

Reuse and Diversion Best Practices for Manufacturers

Toxics Use Reduction Institute | April 27, 2022





FREE WASTE ASSISTANCE FOR BUSINESSES

RecyclingWorks MA is funded by MassDEP, delivered under contract by the Center for EcoTechnology

recyclingworksma.com



MASSACHUSETTS WASTE BANS

Commercial food waste
(threshold reduction to .5 ton/wk, effective Nov 1, 2022)

Effective Nov 1, 2022: Textiles & Mattresses (including box springs)

Cardboard & paper

Metal, glass, and plastic containers

Construction & demolition materials

Yard waste

White goods

For a complete list of waste ban materials: <https://recyclingworksma.com/waste-bans-and-compliance/>

Agenda & Meeting Materials

The next virtual meeting of the R&R Working Group is scheduled for:

Thursday, April 28, 2022

10:00 a.m.

Via Webinar*

[Please register here](#) if you wish to participate. After signing up, you will receive a confirmation email with instructions for joining the call.

*Out of an abundance of caution due to the COVID-19 pandemic, these meetings will continue to be held virtually via webinar only.

Thank you for your cooperation and support as the Commonwealth works to address this public health issue. [Learn more.](#)

Recycling Market Development Workgroup

<https://www.mass.gov/service-details/massdep-recycling-market-development-workgroup>

Reduce & Reuse (R&R) Working Group

<https://www.mass.gov/service-details/massdep-reduce-reuse-rr-working-group>

TIN CANS
GLASS BOTTLES
PLASTIC

SCOUT 5¢ Bottle Drive



No Wine Bottles
Returnable Items
Only

STAPLES

Find-A-Recycler Tool

Recycling Assistance for Businesses & Institutions

Any Material Enter location Pick Up/Drop Off

OR, try a keyword or biz name

RecyclingWorks in Massachusetts is a recycling assistance program funded by the Massachusetts Department of Environmental Protection and delivered under contract by the Center for EcoTechnology that helps businesses and institutions reduce waste and maximize recycling, reuse, and food recovery opportunities.

[LIST YOUR BUSINESS](#)

[ABOUT RECYCLINGWORKS](#)

[ABOUT THE FIND-A-RECYCLER TOOL](#)

recyclingworksma.com

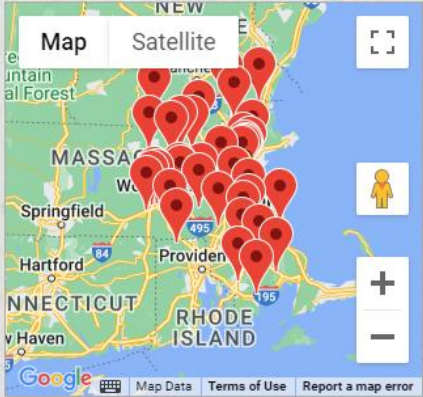
Find-A-Recycler Tool

Distance

The Center for EcoTechnology (CET) and MassDEP host this list to help businesses find recycling service providers. Listings are self-reported and do not imply a recommendation or endorsement by CET or MassDEP.

Casella Resource Solutions
24 Bunker Hill Industrial Park, Boston, MA 02129, USA
 (802) 417-3845 or (855) 428-5247
[https://www.casella.com/sustainability/...](https://www.casella.com/sustainability/)

Save That Stuff, Inc.
200 Terminal St, Charlestown, MA 02129, USA
 (617) 241-9998
<http://www.savethatstuff.com/>



Map Satellite

Springfield Hartford Providence
MASSACHUSETTS RHODE ISLAND

Google

Ruma's Pallet World LLC
124 2nd St, Chelsea, MA 02150, USA
 617-389-8090, 617-389-8093
<http://www.rumaspalletworld.com>

Swift Demolition and Disposal LLC
Everett, MA 02149, USA
 617-407-2584
<http://www.swifttrashremoval.com>

Republic Services of Boston - Revere
320 Charger St, Revere, MA 02151, USA
 (781) 289-0500
<http://www.republicservices.com>

The Junkluggers of North Boston & Southern NH
Melrose, MA 02176, USA
 (781) 315-6133
<http://junkluggers.com>

Modify Search

Choose A Material
Pallets

Location
Boston, MA, USA

50 mi

Pick Up/Drop Off
Pick Up/Drop Off

Keyword
OR, try a keyword or biz name



Free Technical Assistance

Evaluate existing waste streams

Identify opportunities to prevent, recover, and divert waste

Empower employees through education and training

Create customized waste bin signage

Conduct cost analysis

Currently offering remote and in-person assistance



The Office of Technical Assistance (OTA)



Search Mass.gov

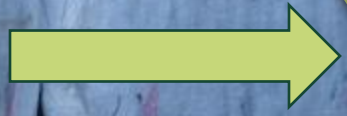
SEARCH 

 > [EEA](#)

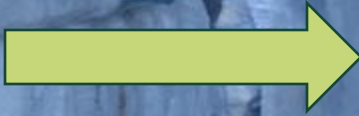
Office of Technical Assistance and Technology (OTA)



<https://www.mass.gov/orgs/office-of-technical-assistance-and-technology-ota>



Reduce



Reuse

Recycle

**Energy
Recovery**

Disposal





Today's Topics

Manufacturing

Office

Wasted Food

Best practices, tools, and case studies!



