

# Recycling in King County

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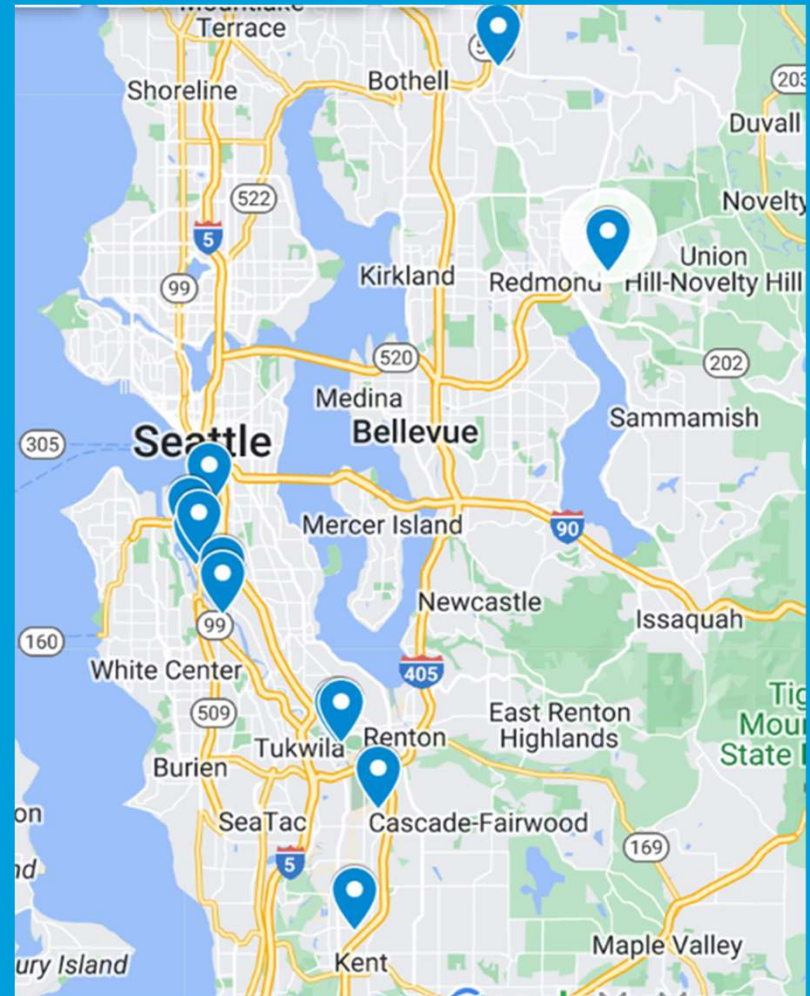
- **Public Health's role in Solid Waste facility inspections**
- **Overview of Recycling facilities in King County & Similar Challenges**
- **Recyclables Part One: Construction and demolition waste**
- **Recyclables Part Two: Curbside Recycling**

## Facilities must follow the Solid Waste Handling Standards WAC 173-350 and related regulations

- Operations as approved in the Plan of Operation.
- Verify facility records (pest control, in-house inspections)
- Environmental controls
- General Safety

