

# Food Waste and Rescue Workshop

Sponsored by  
The Environmental  
Protection Agency,  
Food For Free, and  
Wellesley's 3R Working  
Group

October 24, 2018

# Introduction

- **Food Rescue**
- **Food Waste Diversion**
- **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

# Agenda

- **Why**

- Chris Beling of the US EPA

- **What**

- Marybeth Martello, Sustainability Administrator of Wellesley Sustainable Energy Committee

- **How**

- Matt Delaney, Whitsons Culinary Group Director, Wellesley Public School
- Alison Cross, Wellesley 3R Working Group
- Ryan Lee, Food For Free

- **Wrap-up**

- Q & A, discussion and networking

# Why? Many Wasted Resources

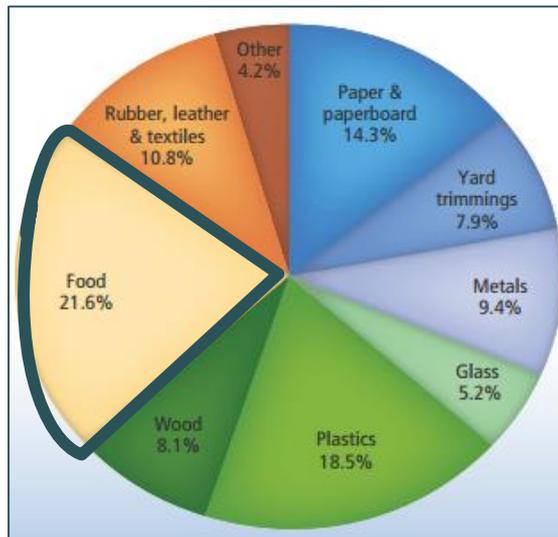
- 40% of food produced ends up in landfill
- Production of food waste uses
  - 25% of fresh water supply
  - 19% of fertilizer use
  - 18% of U.S. cropland



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

# Why? Environmental Costs

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



# Why? Economic and Societal Costs

- **Economic cost**

- Wasted food cost \$218 to produce and distribute

- **Societal cost**

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



Source: ReFED; Feeding America, ERS-USDA,

# Why? Improving Waste Endpoints



Source: US Environmental Protection Agency

# Why? Set Goals and Take Action

- o The EPA's Food Recovery Challenge



# Why? Liability Protection Laws

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



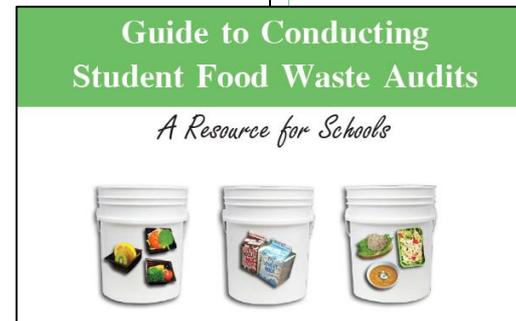
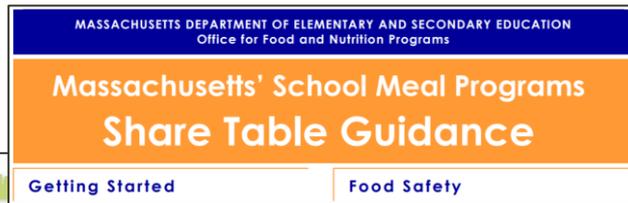
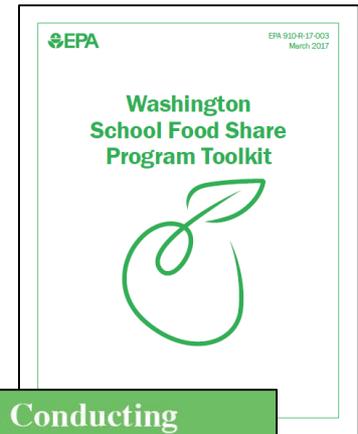
## Legal Fact Sheet for Massachusetts Food Donation: Liability Protections - July 2015

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](https://recyclingworksma.com/wp-content/uploads/2015/07/Legal_Fact_Sheet_-MA_Liability_Protections-FINAL_RWF.pdf)

