

# Is Recycling Still Worthwhile in New Hampshire?

NH Municipal Association Webinar  
January 29, 2020

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# Agenda

1. About NRRRA
2. Fundamentals
3. Recycling Markets
4. Composting
5. Advice
6. Resources



# About NRRRA

# About NRRA

- Recycling nonprofit
- 400+ members, primarily municipalities
- Founded nearly 40 years ago



# Cooperative Marketing and Purchasing



Enable communities  
to manage their own  
recycling programs



40 programs, including  
single stream and  
municipal solid waste



Connect sellers of  
recyclables to  
purchasers



- Workshops
- Facility tours
- Annual conference
- Technical assistance
- School Club programs

Education



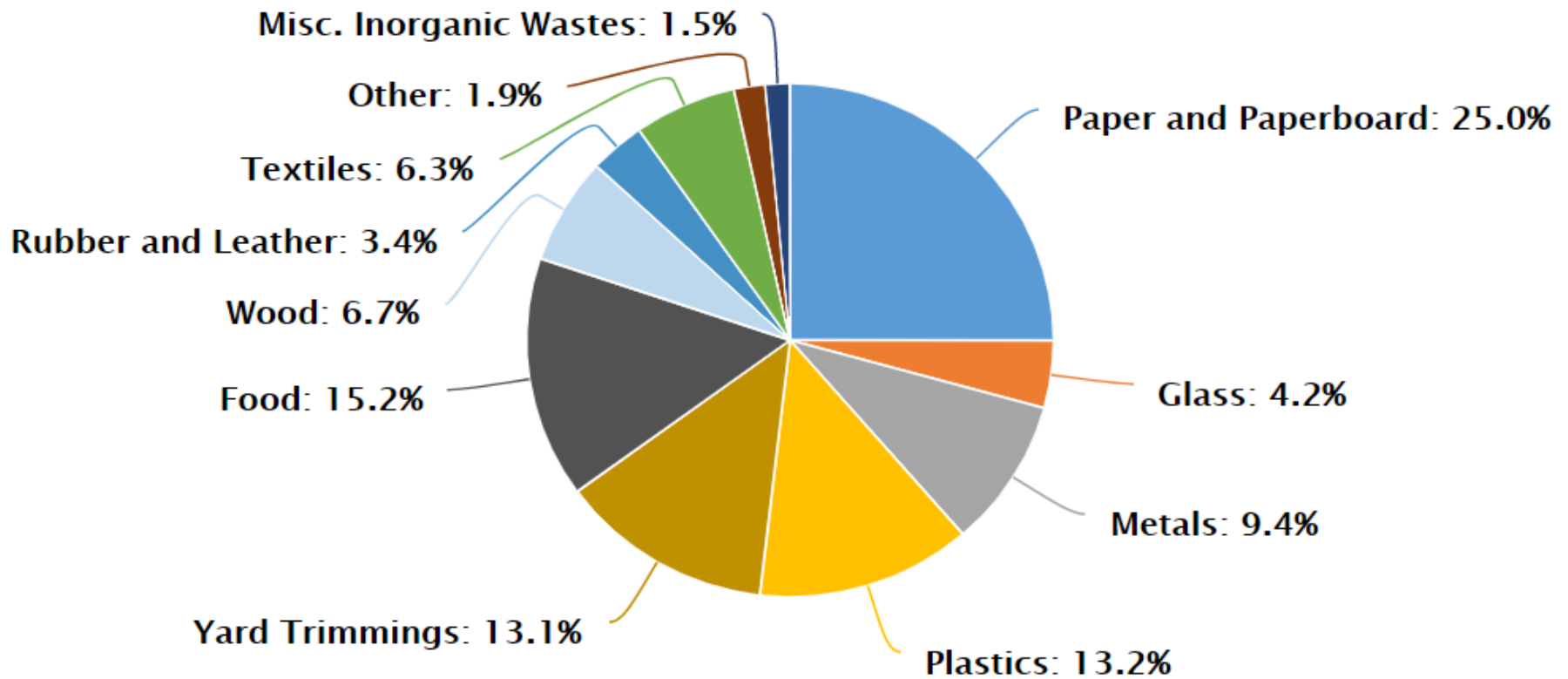
# Trash on the Lawn Day



# Fundamentals

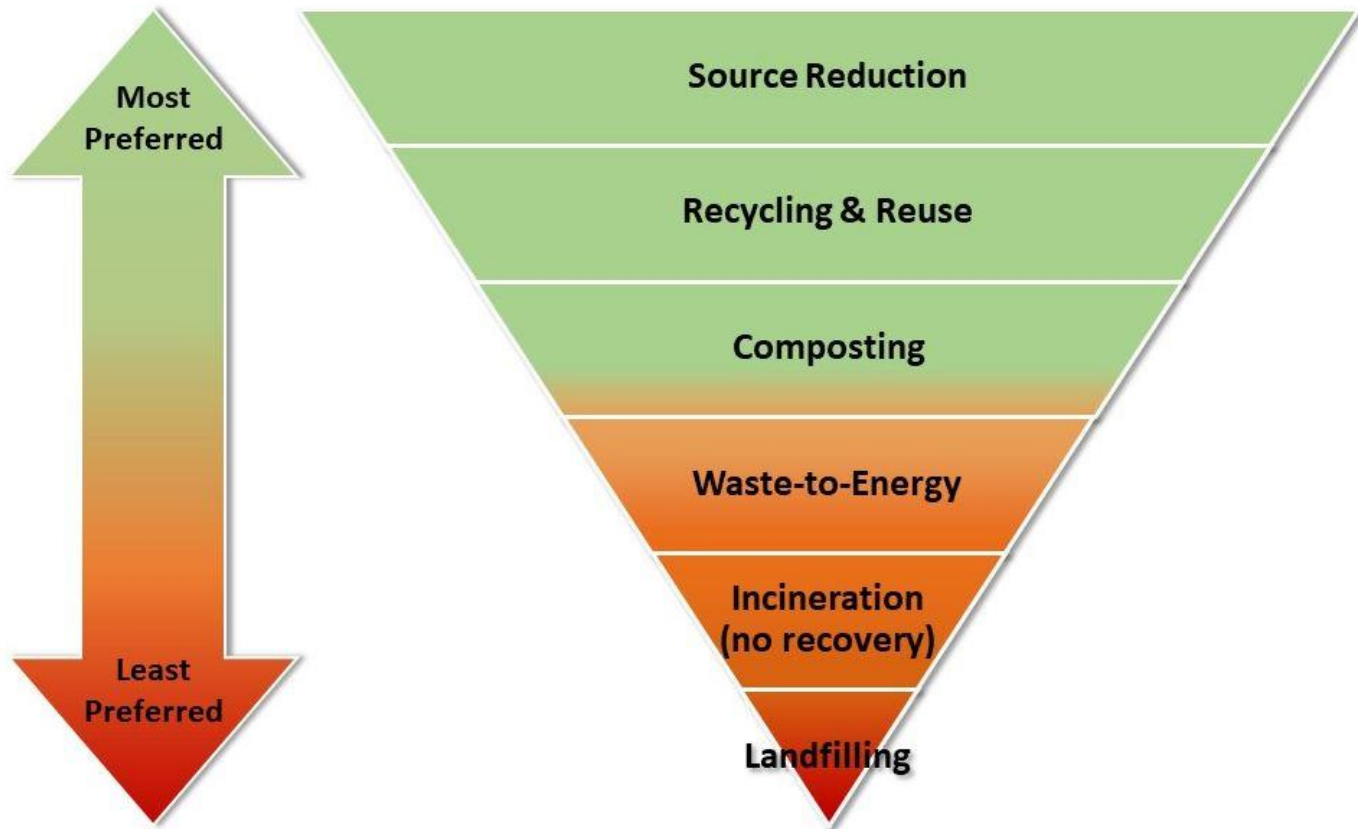



# Total Municipal Solid Waste Generated by Material



Source: EPA 2017

