

Presented By:
NRRA



NRRArecycles.org
@nrrarecycles

RECYCLING 101

A Northeast Resource Recovery Association Presentation

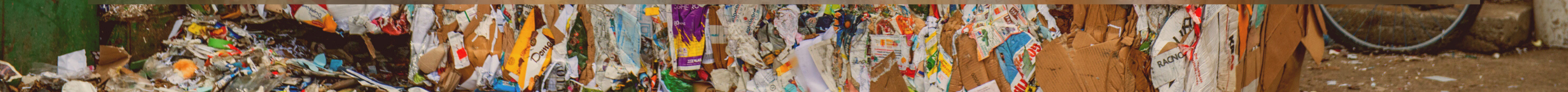


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About NRRA

Introduction

Partnering to make recycling strong through economic and environmentally sound solutions, NRRA is the oldest and largest cooperative-model recycling nonprofit in the US. We support small, rural communities in NH, VT, and MA with cooperative marketing, education, and technical assistance.

- Reagan Bissonnette, Executive Director





Our Impact

Fiscal Year 2022



\$2.98 Million

(\$2,982,771)

The **dollar amount** NRRA returned to members in 2022, thanks to recycling!



81.5 Million
Pounds of Material

Amount of solid waste NRRA helped our members **recycle and manage** in 2022.



207 Million

Pounds of CO²

Amount of **avoided** carbon dioxide emissions averted thanks to NRRA's recycling efforts!



20,392

Passenger Cars

Removing that amount of CO² is like taking 20,392 passenger cars **OFF the road** for a full year!