Who is here today?

Name, title, and company

Single Stream Recycling

Single Stream



EMPTY BOTTLES & CONTAINERS

Plastic, metal, glass
Clean aluminum foil



PAPER & FLAT CARDBOARD

NO

Liquids, food soiled materials
Plastic bags, utensils, straws
Chip bags, hot coffee cups
Tissues, napkins



Do not bag recyclables!

Reciclaje Mixto



CONTENEDORES Y BOTELLAS VACÍOS

Plástico, metal, cristal
Papel de aluminio limpio



PAPEL Y CARTÓN

NO

Líquidos, materiales manchados por alimentos
Bolsas de plástico, utensilios, sorbetos
Bolsas de papitas, taza de café caliente
Pañuelos de papel, servilletas



¡No embolsar productos reciclables!

Shrink Wrap



Shrink Wrap



NO

Food-Soiled Materials
Waxed Cardboard
Green plastic strapping



Scrap Metal



RECYCLABLE SCRAP METAL ONLY



NO

Food-Soiled Materials
Waxed Cardboard
Electronics or trash



Preventing Recycling Contamination

Become a Recycle Smart MA Partner



Food and Beverage Cans
empty and rinse



Bottles, Jars, Jugs and Tubs
empty and replace cap



Bottles and Jars
empty and rinse



Mixed Paper, Newspaper, Magazines, Boxes
empty and flatten

NO!



**Do Not Bag Recyclables
No Garbage**



**No Plastic Bags
or Plastic Wrap**
(return to retail)



No Food or Liquid
(empty all containers)



No Clothing or Linens
(use donation programs)



No Tangles
(no hoses, wires,
chains or electronics)



