



MASSACHUSETTS  
FARM TO SCHOOL

# Composting Kitchen Scraps for the School Cafeteria

October 4, 2023



# MASS. FARM TO SCHOOL OVERVIEW

Mass. Farm to School strengthens local farms and fisheries and promotes healthy communities by increasing local food purchasing and education at schools.

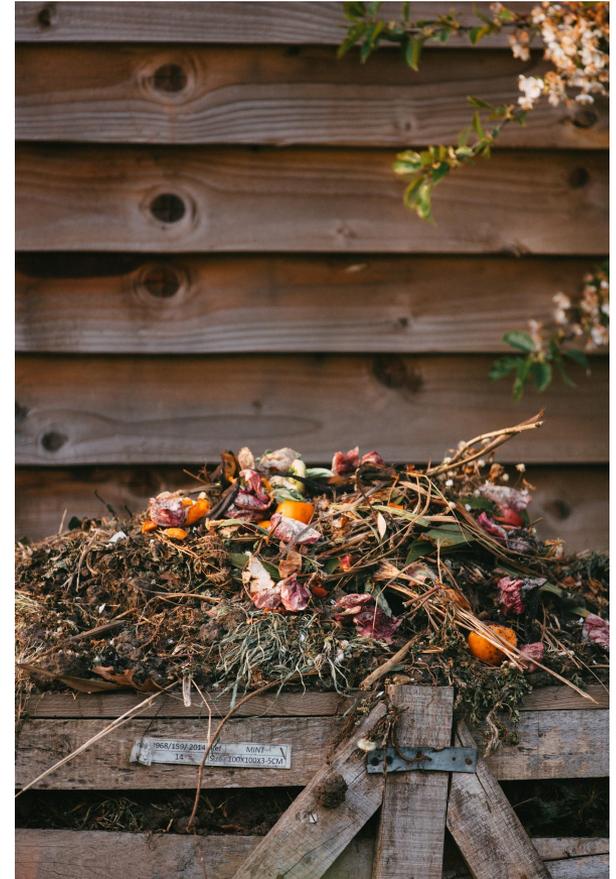
Get involved through our:

- Professional learning opportunities
- Networking
- Policy/Advocacy
- Communications

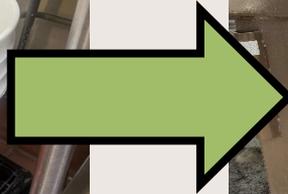


# PRESENTER

**Amy Donovan** is the Program Director at Franklin County Solid Waste Management District, in Greenfield, Mass. The Solid Waste District manages waste programs for 21 member towns, including 17 transfer stations and 25 public schools. Fifteen transfer stations in Franklin County offer free drop-off food waste programs for residents, and the majority of schools within the solid waste district divert food waste from the trash. Amy enjoys working with schools, and has set up indoor worm compost bins in dozens of classrooms since 2007.



# Composting Food Waste for the School Cafeteria: Focus on School Kitchens



Mass Farm to School  
Webinar  
October 4, 2023

Amy Donovan  
Program Director  
Franklin County Solid Waste District



## What is compost?

- During decomposition, worms, bugs, fungi, and bacteria eat dead leaves, trees, and animals.
- As living things decompose, **compost is created.**
- Compost feeds new plants as they grow.
- **In this pres, compost = food waste = "organics"**

**COMPOST**  
FOOD + PAPER



Funded by a grant  
from MassDEP



# Franklin County Solid Waste District 2018: 33 of 35 schools diverted food waste

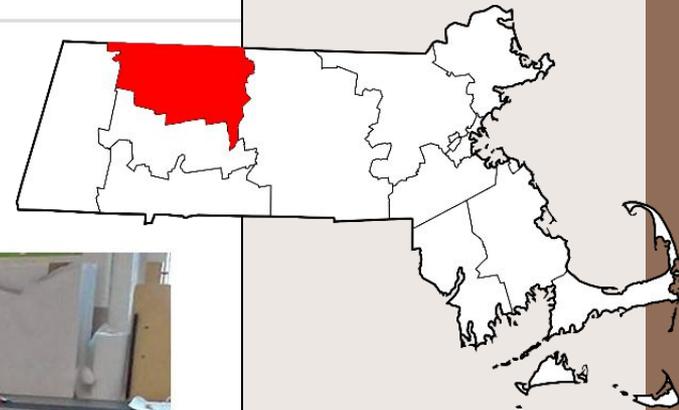


E-Edition Advertise **Subscribe** Login

News Sports Obituaries Opinion Arts Life More

News > Local

## 33 of 35 county schools actively composting



# Spearheaded by honor society, Mohawk Trail Regional School resumes composting

GREENFIELD  RECORDER

March 2022



Mohawk Trail Regional School senior Austin Sullivan, at left, monitors the sorting station, while other students sort their lunch waste into trash, recycling or compost bins. Food and paper waste is sent to Martin's Farm in Greenfield for composting. CONTRIBUTED