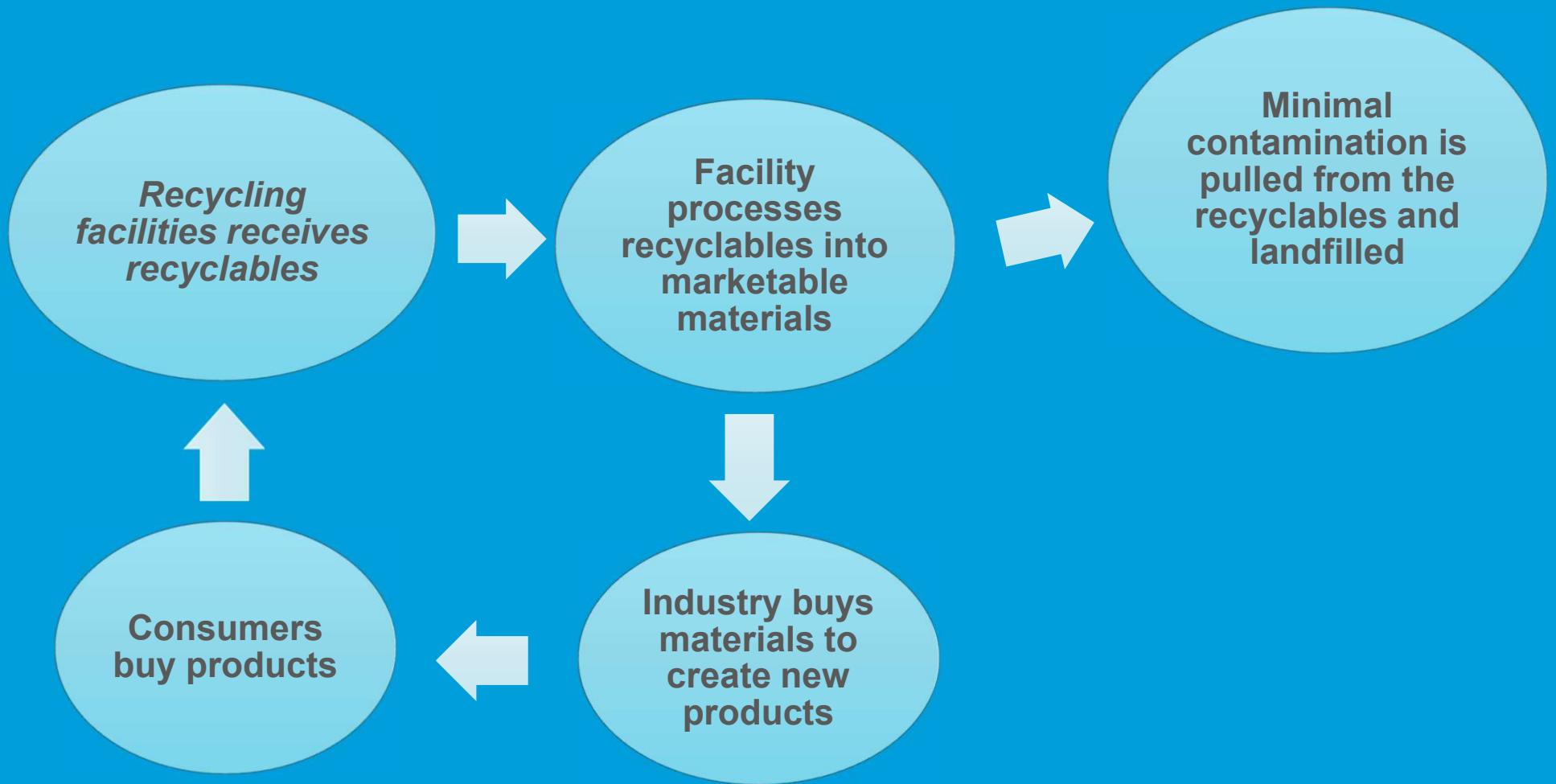


- **Construction and demolition recyclers:**
  - 5 Facilities
- **Curbside material recyclers:**
  - 3 large residential & commercial processors
  - 2 commercial processors
  - 1 glass recycler
  - 1 recycling transfer station



Permitted MRFs in King County

## Permitted Material Recovery Facilities in King County



## Ideal Recycling Process

# Building or Remodeling in King County?

Recyclable construction & demolition (C&D) materials from construction projects are **REQUIRED** to be recycled. Separate these materials from other construction waste.

## C&D RECYCLABLES

Take these materials to a designated recycling facility



Asphalt Concrete/Paving • Drywall/Gypsum (new, unpainted) • Brick



Wood (unpainted, untreated) • Metal • Wire • Cardboard



**Designated C&D Recycling Facilities** accept recyclable C&D materials and mixed loads

City of Seattle & King County have goal to reduce methane production in landfills and increase recycling

- Deconstructed building requirements
- C&D materials are banned from landfills and required to be recycled at designated facilities.

# C&D WASTE

Depending on your vehicle type, either take C&D waste to a **C&D transfer station** or to a **King County transfer station**.

