



# Demystifying Deconstruction

*Inaugural Meeting*

MassDEP Deconstruction Working Group

September 28, 2022

# Housekeeping

This meeting is being recorded

Using zoom/chat

Ground rules

A grayscale photograph of a modern building with a grid-like facade and large arched windows, serving as the background for the slide.

*Poll #1*

**Who is on the call today?**

# How We Got Here

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Solid Waste Master Plan

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Reduce & Reuse Working  
Group

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Reduce & Reuse Action  
Plan December 2021



# Goals for this Deconstruction Workgroup

- ❑ Understand waste disposal crisis
- ❑ Help grow the Reuse Industry in MA for building materials:
  - Support infrastructure to meet growing industry demand
- ❑ Alignment with MassDEP's Reduce & Reuse Action Plan
- ❑ Connecting our work with Climate Impacts
- ❑ Job Training and Development
- ❑ Support Diversity, Equity, and Inclusion



***Basic Operating Principles:***

***Working for the greater good, collaboration, equal opportunity for all stakeholders***



# How Will We Do This?

*Together!*

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- **Education** across all stakeholder groups, what's possible now/resource mapping
- Share **experiences**
- Discuss **incentives** to effect change
- Research **market** opportunities
- Explore **spaces/storage** for materials
- Find efficient ways to **connect** materials with those who want it
- Identify deconstruction **practitioners** across the state
- Helping municipalities/state agencies develop **ordinances** that keep positive feedback loop growing



# Meet the Planning Team



Christine Beling:  
US EPA Region 1



Susan Cascino:  
City of Boston



Mike Elliott:  
MassDEP C&D Lead



Dave Giese:  
Deconstruction Works



Pam Howland:  
Old Window Workshop Cooperative



Abbey Massaro:  
Center for  
Ecotechnology



Kathi Mirza:  
MassDEP



Brooke Nash:  
MassDEP



Michael Orbank: STO Building  
Group, Carbon Leadership Forum  
Boston

# Today's Agenda

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- How much construction and demolition material is being trashed
- Climate impacts of this waste stream and the benefits of reuse
- Resources to envision better ways of managing building materials
- Ways to build the reuse infrastructure in Massachusetts to meet growing demand
- Helping state and local agencies develop positive material loops through effective ordinances





# SHORT VIDEO

- [Deconstruction: The Story of Two Homes - YouTube](#)

# MassDEP C&D Materials Management Overview



Deconstruction Work Group Kick-off  
Via Zoom  
September 28, 2022

# 2030 SWMP Solid Waste Goals

- **30% reduction in solid waste disposal by 2030**
  - 5.7 million tons  
*(2018 baseline)*
  - 4.0 million tons  
*(1.7 million ton reduction by 2030)*
- **90% reduction in solid waste disposal by 2050**
  - 0.57 million tons  
*(5.7 million ton reduction)*

Massachusetts  
2030 Solid Waste Master Plan:  
Working Together Toward Zero Waste  
October 2021





# 2030 C&D Waste Reduction Goal

## CY2018 C&D Waste disposed:

- 985K tons (large C&D Handling Facilities)
- 620K tons (mixed in MSW)
- *1.6 million tons total C&D*
- Over 28% of total waste disposed
- Significant opportunity for reduction through reuse/recycling

2030 Goal: Reduce disposal of C&D materials by 260,000 tons

### Construction and Demolition (C&D) Materials Waste Reduction

#### Goal

Reduce disposal of C&D materials by 260,000 tons by 2030, more than double current C&D recycling tonnage.

**Priority materials:** wood, cardboard, gypsum, carpet.

#### Strategies

Continue to work with stakeholders on the development and implementation of an [Action Plan](#) to increase C&D diversion

Promote waste reuse, reduction, and separation at the job site.

- Continue the Source Separation Pilot Project Initiative to generate [case studies](#) for posting on RecyclingWorks website.
- Continue to provide C&D Technical Assistance through [RecyclingWorks](#) for commercial and institutional generators.
- Encourage use of C&D material reuse stores (e.g., EcoBuilding Bargains, ReStores by Habitat for Humanity, etc.).
- Promote source separated diversion programs such as ceiling tiles and other alternative collection systems.
- Encourage conformance to USGBC/LEED Green Building Standards.

Improve collection and C&D facility performance.