# Pioneer Regional High School/Middle School Compost Program (Northfield, MA); since 2000

Waste stations around school:



# Why Compost?



# Compost = "Garden Gold"



- adds nutrients, minerals to soil (invasive worms deplete)
- replaces chemical fertilizers
- reduces watering
- improves soil structure
- grow more food:  
farm to school...to farm...



HAY photo

# Trash goes to landfills, incinerators



- Does NOT become soil
- Expensive \$\$\$\$\$
- Incinerators at capacity
- <5 years left in MA landfills
- No landfills in western MA
- Contributes to climate change

< "Chicopee Landfill Closes"  
*MassLive photo*

Trash from western Mass  
is sent by train to landfills  
in faraway states:

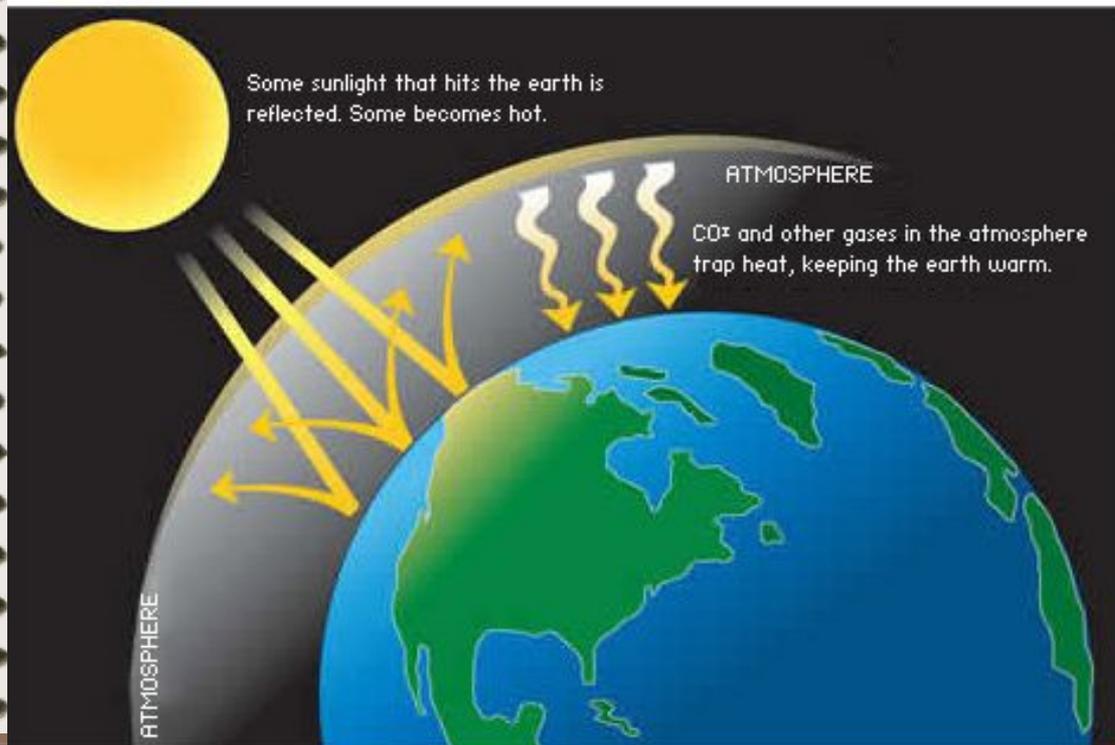
South Carolina  
Pennsylvania  
New York State



