

**How Low Can You Go, Penns Valley?  
Waste Reduction in our Homes and Communities**

**Shelly Mato  
Centre Region Council of Governments  
Refuse and Recycling Program Administrator**





# Why should we REDUCE our WASTE?

REDUCE GREENHOUSE GAS EMISSIONS by reducing:

- gases and pollutants released into the environment from extractive industries like mining and logging
- production and transportation energy consumption
- pollutants from incinerators
- methane from landfills

INCREASES CARBON STORAGE by leaving more trees standing in the forest where they continue to absorb carbon dioxide from the atmosphere.



How:

- use less paper and cardboard produced from trees (as opposed to recycled fibers)
- reuse wood and wood fibers and “use every bit” through careful planning



# What else does Waste Reduction do?

## Reduces energy consumption

- Using **recycled materials typically requires less energy** than making goods from virgin materials.
- Reducing waste **reduces the energy required to transport** it for disposal.
- Reducing our energy consumption
  - helps stabilize energy costs,
  - reduces air pollution,
  - reduces harm to the natural environment and animals,
  - diminishes our reliance on fossil fuels,
  - and makes our energy grids and costs less volatile.

## Helps sustain our economy.

- Pennsylvania's recycling industry is responsible for supporting **26,000 jobs**
- And is responsible for **\$680 million** in annual employee earnings.
- This industry contributes more than **\$4.2 billion** per year to the Pennsylvania economy in jobs, salaries, and spending.

## Creates jobs.

- Recycling creates an average of **9 times more jobs** than trash disposal.
- Reuse through donating unused items that are repaired and marketed creates as many as **30 times more jobs** than disposing of those goods in landfills.

## AND Waste Reduction preserves landfill space.

A Pennsylvania Waste Industries Association study concludes that the state has **6.3 years** of landfill capacity left.

The only option is to open up more landfills or build more WTE facilities.



- Municipal Waste Landfills
- Construction and Demolition Waste Landfills
- Resource Recovery (Waste-to-Energy) Facilities

Notice that there are no landfills or WTE facilities in the center of the state.



# Pennsylvania Waste Characterization Study, 2021

**Total MSW Disposal = 9,393,702 Tons**

This is what was left in the waste stream and went to landfills or WTE facilities.

**Residential = 51.3%**

**Commercial = 48.7%**

Figure 4-6 Divertibility of Disposed MSW

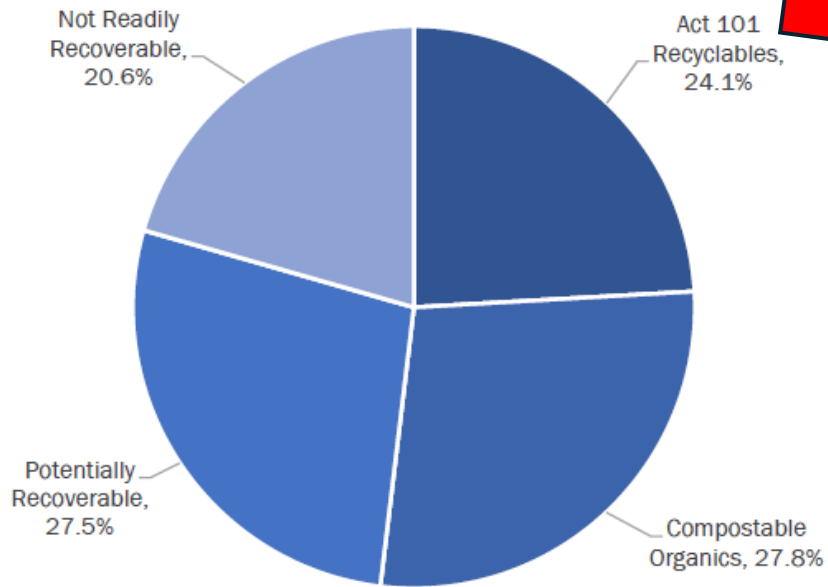


Figure 4-10 Disposed MSW Composition Summary by Generating Sector (Tons)

