



REUSE MARKETS FOR BUILDING MATERIALS

**MASSDEP DECONSTRUCTION
WORKGROUP**

MEETING #3

MARCH 15, 2023



HOUSEKEEPING

This meeting is being recorded

Using zoom/chat

Ground rules

HOW THIS GOT STARTED

2030 Solid Waste Master Plan

Reduce & Reuse Working Group

Reduce & Reuse Action Plan

December 2021

Deconstruction Working Group

September 2022 Kick-Off

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



WHY FOCUS ON DECONSTRUCTION AND REUSE?

- Disposal capacity shortfall- in state and in the northeast
- Little appetite or interest in developing disposal new capacity
- Want to divert materials from waste stream, capture env'l and economic value, drive market dev't and expand job opportunities
- Aggressive Waste Reduction goals in MassDEP's 2030 SWMP:
 - **Specifically for C&D: Reduce disposal of C&D materials by 260K tons by 2030, more than double current C&D recycling tonnage.**

We need to improve the way we are managing these materials.

GOALS FOR THIS DECONSTRUCTION WORKGROUP

- ❑ Increase awareness about our waste disposal crisis
- ❑ Grow the Reuse Industry in MA for valuable building materials
- ❑ Connect stakeholders and share ideas
- ❑ Align with MassDEP's R&R Action Plan
- ❑ Reduce climate impacts
- ❑ Enable Job Training and Workforce Development
- ❑ Support Diversity, Equity, and Inclusion



Basic Operating Principle:
Work for the greater good, collaborate, include all stakeholders



PREVIOUS MEETINGS

A FEW TAKEAWAYS

Demystifying Deconstruction, September 2022

- **30%** of ALL discarded materials in MA are from C&D activities.
- **Embodied Carbon** in the built environment comes from emissions from extraction, manufacturing, transportation, installation, maintenance, and disposal of materials.
- As buildings become more energy efficient, EPA **estimates 49% of GHG emissions** will come embodied carbon from buildings built between 2020-2050.
- **Deconstruction ordinances**, executive orders, incentives, plans, and advisory groups are popping up all over the US and Canada.

Inspiration and Practice: Taking Buildings Apart, December 2022

- Demo of one American home (2400 sq. ft) = equiv. to **a lifetime's worth of trash** for one person (~120K lbs.)
- **25 categories of materials can be captured for reuse**
- Experience with decon demonstrates what is possible: **>60% of a house can go to reuse** and 34% to recycling
- The future includes **Design for Disassembly**: Photo shown-> 99% saved for reuse!
- Deconstruction supports **green collar jobs**: a trained workforce can deconstruct a house on a **cost-competitive** basis, reduce toxins, reduce waste, and help low-income and cost-conscious renovators.

Reuse Outlets: Strengths and Opportunities

Mass DEP Deconstruction and Reuse Working Group



Michael Orbank - Sustainability Manager, Structure Tone



State of Material Reuse - MA

- ▶ Residential vs. Commercial
 - ▶ Small scale, unrefined processes
 - ▶ Linear path for materials
 - ▶ Quality goods require quality deconstruction (and space!)
- ▶ Siloed efforts, unshared knowledge
 - ▶ Ignorance of opportunities and outlets
- ▶ Need for circularity
 - ▶ Reducing waste, increasing collaboration
- ▶ Stakeholder education needed
 - ▶ What does better reuse **Policy** look like?
 - ▶ Where does the **Building Industry** have the most impact?
 - ▶ How can **Reuse Vendors** expand their services?
 - ▶ Which choices yield the most benefit to **Owners**?

Today's Purpose and Speakers

- ▶ Unrealized Opportunities
 - ▶ Mindset changes needed
 - ▶ “Waste is a lack of creativity”
- ▶ Questions to ask
 - ▶ What reuse opportunities exist now?
 - ▶ How can reuse outlets grow to meet industry need?
 - ▶ What can you do to help?
- ▶ Speakers:
 - ▶ Boston Building Resources - Kord Jablonski
 - ▶ EcoBuilding Bargains - John Celesk
 - ▶ Doors Unhinged - Andrew Ellsworth



QUESTIONS



MASSDEP MICROGRANT

WEBSITE: [HTTPS://WWW.MASS.GOV/HOW-TO/APPLY-
FOR-A-MASSDEP-REDUCE-REUSE-REPAIR-MICRO-GRANT](https://www.mass.gov/how-to/apply-for-a-massdep-reduce-reuse-repair-micro-grant)

CONTACT: JANICE.PARE@MASS.GOV

- **Up to \$5,000** to for-profit and non-profit organizations, regional authorities, and eligible municipalities for short-term waste reduction projects.
- **Projects need to specifically promote** source reduction, **reuse**, or repair in Massachusetts. Recycling and composting initiatives are not eligible.
- MassDEP accepts applications on rolling basis, evaluates quarterly until all available funds are obligated.
- Grant funds will be distributed in one lump sum upon conclusion of your project.

RECYCLING DIVIDENDS PROGRAM

- Annual grant available to MA municipalities, \$4.2M awarded November 2022
- Rewards municipal programs demonstrating Best Practices in waste reduction
- Points earned in variety of categories, including REUSE
- Value of points is based on population served by the municipal SW program or EJ designation
- In 2023, Muni separation and reuse/recycling of source-separate wood and/or gypsum wallboard will help munis earn \$\$

REUSE CATEGORY: now includes Deconstruction

- 2 points: Earned if building permits require deconstruction, reuse and/or source separation of C&D
- 2 points: Earned if Muni engaged in deconstruction pilot that can serve as a model practice for deconstruction

NO TIME TO WASTE USED BUILDING MATERIALS

**Next Deconstruction Workgroup Meeting:
Mid-June 2023**

**Topic: How Historic Preservation Supports
Adaptive Reuse and Deconstruction**

*Building materials are too valuable to waste. Let's work together
to create a reuse ecosystem that supports all stakeholders and
reduces our environmental impacts.*



Photo courtesy of Deconstruction Works website

THANK YOU!

DECONSTRUCTION & BUILDING MATERIALS REUSE

Increase Material Supply

Create Jobs

Reduce Waste

Lower Costs

Save Energy

Preserve Value

Conserve Resources

Let's Do This...Together!

MASSDEP CONTACTS

Brooke Nash

Branch Chief

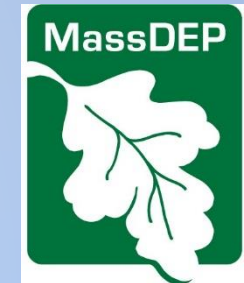
Municipal Waste Reduction Programs

Brooke.Nash@mass.gov

Kathi Mirza

Environmental Analyst

Kathi.Mirza@mass.gov



Reduce and Reuse Working Group

<https://www.mass.gov/service-details/massdep-reduce-reuse-rr-working-group>