# Why? Guidance is Available

- EPA
- USDA – Share Table
- FDA Food Code



**FOOD DONATION GUIDANCE**

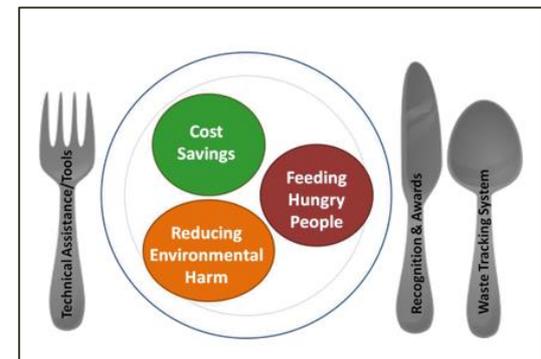
**RECYCLINGWORKS MASSACHUSETTS**

Our Phone: 800-224-1142  
www.recyclingworks.com  
info@recyclingworks.com

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:



# Why? Guidance is Available

## o Links to resources

<https://www.epa.gov/sustainable-management-food/washington-school-food-share-program-toolkit>

<https://thegreenteam.org/wp-content/uploads/2014/04/Share-Table-Guidance.pdf>

<https://recyclingworksma.com/donate/>

<https://recyclingworksma.com/wp-content/uploads/2015/07/Legal-Fact-Sheet-MA-Liability-Protections-FINAL-RWF.pdf>

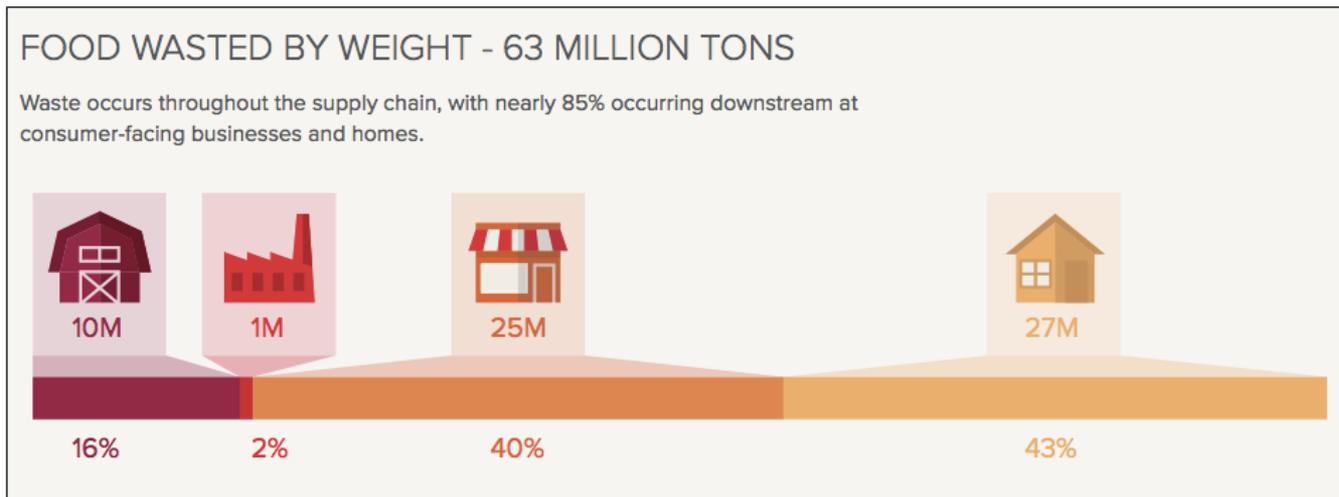
<https://www.epa.gov/sustainable-management-food/food-recovery-challenge-frc>

<https://www.epa.gov/sites/production/files/2017-12/documents/guide-to-conducting-student-food-waste-audit-nov-20-2017.pdf>