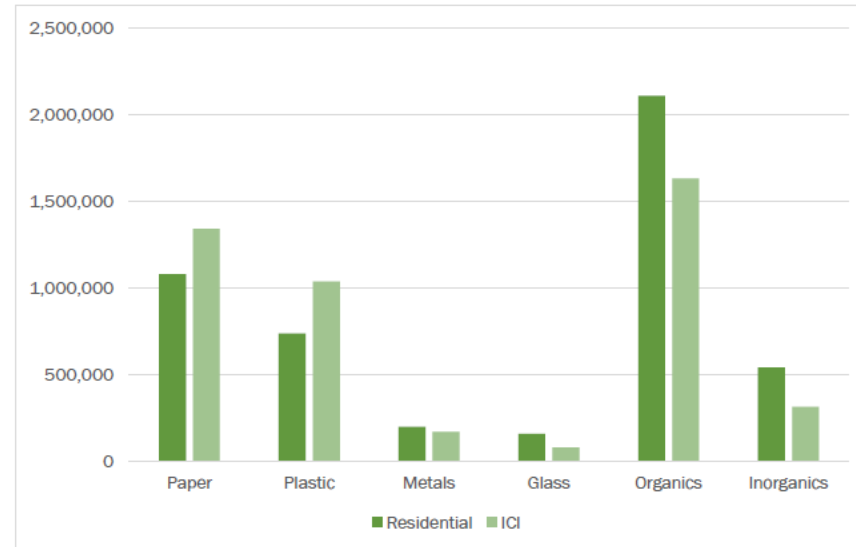
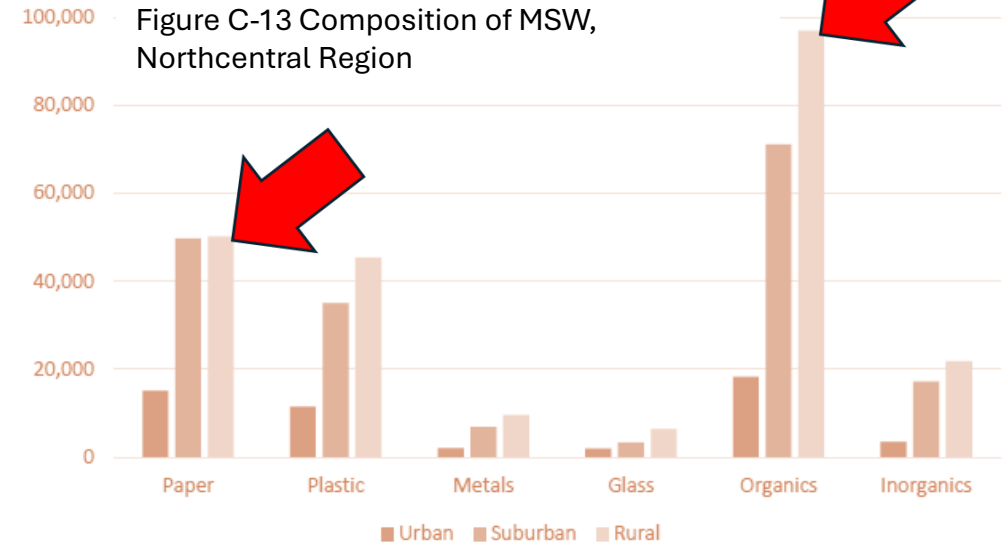


Figure C-13 Composition of MSW, Northcentral Region



## WASTE REDUCTION: 1<sup>st</sup> Strategy

## RECYCLING WORKS!

- Recycling saves natural resources.
- It takes less energy to create from recycled stock than extracting and processing virgin materials:
  - steel = 60 % less
  - plastic = 70%
  - aluminum = 95% less
- Except for “contamination”, everything that is collected for recycling is indeed recycled (made into stock for new products).
- In Centre County, the contamination rate is very low\*, so just about everything is recycled.
- **If you want to make sure it's recycled, recycle right.**

\* because it is all source-separated







# Recycling in Penns Valley: January – October 2024

Recycling Drop Off Locations	Total Recycling in Pounds	Monthly Average
Centre Hall Borough Drop Off	37,640	3,764
Gregg Twp Drop Off	67,160	6,716
Haines Twp Drop Off	50,340	5,034
Millheim Borough Drop Off	49,300	4,930
Penn Twp Drop Off	40,500	4,050
Potter Twp Drop Off	288,820	28,882
<b>TOTAL</b>	<b>533,760</b>	<b>53,376</b>



Note that Potter Township has 5 drop-off sites.