RecycleSmartMA.org



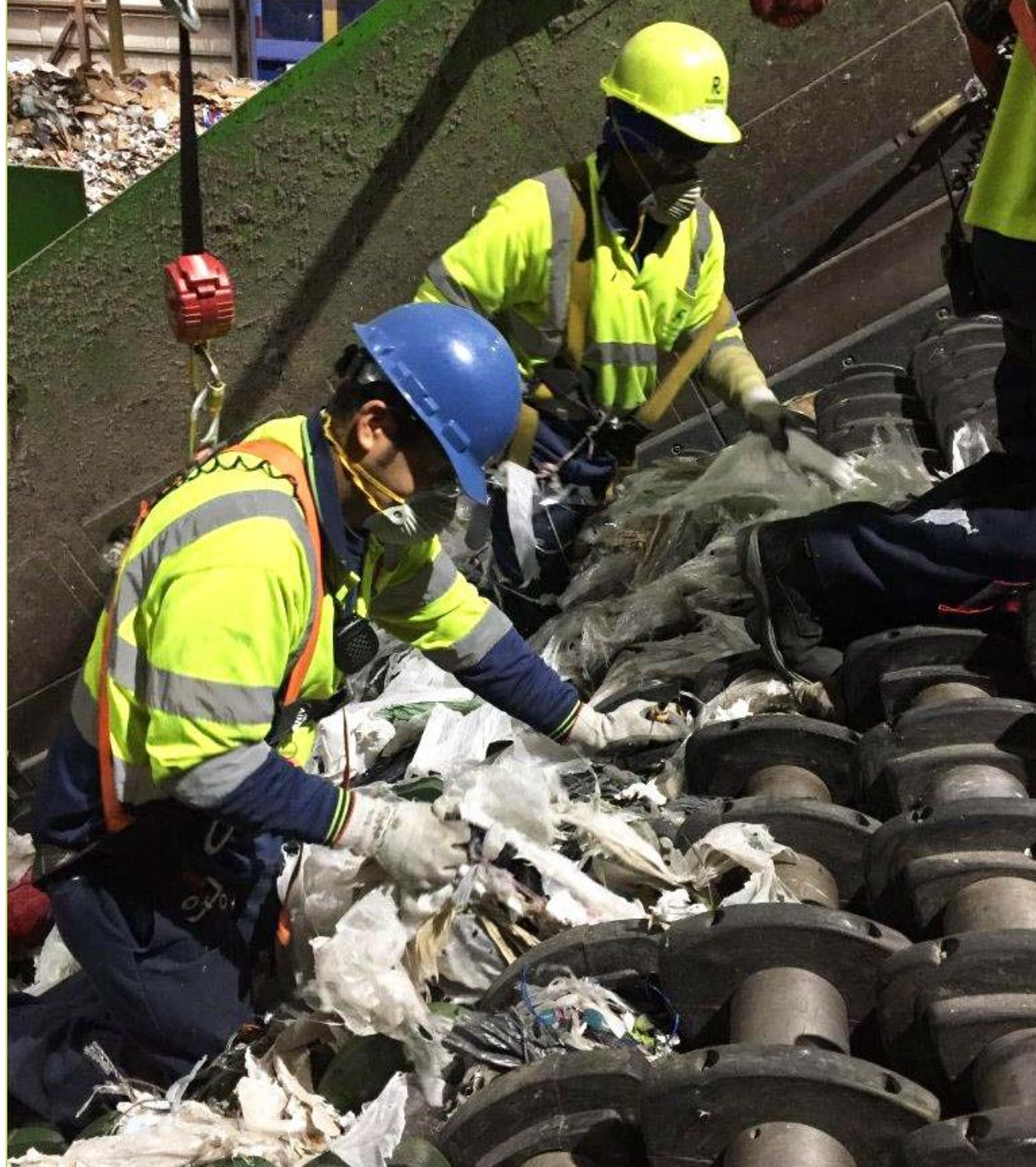
@RecycleSmartMA



RecycleSmartMA



Recycle-Smart-MA



Always Empty Recyclables out of Plastic Bags

Bags tangle recycling equipment causing delays, injuries and extra costs.



Pair trash and recycling bins whenever possible. Use color-coded plastic bags as liners to keep bins clean and make it easier to move materials.



Leave recycling bags untied or loosely tied so they are easy to empty.



Color-coded plastic bags make it easier to visually differentiate so that trash doesn't get confused with recycling in one cart.



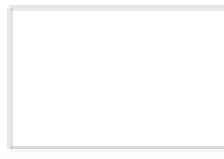
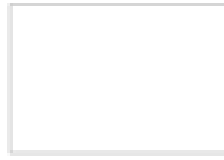
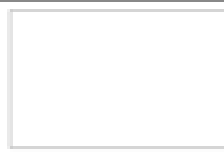

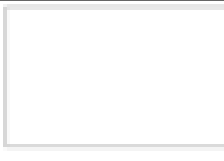

Always empty recyclables out of the plastic bag into the dumpster.



Reuse or dispose of the plastic bag in the trash.



FACILITY MATERIALS MANAGEMENT PLAN

MATERIAL	DESCRIPTION/ HOW TO PREPARE	INTERIOR BINS	HAULER PICKUP LOCATION	PHOTOS
Cardboard	Flatten	Blue Tilt Carts "Cardboard only" tilt carts		
Fabric covered cardboard	Dispose as trash			
Plastic coated cardboard from shipping	Dispose as trash	Gray "trash only" tilt carts		
Cardboard previously used between layers of parts	Recycle			
Bottles & Cans Office Paper	Cleaning crew moves for recycling	Place in unlined blue recycling bins	Recycle Compactor	
Used Masks		Place in designated cardboard collection boxes	Located near x area.	

CONTACT NAME	PHONE NUMBER	E-MAIL

TIN CANS
GLASS BOTTLES
PLASTIC

SCOUT 5¢ Bottle Drive



No Wine Bottles
Returnable Items
Only

STAPLES

What are you doing to prevent unnecessary packaging?

Let's discuss in **breakout sessions!**



Dear [VENDOR NAME],

Thank you for working with us!

The [BUSINESS NAME] is a project focused on environmental consciousness with the intention of using sustainable practices in material choice, production methods, and waste management. One of our main goals is to divert [_%] of our waste from landfills. We ask that you help us with this goal by reducing the packaging of your product, if possible, for our project.

Activities that may be taken to achieve this include, but are not limited to:

- Reduce use of pallets
- Use of bag packaging over box packaging where applicable;
- Reduce additional layers of packaging through product labeling;
- Reduce the use of additional boxes by attaching containers together;
- Use of air pillows (box sized); and
- Reduce or eliminate key unsustainable materials such as polystyrene foam (commonly known as styrofoam) packaging (e.g. packing peanuts) and polyvinyl chloride (PVC)

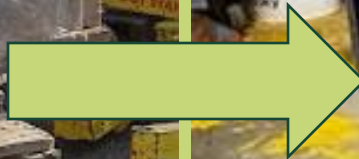
We understand that there are procedures already set in place for packing your product. Whatever measures you can take to reduce this packaging while also ensuring the safe transportation would be greatly appreciated!

