementing Food Rescue Programs

- **Assess waste**

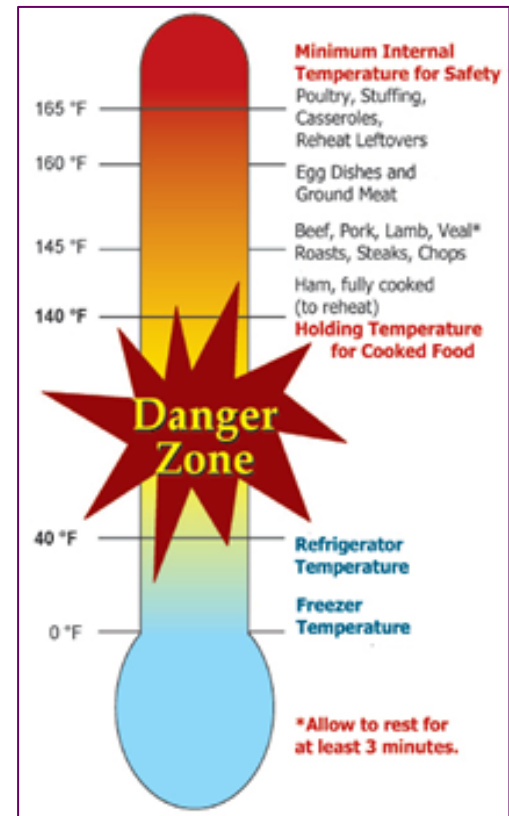
- Prepared food
 - Monitor daily food waste
 - Begin freezing food for one month
- Post-consumer
 - Bates assessment protocols – full zero waste spectrum
 - Begin collecting Share Table foods
- Keep in mind:
 - Even minimal waste rates generate valuable surplus food!

Implementing Food Rescue Programs

- **Research food rescue organizations**
 - Regional players
 - Food For Free
 - Food Link
 - Lovin' Spoonfuls
 - Rescuing Leftover Cuisine
 - Local Food Pantry
 - SpoilerAlert
 - Technology that links donors to food rescue organization
 - Support food rescue organizations

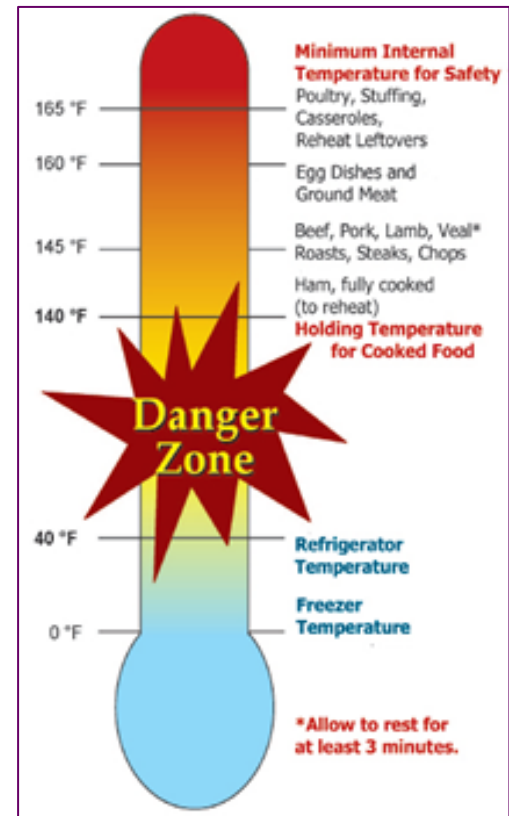
Implementing Food Rescue Programs

- **Standard Operating Procedures**
 - **Adhere to FDA Food Code**
 - **Ensure food safety**
 - Time and temperature controls
 - Hot foods kept at 140° F
 - Cold foods kept under 40° F
 - Limited time for foods outside of safe temperature zone
 - **Maintain chain of custody**
 - SafeServ trained food services staff handles collection and storage



Implementing Food Rescue Programs

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Implementing Food Rescue Programs

- **Communicate with collaborators**
 - Ideal for one person/team to “own” the process
 - Stay on top of issues, concerns, challenges
 - Visit sites, get feedback
 - Support volunteer network – Green Schools
 - Recognize hard work – food services
 - Assess local food insecurity

Implementing Food Rescue Programs

- **Promote visibility of program**
 - Among students and parents
 - Within the town government
 - Among residents
 - Neighboring communities

Pay it forward!