Corrugated Cardboard (does not include drop offs)	Total OCC Recycling in Pounds	Monthly Average
Centre Hall Borough	9,620	962
Gregg Twp	50,000	5,000
Haines Twp	33,760	3,376
Millheim Borough	39,020	3,902
Penn Twp	25,460	2,546
Potter Twp	84,440	8,444
<b>TOTAL</b>	<b>242,300</b>	<b>24,230</b>

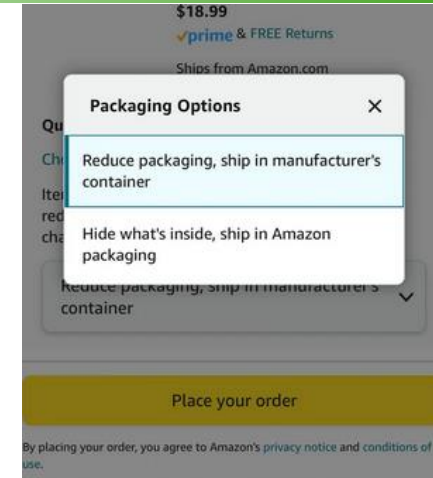


Penns Valley Business Recycling	Total Recycling in Pounds	Monthly Average
American Legion Keystone Post 44	7,035	704
Burkholder's Market	1,530	153
Cooke Tavern LTD	6,500	650
Elk Creek Café	2,230	223
Hosterman & Stover	5,985	599
Martin's Feed Mill	2,050	205
Millheim Fire Company	17,390	1739
Millheim Hotel	17,665	1767
Millheim Small Engine	3,215	322
Woodward Sports Camp	12,740	1274
<b>TOTAL</b>	<b>82,540</b>	<b>8254</b>

↑  
This is not a complete list.



## #1 Reduce Packaging. Opt for less packaging when you shop.



## #2 Reuse. Commit to putting nothing in the trash until you've thought about how it could be reused.



## #3 Choose Reusables.



## #4 Go for second-hand or recycled content.



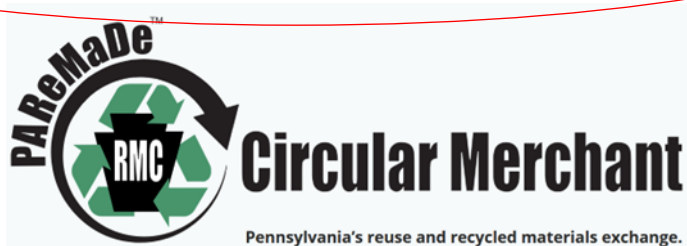
## #5 **Donate and Share.** Remember to use website, apps, and other online resources.



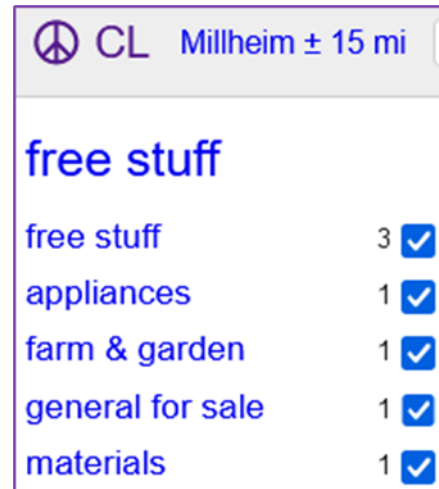
### Recycle Construction and Renovation Materials

Untreated wood, vinyl siding, and scrap metal can all be recycled at the CCRRA\*.

Both used and unused building materials, stone, and even appliances can be bought, sold or exchanged through PA's **Circular Merchant** platform.



Check out what's there before buying new materials for your project.



### Donate Renovation and Household Left-over Material



Restore in Bellefonte accepts the following:

- New and gently used appliances
- Gently-used furniture and rugs
- Kitchen and bathroom cabinets, countertops and fixtures
- Light fixtures
- Wood and building materials
- Tools (working and in good condition)
- Unused tile and paint

*And remember to shop at Restore for your renovations and upgrades, from lamps to garden fencing!*



**don't**



#6 **Curb the junk, especially junk mail.**



#7 **Research before you buy.** Look for recycled content and sustainably-sourced options, no matter what it is.



#8 **Reduce your FOOD WASTE.** In many ways, this could have the greatest impact!

## Food Waste is a World-wide Problem

- Across the world, about **30%** of all food produced is eventually wasted.
- Food Waste accounts for **8%** of human-caused greenhouse gas emissions.
- If Food Waste were a country, it would be the third-largest greenhouse gas emitter in the world, just behind the U.S. and China.
- If we stopped wasting 50% of that food, we could feed **2 billion** people every day.