- Establish minimum performance standard for waste ban compliance by C&D processing facilities and transfer stations.
- Provide financial investment to improve process efficiency and effectiveness (e.g., RLF, RBDG).
- Evaluate flexibility in the permit modification process for capital investments tied to increased reuse and recycling.

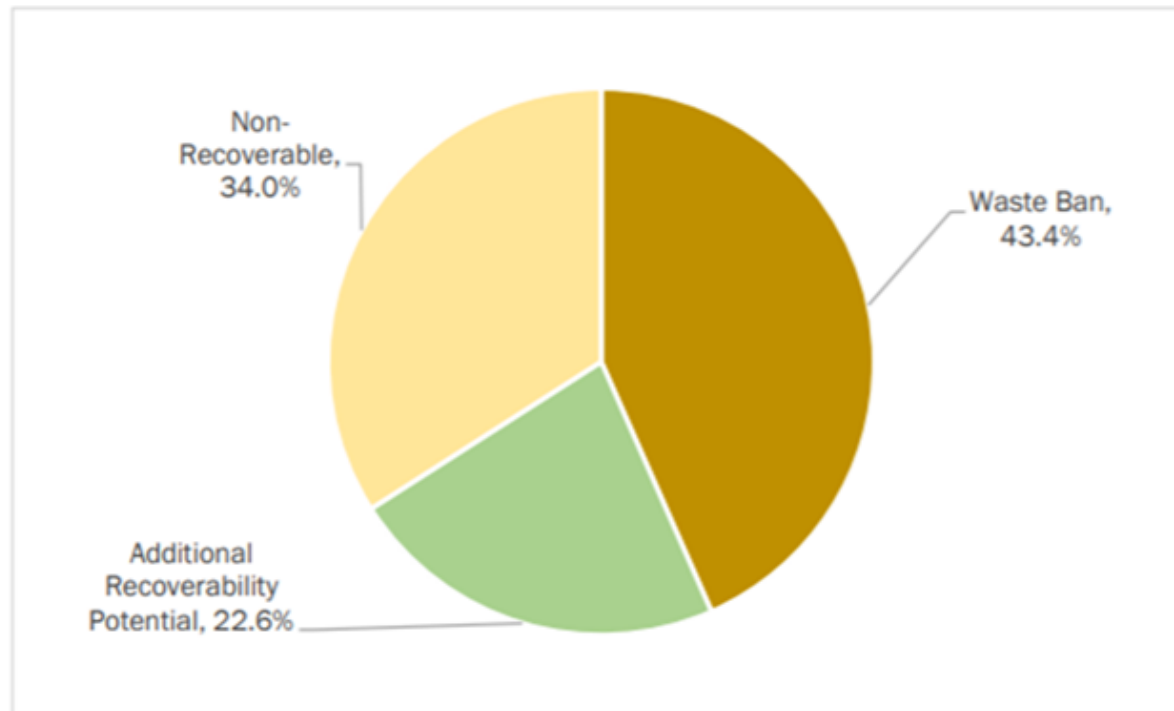
#### Recycling Business Development Grants



- Since 2017, MassDEP has awarded \$750,000 in grants to six facilities to purchase and install equipment to recover more wood for recycling.
- This equipment is projected to increase wood recycling by 34,000 tons per year.
- The photo (left) shows clean, separated wood at Stoughton Recycling, a project partially funded by an RBDG grant.

# Findings of Bulky Waste Study\*

Figure 4-3 C&D Waste Composition by Recoverability Potential



## CY2021 Tonnage

- Actual C&D waste accepted: 1.45 million tons
- Est. Waste Ban Material: 640K tons (ABC, metal, wood, clean gypsum, OCC, etc. )
  - Actual Recycled/Reused: 241K tons (400K ton shortfall)
- Est. Add'l Recoverability Potential: 329K tons
  - Asphalt shingles: 195K tons
  - Used gypsum: 96K tons
  - Carpet: 23K tons
  - Durable plastic: 6K tons