# NH Waste Reduction Hierarchy





## Disposal of Solid Waste in NH

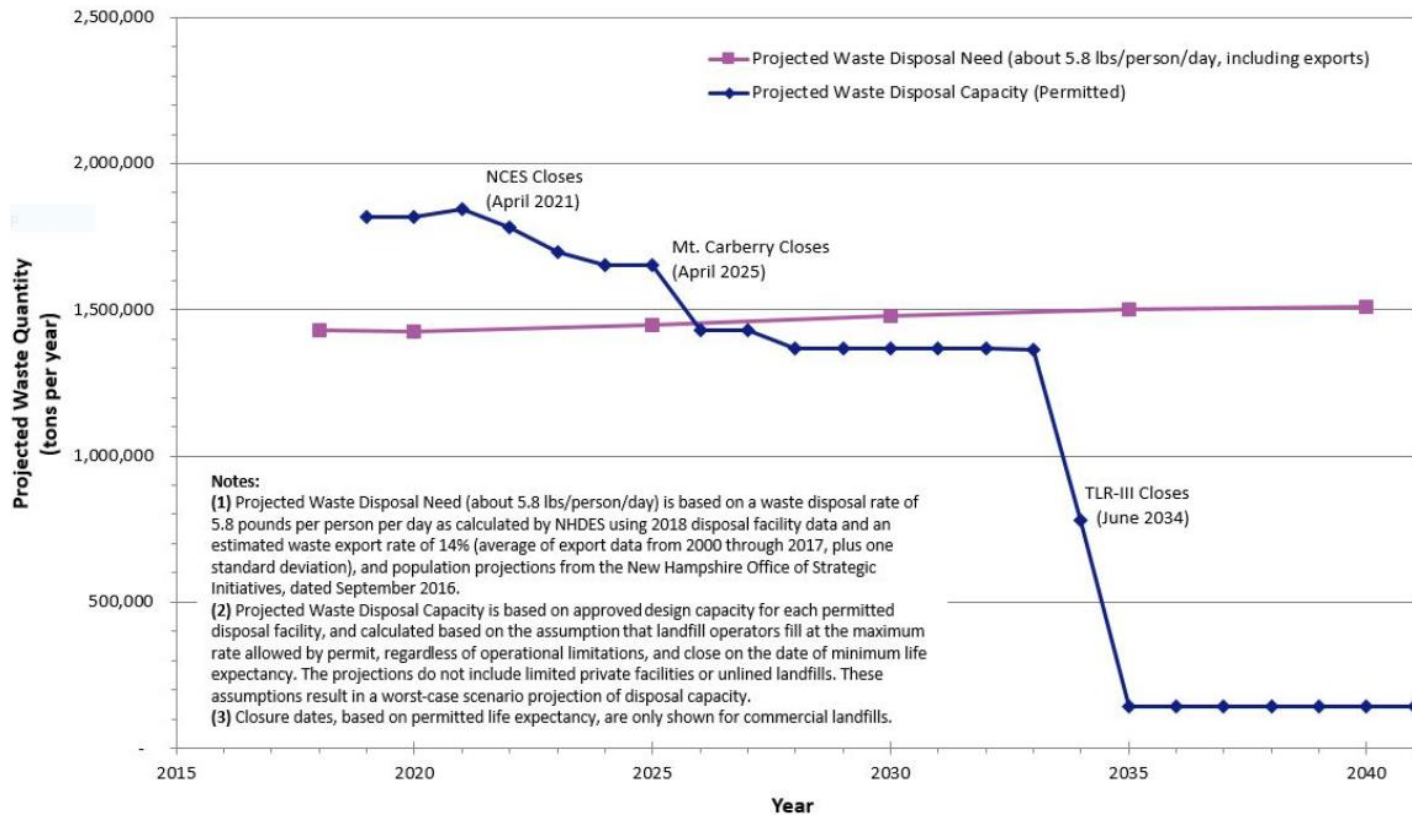
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- Key costs determined by weight: tipping and hauling fees
- 6 landfills in NH
- 50% of trash disposed of in NH comes from out of state (mostly from MA)

# We're running out of landfill capacity

NH Projected Waste Disposal Need and Capacity (2020 - 2040)