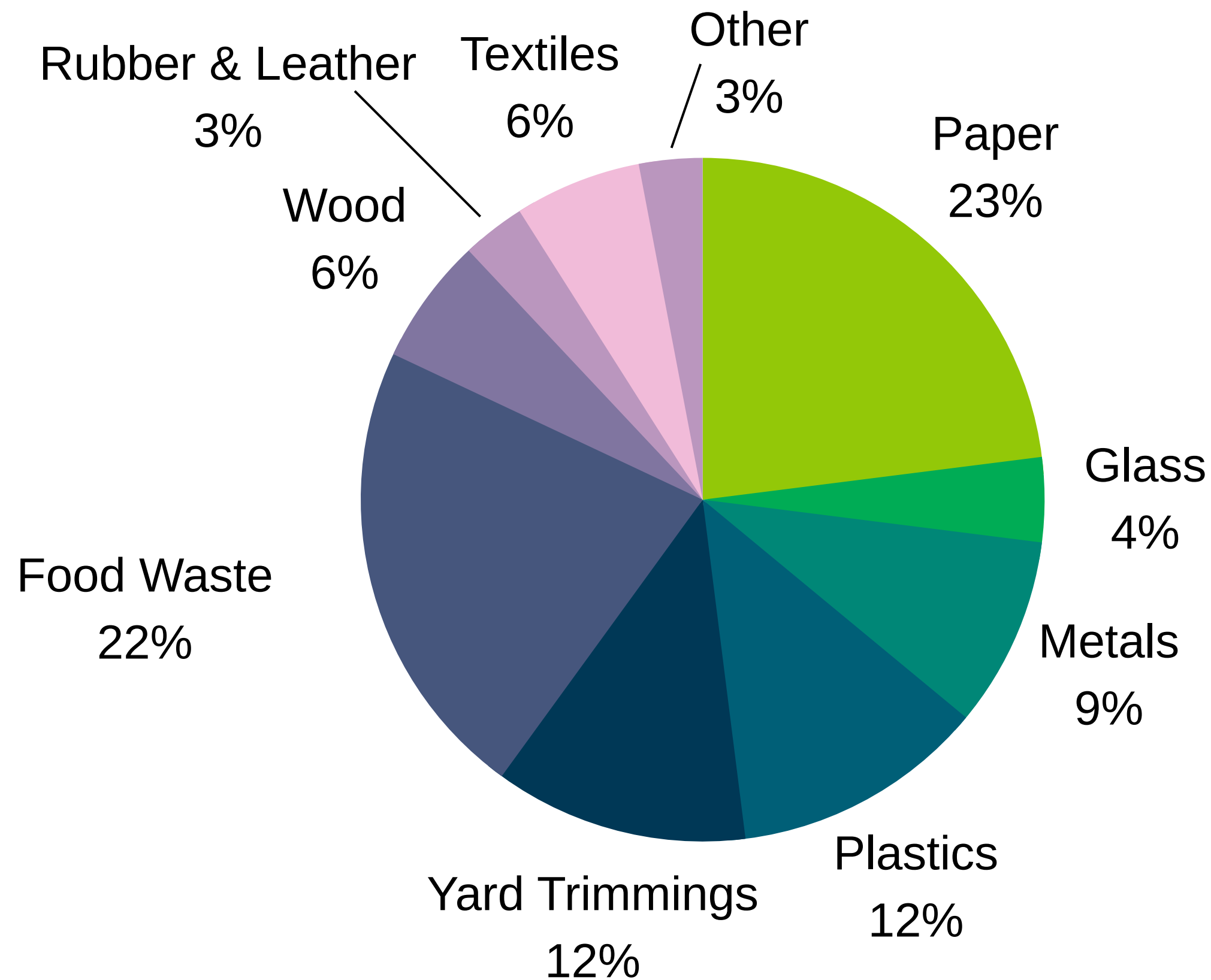


Let's Start with Trash

A Nationwide Look

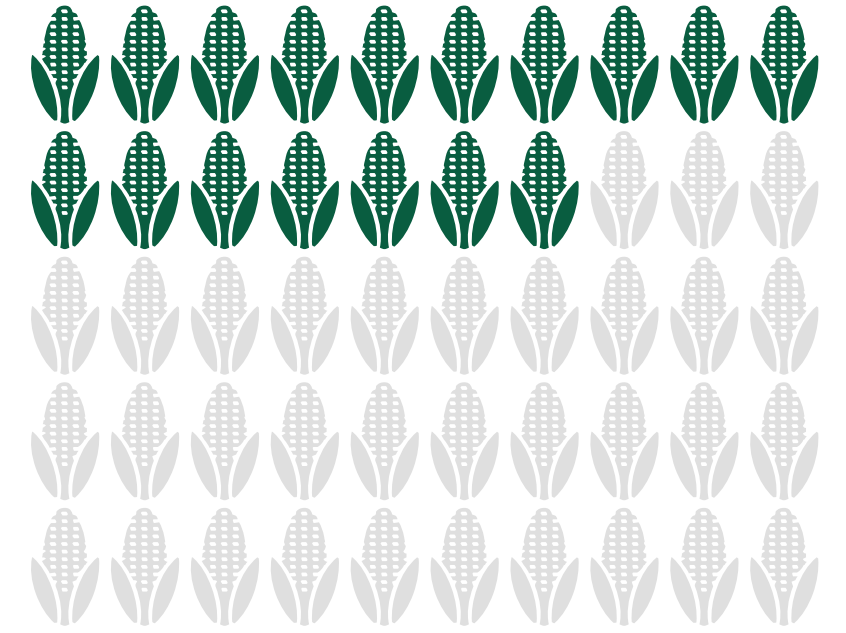


What's In The Trash?



