

SWAC C&D Subcommittee Meeting – May-2024
MassDEP – Bureau of Air & Waste – Solid Waste Management Division
May 16, 2024; 10:00 AM to 12:00 PM (Virtual Meeting via Zoom webinar)

Meeting Notes: Recorded by Mike Elliott (MassDEP)

NOTE: Copies of the meeting notes and presentation slides are available on the MassDEP C&D Subcommittee webpage found at the following link: <https://www.mass.gov/service-details/massdep-construction-demolition-subcommittee>. Submit comments via email to michael.elliott@mass.gov.

Agenda

- Welcome
- CY2023 C&D Facility Annual Report Data Analysis
- Evaluation of MPS Effectiveness at Year-5
- C&D Facility MPS Compliance Status Update, May 2024
- Progressive Enforcement Update
- Discussion

Welcome/Introductions

MassDEP welcomed participants to the webinar.

- 53 individuals registered for the meeting.
- Registrants reflected a cross-section of the C&D industry including: Large C&D Handling Facilities; Material Recycling Processors; Recycling/Re-use End-Markets; Construction Management Firms; Waste Haulers; Trade Association Representatives; Industry Consultants; State/Municipal Officials.
- The number of registrants in each stakeholder category was as follows:
 - C&D Facilities/waste facilities/waste haulers: 19
 - Recyclers: 4
 - Construction/Demo Contractors: 7
 - Consultants/Architects/Designers: 2
 - Trade Associations: 2
 - Government Agencies: 16
 - NGOs/Academia: 3
- At any given time during the meeting, there were 30-35 participants on the call.

CY2023 C&D Facility Annual Report Data Analysis

The “CY2023 Annual C&D Report Data Summary” document can be found at the following URL: <https://www.mass.gov/doc/2023-annual-cd-report-data-summary/download> (This document shows the disposition of materials handled at each of the 29 large C&D Handling Facilities, and a detailed break-out the quantities of material categories handled).

The bar chart in Slide 5 shows the categorical breakdown of quantities of C&D material managed by the 29 Large C&D Handling Facilities operating across Massachusetts in CY2023. The left side of the chart shows the 18 C&D Handling Facilities that operated as C&D processors and separated WB and recoverable materials for reuse/recycling. The right side of the chart shows the 11 facilities that operated as C&D transfer stations and transferred unprocessed and partially processed C&D materials to MPS-compliant facilities for further processing.

Of the 1,831,865 tons of Total C&D Materials generated across the State in CY2023 (i.e., mixed C&D, source separated material, and bulky waste), the C&D Handling Facilities generated the following quantities of materials:

- Recycled-Reused: 240,804 tons (shown as Green-colored bars)
- Diverted material (sent and received as separated recyclable material to another processor; e.g., ABC, wood, gypsum): 22,714 tons (shown as Yellow-colored bars)
- Transferred to MPS-compliant facility for further processing: 318,549 tons (shown as Grey colored bars)
- Total Landfill Dependent Use Application (e.g., Alternative Daily Cover (ADC), Roadbase, Shaping & Grading): 31,431 tons (shown as Brown-colored bars)
- Disposed via landfill/combustion (less inbound C&D residuals): 1,217,934 tons (shown as Red-colored bars)

The 2030 SWMP established a 2030 waste reduction goal to reduce C&D waste disposal by 260,000 tons per year compared to the 2018 baseline (985,000 tons). That translates to a goal of no more than 725,000 TPY of C&D waste disposed by 2030. To achieve this goal, the quantity of C&D waste disposed must drop over time, and the quantity of material recycled or reused must increase.

In 2023, as shown in Slide 6, the trend line for C&D waste disposed increased by 39 tons compared to 2022; which is unfavorable and contrary to the SWMP goal. The trend line for recycled/reused increased slightly by 16 tons compared to 2022, which is favorable, but not enough to produce a reduction in tonnage disposed.

Evaluation of MPS Effectiveness at Year-5

The “Recycle Rate/Process Separation Rate (PSR) Trend Chart (Slide 8) shows that the PSR industry average declined from 19.5% in CY2022 to 17.4% in CY2023.