Insulation • Painted and Treated Wood  
Railroad Ties and Creosoted Timbers • Carpet • Roofing  
Countertops • Painted Drywall • Composite Cement Siding • Veneer



Construction and demolition waste for landfill disposal

- Inspection program for permit exempt recyclers which includes complaint response.
- Worked with operator to cover the outdoor piles.
- Began enforcement action for better environmental controls.



Duwamish River



Duwamish River

**Construction and demolition waste: Permit exempt recycler**

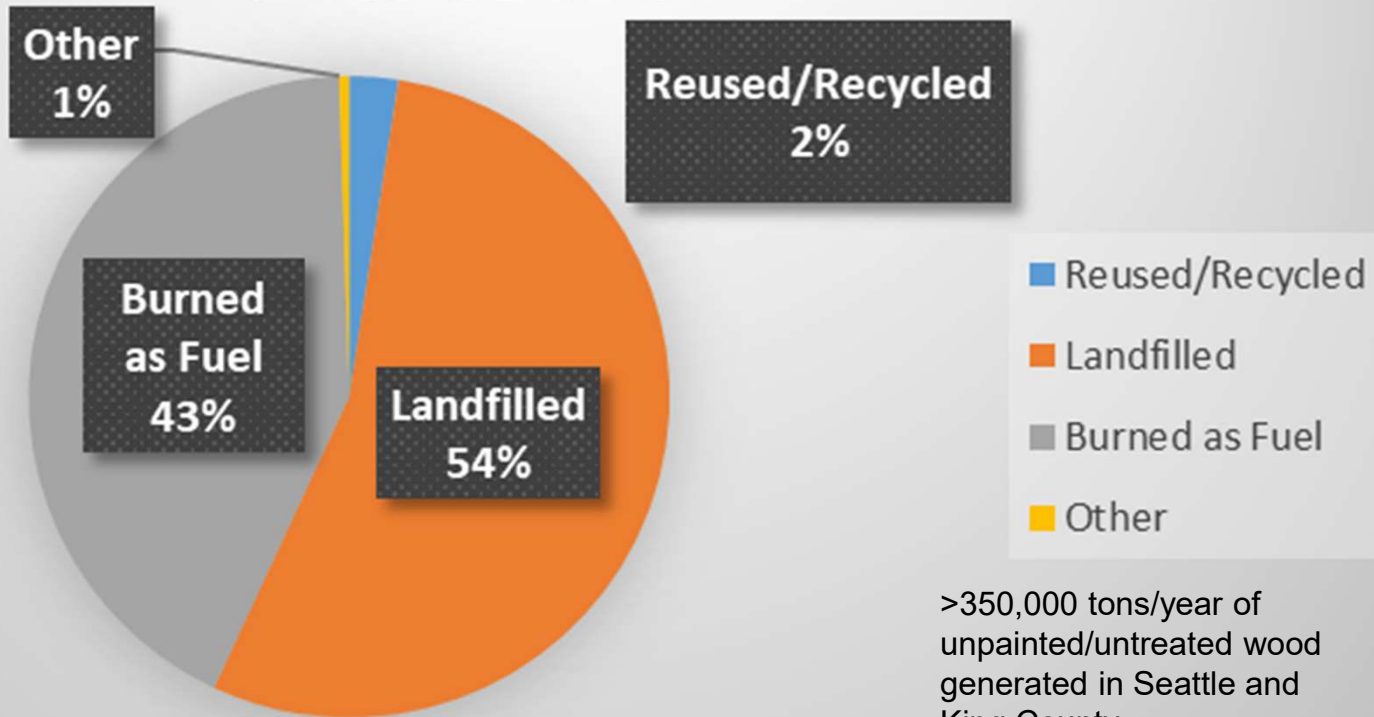


- WSDA granted fertilizer registration approval for the paper component and it was no longer a solid waste.
- Issue: Supply exceeds demand markets in Eastern WA and hauling is expensive.
- Status: The pile is still there, but it is covered to ensure environmental controls.
- Site is still not in compliance with city zoning for established use.