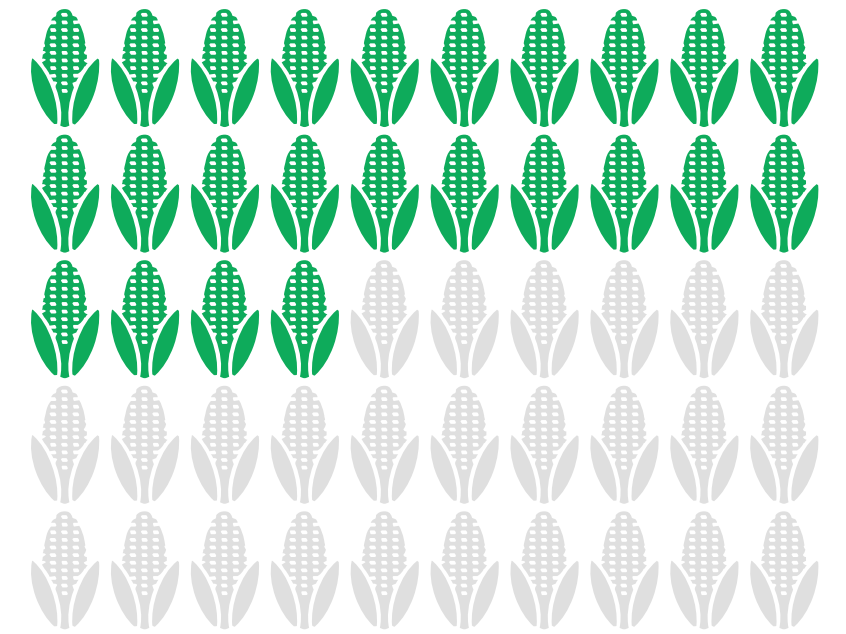
34%

could be
composted



48%

(theoretically)
could be
recycled

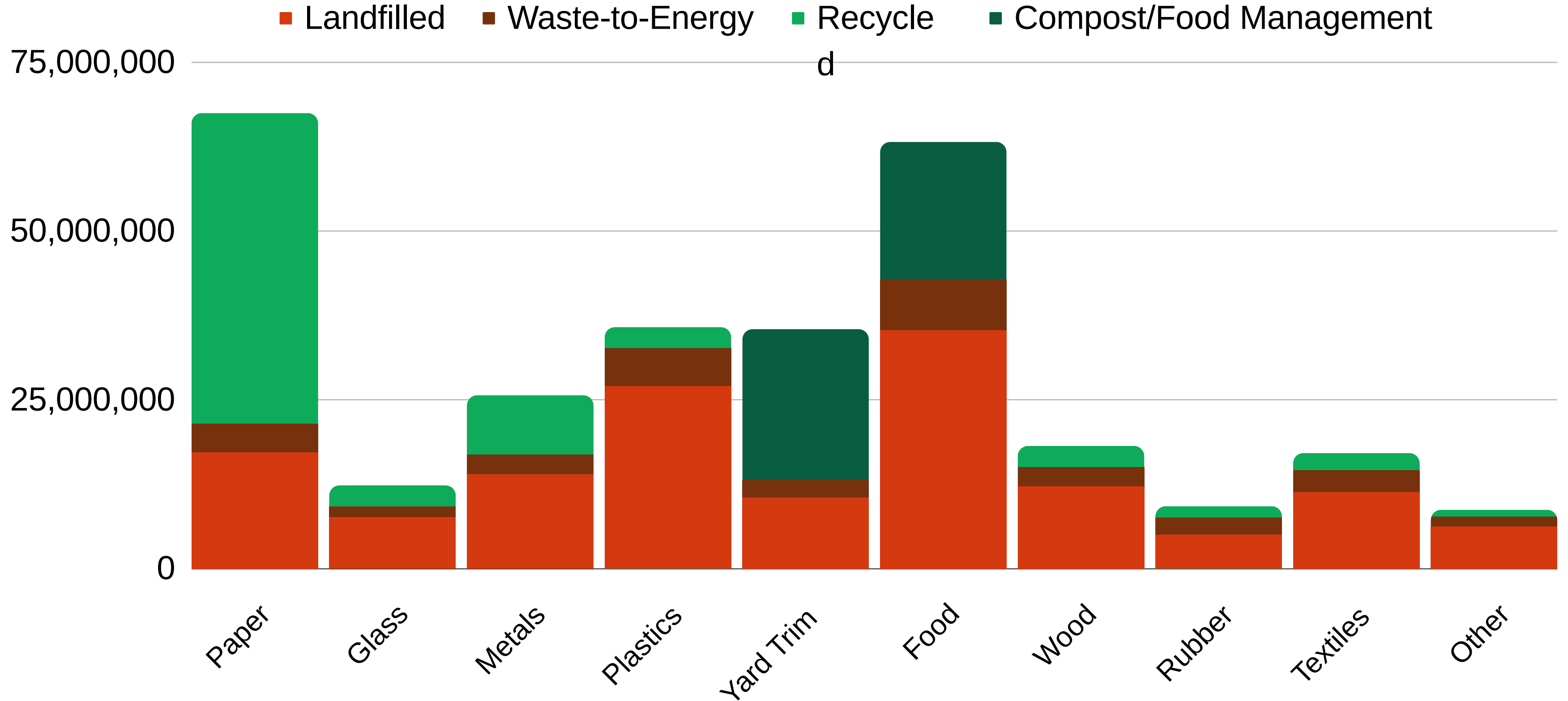


Nationwide MSW Generated by Material based on weight



NORTHEAST RESOURCE RECOVERY ASSOCIATION

What Happens to your Trash?