Source: NHDES 2019 Biennial Solid Waste Report



**Myth: If recyclables can't be sold for a profit, then they should be thrown away.**

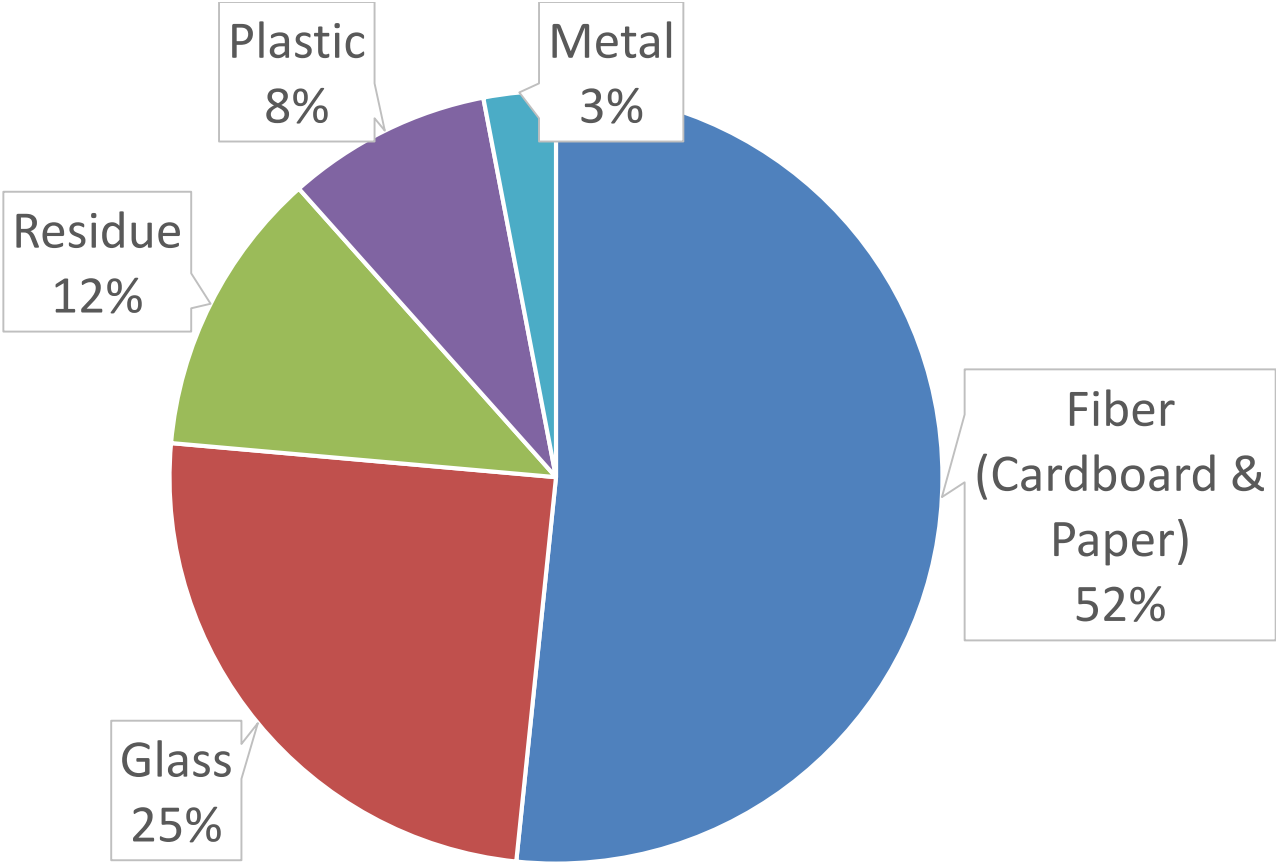
**Truth: Recycling is a valuable cost avoidance strategy**

# When Does Recycling Happen?



When materials  
turned into new  
product that  
someone buys

# Core Commodities Leaving Materials Recovery Facilities (by weight)



[Source: Northeast Recycling Council \(Aug. 2019\)](#)



Single Stream  
Recycling  
(versus source  
separation)

Typically lower value commodities  
because more contamination

Higher contamination key factor  
leading to China's National Sword



# China's National Sword Policy

- Ban effective Jan. 1, 2018
- All plastics, unsorted mixed paper & textiles
- Some glass and metals
- 0.5% contamination limit versus prior 2%