Slide 9 shows the PSR trend over time for the 11 processors that met the 15% PSR minimum threshold in CY2023.

- Certain facilities improved from non-compliant to passing performance during this 5-year period; for example
 - Western Recycling (improved by adding processing equipment and showed the most improvement)
 - New England Waste Disposal (improved by adding a mobile picking line),
 - Upper Cape Regional Transfer Station, K&W Materials & Recycling, United Materials Management-Leominster and E.L. Harvey-New Bedford (improved by making operational improvements),
- E.L. Harvey-Westborough was the only facility that maintained a high level of performance (>30%) for the entire time period.
- New England Recycling dropped from high level performance to under 25%
- United Materials Management-Millbury dropped from high level performance to marginal performance, just exceeding the 15 percent PSR
- ReSource Waste Service-Roxbury initially improved, but then dropped back to marginal performance.

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- Raynham Regional Solid Waste Processing Facility maintained marginal but passing performance across the time period:

Slide 10 shows the PSR trend over time for the 7 processors that failed to meet the 15% PSR minimum threshold in CY2023

- Stoughton Recycling dropped from a high level performance to non-compliant
- Champion City Recovery-Brockton has shown improvement, but fell just below the minimum threshold in 2023
- Three facilities hovered at or just below the 15% minimum threshold:
 - Devens Recycling
 - Casella-Holyoke Transfer Station
 - Casella-Lenox Transfer Station
- TBI Recycling data is only reliable for past two years since resuming full operation; it has been flat around 11%
- And Trojan Recycling (despite adding process equipment) has remained in the 5%-7% range.

The Wood Products Trend Chart on Slide 11 shows the total amount of wood separated annually compared to the estimated quantity of A-wood potentially available for the past two years. The data suggests that the processors are only recovering about 50% of available A-wood material.

The subsequent table of individual facility wood separation rates shown on Slide 12 offers an explanation why the wood product recovered is not optimal. Only 7 facilities achieved a wood separation rate (WSR) that exceeded industry average of 8.5%. 12 facilities lagged behind the industry average including 8 facilities at < 5%, and 3 facilities at < 1%.

The trend chart of quantities of clean gypsum wallboard (CGW) separated for recycling by C&D processors shown on Slide 13 demonstrates a steady decline since its peak in 2021. The 2023 quantity separated has declined by 561 tons compared to 2021, from 1,921 tons to 1,360 tons. That represents a 29% drop over two years. For comparison, the latter two years show the estimated quantity of CGW that could potentially be recovered from inbound C&D and Bulky waste streams (estimated using MassDEP's most recent waste characterization study compositional data from 2022.) As suggested by the data, the C&D Processors are recovering 10% or less of the potential recoverable clean GWB that could otherwise be recycled. As a reminder, MassDEP's 2013 gypsum wallboard guidance and facility waste ban compliance plans (WBCP) require that CGW must be separated from tipped loads prior to any mechanical processing or transfer to another processor (refer to URL at <https://www.mass.gov/doc/gypsum-wallboard-waste-ban-guidance-cd-handling-facilities/download>).

In Slides 14 and 15, MassDEP listed some of the common observations from the compliance inspections performed jointly by regional and Boston staff during 2023 and 2024. Common observations included the following:

- No manual pickers on tip floor
- Loads were not spread out to 1-2 foot depth when tipped on tip-floor to allow most effective kick-sorting of CGW and Zero-Tolerance items
- Separation of CGW only happened, for the most part, when loads arrived with a high percentage of CGW

- Picking lines were not operating at all times
- Picking lines were not fully staffed with manual pickers
- Post process fines and residuals appeared to contain excessive levels of recoverable wood

Slide 16 references MassDEP's C&D Action Plan, which can be found at the following URL: <https://www.mass.gov/doc/cd-action-plan/download>. The C&D Action Plan is a dynamic planning tool incorporated into the 2030 Solid Waste Master Plan (SWMP). One of the four main objectives of the C&D Action Plan from its inception has been to "Enhance Collection & Processing". The Action Plan looks to achieve this objective by improving the PSR over time and separating all waste ban materials to the greatest extent possible, which corresponds with the MPS performance requirements.

