



Northern Virginia  
Waste Management  
Board

# THE BIG PICTURE: WASTE MANAGEMENT CHALLENGES IN NORTHERN VIRGINIA

2022 MARINE DEBRIS SUMMIT



Northern Virginia Regional Snapshot  
The Local Role in Waste  
Waste Generation by Sector  
2020 Diversion and Disposal  
Disposal Facilities  
Local Recycling Infrastructure  
Contamination and Residue  
Recent Initiatives  
Key Points



# NORTHERN VIRGINIA REGIONAL SNAPSHOT

- 13 Jurisdictions
- 2.5 M people
- 922 K Households: 642 K single family, 278 K multi-family households
- 1.25 M employed in the region
- 1.5 M Tons waste disposed in 2020
- 950 K Tons recycled in 2020
- 4 material recovery facilities (all private)
- 4 public waste facilities (all public) in region. One private out-of-region facility used by two cities
- 60 percent waste disposed as WTE
- Biennial Waste Report and dashboard,  
<https://www.novaregion.org/583/Solid-Waste-Report>



*Public Solid Waste Services in  
Northern Virginia and the District of Columbia*



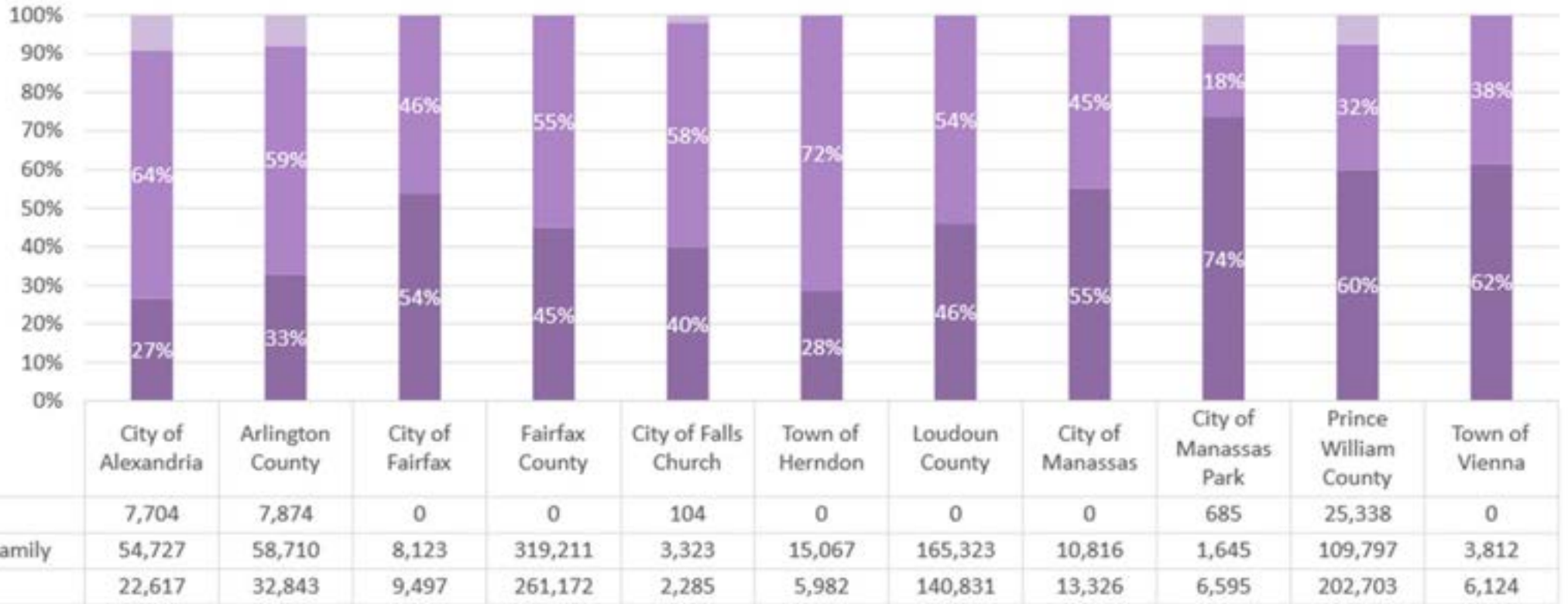
Prepared for the Northern Virginia Waste Management  
Board by Northern Virginia Regional Commission staff