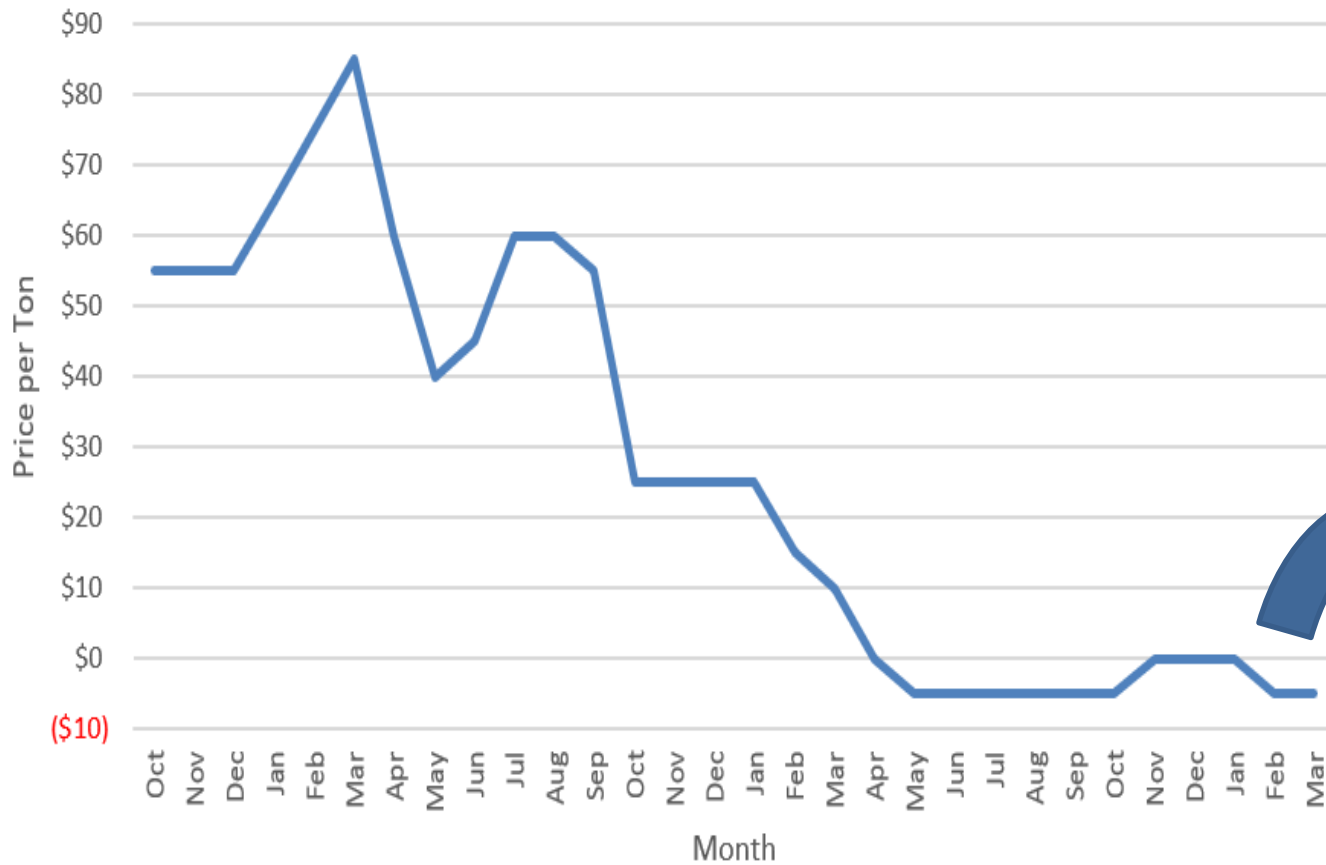
# Recycling Markets



Fibers (cardboard  
and mixed paper)

- Biggest impact from China's National Sword
- Pre-Sword, China purchased 55% of world's scrap paper

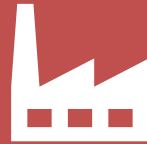
### Trading Price of Mixed Paper October 2016 to March 2019



Jan. 2020  
Cost over  
\$80 per ton

(Source: NRR)

# Silver Lining



Domestic investment  
in paper mills



22 new and existing  
mills increasing  
capacity for mixed  
paper



[Source: Northeast  
Recycling Council  
\(Aug. 2019\)](#)



# Glass

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- Markets were poor before China
- NRRRA has two programs for glass

# Glass Recycling



Glass bottles and jars only



Canadian vendor cleans and crushes



Made into fiberglass insulation back in US



65+ communities in NH, VT & MA

# Processed Glass Aggregate

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- Glass bottles and jars
- Pyrex, ceramics, porcelain, window glass
- Crush into aggregate
- Subbase for road and infrastructure projects
- 60+ communities in NH, VT & MA





# Metal & Plastic

- Scrap plastic exports from the U.S. dropped by 35% from 2017 to 2018
- Metal prices down due to tariffs between US and China
  - Not related to National Sword Policy