Implementing Food Rescue Programs

- **Track donations**
 - Dates, volumes/weight, food categories
 - Regularly scheduled donations
 - Ad-hoc donations
e.g. pre-vacation week
 - Form of feedback
 - Solidify metrics of wasted food:student



Babson College Food Rescue Program
Food Temperature Log

Dining Hall: _____
Food Services Director: _____

Date	Time	Food	Temp (F)	Notations	Initials

Temperature of **COLD FOODS** to be **41° or below**
Temperature of **HOT FOODS** to be **140° or above**

Food Waste and Rescue Workshop

o Practical Benefits

- o Cost savings
 - o Feedback loop reduces waste
 - o Reduced garbage removal and tipping costs
- o Environmental benefits
 - o Reduced methane emissions
 - o Reduced “ick factor”
- o Positive impact on students
- o Contributes to employee morale

Food Waste and Rescue Workshop

○ The Challenges

- The “sell in” to food services staff
- Development of Standard Operating Procedures
 - Health Department
 - Food Services
- Adherence to procedures to protect food safety
- Communications with food rescue organizations

Food Waste and Rescue Workshop

- **Wrap-up**
 - Questions and answers
 - Networking

**THANK YOU FOR
PARTICIPATING!**

25 Public Schools in Franklin County Compost!

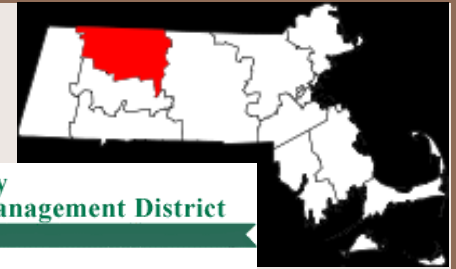
Farm to School...and Back Again!



Mass Farm to School Conf.
December 6, 2018

Amy Donovan
Program Director

Franklin County's 25 School Compost Programs!



All 35 schools recycle paper/cardboard, cans/bottles, more...

35 schools: 22 "off site" cafeteria/kitchen compost programs; 3 "on-site"; 7 pig/chicken farms (2 tiny ES left)

High Schools (6):

- **Greenfield HS**
- **Frontier MS/HS**
- **Mohawk MS/HS**
- **Pioneer MS/HS**
- **Turners Falls HS**
- **Four Rivers Charter**

Pig/ Chicken Farmers (7):

- **Mahar MS/HS**
- **Colrain, Conway ES**
- **Shelburne Falls ES**
- **Orange ES: 2**
- **Rowe ES**

Elementary Schools (16):

- **Bernardston**
- **Deerfield**
- **Erving**
- **Gill, Montague: 3 ES**
- **Greenfield: 5 ES**
- **Leverett**
- **Northfield**
- **Sunderland**
- **Swift River**
- **Whately**

Major On-Site Programs (3):

- **Franklin County Technical High**
- **Hawlemont, Warwick ES**

Recent Press

Greenfield Recorder, 2018:

- 33 of 35 County Schools Actively Composting
<https://www.recorder.com/franklin-county-schools-pitch-in-with-recycling-18773690>
- Composting Before Kindergarten
<https://www.recorder.com/Between-the-Rows-Composting-before-kindergarten-17883492>
- Editorial: Composting: Kids Have Got it Down Pat
<https://www.recorder.com/Composting-Kids-have-got-it-down-pat-19027953>

BioCycle Magazine, August 2018:

- Franklin County, Mass: Source Separating Organics Soars In Schools
<https://www.biocycle.net/2018/08/07/composting-roundup-87/>

Resource Recycling, September 2018:

- Looking Farther Afield (Organics Recycling in Rural Areas)
<https://resource-recycling.com/recycling/magazine/>

Pioneer Regional High School/Middle School Compost Program is 17 years old! (Northfield, MA)

17 waste stations around school:



Celebrating 3 years of Mohawk HS/MS compost program! March 2012 – 2015

Shelburne Falls, MA

Congratulations!