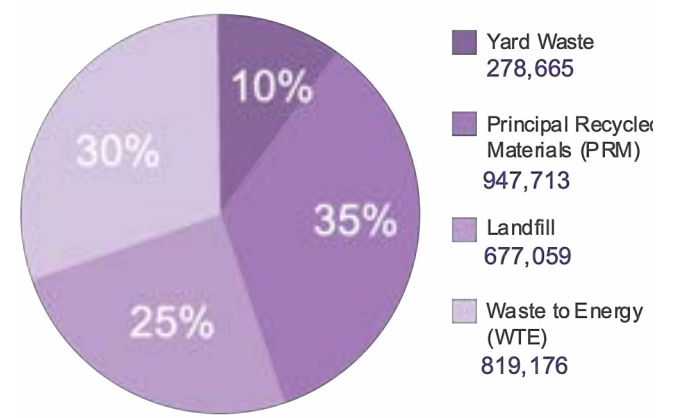
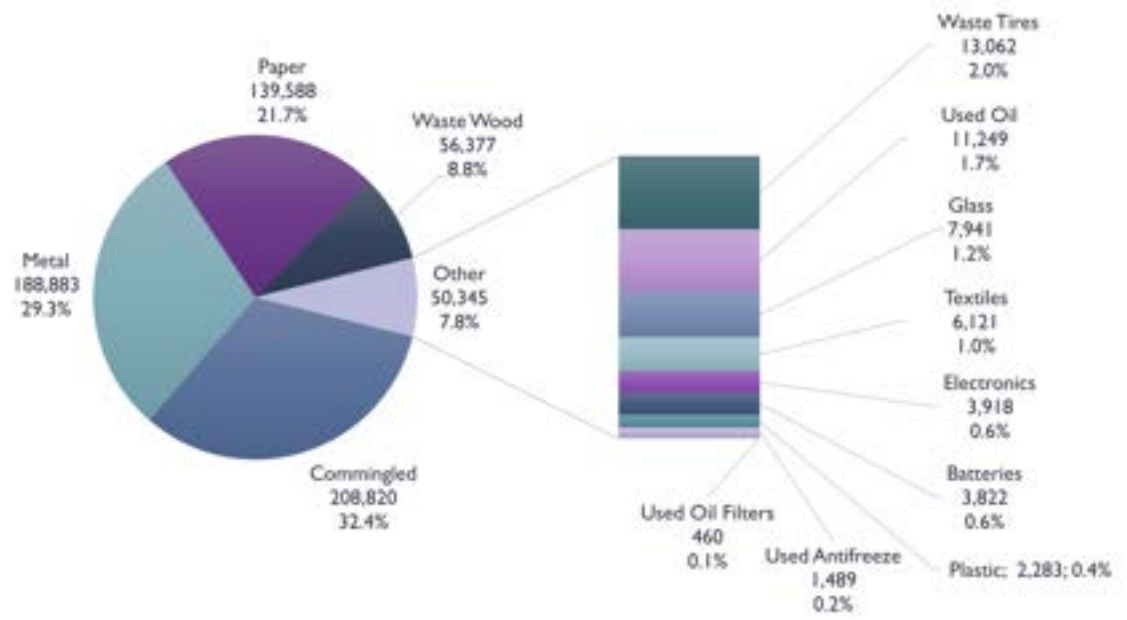
# THE LOCAL ROLE IN WASTE