Solid Waste in NH

New Hampshire's Infrastructure



6

Landfills

- 3 public landfills
- 3 private (limited service area) landfills

1

Waste-to-Energy Incinerator

Wheelabrator Concord is a waste-to-energy facility.

0

Materials Recovery Facility

A "MRF" mechanically separates single-stream or zero-sort recyclables

0

Anaerobic Digester

An "AD" breaks down food waste into fertilizer and biogas composted mostly of methane. Biogas can be burned for energy or processed into natural gas and fuel.

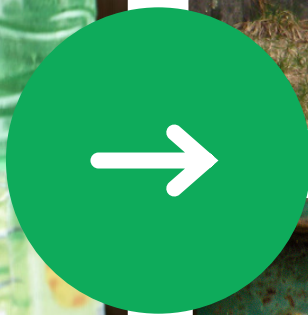
How much waste disposed of in **New Hampshire** comes from **out of state**?



How much waste disposed
of in **New Hampshire**
comes from **out of state**?

50%





What About Recycling?

A Statewide Look



What Recycling Program does your community have?



I Single Stream

All recyclables go into one bin and are separated after collection.

II Dual Stream

Paper & cardboard and recyclables containers (plastic, metal, glass) are put in separate bins prior to collection.

III Source Separated (multi-stream)

Recyclables are separated by material prior to collection OR at the drop off center (transfer station).



Source Separated

PROS: Materials are generally higher in quality and value because there is less contamination.

CONS: Requires more effort by the residents to either leave sorted items at their curb or take them to a drop-off site.

Single or Dual Stream

PROS: Recycling is more convenient because all recyclables go into one or two containers.

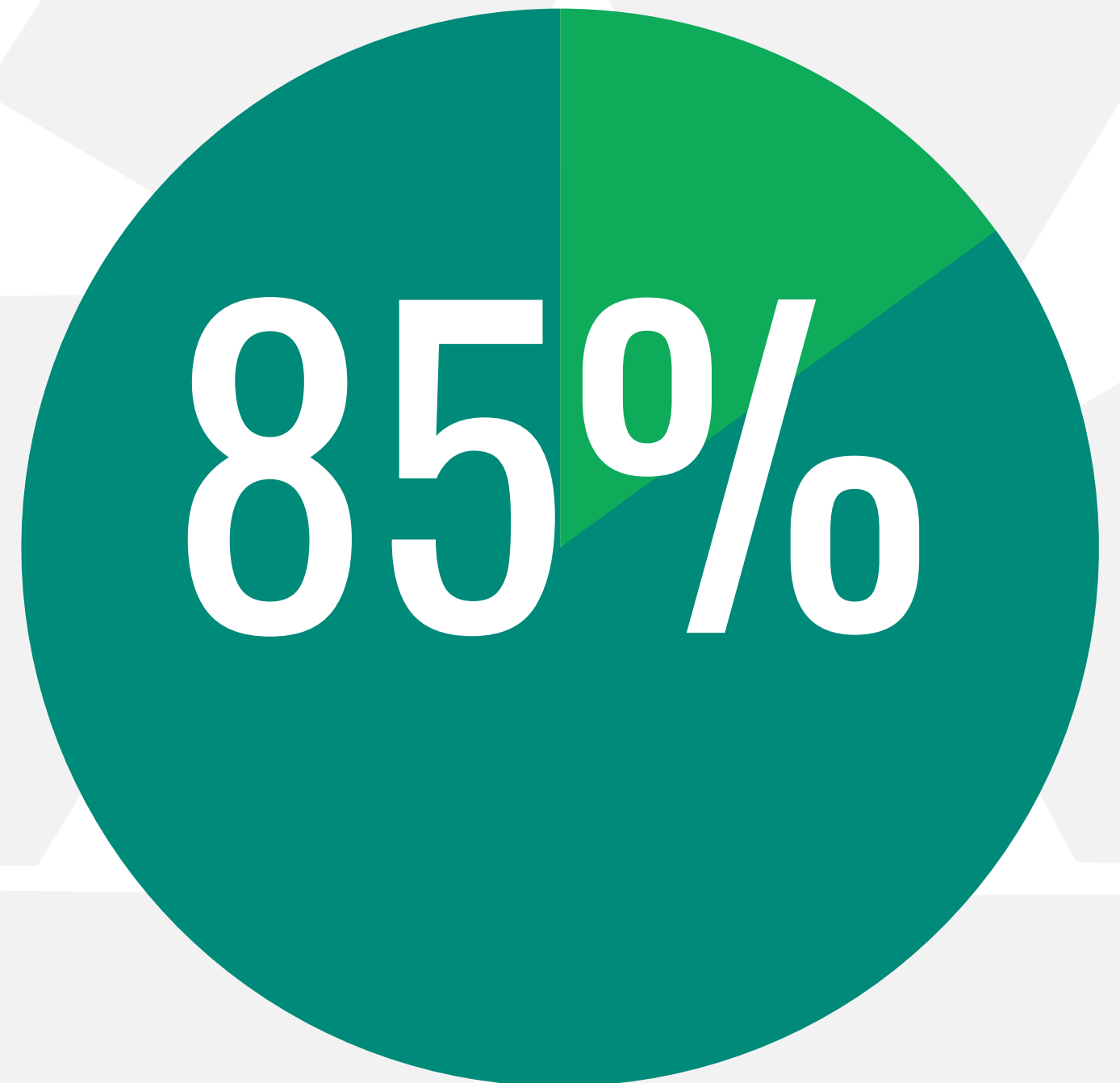
CONS: The quality of the material can be degraded due to contamination, resulting in materials being sent to landfills.



