

# MassDEP C&D Subcommittee

Via Zoom Webinar

December 1, 2022

10:00 AM to 12:00 PM



# Agenda

- Welcome/Introductions
- Revisit 2019 C&D Action Plan
- C&D MPS Update
- Check-in on Wood Market Disruptions
- Announcements
- Open Discussion

# **REVISIT 2019 C&D ACTION PLAN**

# Development of C&D Action Plan (March 2019)

- Recurring themes emerging from CY2016-2018 stakeholder input
  1. Improve Jobsite Waste Management
  2. Enhance Collection & Processing
  3. Develop End Markets
  4. Promote interagency cooperation to advance “leading by example”

### 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.

26

Action No.	Proposal/Description	Comments
1.0	<u>Jobsite Waste Management</u> Promote waste re-use, reduction and separation at the job site	
1.1	Continue technical assistance programs through RecyclingWorks (RW)	Encourage and facilitate public and private demonstrations of successful material management practices and strategies (e.g. RW BMPs/Case Studies, etc.)
1.2	Promote source separated diversion programs such as ceiling tiles, gypsum wallboard, etc.; pilot use of split boxes; support material re-use stores, etc.	Emphasis on Waste Management Plan; Promote waste management hierarchy: reduce, reuse, recycle, recover energy, dispose; Encourage separation at the jobsite of certain materials that are either hard for processors to separate, or contaminate C&D process by-products (e.g., pressure treated wood, gypsum, etc.)
1.3	Encourage conformance to USGBC/LEED Green Building Standards	Support higher standards for C&D projects and improvements to materials-related elements of green building certification systems.

Action No.	Proposal/Description	Comments
2.0	<u>Enhance Collection &amp; Processing</u> Improve C&D Facility Performance	
2.1	Establish Minimum Performance Standards (MPS) for C&D Processors	Require all Mixed C&D Waste loads to be processed at processors that meet MPS standard; Increase MPS criteria over time to improve performance
2.2	Provide financial investment to improve process efficiency and effectiveness (e.g. RLF, RBDG)	Encourage market development and equipment/technology improvements to recover highest and best use of C&D materials.
2.3	Improve implementation of C&D waste bans: Clarify definitions and standards; improve enforcement of existing WBs evaluate adding new WB materials	Ensure a level “playing field”; Increase facility inspection frequency.

Action No.	Proposal/Description	Comments
<b>3.0</b>	<u>Develop End Markets</u>	
<b>3.1</b>	Expand existing wood markets	Improve ability to recover wood that meets or exceeds specifications for current markets.
<b>3.2</b>	Explore siting in-state energy generation facility that uses C&D biomass (either conventional technology or innovative technology)	Until able to demonstrate effective process of flawless recovery of clean wood, this is not a realistic objective. In near term, stay focused on refining methods to recover clean wood for existing markets.
<b>3.3</b>	Develop common C&D materials product specifications (improve reliability for end-markets)	Support efforts to encourage the use of products made from recovered materials
<b>3.4</b>	Identify outlets for C&D Fines	
<b>3.4.1</b>	Identify other BUD material uses; Explore technologies to sort into constituent parts, recover useful fractions, minimize waste fractions; Explore cement stabilization technologies (e.g. Re-crete™); Evaluate disposal in fly-ash monofill landfills	Research what other uses have been approved in other states
<b>3.4.2</b>	Identify shaping & grading material needs at future landfill closures	Develop master schedule of landfill closures throughout state and region

Action No.	Proposal/Description	Comments
4.0	<u>Optimize Regulatory/Policy Incentives</u>	
4.1	Develop generic BUD for coated concrete	To be protective of most sensitive land uses anywhere, generic BUD would need to be very conservative, possibly impractical in most cases.
4.2	Explore management standards for extended producer responsibility (take-back) programs (e.g. gypsum wallboard, carpet, etc.); promote optimal end-of-life re-use and product stewardship	Work with manufacturers and markets to determine environmental and other potential costs not reflected in prices (i.e., full cost of products).
4.3	Promote interagency cooperation “leading by example”:	Coordinate with other state agencies on uses for C&D materials in construction applications through the State Agency Recycling Market Development Council
4.3.1	Continue dialogue with MassDOT for use of RAS, PGA, etc.	Encourage greater use of sub-base borrow spec for PGA; Explore pilot of RAS in Reclaimed Asphalt
4.3.2	Re-engage with DCAMM to ensure adherence to design and construction project specifications	Work with DCAMM to assess and build upon existing sustainable procurement policies and materials management programs
4.3.3	Approach DPS about amending building code to recognize waste disposal bans	Promote source separation at the jobsite; direct contractors to transport mixed C&D waste loads to permitted C&D handling facilities