Old info,
great slide!



YOU have composted:

- **240 cubic yards,**
- **or over 60 tons,**
- **or 8 huge dumpsters of food and paper!**

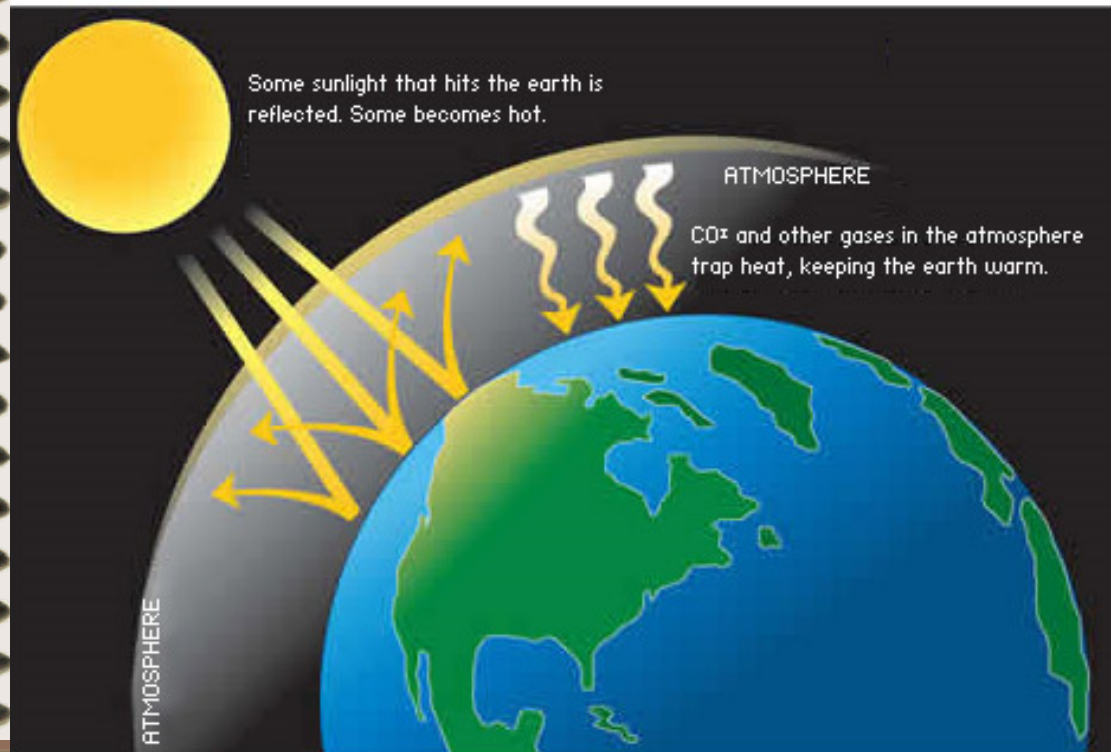
- Saved 55 metric tons of greenhouse gases*
- Saved 3,200+ bags of trash!
- Saved space in landfills
- Created soil from waste

*metric tons of carbon dioxide equivalent (MTCO₂E)

Composting and recycling help slow **Climate Change**

Climate Change is caused by greenhouse gases in earth's atmosphere.

The Greenhouse Effect



Greenhouse Gases:

- Carbon Dioxide
- **Methane** (food waste in landfills)
- Nitrous Oxide

- When organically based materials (“organics”) such as food waste (and paper) decay in a landfill, **methane** is released.
- **Methane** is a greenhouse gas **23 times** more powerful than carbon dioxide.



**Methane pipe at
a landfill**

Why doesn't *composting* release methane? Because oxygen is part of the composting process. There is *no* oxygen in a landfill.

Windrow turner at Martin's Farm turns/stirs windrows.