Additionally, we encourage all companies to assess their packaging systems and identify any areas where they can reduce material or redesign to greater efficiency. This not only helps with environmental

Container Reuse



Reusable Containers



Reusable Pallets



Reusable Delivery Crates



Cardboard Gaylords Failed Load



Self-dumping hopper



Untold Brewing

Comprehensive recycling program

Reusable pallet wrap

<https://recyclingworksma.com/breweries-reduce-waste-through-reuse-recycling-and-organics-diversion/>



Preppy Puppy Bakery



Film Plastics



Preppy Puppy Bakery cont'd





C&D Materials

Deconstruction

Soft strip

Full deconstruction

Reuse outlets

EcoBuilding Bargains

Habitat for Humanity
ReStores

<https://recyclingworksma.com/reuse/building-materials/>

BATTERY DISPOSAL GUIDE:

Batteries can cause **fires!** Here's how to handle and dispose of each type

BRING TO RETAIL OR MUNICIPAL BATTERY COLLECTION

Put tape on battery terminals and bring to local retailer or municipal collection site



Lithium-Ion Rechargeable: These batteries are typically found in cell phones, laptops, small power tools. If damaged, they can be extremely flammable.

Rechargeable AA, AAA, C, D, 9V (Ni-Cad): Do not dispose of rechargeable batteries in the trash. They may contain heavy metals that pose risks to human health and the environment.

HANDLE AS HOUSEHOLD HAZARDOUS WASTE

Call your municipality or local recycling center for household hazardous waste collection information



Lithium-Primary: These batteries come in a variety of household sizes, including flat nickel-shaped batteries that may not be labeled as lithium. Do not throw in trash as they can be flammable if damaged or defective. Put tape on terminals and handle with care.

Lead Acid Automotive or Sealed: These batteries are commonly found in vehicles, lawnmowers and some tools. They may be accepted at transfer stations, or exchanged with new purchases. Leaking lead acid batteries are considered hazardous waste.

NON-HAZARDOUS BATTERIES

These battery types no longer contain mercury and can be disposed in regular trash



Button: These batteries are about 1/3" across. Commonly found in hearing aids

Traditional Everyday (AA, AAA, C, D, 9V): Single use, alkaline batteries



Universal Waste

Fluorescent Light Bulbs and Mercury-Containing Products

Massachusetts Mercury Management Act
prohibits disposal

FAC 110



Textile Reuse & Recycling

Volume, fabric type,
Clean (stained is OK) and dry

<https://recyclingworksma.com/how-to/materials-guidance/recycle-textiles/>

Secondary Materials and
Recycled Materials
(SMART)