# 2022 Check-in/Update

- Internal staff performed gap analysis seeking opportunities for improvement; with emphasis on market development and waste reduction
- Findings
  - March 2019 C&D Action Plan still largely valid
  - Opportunities for improvement through coordination with newly formed work groups
    - Recycling Market Development Work Group
    - Deconstruction Work Group

# Recycling Market Development WG

- Closely aligned with C&D AP Theme #3 “Develop new markets”
- Recycling Market Development Work Group (RMD-WG)
  - Identify policies, programs and incentives to encourage development of resilient re-use/recycling markets for existing and emerging waste materials.
  - <https://www.mass.gov/service-details/massdep-recycling-market-development-workgroup>
- Includes C&D and Bulky Household Items, for example:
  - Wood
  - Gypsum wallboard
  - Asphalt shingles
- RMD-WG Action Plan expected in 1H2023

# Deconstruction Work Group

- Closely aligned with C&D AP Theme #1 “Improve Jobsite Waste Management”
- Deconstruction Work Group
  - First workgroup formed under the Dec-2021 Reduce & Reuse Action Plan (<https://www.mass.gov/doc/massachusetts-reduce-reuse-action-plan-december-2021/download>)
  - WG creation was a priority due to high level of interest and impact
  - WG brings together public, private and government stakeholders to promote culture change in C&D industry
    - Design for re-use for new structures
    - Adaptive re-use for existing structures
    - Deconstruction and re-use of building materials wherever possible
  - Deconstruction WG Action Plan expected 2023

# **C&D MINIMUM PERFORMANCE STANDARD**

# C&D Minimum Performance Standard 2030 SWMP Goals and Objectives

Simply put...

***Ensure that every ton of C&D debris is processed at an MPS-compliant facility***

- Level the playing field for all facilities
- Recover maximum value from recyclable/re-usable materials
- Separate all waste ban materials
- Minimize tonnage sent for disposal – “Reduce Leakage”

# C&D MPS Performance Criteria

- C&D Processors:
  1. Achieve at least 15% Process Separation Rate (PSR) minimum threshold;
  2. Demonstrate that all banned materials are separated to the greatest extent possible.
- C&D Transfer Stations:
  - Transfer all C&D materials accepted to an MPS-compliant facility for further processing
  - Separate clean gypsum wallboard and Zero-Tolerance waste ban items prior to transfer

# 2022 C&D MPS Status

## 18 C&D Processors

- All but 2 facilities are fully MPS compliant
- Remaining 2 facilities installed new process lines
  - One facility completed installation and started new line in Mar-2022; still optimizing performance
  - Second facility completed installation and started testing new line in Sept-2022; optimization is underway
- Track MPS compliance through ongoing facility compliance inspections and annual reporting requirements

## 11 C&D Transfer Stations

- All facilities are fully MPS compliant
- One facility changed permit classification from processor to transfer station in May-2022.