Windrows at Martin's Farm, Greenfield, MA

Martin's Farm in Greenfield accepts organics from:

25 public and private schools, Umass, colleges;

municipal organics programs - Greenfield, Leverett, Northfield, Bernardston (4 other programs go to other sites);

restaurants - Shelburne Falls Compost Collaborative;

markets - co-ops, Big Y stores, Fosters' Market

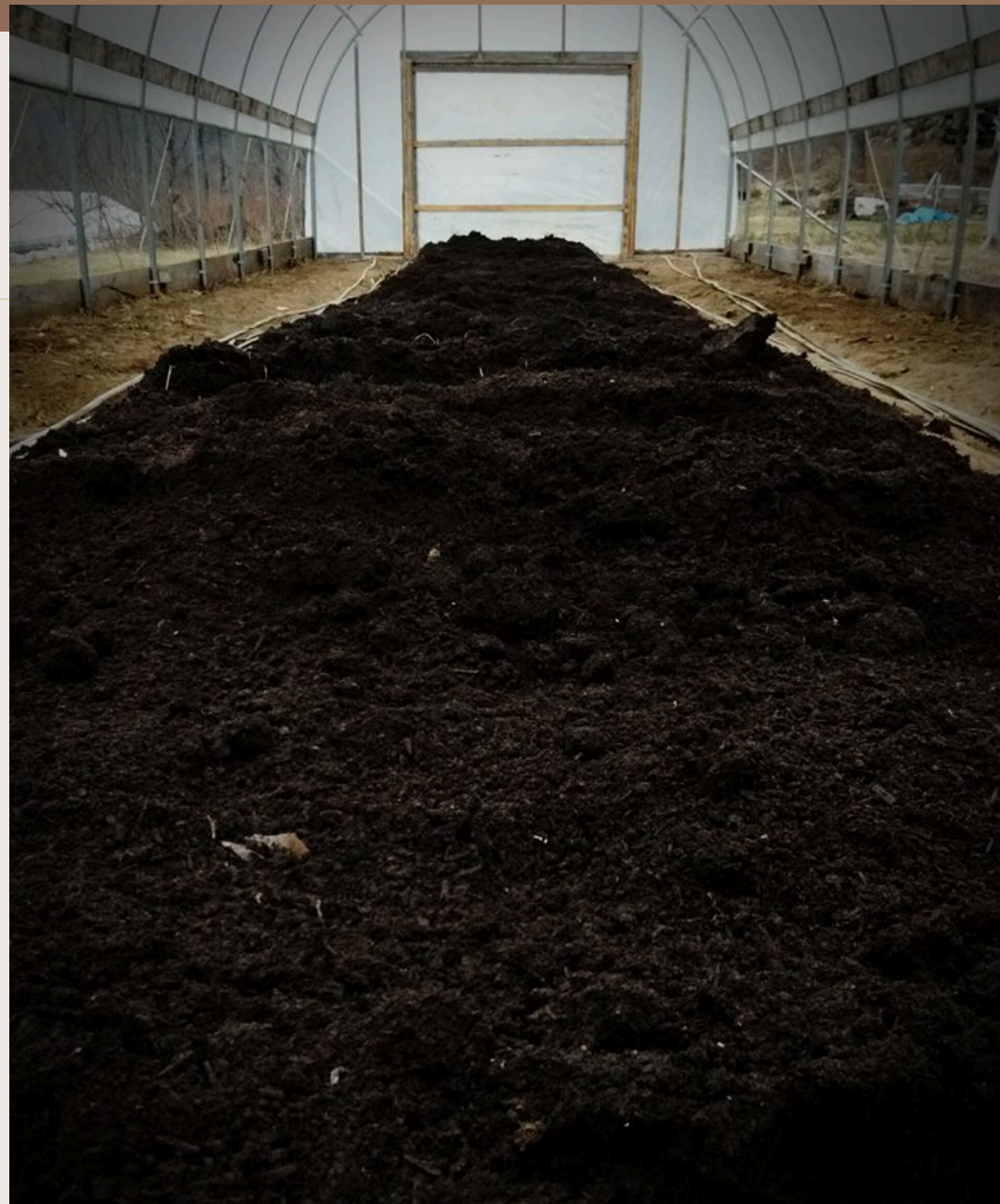
public events, food factories...