<https://furtherwithfood.org/>

# What? Food Waste from Farm to Table

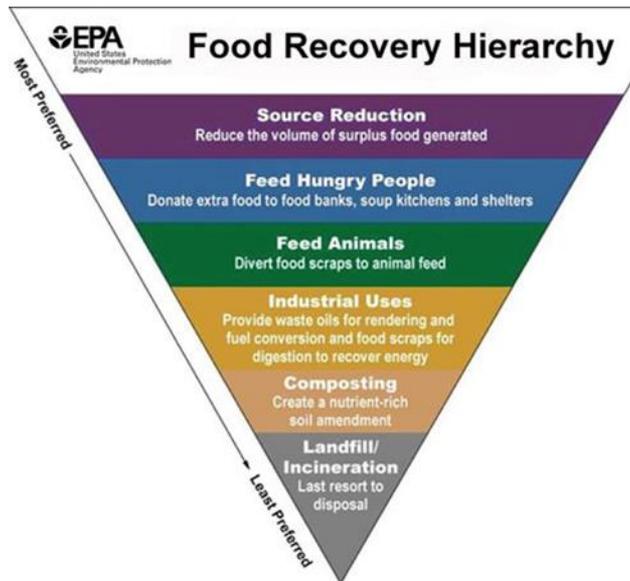
- 40% at consumer facing and institutional level
- Prepared food waste is on the rise



Source: ReFED data

# Bates School Cafeteria Audit

- Post-Consumer Food and Materials
  - Food waste
  - Liquid waste
  - Recyclable
  - Trash



# Bates School Cafeteria Audit



Town of Wellesley  
SUSTAINABLE ENERGY COMMITTEE

Whitsons - Food Services

FMD/ Custodial Staff

Board of Health

DPW/Recycling & Disposal Facility



Bates Parents

The Green Collaborative



# Bates School Cafeteria Audit - Process

## Sorting Categories



Sharing  
Items



Animal  
Feed



Simple  
Compost



Complex  
Compost



Recycle



Trash



Liquid

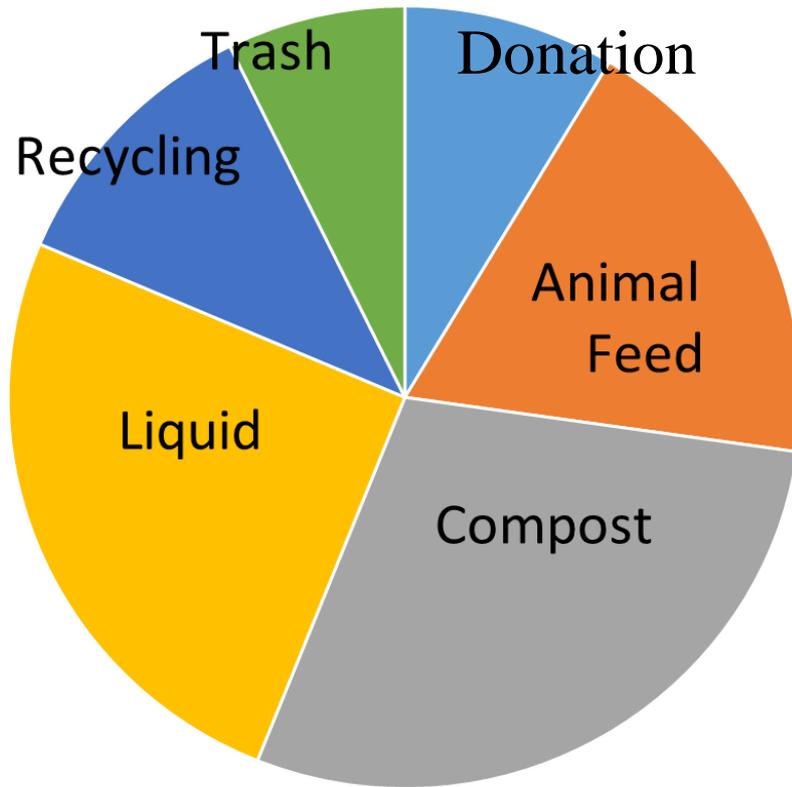


Napkin  
Packets

# Bates School Cafeteria Audit - Process



# Bates School Cafeteria Audit - Results



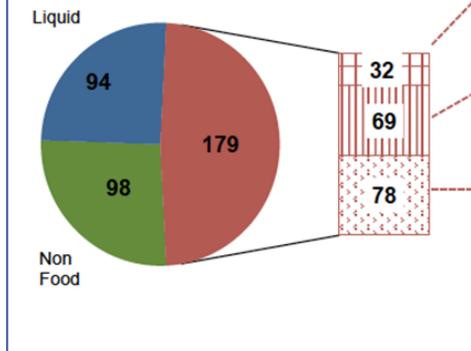
Item	Weight (lbs/week)	%
Donation	32	9
Animal Feed	69	19
Compost	107	29
Liquid	94	25
Recycling	42	11
Trash	27	7