# Materials Recovery Facility Financials

Revenue and (Costs)	Per Ton	
Tipping Fee with Contract (Calendar year 2018)	\$38.00	
Processing Costs (Calendar year 2018; July - Sept 2019)	(\$82.00)	(\$83.00)
Commodity Value Per Ton with Residuals (April - June 2019; July - Sept 2019) <b>-24% change</b>	\$45.83	\$34.85

[Source: Northeast Recycling Council \(Nov. 2019\)](#)

# Effect on Single & Dual Stream Communities



Dramatically higher tipping fees (\$100+ per ton)



Additional fees if exceed set contamination limits



Some switching back to source separation



Some burning or landfilling recyclables temporarily



## Effect on Source Separating Communities

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Less impact because  
higher quality  
commodities and not  
dependent on materials  
recovery facilities

# Source Separated Commodity Values

Sample Market Pricing for January 2020			
		Revenue / (Cost) Per Ton	
		Low	High
Plastic	#2 HDPE Natural (ex. Milk jugs)	\$1,020	\$1,120
Metal	Aluminum Cans	\$440	\$620
Plastic	#2 HDPE Colored (ex. Detergent bottles)	\$220	\$280
Fiber	Sorted Office Paper	\$80	\$85
Plastic	#1 PET (ex. Soda bottles)	\$40	\$100
Plastic	#1 - #7 Mix	\$40	\$80
Fiber	#8 Newsprint	\$45	\$55
Fiber	OCC (Cardboard)	\$15	\$40
Glass	Into Aggregate or Fiberglass	(\$75)	(\$35)
Fiber	Mixed Paper	(\$100)	(\$80)
<b>TRASH</b>	<b>MUNICIPAL SOLID WASTE</b>	<b>(\$120)</b>	<b>(\$70)</b>

Source: NRRRA (assumes material baled and shipped in full loads)



# Composting



# Leaf and Yard Waste

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Cannot landfill or incinerate in New Hampshire

# Food Waste

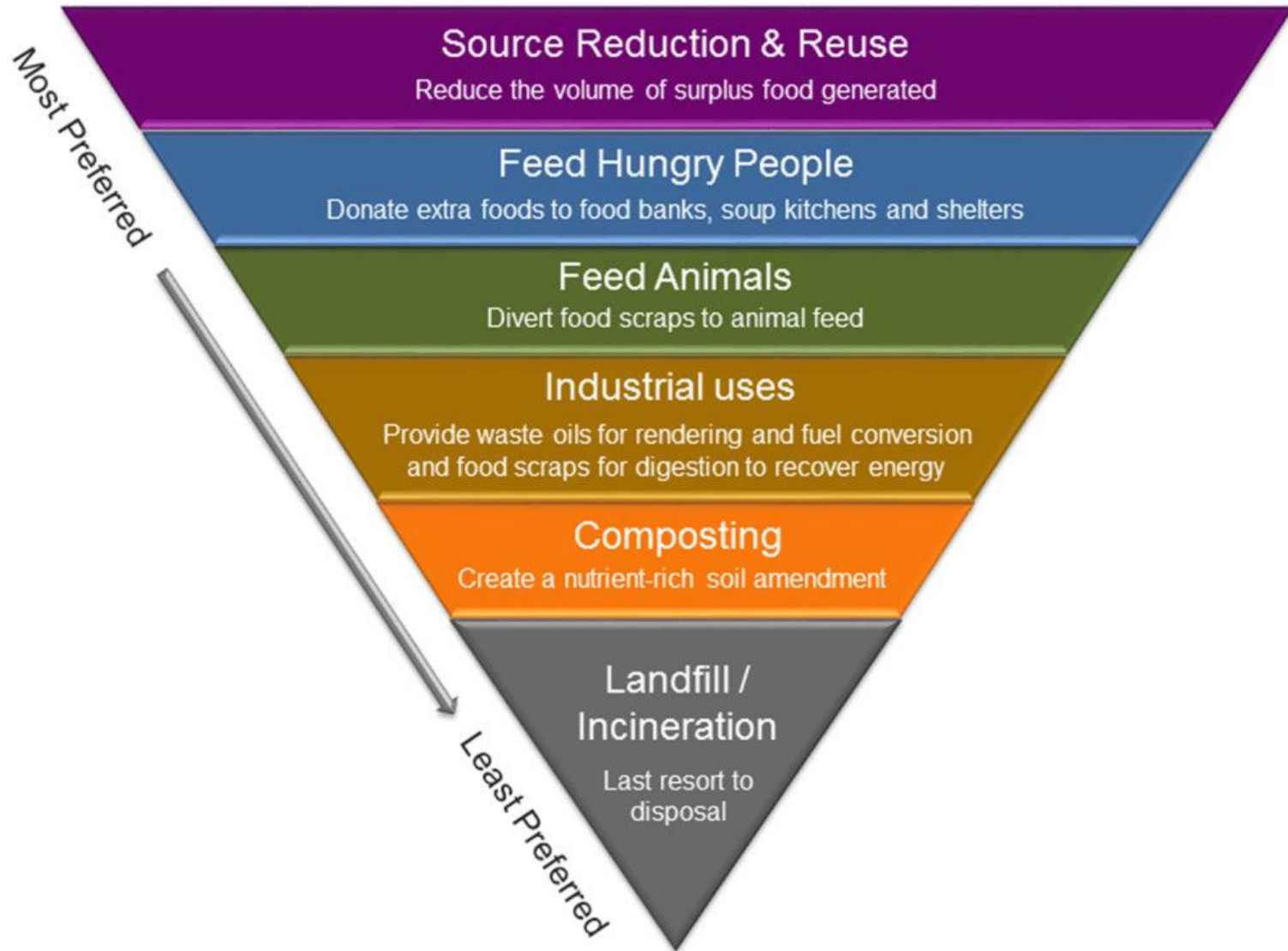
- Food waste is single largest component of material being landfilled (22%; EPA 2017)
- Only 6% of food waste is composted in US (EPA 2017)
- Landfilling food waste problematic for environmental, financial and moral reasons