So, Farm to School and back to Farm...

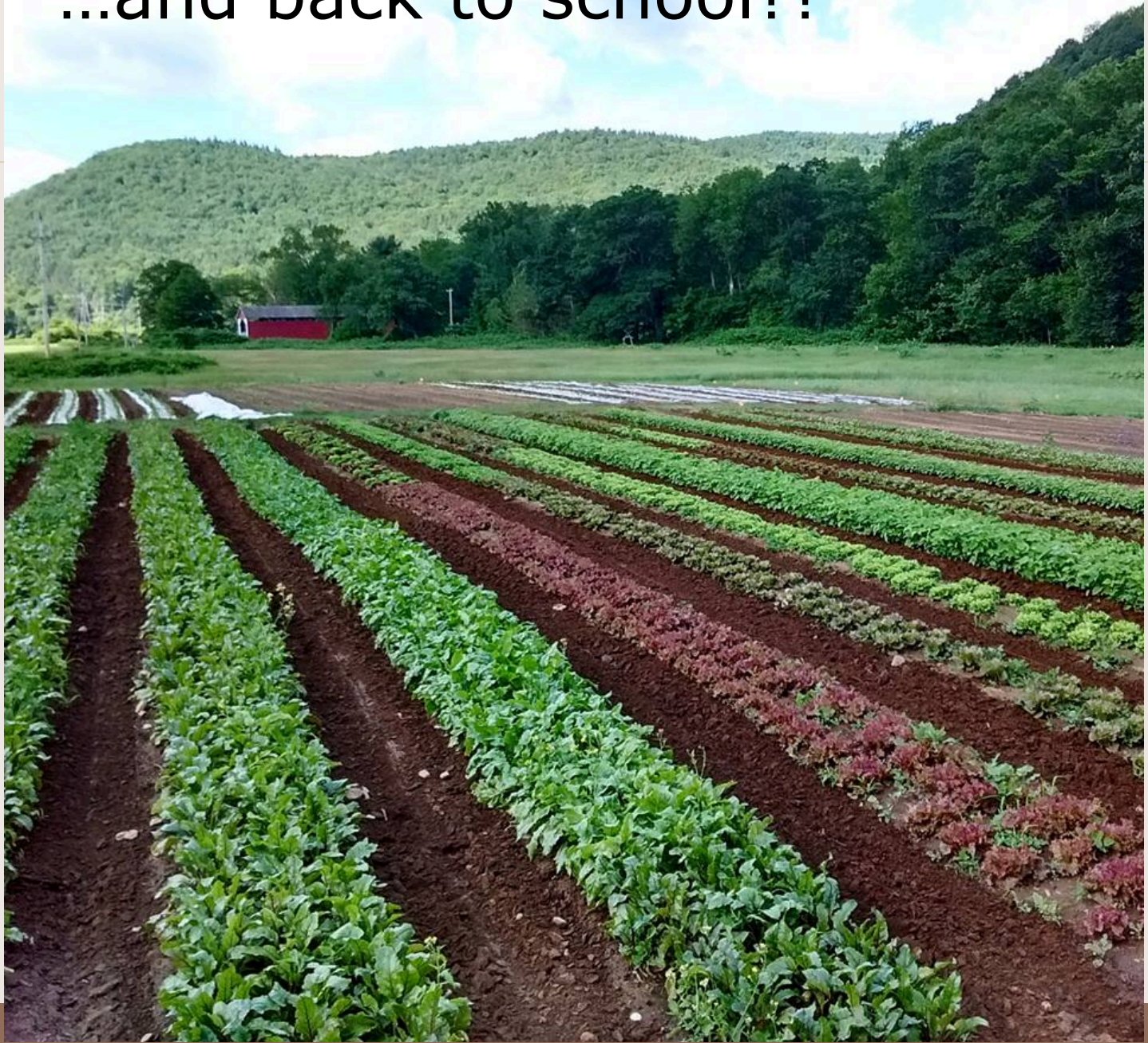
Lyonsville Farm in
Colrain MA;
Over 100 cubic yards
of Martin's Farm
compost is spread
every year!