**Construction and demolition waste: Drywall/Wallboard (paper+gypsum)**

## Valuable Wood Under KC SWD Flow Control





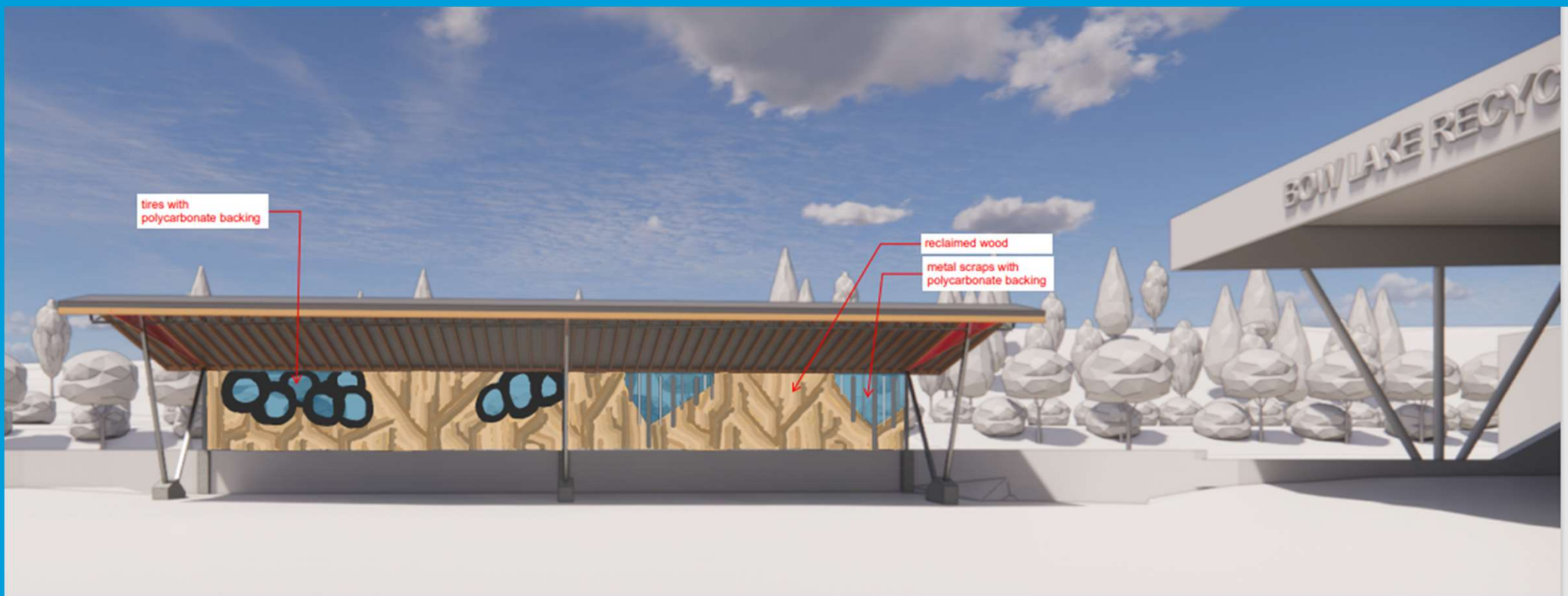
Examples of wood piles observed at C&D facilities

## Construction and demolition waste: Woodwaste



- Two distinct piles of wood waste generated from C&D activities.
- Yard debris & clean wood can go to composters.

## Construction and demolition waste: Woodwaste



- **Re+** (zero waste) program is King County's approach to minimize waste
- Grants are issued to small businesses that process waste into a commodity
- KC incorporates recyclable materials in new County construction projects

## Construction and demolition waste: Woodwaste

# Multi bin System(not in KC):



# One bin system (KC):

## Metal

### ALUMINUM & TIN CANS

Place tin lids in can, crimp shut.



### SCRAP METAL

Small, non-working metal appliances, pots, tools, etc. Limit 2' x 2' x 2', 35lbs; no wood, plastic, or rubber attachments; no sharp metal.

## Glass

### JARS & BOTTLES (ALL COLORS ACCEPTED)

Only bottles and jars—no other types or shapes of glass are allowed.



## Paper and Cardboard

### CLEAN & DRY

Most types of paper and cardboard are accepted, as long as it is clean and dry. Cardboard and flattened boxes should be no larger than 3' x 3' x 3' in size.