SwagCycle

Cyntex

HELPSY

Logistics



Think
broadly

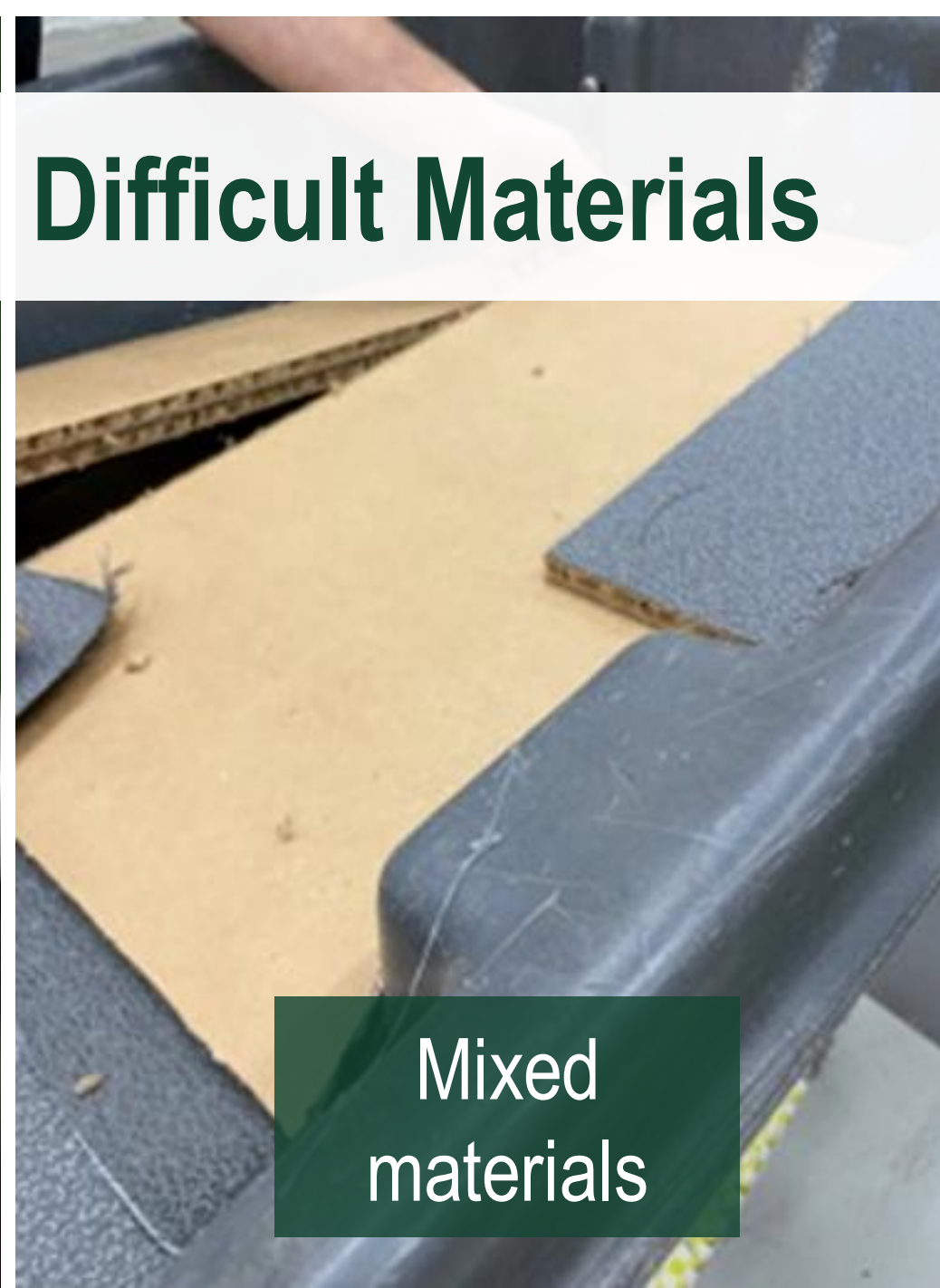
Leverage
your
business
network

Share services
and dumpsters

Difficult Materials

A photograph showing several large rolls of clear, translucent shrink wrap material. The rolls are stacked and appear to be in a storage or processing area. The material is tightly wound and has a slightly glossy texture.

Shrink wrap
cores

A photograph showing a collection of various materials, including a large sheet of yellowish-brown cardboard, a piece of blue textured material (possibly a mat or fabric), and a piece of grey material with a wavy, textured surface. The materials are scattered on a light-colored surface.

Mixed
materials

A photograph showing several pieces of dark grey or black rubber material with a complex, wavy, textured surface. The texture consists of deep, irregular grooves and ridges, characteristic of a specialized rubber compound used in industrial or automotive applications.

Rubber

PLEASE FLATTEN CARDBOARD BOXES

Help us recycle even more by flattening your cardboard.
It's as easy as opening the top of the box!

- 1 Remove all packaging from box



- 2 Open the bottom of the box the same way you opened the top



- 3 Flatten the box completely



- 4 Place in recycling bin



TIN CANS
GLASS BOTTLES
PLASTIC

SCOUT 5¢ Bottle Drive



No Wine Bottles
Returnable Items
Only

STAPLES



<https://recyclingworksma.com/recyclingworks-spotlight-resinate/>

Paper Conservation

QUESTIONS?

RecyclingWorks is committed to working with TUR Planners on your waste management efforts and we're here to support you any way that we can. We will follow-up with you as your programs are implemented to provide additional support as discussed. If you have questions in the meantime, please do not hesitate to contact us.

Abbey abbey.massaro@cetonline.org

888-254-5525 | recyclingworksma.com | info@recyclingworksma.com

Heather heather.billings@cetonline.org

Print Preview

Adjust font size or margins

Excel Sheet Fit To One Page

Double side print

Clear copy machine instructions to avoid mistakes

Digital versions



Furniture

**Reuse
Marketplace**

**The Wish
Project**

**The
Furniture
Trust**

<https://recyclingworksma.com/furniture-and-equipment-reuse-guidance/>

Electronics

Secondary market

Recycling

Donation

FAC 110

<https://recyclingworksma.com/how-to/materials-guidance/recycle-electronics/>

Workplace Events & Catering

A background image showing a catering event. In the foreground, a large stainless steel buffet tray is filled with a colorful vegetable medley including sliced carrots, zucchini, and tomatoes. To the left, a person is holding a white plate with a portion of the food. In the background, other people are visible, some holding plates and spoons, indicating a busy serving area. The overall scene is brightly lit and focused on the food and the act of catering.