# Food Recovery Hierarchy



# Composting Food Waste in NH



- 6 active composting facilities in NH; only 1 can compost meat and dairy
- Composting meat and dairy requires extensive permit process with NHDES
- 2015 law directed NHDES to establish rules for composting meat and dairy
- Not yet completed, but can request waiver of rules in meantime



Advice

# Advice for Communities



**Single & Dual Stream:** educate residents and clean up your recycling stream



**Source Separated:** consider separating out more material



**All:** encourage composting



**All:** avoid making dramatic changes

## How Can You Help?

Educate others about waste management and recycling

Used processed glass aggregate locally

Purchase products with recycled content

Compost



# Resources

*Can you turn trash into treasure?*

## Using Recycled Content Materials in Road & Infrastructure Projects

Curious about the use of recycled content in road and infrastructure projects?  
*What are the requirements? What will my citizens say? And... how do I even?*  
Join us on **4/15/2020** in **Concord, NH** for this special one-day workshop!

### Topics will include:

- Plastic drainage pipes
- Ground asphalt for roads
- Crumb rubber
- Glass/ Processed Glass Aggregate (PGA)

**\$75 registration fee includes lunch**

### Who should attend:

- DPW and DOT professionals
- State recycling/environmental professionals
- Recycled content advocates, plastic recyclers, and other state and community recycling leaders
- Economic development and recycling market development professionals

April 15, 2020  
NH DES Auditorium  
29 Hazen Drive, Concord

Register by March 27, 2020 at:  
<https://nerc.org/special-event/workshop-april-2020>





Northeast Resource Recovery Association  
**ANNUAL CONFERENCE  
& EXPO**

**Monday & Tuesday, May 18 – 19, 2020**  
**Manchester, New Hampshire**



**Report of the Committee to Study Recycling Streams and Solid Waste Management in NH** (Nov. 2019) – many resulting bills this session  
<https://www.gencourt.state.nh.us/statstudcomm/committees/1476/reports/2019%20Final%20Report.pdf>

**NRRA Testimony: The State of Recycling Markets in New Hampshire**  
(Sept. 2019)  
<https://nrta.net/wp-content/uploads/NRRA-HB-617-Recycling-Markets-09032019.pdf>

**Food Waste Diversion Webinar Recording** (Sept. 2019)  
<https://nrta.net/resources/food-waste-reduction-composting/>

**NRRA Monthly Free E-Newsletter *Full of Scrap***  
Sign up: <https://nrta.net/#newsletter>



*Thank you For Recycling*

**Northeast Resource Recovery Association**

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**STAY CONNECTED**

**[FACEBOOK](#)**

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