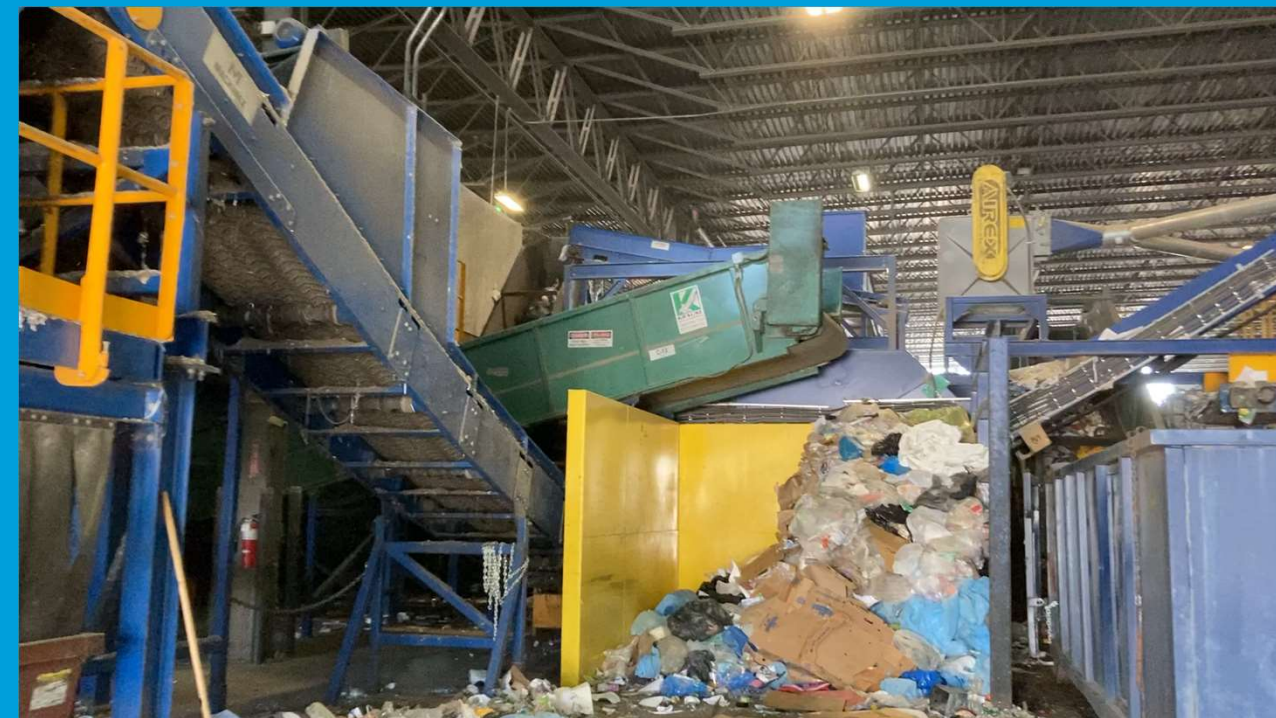
## Plastic

### BOTTLES, JUGS & TUBS

Only recycle these "shapes" of plastic containers—do not worry about the recycling symbol or number.