Planning for catering events

What to do with leftovers

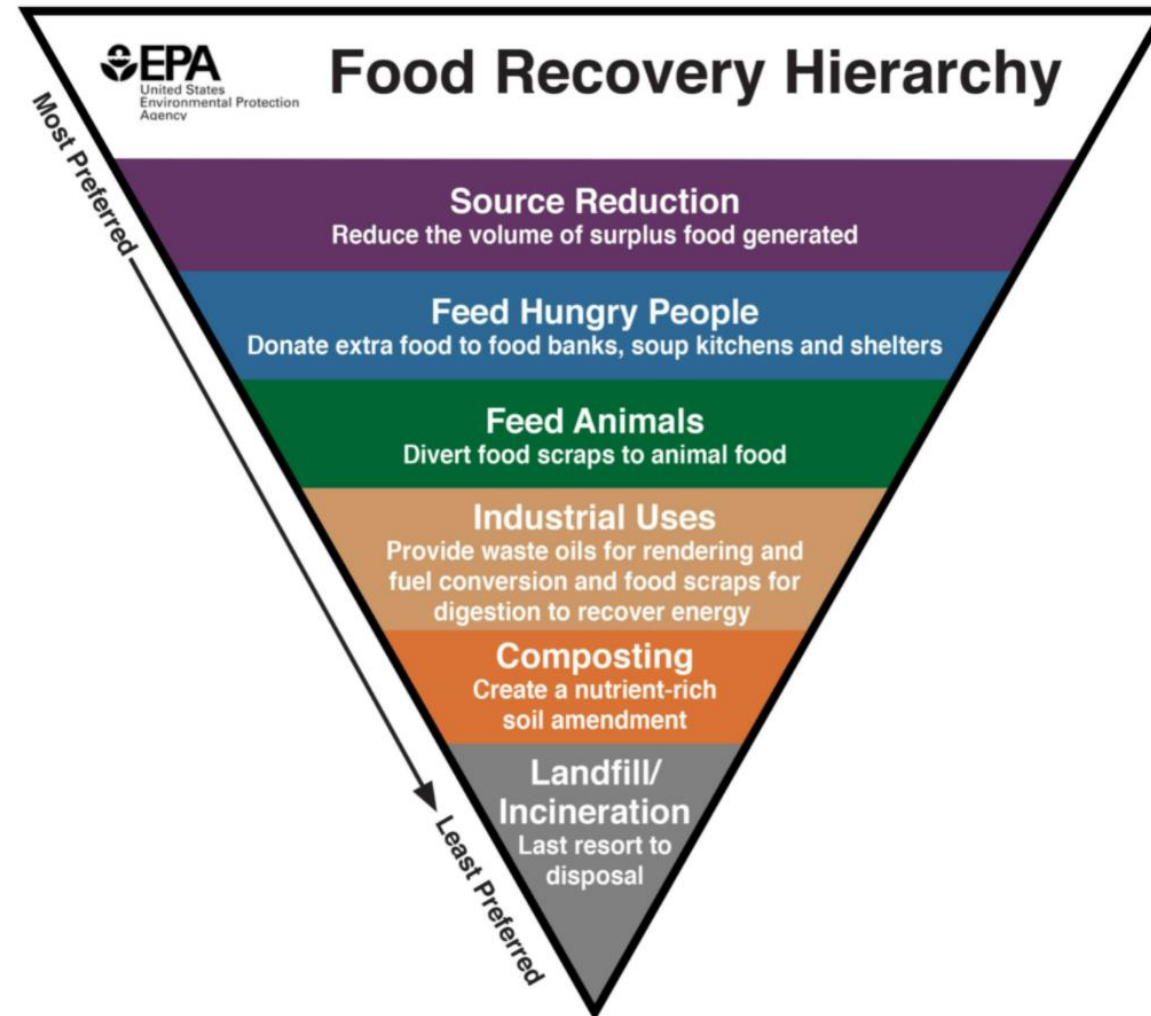
<https://recyclingworksma.com/wp-content/uploads/2019/09/Tips-for-Waste-Reduction-at-Workplace-Events-1.pdf>



Breakroom Food Waste Reduction

Reducing bin contamination

APPROACHES TO ADDRESSING WASTED FOOD



A man with a beard and glasses, wearing a blue polo shirt and a red apron, is standing in a market. He is holding a clipboard and a pen, looking down at it. The background is filled with various fruits and vegetables, including tomatoes and leafy greens, arranged in wooden crates. The lighting is bright and natural, suggesting an outdoor market environment.