# Bates School Cafeteria Audit - Results

- 371 lbs/week =
  - 13,000+ lbs/year
- School Lunch Waste =
  - 4x home lunch waste (by weight)
- Older Kid Waste =
  - Younger Kid Waste (by weight)



Figure 10A: Cafeteria Waste  
in pounds per week



Surplus food  
to be donated

Food waste for  
animal feed

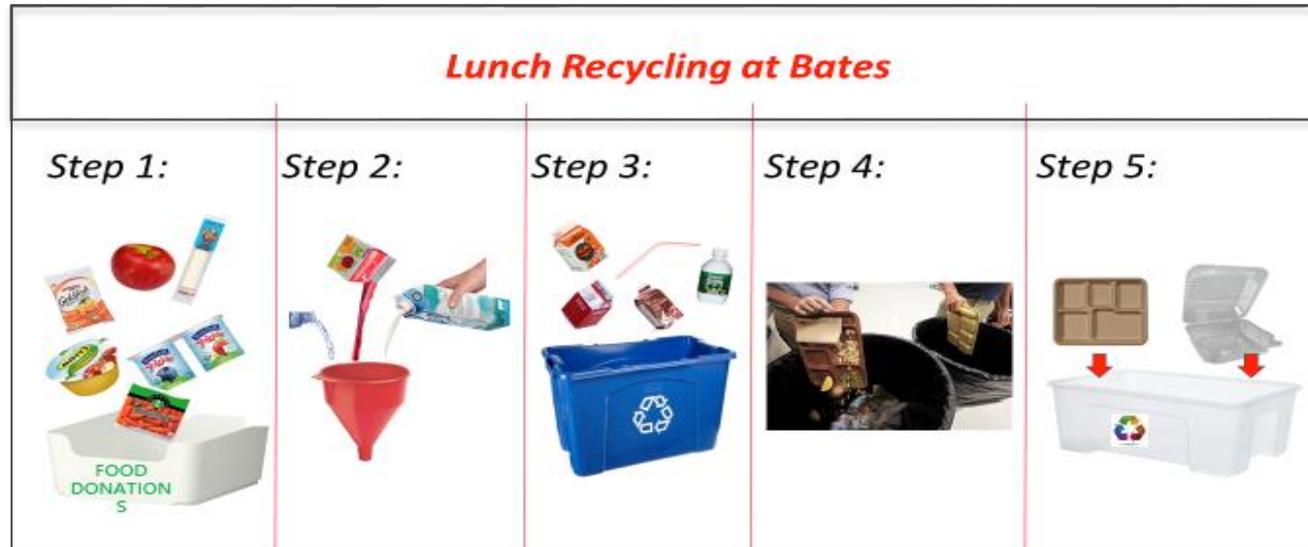
Compostable  
food scraps

# What Gets Wasted 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
- Environmental and financial costs (including waste hauling costs)