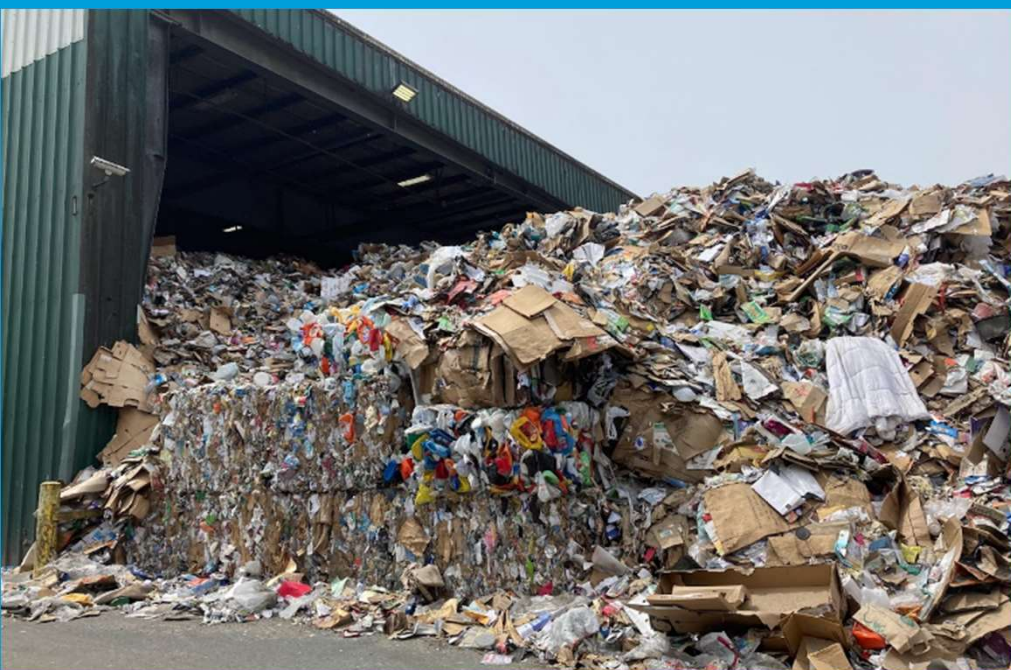
Curbside recycling



- Markets:
  - 2018 China Sword Policy:
  - Minimal domestic markets
  - Limited markets outside US and China due to contamination of material
- Current events:
  - Covid Staffing issues
  - Limited Rail/port availability
  - Potential rail Strike
  - Limited Shipping containers
- Inconsistent messaging to public
- Glass breaks
  - Limited recyclability
  - Hard on machinery

## Challenges in Curbside Recycling

Incoming and processed materials are required to be processed and stored indoors.



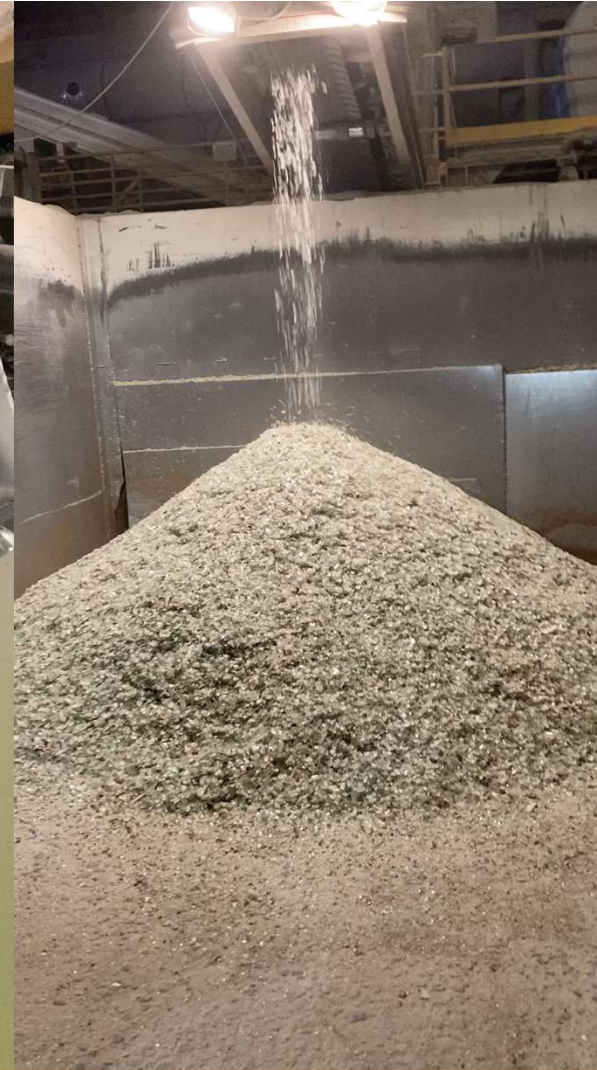
## Challenges in Curbside Recycling





## Curbside Recycling: Challenges

- Only 31.3% glass recycled in US
- Glass gets compacted and causes damage to sorting equipment at the facility.
- 1 glass recycler in KC & WA State
  - Cullet from curbside processors >5% contamination
  - needed a SW permit
  - Has reduced acceptance of glass cullet from curbside recyclers