- **Localities granted authority for waste management by Virginia for requirements, planning, and reporting**
- **23 percent of all households receive services directly from localities (245 K of 922K total).**
- **Multifamily and commercial property waste is privately contracted by owners/property managers according to local ordinances.**
- **Virginia does not track plastic waste generation or recovery.**
- **Plastics are included in recycling reports as commingled or single stream materials, how these materials are collected from households**
- **Some specific data may be available from grocery stores and other businesses for film or specific materials collection.**

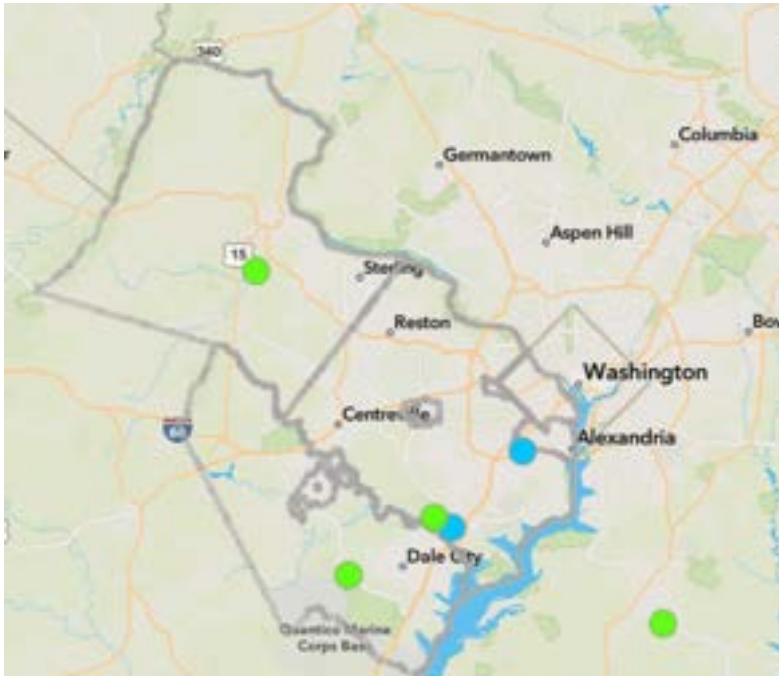
# 2020 WASTE GENERATION BY SECTOR





# 2020 NORTHERN VIRGINIA DISPOSAL & DIVERSION

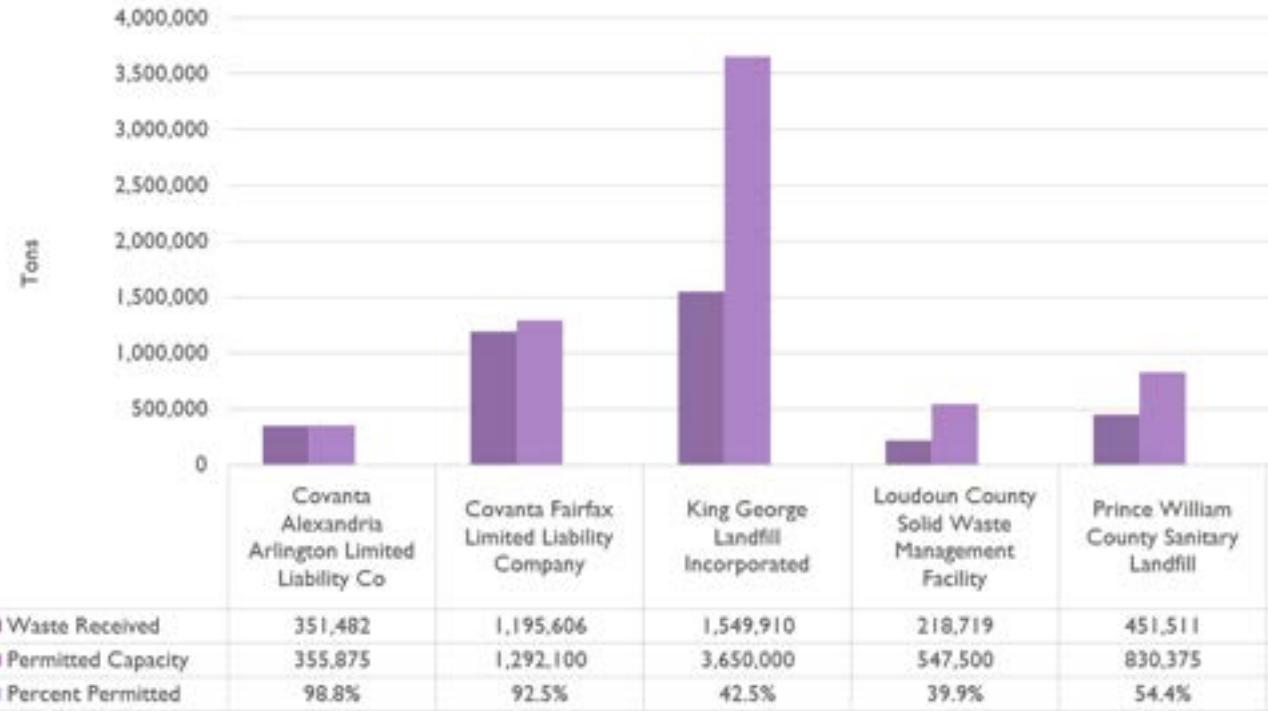




## Disposal Facility

Disposal Facility Type

- WTE
- MSW LF



# WASTE DISPOSAL

## Recycling Once Collected

- Recycling generally flows to 4 Material Recovery Facilities (MRF's) in Northern Virginia
- Two are located in Prince William County (operated by Republic Services and Waste Connections). The third and fourth servicing Northern Virginia are located in Loudoun County, VA and Elkridge, MD (WM).
- Haulers typically pay a processing fee of about \$85/ton to drop off recycling that does not include transportation costs.