Source Reduction Guidance

Cost savings

Waste tracking

Meal planning

Food purchasing and
Procurement

Storage

recyclingworksma.com/source-reduction-guidance

Quality Control

Minimizing losses during production

Maintaining equipment

Using proper packaging



A close-up photograph of a large pile of food waste. The waste includes various types of fruit peels and scraps, such as apples, pears, and oranges. There are also several whole blueberries, some of which are cracked open, and some green leafy vegetables like parsley. The background is a dark green circular overlay with a pattern of leaves.

Waste Tracking and Audits

Steps to take to establish a food donation program

Identify

Identify the types and amounts of food to be donated

Partner

Identify partner organizations in your area with which to work

Determine

Determine packaging, storage, and labeling requirements to ensure food safety

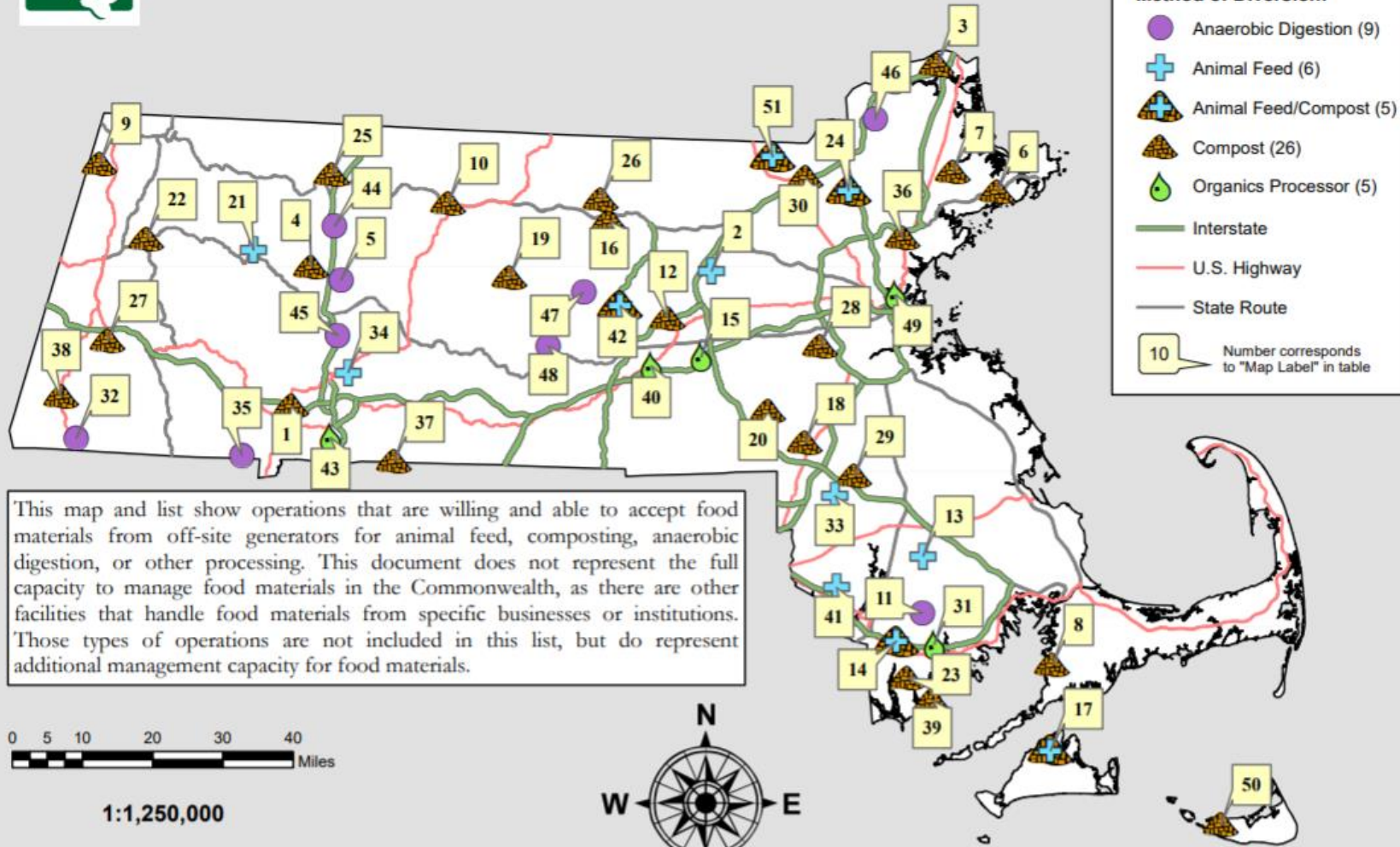
Logistics

Determine how food will be transported as well as pick-up frequency and quantities