## Curbside Recycling: Glass



## Curbside Recycling: Glass

## Contamination:

- Cardboard becomes contaminated
- Paper mills will buy limited contaminated cardboard or will accept for a fee
- Limited markets for cardboard in WA



White paper has highest value if clean  
(picture from a paper only recycler)

## Coated Cardboard:

- Limited recyclability.
- “cardboard bath” where plastic floats and paper pulp sinks
- Paper pulp is used to make new products
- Skimmed plastic is often used for fuel.
- Very little pulp is extracted from these materials.

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- Some plastics are hard to recycle
- Where do hard to recycle plastics go?
- All plastics are accepted at all MRFs in KC?
- Bottles, jugs, tubs
- Don't bag your recyclables!

## Curbside Recycling: Plastics

# Curbside Recycling: State legislation proposals



The Re-WRAP Act (HB 2049)-  
packaging (accurate labeling provisions  
and requirements for post-consumer  
recycled content in plastic tubs,  
thermoform containers (e.g.,  
clamshells), and single-use cups)



Beverage deposit aka Bottle Bill (HB  
2144) increase recycling of glass,  
metal, or plastic bottles/cans

Both of these did not pass

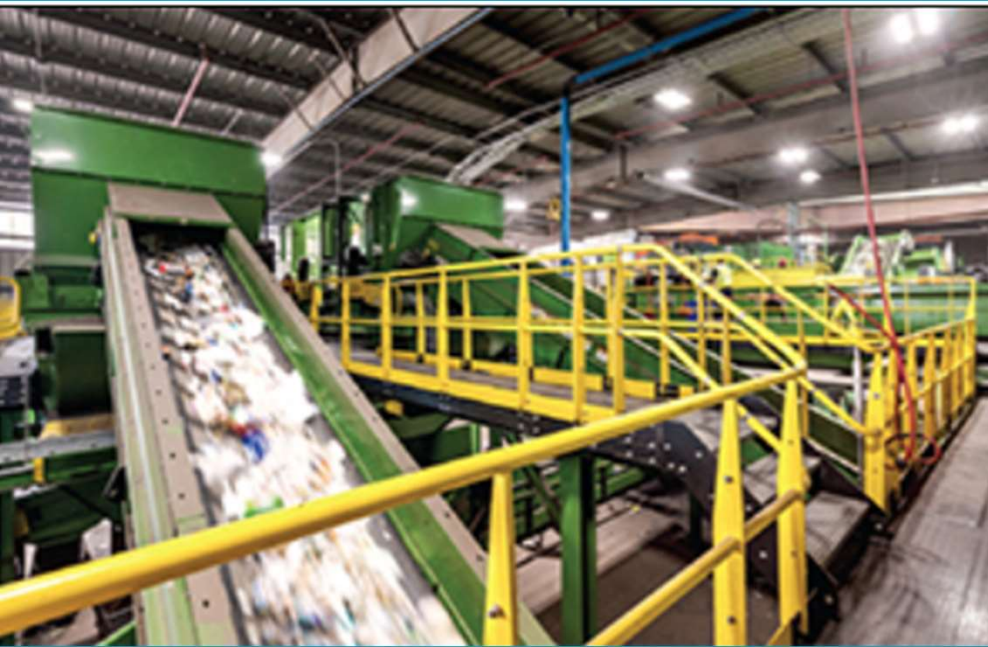
- Waste Load audits
  - Help keep track of where the contamination comes from
  - Takes time
- Only an option for non-peak hours
- Running sorting machines at slower speeds
  - Sorters (human) better pick out contamination
  - Safer
- Less material is sorted.



## Curbside Recycling: Industry response

### Facility upgrades:

- Multimillion dollar upgrade.
- State of the art facility.
- Better at sorting/removing contamination
- Glass cullet is cleaner



## Curbside Recycling: Industry response



## Things we can do to improve curbside recycling:

- Reduce single use plastics
- If I buy this, will I be able to recycle it?
- Which bin does this waste belong in?
- **Recycle right**
- **If in doubt, throw it out**



# *THANK YOU*

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