**Source: RecyclingWorks Ma; Vermont Agency of Natural resources**

# Bates School Recycling and Food Recovery Program



**Donate**  
Share within  
school or  
donate to  
Food Pantry

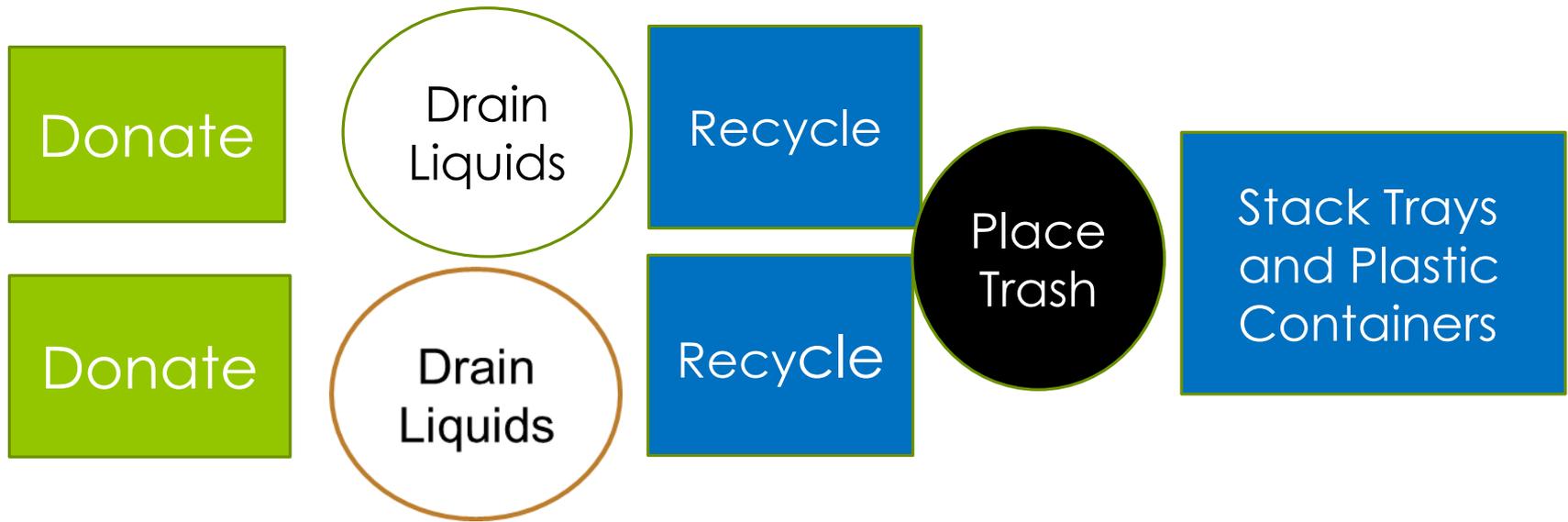
Drain  
Liquids

**Recycle**

**Trash**

**Stack Trays  
and Plastic  
Containers**

# Bates School Recycling and Food Recovery Program



# Wellesley Recycling and Food Recovery

## Bates, Fiske and Sprague Elementary

- Recycling
- Liquid diversion
- Food donation

## Middle School

- Food donation
- Food waste diversion pilot



# Wellesley Recycling and Food Recovery

## Bates, Fiske and Sprague Elementary

- Recycling
- Liquid diversion
- Food donation

## Middle School

- Food donation
- Food waste diversion pilot



# Food Waste Diversion and Food Recovery

## Procedures demonstration

<https://youtu.be/f2Kmj8h2Otw>

# 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"><li>• Lasagna</li><li>• Noodles with sauce</li><li>• Rice dishes</li><li>• Pizza</li><li>• Hamburgers</li><li>• Hot dogs</li><li>• Cooked vegetables</li></ul>	<ul style="list-style-type: none"><li>• Salads</li><li>• Dishes made with previously canned fruit</li><li>• Dishes deemed past their serviceability</li></ul>

# 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
  - ◉ Logs donated food

# Food Rescue Process

## o Share Table – Do and Don't Donate

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

# 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



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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 and logging 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

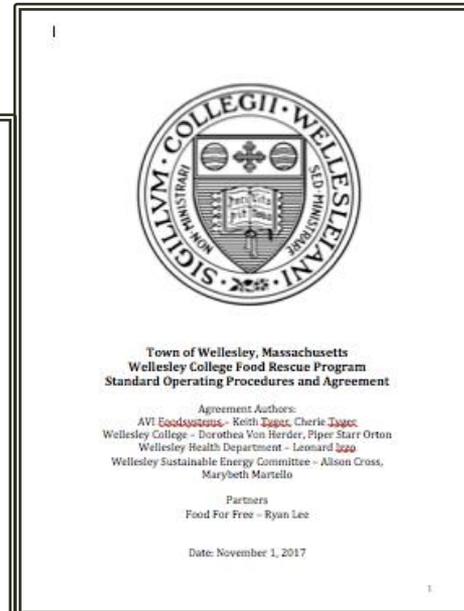
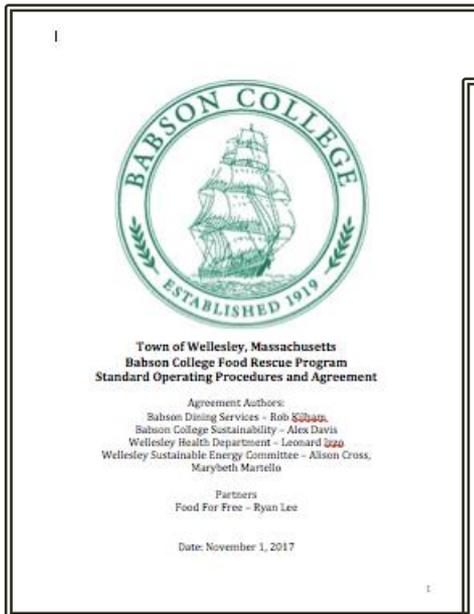
- **Create a network of schools**
  - Maximize volume of pick-ups
  - Minimize number of pick-up sites within network
- Are food prep kitchens centralized?
  - Do individual schools have sufficient set-up for collection and storage?
- If decentralized, identify
  - Central location for pick-up
  - Acceptable means of transporting food