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



Sites Accepting Diverted Food Material



DATA SOURCES:
 - Major Roads: MassDOT OTP, MassGIS, June 2014
 - Food Material Diverters: MassDEP BAW, August 2020

Packaged Food Waste

Company	Contact Name	Phone	Facility Location
<i>Depackaging Facilities Currently Operating</i>			
Ag-Grid Energy LLC	Rashi Akki	610-574-8737	Granville, MA
E. L Harvey	Benjamin Harvey	508-836-3020	Westborough, MA
Exeter Agri-Energy	Greg Williams	207-669-2457	Exeter, ME
Orbit Energy	Beverly Westle	917-881-2644	Johnston, RI
Parallel Products (Liquids only)	David Winchell	914-456-1397	New Bedford, MA
Quantum Biopower	Brian Paganini	203-565-6045	Southington, CT
RecycleWorks Inc	Dan Buonagurio	781-340-9425	Braintree, MA
Save That Stuff, Inc	Marc Galardi	617-714-1562	Charlestown, MA
Feedback Earth, Inc.	Carol Peterson	508-839-1300	Grafton, MA
Vanguard Renewables	Matthew Lillie	508-309-8111	Agawam, MA
Waste Management Boston CORE	Konrad Nowakowski	617-843-5990	Charlestown, MA

recyclingworksma.com/depackers-in-massachusetts



Food Scraps Source Separation Guidance

Collect for composting, animal feed, or anaerobic digestion

Container placement and color coding

Clear signage

Easily accessible and available bins

Good housekeeping practices

recyclingworksma.com/source-separation-guidance



Outdoor/Indoor Storage

Use estimator tools to
guesstimate container needs

Work with your hauler

Different container considerations
for indoor and outdoor storage

Best practice: check for
contamination

Training tools



Hauler Contracting & Equipment Guidance

Know Your Waste

Create and Adjust Contracts

Comply with Waste Disposal
Bans and Other Regulations

Communicate Effectively



recyclingworksma.com/hauler-contracting-bmp

Signage and Training Tools



FOOD SCRAPS RESTOS DE ALIMENTOS



ALL FOOD SCRAPS

Fruit & vegetable peels
Dairy, eggs, grains, bread
Meat, fish, poultry
Bones, shells



NO

Tissues, napkins, paper towels
Compostableware
Coffee cups, wrappers
Plastic, metal, glass



TODOS LOS RESTOS DE ALIMENTOS

Pieles de frutas y vegetales
Lácteos, huevos, granos, pan
Carne, pescado, aves
Huesos, cáscaras

NO

Pañuelos de papel, servilletas,
papel toalla
Utensilios compostables
Taza de café, envoltorios
Plástico, metal, cristal



LesserEvil

All popcorn scraps
are composted



America's Food Basket/CERO

Worked with RecyclingWorks to set up a food waste separation program for composting

Great hauler/generator relationship

<https://recyclingworksma.com/americas-food-basket-supermarkets/>



<https://recyclingworksma.com/resource-management-contracting-for-waste-services/>

RESOURCE MANAGEMENT CONTRACTING FOR WASTE SERVICES

Resource Management Contracts: Description and Benefits

Resource Management (RM) is a strategic approach to contracting waste services that aligns the financial incentives for the hauler with the goals of maximizing waste prevention and recycling. Unlike conventional waste service contracts, where a hauler's compensation increases as waste volumes increase, this approach incentivizes the businesses and institutions contracting for services and their service providers to work collaboratively toward maximizing waste reduction and diversion.

RM contracts emerged in the late 1990s but are particularly apt now, when a growing majority of large companies and institutions have waste minimization and/or climate action policies in place. An RM contract embodies those values: the service provider is tasked with working holistically

[Find A Recycler](#)

[Choose A Material](#)

Any Material 

[Location](#)

Enter location 

50 mi 

[Pick Up/Drop Off](#)

Pick Up/Drop Off 



Preppy Puppy Bakery



Case Studies

America's Food Basket, Boston

Untold Brewing, Scituate

River Valley Co-op, Northampton

Whole Foods Market, Medford

Hannaford, Stop & Shop, Whole Foods Market

Ocean Spray

NATURE HAS AMAZING PACKAGING

NO BAG NEEDED

FOOD BIODEGRADES, PLASTIC DOES NOT
OUR PLANET THANKS YOU!



THANK YOU!

Heather Billings

heather.billings@cetonline.org

Abbey Massaro

abbey.massaro@cetonline.org

info@recyclingworksma.com

888-254-5525

www.recyclingworksma.com