Farmers and gardeners
need compost!

martinsfarmcompost.com
www.lyonsvillefarm.com



...and back to school?!



3 "sizes" of composting:

what size is right for your classroom, school, school district, or home?

Small: Indoor **worm bin** (vermicomposting)

- ✓ Red Wiggler worms
- ✓ Newspaper bedding
- ✓ Raw vegs, fruits *only*
- ✓ **No meat, bones, dairy, oils, bread**



Medium: Backyard or **on-site** composting

- ✓ Veggies, fruit, bread
- ✓ Yard waste, leaves
- ✓ **No meat, bones, dairy, oils**

Earth Machine



New Age Composter



Large: Commercial Composting at compost facility accepts:
ALL food: including meat, bones, cheese, oily foods...
Paper: napkins, towels, food boats, paper lunch trays, (milk cartons)
Up to 89% of a school lunch is compostable!



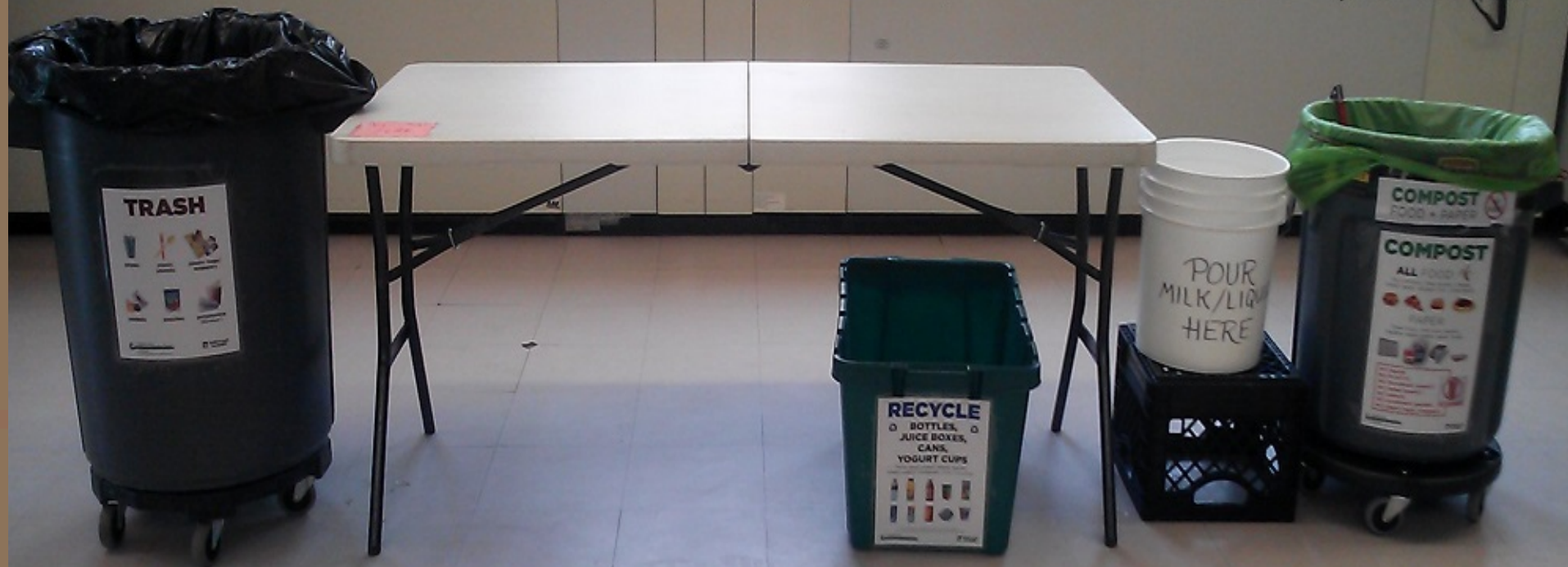
**Windrows at
Bear Path Farm,
Whately, MA**