# Implementing Food Rescue Programs

- **Conduct on-site visits with health department**
  - Assess cafeteria and kitchen space
    - Freezer capacity
    - Dedicated areas for storage
  - Identify any equipment needs
    - Small chest freezers, coolers, signage
  - Determine procedures
    - Walk through step by step

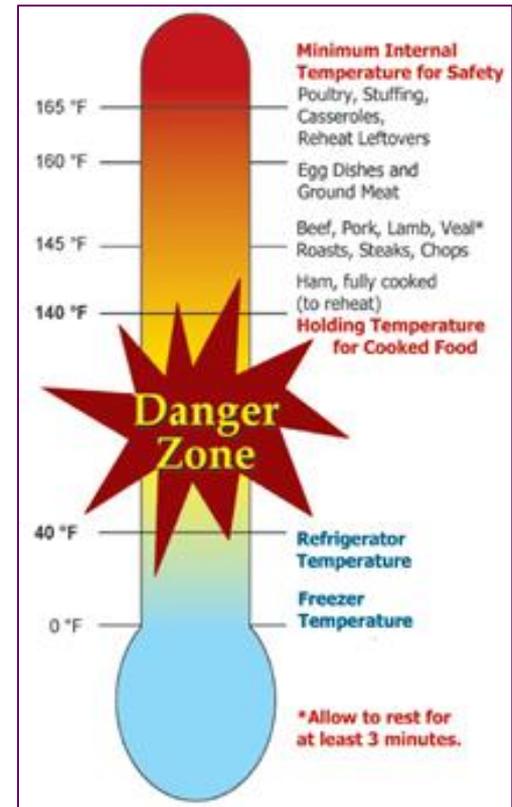
# Implementing Food Rescue Programs

- Create Standard Operating Procedures



# 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

- **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





# MassBay Meal Distribution

- MassBay Food Insecurity: 1 in 2 students
- Piloted at 2x/week
  - Ranged from 50-100 meals/week
- Expanding to 4x/week



# The Potential

- Annual pounds of food waste
- Annual donations – pounds, meals

Estimated Potential				
	Total school population	Annual Food Waste (lbs)	Annual Donations (lbs)	Annual # meals donated
Brookline	13,166	58,221	19,407	16,173
Needham	9,646	62,538	20,846	17,372
Newton	21,421	128,618	42,873	35,727
Natick	9,284	54,049	18,016	15,014
Weston	3,512	20,929	6,976	5,814
Waltham	9,422	57,604	19,201	16,001
Lexington	12,138	72,129	24,043	20,036

Source: DOE; RecyclingWorks Mass; Wellesley Area Schools metrics

# Perspective on Food Insecurity

## ○ Food Insecurity in Metro West

- Massachusetts - 652,760 food insecure (9.6%)
  - 35% don't qualify for assistance
- Norfolk Co. - 53,810 food insecure (7.8%)
  - 49% don't qualify for assistance
- Middlesex Co. - 123,870 food insecure (7.9%)
  - 40% don't qualify for assistance

**Source: Feeding America**

# 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

## ○ Potential Hurdles

- The “sell in”
  - School administration
  - Food services
  - Health departments
- The development of Standard Operating Procedures
- Adherence to procedures to protect food safety
- Communications with food rescue partners

# Food Waste and Rescue Workshop

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

**THANK YOU FOR  
PARTICIPATING!**