What percentage of communities in NH have their own municipal recycling facility?



What percentage of communities in NH have their own municipal recycling facility?



Recycling Processing

Materials Processed in New Hampshire



Electronics

Processed in Dover, NH

Electronics are sorted, dismantled, and mechanically separated. Valuable materials such as gold, copper, glass, and aluminum are then recovered to be reused.



Cardboard

Processed in Claremont, NH

Cardboard is made into large sheets of kraft paper for brown paper grocery bags, lawn bags, and packing material.

What it Takes to Become a Solid Waste Operator

In New Hampshire



Certification

All operators who work at permitted solid waste facilities in New Hampshire must be certified by NHDES through the Solid Waste Facility Operator Training and Certification Program.



Ongoing Training

All operators must renew their certification annually, which includes at least 2.5 hours of continuing professional development within the previous 12 months.



Permitted Facility

With few exceptions, solid waste management facilities must obtain a permit to construct, operate, and permanently close.





Recycling in my Town

A Local Look



Which of the following town departments generate revenue?



Economic Development

Police

Fire Station

Human Services

Recreation

Town Clerk/Tax Collector

Sewer

Transfer Station

Planning & Building

Public Works

Which of the following town departments generate revenue?



Economic Development

(fees) Police

Fire Station

Human Services

(fees) Recreation

(taxes) Town Clerk/Tax Collector

Sewer

(sales & fees) Transfer Station

(fees) Planning & Building

Public Works

**Like money?
Try recycling!**



DISPOSAL COSTS

Decrease as material is diverted from the solid waste stream and is recycled instead.



REVENUE

Earned by **selling high quality recyclable material** to responsible vendors.