Consistent with the C&D Action Plan and 2030 SWMP, MassDEP is proposing incremental increases in the PSR minimum threshold to enhance collection and processing. As demonstrated by Figure 4-7 that appears on Slide 17, the most recent MassDEP 2022 Waste Characterization study documented that each of the three main types of C&D material waste loads (C&D, Bulky, and Mixed C&D/Bulky) contained >35% Waste Ban material content. MassDEP believes that this study provides strong empirical evidence that increasing the PSR minimum threshold incrementally from the current 15% to 25% by 2030 is achievable. Therefore, MassDEP is proposing incremental increases in the PSR minimum threshold according to the following schedule:

- 2020 = 15% (currently in effect)
- 2025 = 20%
- 2027 = 23%
- 2030 = 25%

MassDEP believes these levels of performance are not only achievable but they can open opportunities for the C&D Facilities to grow their businesses.

- C&D Handling facilities can leverage their existing strengths:
 - Their access to secondary material markets
 - The availability of processing equipment to render separated product suitable to meet recycling market outlet specifications
 - And their position as well-known, established locations for material aggregation
- With some creative thinking, C&D handling facilities can adopt new business strategies to capture a greater market share, for example:
 - Serve as material re-use aggregation points and/or material re-use vendors
 - Partner with developers to enable efficient and effective jobsite source separation
 - Process source separated materials for reuse and/or recycling
 - Use business expertise to expand secondary material markets

MassDEP is also considering other incentives to encourage improved performance across the industry. For example, MassDEP is considering publishing individual facility key performance indicator scorecards. This will increase transparency of facility performance to the stakeholder community, possibly including estimates of greenhouse gas emissions from embodied carbon in C&D residuals sent for disposal.

C&D Facility MPS Compliance Status Update, May 2024

SWAC C&D Subcommittee Meeting – May-2024
MassDEP – Bureau of Air & Waste – Solid Waste Management Division
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The “Status of Facility Compliance with C&D Minimum Performance Standard, May 2024” document can be found at the following URL: <https://www.mass.gov/doc/status-of-facility-compliance-with-cd-minimum-performance-standard-may-2024/download> (This document provides an updated list of the compliance status of each C&D handling facility)

- Slide 21 shows the nine facilities operating as C&D processors that achieved full compliance with both MPS performance criteria in CY2023:
 - EL Harvey C&D Processing, Westborough
 - K&W Materials & Recycling, West Springfield
 - New England Recycling, Taunton
 - New England Waste Disposal, Taunton
 - Raynham Regional SW Processing Facility, Raynham
 - ReSource Waste Services of Roxbury, Boston
 - United Materials Management-Millbury, Millbury
 - Upper Cape Regional Transfer Station, Sandwich
 - Western Recycling, Wilbraham
- Slide 22 shows the seven facilities operating as C&D processors that failed to achieve the 15% PSR minimum threshold:
 - Casella-Holyoke Transfer Station, Holyoke
 - Casella-Lenox Transfer Station, Lenox
 - Champion City Recovery, Brockton
 - Devens Recycling, Ayer
 - Stoughton Recycling, Stoughton
 - TBI Recycling, North Andover
 - Trojan Recycling, Brockton
- Slide 22 also shows the two facilities operating as C&D processors that did not report separating/diverting any clean gypsum wallboard, one of the 4 C&D waste ban materials that must be separated/diverted:
 - E.L. Harvey-New Bedford Transfer Station
 - United Materials Management-Leominster, Leominster
- Slide 23 shows the six facilities operating as C&D Transfer Stations that are in full compliance with the MPS; (Note: That means transferring all unprocessed or partially processed C&D materials to an MPS compliant facility for further processing after first separating CGW and zero-tolerance WB items):
 - Bourne Large Handling Facility, Bourne
 - Harvey Recycling of Fitchburg, Fitchburg
 - Holliston Transfer Station, Holliston
 - Oxford Transfer Station, Oxford
 - S&J Exco Transfer Station, Dennis
 - Wood Transfer Station/Allied Waste, Peabody
- Slide 24 shows the five facilities operating as C&D Transfer Stations that did not report any separation or diversion of CGW:
 - E.L. Harvey-Rochester/Zero Waste Solutions, Rochester
 - E.L. Harvey-Sandwich, Sandwich
 - F.P. McNamara, Springfield
 - ReSource Waste Services Ware, Ware