Enacted Oct. 1, 2014: MassDEP waste ban on food waste - more than 1 ton/week from commercial/institutional. For help: www.recyclingworksma.com

MassDEP's Sustainable Materials Recovery Program (SMRP): **School Recycling Assistance Grant**

- 3 year grant; entire school district; \$30,000 - \$100,000
- Grant funds *set up costs* only:
 - equipment, educational materials;
 - dedicated staff to plan and implement program;
 - NOT *ongoing costs* such as hauling, compostable bags, etc. Program must continue after grant ends.
- Usually used for establishing recycling programs
- Greenfield Schools / FCSWMD: 1st time this grant has been used for *composting (organics)*
- To qualify for composting: must already recycle (paper/cardboard; bottles, cans...milk cartons?)
- www.mass.gov/eea/agencies/massdep/recycle/grants/smrp-grants.html

At 5 Greenfield Public Schools:
75% - 86% of kitchen and cafeteria waste
is now *composted*, totaling 5 tons/month!



101 lbs. trash/week
Caf. and Kitchen

10 gallons recycling
Cafeteria

273 lbs. compost/week
Caf. And Kitchen

Four Corners Elementary (K-4): 75% compost!

33.5 lbs. trash/week

10 gallons recycling

215.5 lbs. compost/week

Math & Science Academy (4-7): 86% compost!

Federal St School: 82% compost!



Trays: stacked,
then composted

451 lbs. compost/week
Cafeteria and Kitchen

97 lbs. trash/week
Cafeteria and Kitchen

Greenfield High School: **75% compost!**

COMPOST
FOOD + PAPER

NO PLASTIC

Funded by a grant from MassDEP

TRASH
PLASTIC WRAPPERS, STRAWS, ETC.

Funded by a grant from MassDEP



550 lbs. Compost
Cafeteria and Kitchen

180 lbs. Trash
Cafeteria and Kitchen

School Kitchens

Greenfield HS:

- Same 32 gal barrel as cafeterias
- Compost barrels on wheeled dollies: roll to compost dumpster; do not lift and carry compostable bags



Math & Science Academy:

- 23 gallon compost barrel;
- 5 gallon trash pail
- 1 lb. of trash/ day!



Signage is important
Custom signage includes DEP logo



Compostable bags:
32-gallon "Renew"
via Mansfield Paper

COMPOST

ALL FOOD: 

Yes, compost: meat, bones, cheese, bread, pasta, veggies, fruit, condiments



PAPER:

Paper trays, milk/juice cartons, napkins, paper plates, paper 'boats'



NO liquids
NO PLASTIC
NO Styrofoam bowls!!!
NO cereal bowls!!!
NO utensils
NO condiment packets
NO plastic bags, wrappers



Sort your lunch waste carefully:
Get plastic trash off your tray first!

Actual school
pres. slides



TRASH

PLASTIC WRAPPERS, STRAWS, ETC.

 Funded by a grant
from MassDEP

Before
you get
up,
make a
trash pile:

The rest
is food &
paper for
compost!



Step 1:

TRASH

PLASTIC WRAPPERS, STRAWS, ETC.

Funded by a grant from MassDEP



straws



plastic utensils



plastic bags/wrappers



packets



pouches



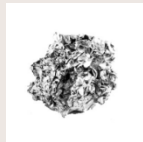
polystyrene (Styrofoam™)

Step 2:



Recycle
juice **boxes:**
Empty, throw away
straws

Recycle clean
aluminum
Foil



Signs:
www.springfieldmrf.org

RECYCLE



BOTTLES, JUICE BOXES, CANS, YOGURT CUPS



Throw away straws, empty liquids,
empty yogurt containers (rinse if possible)