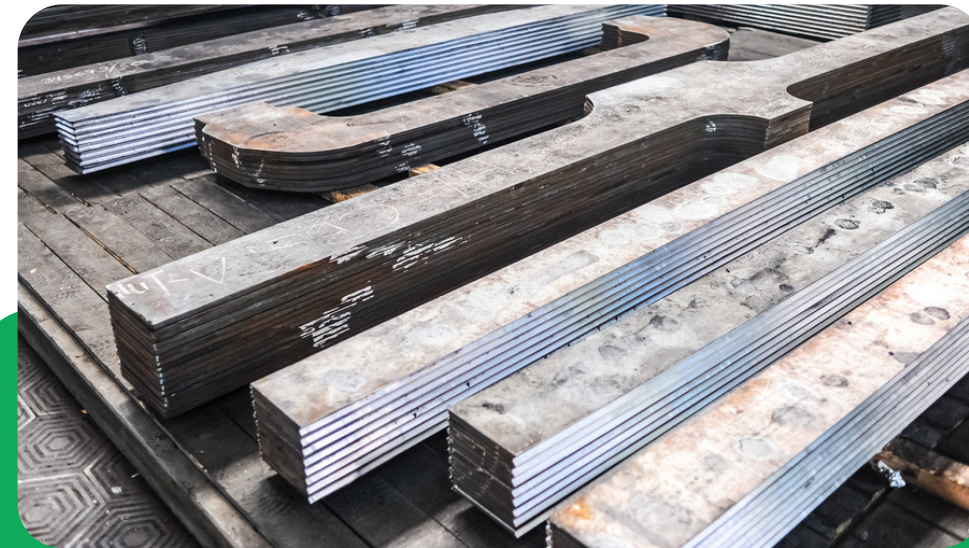
Recycling Example

Aluminum Cans



Saves MONEY

It's cheaper to recycle aluminum versus extracting new aluminum through mining and processing ore.



Saves ENERGY

Recycling aluminum saves **more than 90%** of the energy needed to create new aluminum.



Saves Natural RESOURCES

Nearly 75% of all aluminum produced is **still in use today!**

JUST BECAUSE IT'S
RECYCLABLE DOES
NOT MEAN IT'S
PROCESSABLE.

Why doesn't my town recycle EVERYTHING?

You need 3 things to decide:

I Amount

Economy of Scale: How much of an item do you have to recycle?

II Location

Transportation & Processing: Where is the location of the processing facility in relation to the community?

III Cost

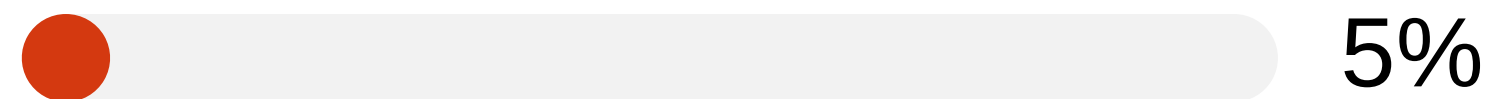
Markets & Materials: Are you offering high quality materials (clean, dry, and uncontaminated?) Is the market good?

A Note on Contamination

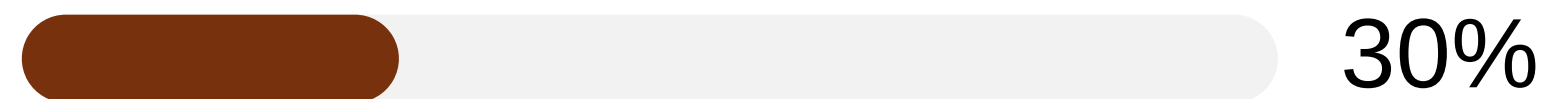
Recycling is a manufacturing process - machinery is used to create new items on a large scale. When can then better understand why contamination is such a problem. Just as you wouldn't want contamination in other manufacturing, contamination in recycling is also problematic.

Percent of Contamination Found:

Source Separated Recyclables



Single and Dual Stream Recyclables





Types of Recycling

A Look at Materials



When does recycling happen?

Hint: Probably not when you think!

When does recycling happen?

Hint: Probably not when you think!

Recycling doesn't happen when items are tossed in the recycling bin or dropped off at the transfer station. **Recycling happens when materials are turned back into products that people use.**

RECYCLINGBASICS

Time to CLOSE the recycling loop

IF YOU ARE NOT BUYING RECYCLED, THEN YOU AREN'T FULLY RECYCLING.



(Before you buy, look for the words, "post-consumer recycled content")