## U.S. Food Waste Facts

- **40% of all food** in the United States is wasted.
- **25% of all fresh water** we consume goes to produce food we never eat.
- **4% of the oil** we consume goes to produce food we never eat.
- **\$166 billion** (retail value of preventable waste) is spent on the food we never eat.
- **135 million tons of GHG** emissions are created by the food we never eat.
- American households throw out **25% of the food** they purchase.
- A family of four tosses out more than **\$1,800** a year in wasted food.

# Tips for Reducing Food Waste in Your Home



## Plan.

- Make a meal plan and list of ingredients.
- Pay attention to your calendar and plan “leftover” days.
- Buy in season; fruits and veggies will last longer.
- Do some prep work; we’re more likely to eat those veggies if they’re cut up already.



## Use what you have.

- Check what you have on hand before you shop.
- Have an “Eat Me First” spot in the “fridge and pantry.
- Eat those leftovers. Package them in lunch-size portions right from the start.
- Get creative with extras, scraps, and “almost gone” foods. There are tons of recipes out here.





## Tips for Reducing Food Waste in Your Home



### **Store food properly for maximum nutrition, taste, and longevity.**

- Low-humidity (fruits, berries) and High-humidity (root veggies and leafy greens)  
On-the-counter (bananas, tomatoes) and in the dark (potatoes, onions)
- Know the “Enemies” that you should keep apart
- Avoid pre-washing leafy greens, but do trim tops of root veggies
- Use the freezer for more than ice cream. Like bags of soup.
- Label, label, label.



### **Know what date labels actually mean.**

- **Not an indicator of safety or expiration** nor required by federal law (except infant formula!)
- **Best By / Best If Used By / Best If Used Before:** indicates when a product is most likely to have its best flavor or quality
- **Sell By:** tells the store how long to display a product for inventory management
- **Use By:** also not a safety date (except for infant formula); indicates peak quality or flavor.

## Tips for Reducing Food Waste in Your Home



**Compost whatever possible.**

**Composting is a managed decomposition process that naturally gets rid of vegetative food waste and produces a nutrient-rich soil additive for your garden.**



### The “Easy” Actions

- Host or Sponsor Events
  - Repair Café →
  - Workshops (composting, basic sewing, canning)
    - Pair a workshop with a business event like an open house
  - Drop-offs (such as e-waste)
  - Community swaps
- Promote Local
- Highlight businesses that take action to reduce waste →
- Provide resources on waste reduction (e.g. how to opt out of junk mail)
- Push for policies such as purchasing and recycling for municipal operations and institutions
- Include Waste Reduction in conversations/outreach on conservation and environmental stewardship.



## Waste Reduction: 4<sup>th</sup> Strategy

## Community Actions to Reduce Waste

### “Heavy Lift” Actions

- Municipal Ordinances
  - Separation of recyclables from refuse
  - Businesses, institutions, residents
  - Burning
- Community Resource Recovery programs/ centers
- Community Food Rescue or Composting (possibility of some funding through sale of carbon credits!)