# Composting and recycling help slow **Climate Change**

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

The Greenhouse Effect



## Greenhouse Gases:

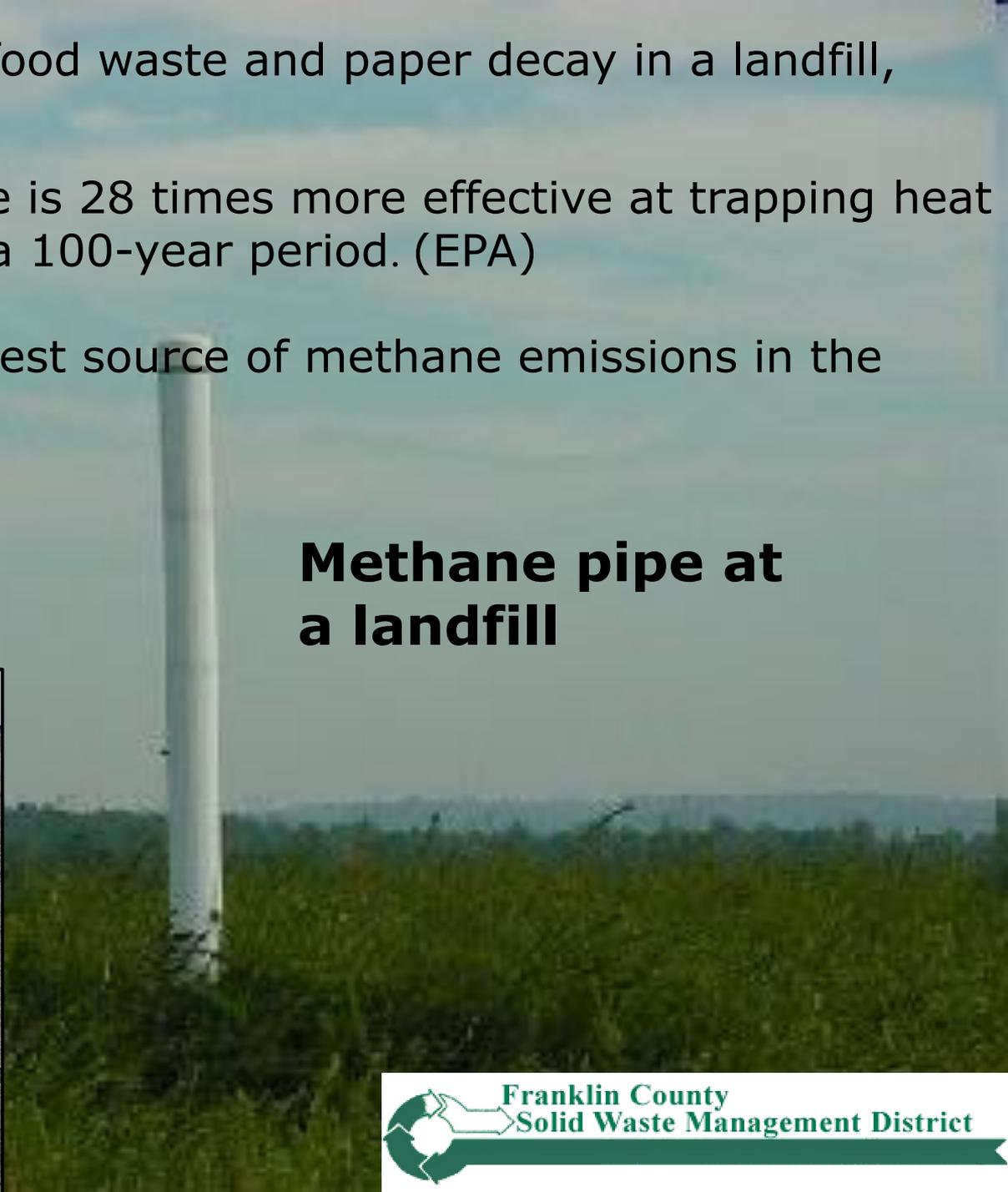
- Carbon Dioxide
- **Methane**
- Nitrous Oxide

When “organics” such as food waste and paper decay in a landfill, **methane** is released.

Pound for pound, methane is 28 times more effective at trapping heat than carbon dioxide over a 100-year period. (EPA)

Landfills are the third-largest source of methane emissions in the United States. (EPA)

## 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.



Front load tractor  
at Martin's Farm  
turns/stirs compost piles.

**Martin's Farm  
in Greenfield  
accepts  
organics from:**

25+ public and  
private schools,  
UMass, colleges;

10 municipal  
organics programs  
Greenfield,  
Deerfield,  
Northfield,  
Bernardston,  
Shelburne Falls

Many restaurants

Markets – co-ops,  
Big Y stores,  
Fosters' Market

Public events,  
food factories...

# What type/size compost system?



Earth Machine, left and New Age Composter provided by Mass DEP's The Green Team. (+ Green "Sure Close" compost pail) at Frontier High School Garden, Deerfield, MA

# 3 "sizes" of composting:

which 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



# Pioneer Valley Regional School

## Two 6-foot worm bins in N. Pullen's Science Class



Medium: On-site composting:



YES: compost fruit, peels, vegetables, bread, pasta, leaves, yard waste

**NO: animal products – meat, bones, cheese!**

**NO: paper, milk cartons**

Buy home compost bins “at cost” from your municipality.