Mixed Paper Recycling

Magazines, Paperboard, Mixed Paper, and Junk Mail

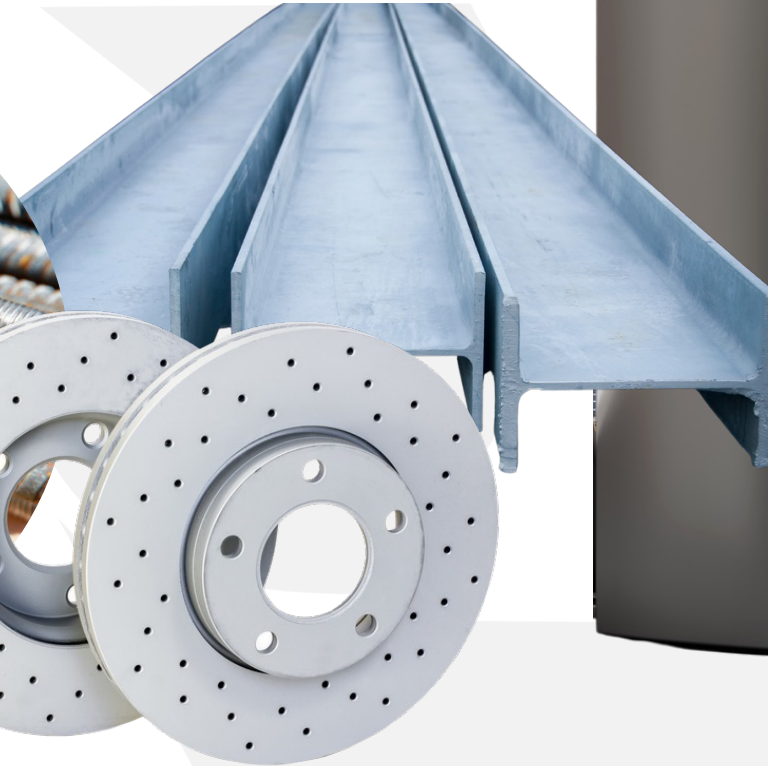


Paper & Cardboard Recycling

Cardboard, Notebook and Computer Paper



Tin & Aluminum Can Recycling



Glass & Plastic Recycling



PLASTICS RECYCLING

A QUICK GUIDE TO ♻️ NUMBERS



Plastic Recycling

Not all plastics can be recycled



What About Chasing Arrows?

This symbol with a number in the middle tells you what type of resin the item is made out of.

This means it can give you a **CLUE** as to whether or not it's recyclable.



YES, RECYCLE! Items include soda and water bottles, milk and juice jugs, shampoo and cleaning bottles.



NO, TOSS IT. Items include plastic wrap and food trays, cooking oil containers, vending cups, vinyl and styrofoam products.



MAYBE, ASK? Items include yogurt containers, shopping, and dry cleaning bags

Plastics **Fast** Facts

I HEARD **STYROFOAM** IS RECYCLABLE,
WHY CAN'T I PUT IT WITH MY
PLASTIC RECYCLING?



Made of 95% air, 5% polystyrene,
styrofoam is **Hard** to process,
Expensive to store and ship, and a
common **Single-Stream Contaminant**.

WHY CAN'T I RECYCLE **PLASTIC BAGS**
OR FILM AT MY TRANSFER STATION?



Plastic bags and film require a
different type of processing.
At a typical recycling plant,
**this type of plastic can tangle and
jam the processing equipment.**



Recycling Next Steps

What YOU can do



Next Steps

Actions you can start taking TODAY



SIGN UP

For **Full of Scrap**

NRRA's bi-weekly newsletter on recycling and waste reduction news in the Northeast



BUY RECYCLED

At **Home** and at **Work**

Look for the phrase, "post consumer recycled material."



DIVERT

Food Waste OUT

Find an alternative - compost at home, with a commercial composter, or farm.



UNITE

Join a Committee

Join or start a municipal waste reduction committee, working in **PARTNERSHIP** with your town.



Challenges Unique to NH



Solid Waste Disposal is **Expensive**

New England has the **highest cost** for trash disposal in the entire country.



Out-of-State Solid Waste coming in.

Nearly 50% of the waste disposed in NH comes from out of state - mostly from MA.



Lack of **State Support**

We lack the grants, technical assistance, and state-level policies that support recycling and solid waste management.



Lack of **Infrastructure**

We lack infrastructure such as a MRF or anaerobic digester for solid waste diversion.



Possible Solutions

Options that have worked in other states



Bottle Bill

Deposit-refund system incentivizes bottle recycling through a minimum refundable deposit (*requires legislative action*)



Extended Producer Responsibility (EPR)

An environmental policy approach that shifts the responsibility for the full lifecycle of a product upstream toward the producer and away from municipalities.



Waste Bans

Enacted on the state level (such as the NH Yard Waste Ban), waste bans restrict the type of items that can be disposed of within the state.

Recycling **Takeaways**

Did you know?

**WISH-CYCLING IS
JUST TRASH WITH
GOOD THOUGHTS.**



Did you know?

**PREVENT
RECYCLING
CONTAMINATION:
WHEN IN DOUBT,
THROW IT OUT.**



Connect With Us

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THANKS & QUESTIONS?

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