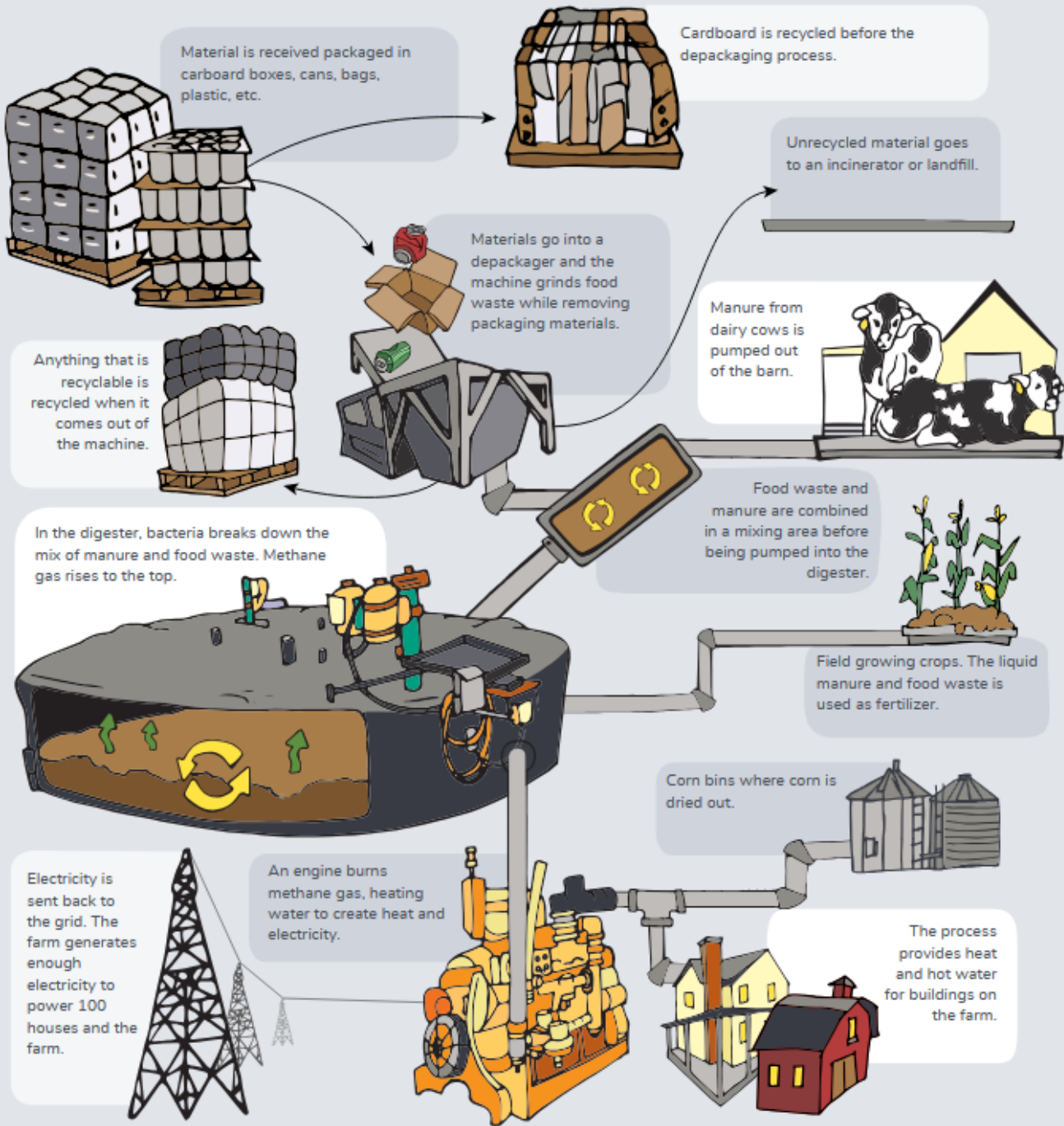


# On-Farm and Non-Farm Composting Option: General Permit

- Pennsylvania's General Permit [WMGM017](#) ("Source Separated Composting") now includes on-farm and small-scale non-farm composting of residual and municipal waste.
  - Includes composting, vermicomposting, and hermetiacomposting (using black soldier flies)
  - Materials eligible for on-farm composting include **manure**, **yard waste**, source separated **food waste** from various sources, and source-separated newspaper and cardboard.
  - **Non-farm composting facilities are limited to composting yard waste and source-separated pre- and post-consumer food waste.**
  - Approved uses for finished compost include marketing or distribution as soil substitute, soil conditioner, soil amendment, fertilizer, or mulch.
- **Criteria:**
  - Cannot exceed 5 acres for on-farm or 2 acres for non-farm
  - Does not store more than 500 tons or 1,000 cubic yards per year of source-separated food scraps
  - Does not store more than 3,000 cubic yards per acre of total materials at any time
  - Non-farm facilities accepting more than 3,000 cu. yds. per year must maintain a financial bond to guarantee proper management and removal of any feedstocks, compost, or finished product
  - Composting methods must be via windrows, aerated static piles, or in-vessel
  - Incoming food scraps must be incorporated into composting process within 24 hours
  - Cannot be within a 100-year floodplain, 300 feet of an "exceptional value wetland", 300 feet of a water source, within 100 feet of a perennial stream, or within 300 feet from an occupied dwelling



# Anaerobic Composting (biodigester)



Reinford Farm, Mifflintown, PA



“We don’t need a handful of people doing zero waste perfectly. We need millions of people doing it imperfectly.”

*Anne-Marie Bonneau*