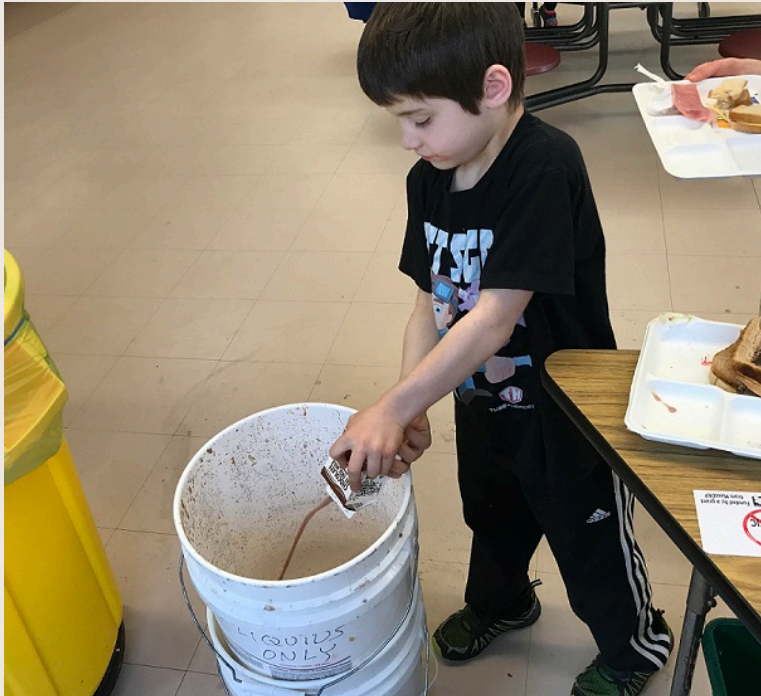


For a complete YES & NO of what can be recycled,
visit www.franklincountywastedistrict.org or call 413-772-2438

Step 3 – Compost milk carton:



Throw away straws.
Empty milk
into pail.



Put carton in
compost bin.



Step 4:

COMPOST
FOOD + PAPER



 Funded by a grant
from MassDEP

ALL *leftover* food
(eat your lunch!)



Paper: milk carton, napkin, food boat, tray



Trays stacked,
then composted

Sorting is easy!

- Before you get up, make trash pile on tray.
- Put tray down on sorting table.
- **Get trash off your tray first!**
- Then, go with the flow...

Student Green Teams

- Teacher joins DEP Green Team
- Their students monitor sorting
- Students track # of daily trash, compost bags, weights (1 week)
- Rubbermaid Pelouze shipping scale >



Advanced: Classroom composting



Paper Recycling

Trash - Bottles/Cans - Compost - Paper Towels

Hands – on composting in each school; grant funded (Green Team)



Worm compost bins:

- Free worms: Green Team
- In classrooms (new state science standards)
- Teach students, staff how
- Worms Eat My Garbage by Mary Appelhoff



On-site garden compost bins:

- Free bins: Green Team
- In home or on-site bins:
no meat, bones, cheese...
- 75% "browns" - leaves



Potential Savings

Off-site program: materials diverted from trash dumpster:

- GPS reduced trash dumpster size, hauling frequency by 50%
- Reduced trash by 5 tons; reduced bill by \$505/mo.
- Savings applied to compost pickup (\$465/mo for 5 locations)
- Saving \$1,410/year on hauling
- Still have to pay (more) for compostable bags
- Educational, social, environmental value: priceless

Off-site program set-up costs:

- Barrels, pails, strainers (No grant? Re-label existing 32-gal. trash cans as compost.)
- Laminated signage, custom stickers (www.makestickers.com)

MassDEP School Recycling Assistance Grant:

- Funded \$6,000 + in equipment, educational signage, etc.
- Funded \$23,000 + in staff/implementation, over 3 years

Resources:



- MassDEP's Green Team: free bins, activities, lesson plans that align with state standards: www.thegreenteam.org
- Green Team Films: <https://thegreenteam.org/recycling-facts/food-waste-reduction/>
- Green Team's 9 Minute Film about Franklin County Schools (How to Set Up a School Compost Program"): https://www.youtube.com/watch?time_continue=2&v=YD4hYv-UEeo
- Recycling Works MA, lists organics haulers, gives free assistance: www.RecyclingWorksMA.com
- MassDEP Sustainable Materials Recovery Program; School Recycling Assistance Grant: www.mass.gov/how-to/sustainable-materials-recovery-program-smrp-municipal-grants