## Medium: Compost Bin in School Garden



**YES:**  
fruit,  
vegetables,  
bread,  
**leaves,**  
garden waste,  
grass clippings

**NO:**  
meat,  
bones,  
Cheese

Bin supplied by  
MassDEP's  
The Green Team

Greenfield Recorder photo

## Medium: on-site school composting (similar to home composting)

- Larger system: 3-bay compost system
- No meat, bones, dairy, oily foods, peanut butter
- Kids empty pail after lunch
- Cover w/ leaves, **add leaves regularly**
- Stir/ turn often
- Labor intensive





# Franklin County Technical School

82 Industrial Blvd, Turners Falls, MA 01376 | 413.863.9561

On site composting  
from Culinary Arts,  
Cafeteria, Kitchen;  
No animal products

*Pictured: Landscape  
Horticulture  
Students rake leaves  
from fields and use  
them for compost*

*Compost used for  
FCTS tree nursery*



FCTS photo

# **Large: Commercial composting (“organics”) accepts:**

**ALL food:** including meat, bones, cheese, oily foods...

**Paper:** napkins, paper towels, food boats, paper lunch trays

Up to 93% of a school lunch is compostable!



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

Enacted Nov. 1, 2022: MassDEP waste ban on food waste - more than ½ ton/week from commercial/institutional.  
For help: [www.recyclingworksma.com](http://www.recyclingworksma.com)

**Large: Commercial composting:** ALL food is acceptable!  
**ALL food:** meat, bones, cheese, (yes, animal products)  
bread, veggies, fruit...  
**ALL paper:** napkins, paper towels, paper trays, (milk cartons)  
**Compostable plastic:** special cups, bags: "BPI-certified"



**Windrows and  
window turner at  
Martin's Farm**

Bags are placed in compost dumpster or toter, which is picked up 1-2x/week



# How to sort lunch waste

Actual school  
pres. slides



**COMPOST**  
FOOD + PAPER



Funded by a grant  
from MassDEP

Actual school  
pres. slides

ALL *leftover* food



Paper: milk carton, napkin, food boat, tray



Trays stacked,  
then composted

**Paper** comes from trees,  
so it will turn into soil (compost)!

Actual school  
pres. slides



Lunch trays should ideally be BPI certified or PFAS free:  
[bpiworld.org](http://bpiworld.org)

82% of cafeteria, kitchen waste is compostable!



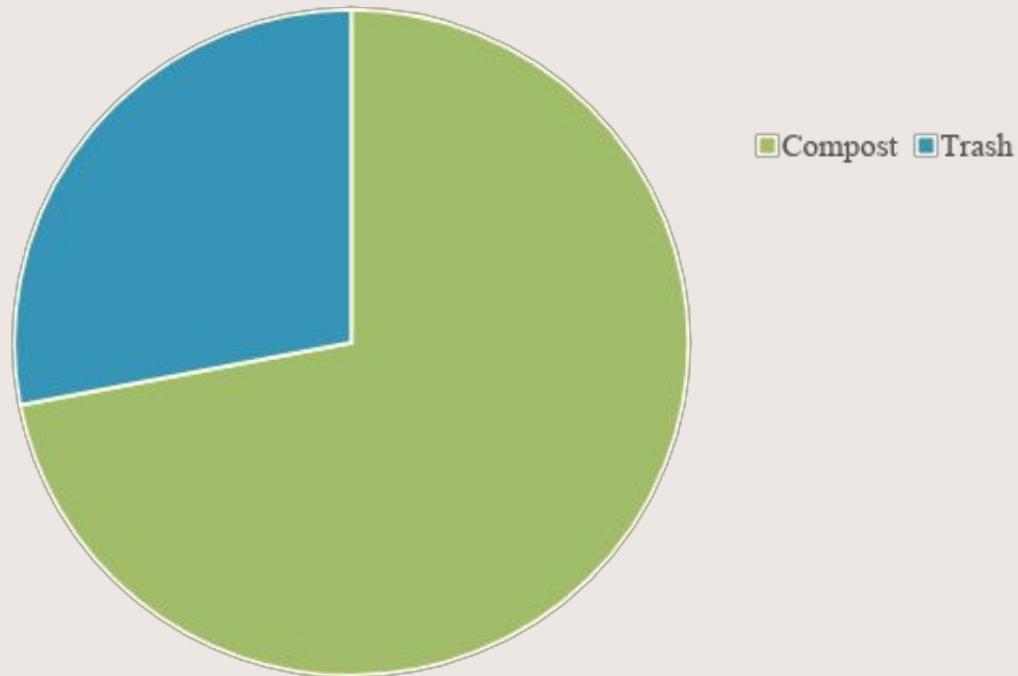
Trays: Stacked,  
then composted

451 lbx. compost per week  
Cafeteria & Kitchen

97 lbx. trash/week  
Cafeteria & Kitchen

72% of kitchen waste = compost!