# C&D MPS Resources

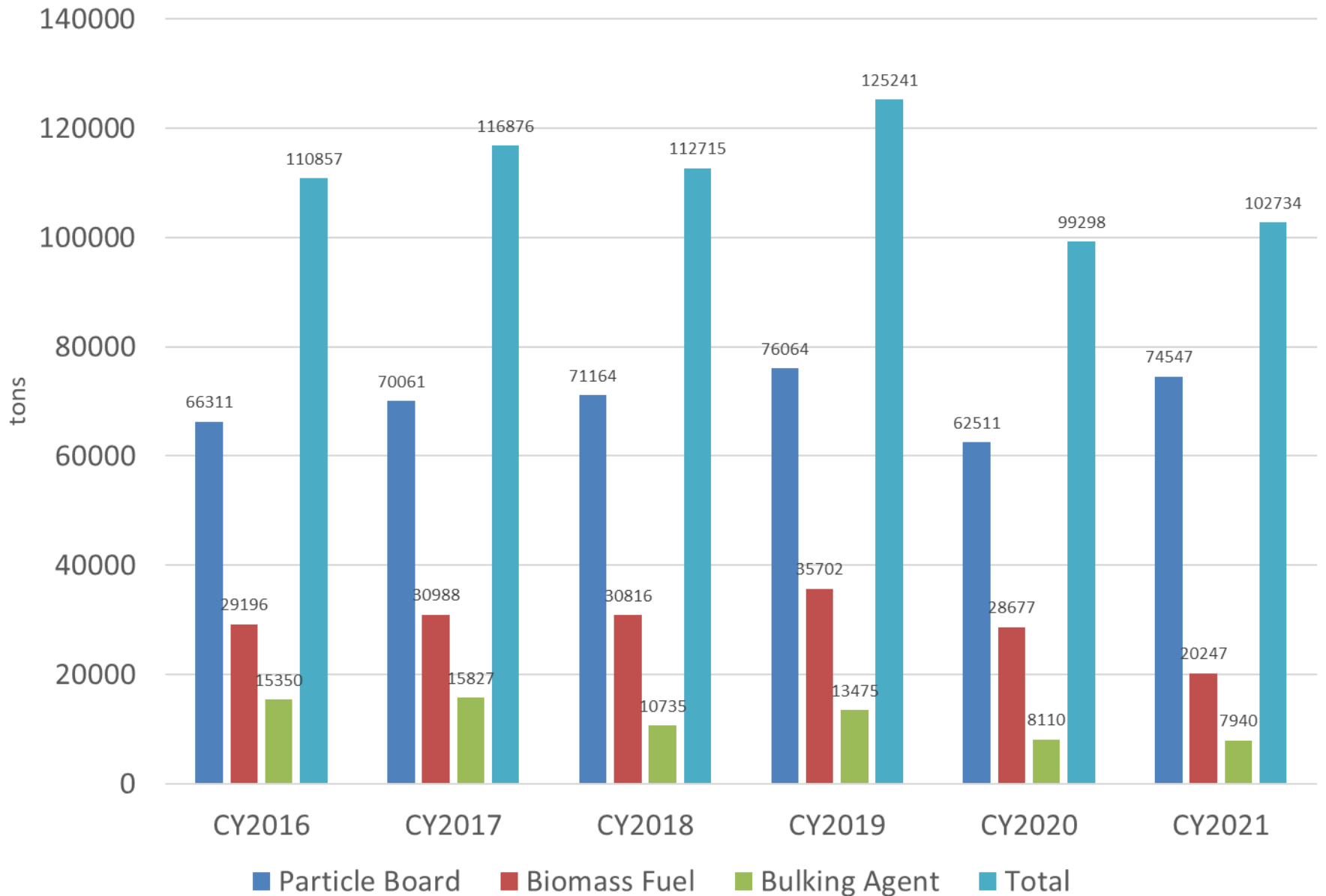
The following resources can be found on the MassDEP webpage...

- 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>



# **CHECK-IN ON WOOD MARKET DISRUPTIONS**

# Wood Products Trend Chart 2016-2021



# CY2021 C&D Wood Tonnages Exported to Re-use/Recycling Markets

Facility	Town/City	Region	Particle board feedstock outlet #1	Biomass fuel outlet #1	Biomass fuel outlet #2	Biomass fuel outlet #3	Bulking agent feedstock outlet #1	Bulking agent feedstock outlet #2	Bulking agent feedstock outlet #3	Landscape feedstock outlet #1	Landscape feedstock outlet #2
Devens Recycling Center	Ayer	CERO	5,216								
UMM-Millbury	Millbury	CERO	13,600	4,680							
E.L. Harvey C&D Processing	Westborough	CERO	14277		4480	1274					
Resource Waste Services Roxbury	Boston	NERO	9427								
TBI	N. Andover	NERO	58								
New Bedford Waste Services	New Bedford	SERO	637								
Raynham Regional Processing	Raynham	SERO	5811								
Stoughton Recycling	Stoughton	SERO	16,000								
New England Recycling	Taunton	SERO	9,527	8010			7434	183	323		
Lenox Valley WTF	Lenox	WERO								119	
K&W Materials Recycling	W. Springfield	WERO		1803							581
Totals			74,553	14,493	4,480	1,274	7,434	183	323	119	581

# CY2022 C&D Wood Market Constraints

- PRE-Greenleaf, Plainfield, CT
  - Biomass boiler that accepts 20-25% of C&D wood product produced in MA for energy resource recovery
  - Unscheduled shutdown due to turbine failure (5/27/2022)
  - Anticipated timeline to resume operation
    - Deliver repaired turbine (end of Dec-2022)
    - Start-up (mid-Jan-2023 through mid-Feb)
      - » Consume inventory of left-over wood from pre-shut-down
      - » Accept limited quantities of new inventory
    - Fully operational (mid-Feb 2023)
      - » Accept normal quantities of new inventory
- Impact on C&D Program
  - Affected 5 C&D Handling facilities owned by 2 companies
  - MassDEP issued 2 temporary waste ban waivers
    - » Allow disposal of limited quantities of wood
    - » Requires maximum use of existing markets and continual search for new markets

Any wood market updates?