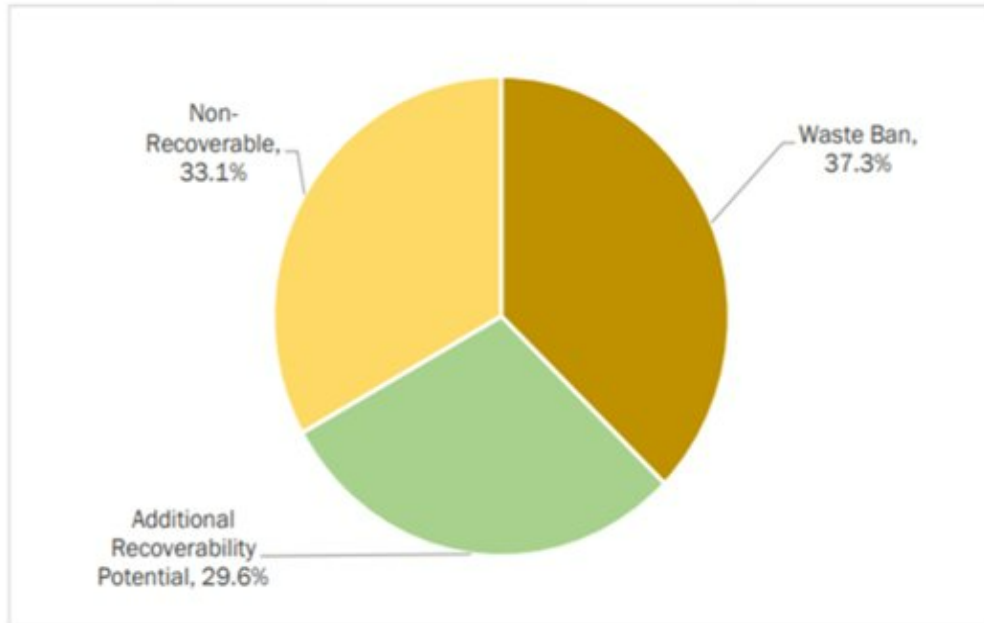
\*Note: Statewide waste characterization study conducted at five C&D Handling Facilities in Spring 2022.

Approximately 20% of the loads surveyed were straight C&D waste loads, thus providing current data on the composition of C&D waste.

# Findings of Bulky Waste Study

## Composition of Bulky Waste

Figure 4-1 Bulky Waste Composition by Recoverability Potential



## CY2021 Tonnage

- Actual Bulky Waste accepted: 308K tons
- Est. Waste Ban Mat'l: 115K tons (ABC, metal, wood, clean gypsum, OCC, etc.)
- Est. Addition'l Recoverability Potential: 91K tons
  - Furniture (wood): 53K tons
  - Furniture (plastic): 5K tons
  - Used gypsum: 3K tons
  - Asphalt shingles: 2K tons
  - Carpet: 11K tons
  - Durable plastic: 5K tons



# Future Opportunities

## C&D Handling Facilities can leverage strengths

- ✓ Access to secondary markets
- ✓ Processing equipment to meet product recycling specs
- ✓ Established locations for material aggregation

## C&D Facilities can adopt new business strategies

- ✓ Material re-use aggregation points/vendors
- ✓ Partner with developers to enable jobsite source separation and deconstruction
- ✓ Process source separated materials for reuse/recycling
- ✓ Expand secondary markets

# C&D MPS Resources

The following resources can be found on the MassDEP webpage...

Managing Construction and Demolition (C&D) Wastes: <https://www.mass.gov/lists/managing-construction-demolition-cd-wastes>

Minimum Performance Standard for C&D Handling Facilities: <https://www.mass.gov/doc/minimum-performance-standard-for-construction-demolition-handling-facilities/download>

C&D MPS Q&A Guidance: <https://www.mass.gov/doc/frequently-asked-questions-faq-minimum-performance-standard-for-cd-handling-facilities/download>

Status of Facility Compliance with MPS (May 2022): <https://www.mass.gov/doc/status-of-facility-compliance-with-cd-minimum-performance-standard-may-2022/download>

Statewide Bulky Waste Characterization Study (June 2022): <https://www.mass.gov/doc/statewide-bulky-waste-characterization-study-june-2022/download>



## For More Information

### Point of Contact:

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# Questions?

A grayscale photograph of a modern, multi-story building with a grid-like facade and large windows. The building is partially obscured by trees in the foreground. The text is overlaid on the right side of the image.

*Poll #2*

# Let's Select Future Meeting Topics for a Deeper Dive

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### **Reduce and Reuse Working Group**

[https://www.mass.gov/service-  
details/massdep-reduce-reuse-rr-working-  
group](https://www.mass.gov/service-details/massdep-reduce-reuse-rr-working-group)