Kitchen Waste by Weight



Large high school kitchen, 1 week:  
154.5 lbs. compost, 61 lbs. trash

# Collecting food and paper waste in school kitchens

## HS School Kitchen:

- Same 32-gal barrel as cafeterias
- Kitchen: 2-3 compost barrels on wheeled dollies
- Lined with compostable bag; must be BPI-certified:  
[bpiworld.org](http://bpiworld.org)
- Roll barrel out to compost dumpster; do not lift and carry compostable bags.



# Collecting food and paper waste in school kitchens



Compost, trash and recycling barrels

This school uses regular plastic bags and empties them into compost and recycling dumpsters.

# Collecting food and paper waste in school kitchens



Compost barrel at handwashing sink (paper towels) in HS kitchen

# Collecting food and paper waste in school kitchens

## Small school kitchen:

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



# Collecting food waste at different stations around the kitchen

Smaller containers get emptied into larger barrel or toter:

- 5-gallon pails
- Large metal bowls
- Other

Potential stations:

- Food prep areas
- Serving area
- Dishwasher area
- Handwashing sink  
(paper towels)



# Smaller kitchen containers can go through dishwasher



*Photo Credit: David Conlon*

# School Kitchen Recycling

Every container in this kitchen stockroom photo is recyclable and should be recycled.



# School Kitchen Recycling



# School Kitchen Recycling



Recyclables from a school kitchen await pickup in a recycling toter.

# Resources



- MassDEP's Green Team: free compost bins, activities, lesson plans that align with state standards:  
[thegreenteam.org](http://thegreenteam.org)
- Green Team Films:  
<https://thegreenteam.org/recycling-facts/food-waste-education/>
- **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](https://www.youtube.com/watch?time_continue=2&v=YD4hYv-UEeo)
- Green Team signage:  
<https://thegreenteam.org/recycling-and-composting-signage/>

# Resources

---

- **Green SWoRD** is a statewide group working on school waste reduction, composting, and sourcing compostable lunch trays.

**Next mtg: Thurs Oct 5, 9:30 am**

– <https://sites.google.com/view/ma-green-sword-k-12-schools/home>

- Recycling Works MA lists organics haulers, provides calculations for ½ ton organics ban, gives free assistance to schools: [recyclingworksma.com](http://recyclingworksma.com)
- Carton Council - Resources for recycling school milk cartons: [recyclecartons.com](http://recyclecartons.com)
- Massachusetts Farm to School - local food purchasing and education at schools: [massfarmtoschool.org](http://massfarmtoschool.org)

Signs:  
springfieldmrf.org

# RECYCLE



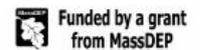
**BOTTLES,  
JUICE BOXES,  
CANS,  
YOGURT CUPS**



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](http://www.franklincountywastedistrict.org) or call 413-772-2438



# TRASH

PLASTIC WRAPPERS, STRAWS, ETC.

 Funded by a grant  
from MassDEP

# TRASH



straws



plastic  
utensils



plastic bags/  
wrappers



packets



pouches



polystyrene  
(Styrofoam™)



413-772-2438  
[www.franklincountywastedistrict.org](http://www.franklincountywastedistrict.org)



Funded by a grant  
from MassDEP

Signage is important!



Ask Amy Donovan for this sign.  
(Contact info in last slide.)

# 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**



# MassDEP's RDP program

---

Your city/town's earned "RDP" funds: can be used to support school composting:

- Signage
- Bin liners
- Equipment (bins, etc.)
- Post consumer recycled content plastic trash barrels, etc.
- Collection/processing costs
- Stipends for personnel coordinating new compost programs



*Contact info:*

*Amy Donovan*

*Program Director*

*Franklin County Solid Waste Management District*

*Greenfield, MA*

*413-772-2438*

*[amy@franklincountywastedistrict.org](mailto:amy@franklincountywastedistrict.org)*