# **ANNOUNCEMENTS**

# NEWMOA/NERC Gypsum Wallboard Waste Management Webinar Series

## Webinar 1:

**Monday January 9, 2023**

**Gypsum Wallboard: Problems,  
Recommendations, & The Current State  
of Recycling**

- **Speakers:**
  - Rick Watson, Delaware Solid Waste Authority
  - Mark VanWeelden, Covanta
  - Terry Weaver, USA Gypsum Recycling
  - Michael McCamley, New West Gypsum Recycling
- **Register at:**  
<https://attendee.gotowebinar.com/register/1799381992148594190>

## Webinar 2:

**Tuesday January 24, 2023**

**Opportunities to Increase Recycling**

- **Speakers:**
  - Michael Orbank, Structure Tone
  - David Drake & Taiji Miyasaka, Washington State University
  - Steve Meima & Susan Hines, Gypsum Association
- **Register at:**  
<https://attendee.gotowebinar.com/register/3758454427124722191>

**Gypsum Wallboard Stakeholder Survey (prior to webinars):**

<https://www.surveymonkey.com/r/GypsumWallboardSurvey>

# Upcoming MassDEP SWM Meetings

- **Informational webinar for Solid Waste Facilities and Haulers on New Waste Bans - Fri (12/02) from 11:00-12:30**
  - Issues and questions relative to implementation of new waste bans that went into effect 11/01 (mattresses, textiles, lower threshold on commercial organic food waste)
  - Zoom: <https://us06web.zoom.us/meeting/register/tZAsfuGhrj4vE9OXBf3lgJck9ZqeEFDkY3B9>
- **Deconstruction Work Group Mtg. - Wed. (12/14) from 1:30-3:00**
  - “Inspiration and Practice: Taking Buildings Apart”
  - Share experience of several leading experts
  - Zoom: <https://us06web.zoom.us/meeting/register/tZYvf-yorT0tGNSjqVuYFuqd1h6fxhflf-3N>
- **Recycling Market Development Work Group Mtg. - Thu. (12/15) from 10:00-1:00**
  - Focus on research and development
  - Meeting will kick off with a panel discussion
  - Zoom: <https://us06web.zoom.us/meeting/register/tZEvC-urpz8oGtxTJWLCsEOHt3im77D7Bsyn>



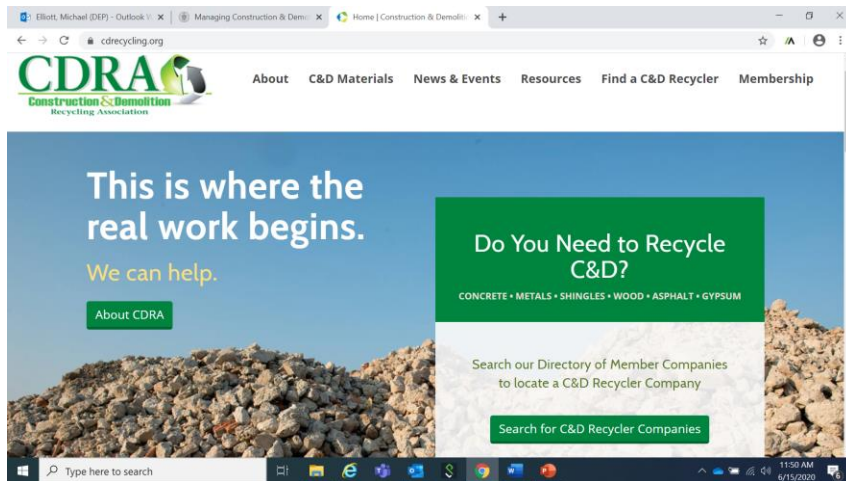
# EBC 17<sup>th</sup> Annual C&D Regional Summit

- EBCNE 17<sup>th</sup> Annual C&D Regional Summit
  - In-person
  - Doubletree Hotel, Westborough, MA
  - **Friday morning, Jan. 27, 2023**



**Information and registration:** <https://ebcne.org/event/ebc-17th-annual-construction-and-demolition-materials-management-summit/>

# CDRA National Perspective



<https://cdrecycling.org/>

- California legislation promoting end markets for recycled aggregates in roadways
- EPA considering changes to waste hierarchy
- CDRA recycler survey to update industry statistics

# **OPEN DISCUSSION**

## For More Information:

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