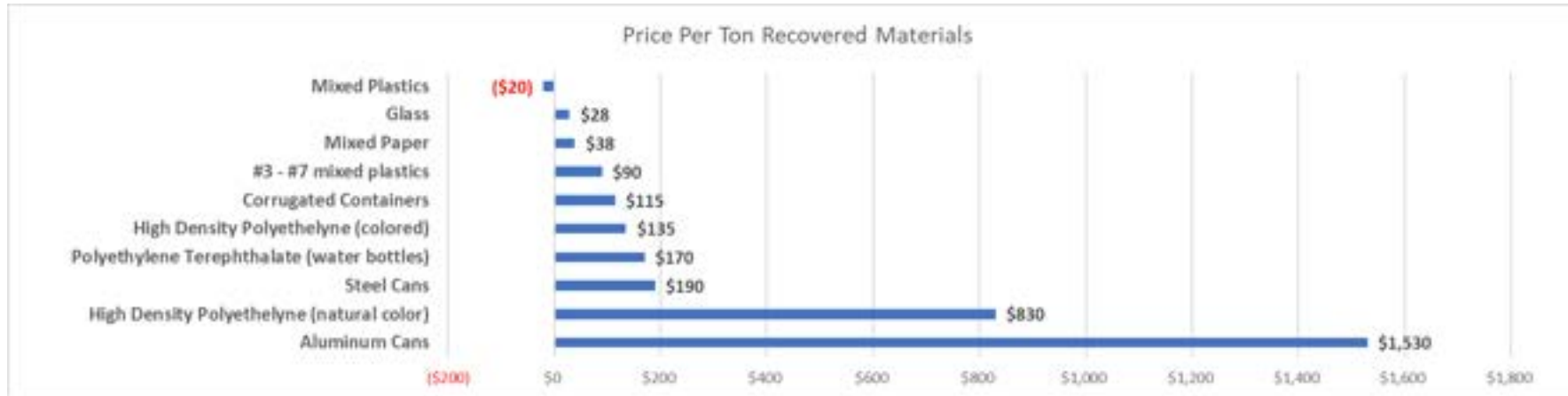


## Sorting at the Facility

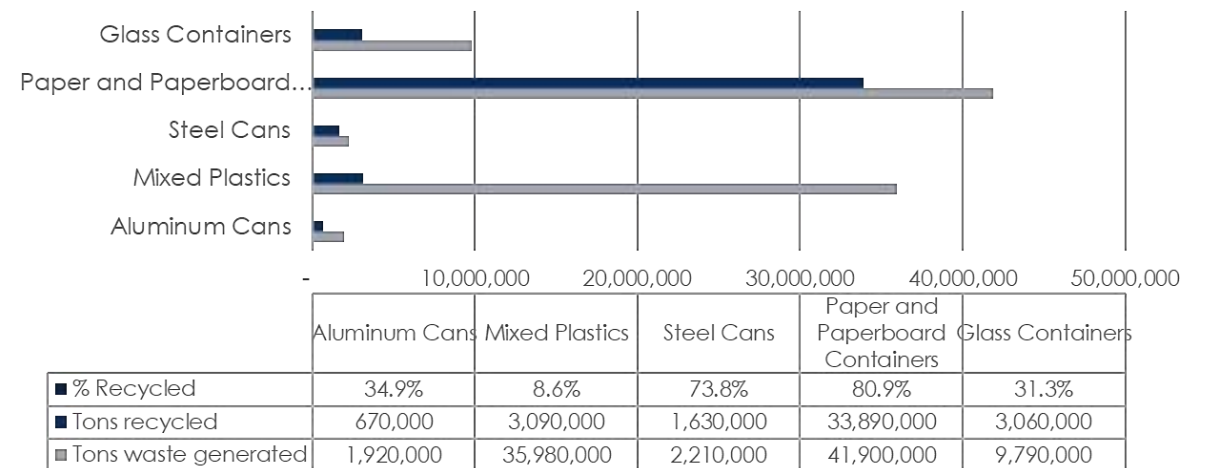
- Processors typically sort materials into about 8 different bales based on commodity pricing (which ) but typically, cardboard, mixed paper, aluminum beverage cans, steel cans, PET (#1), HDPE #2 (natural), HDPE #2 (colored), and #3-7 plastics.
- Recent blended value of a ton of "single stream recycling" is currently running about \$170/ton.



# RECYCLING COMMODITIES



2018 US Generation vs Recycling (EPA Facts and Figures)



■ % Recycled ■ Tons recycled ■ Tons waste generated



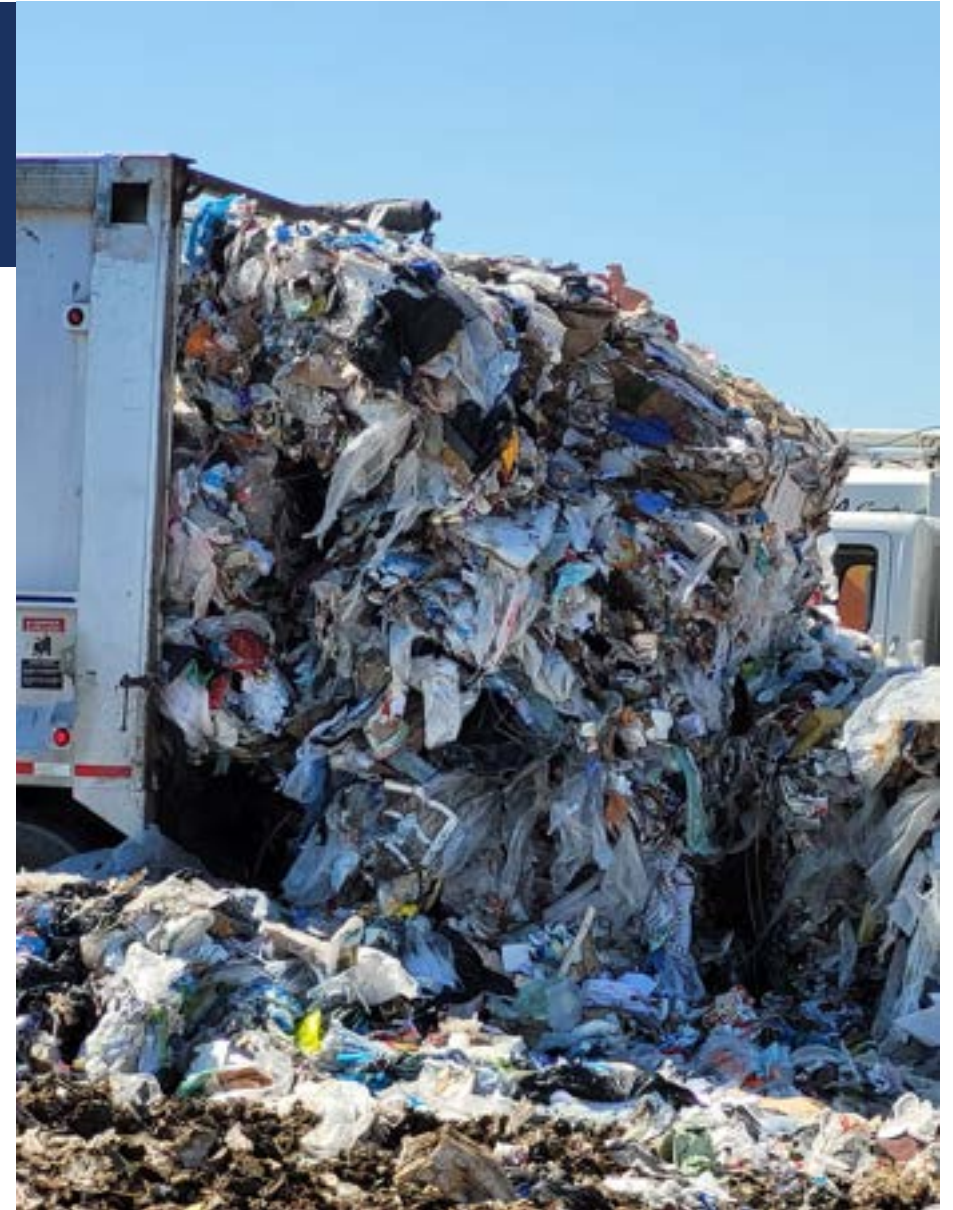
# CONTAMINATION AND RESIDUE

## Contamination

- About 20% of what people put in recycling is unacceptable
- These contaminants include things like plastic bags, diapers, Styrofoam, take-out containers, batteries, and hoses

## Recycling Residue

- Prince William County's two MRF's sent nearly 48,000 tons of residue to the Prince William County Landfill for disposal in 2021.
- Plastic and film represent the majority by volume of residue.
- This residue reflects 19 percent of all Prince William landfill disposal in 2021.



# RECENT INITIATIVES

## Purple Can Club



## Plastic Bag Fee

<https://www.novaplasticsolution.org/>



## KEY POINTS

Virginia does not have a plan or program for plastic recycling, waste management, or capacity planning.

Plastic waste and diversion data is not readily available.

Recycling is a private enterprise that employs more than 7,000 people in Virginia.

Local programs attempt to manage the flood of plastic waste with a limited role and authority.

Litter is a failure of solid waste collection (behavior, collection locations and frequency, emptying and transporting containers, or processing/disposal).

Manufacturer involvement in product design and recovery can offer effective recovery and recycling hard-to-handle material (EPR).

There is no circularity if the materials on shelves are not matched by recovery systems in place.

Systems and programs need to align with waste sectors and characteristics.

## Waste Hierarchy

Source Reduction

Reuse

Recycling

Resource Recovery  
(Waste to Energy)

Incineration

Landfilling

# THANK YOU!

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