- Valley Recycling, Northampton

Progressive Enforcement Update

The statement in Slide 26 is excerpted from a slide shown at the 10/30/2019 C&D Subcommittee meeting prior to the effective date of the MPS requirements. It outlines how MassDEP would exercise progressive enforcement for failure to meet the MPS:

- Starting one year after MPS Policy launch, MassDEP may exercise options under Enforcement Response Guidelines
 - Follow progressive discipline model to encourage improvement: NONs -> High Level Enforcement (HLE)
 - Require facility-specific Return-to-Compliance Plans as formal commitment to corrective actions

Since first announcing the MPS, MassDEP has consistently stated that it will enforce compliance of the MPS under the MassDEP Waste Ban regulation (310 CMR 19.017) and the facility's obligation to comply with its site-specific operating permit and waste ban compliance plan. During the first four years of the MPS, MassDEP has exercised enforcement discretion and worked collaboratively with facilities through compliance assistance. But now in the 5th year of the program, MassDEP will start exercising enforcement for failure to satisfy the MPS requirements.

Conditions that may trigger enforcement include:

- Failure to achieve PSR minimum threshold (MPS Criterion #1)
- Failure to separate/divert all C&D WB materials (MPS Criterion #2)
 - ABC, Metal, Wood, and Clean Gypsum Wallboard
- No manual pickers on tip floor
- Failure to spread loads for inspection/kick-sorting on tip floor
- No containers/bunkers dedicated for separated WB materials
- Process line not fully operational or fully staffed
- Excessive contamination in separated WB materials
- Excessive quantity of WB materials in processed fines or residuals
 - Constitutes failure to comply with the Waste Ban Regulation and the Facility's Waste Ban Compliance Plan requirements
 - Includes both C&D waste ban materials (ABC, metal, wood, and CGW) and any Other waste ban materials (e.g., OCC, mattresses, textiles, CRTs, electronics, etc.)

Discussion

Thanks to the willingness of the attendees to participate in open dialogue, there was a considerable amount of discussion during the final 30 minutes of the meeting. A few of the most salient discussion points included the following:

- MassDEP emphasized that our expectations of a C&D Processor are no different than our expectations of a Material Recovery Facility. Because such facilities are routinely accepting loads with waste ban materials, they are expected to be fully operational at all times. No materials shall be disposed that have not been fully processed. If any part of the facility is not fully operational or fully staffed, then no material can be sent for disposal. As with material

recovery facilities for single stream recycling, each C&D processing facility should have a contingency plan that may include actions such as temporary stockpiling until processing can resume, transfer to another facility for further processing, slowing down the process and reducing tonnage to allow manual kick-sort operations that are equally effective as the mechanical sorting line, etc.

- MassDEP also emphasized that the availability of end-markets for waste ban materials, or lack thereof, has no bearing on the facility's obligation to separate waste ban materials in compliance with its waste ban compliance plan. Regardless of the market availability, the facility must still separate the waste ban materials. If there are no markets for separated materials, the facility can then request a temporary waiver from MassDEP to dispose of a finite quantity of waste ban material until the market recovers or new market outlets are identified.
- We heard from the representatives of recycling market outlets for both wood and clean gypsum wallboard (CGW), that there is still capacity to take more recycled feedstock material from Massachusetts processors.
 - In the case of wood, the Tafisa director of wood supply reported that they are seeing a decline in separated C&D wood quality in the past few years. The biggest problem is ferrous and non-ferrous metal which suggests lack of quality control on the processing floor.
 - In the case of CGW, the president of USA Gypsum opined that MassDEP has grossly under-estimated the quantity of CGW missed by Massachusetts facilities. He also clarified that 80% of all gypsum wallboard sold into the New England market is plain white board, which is ideal for recycling.
- A consultant to the C&D Industry recommended that a chart should be generated showing end users for the different C&D materials, the annual tonnage they receive from C&D processors located in Massachusetts (no need to identify which C&D processors they receive the material from), additional capacity they have to receive more material, etc. With this information MassDEP would have a better view of each C&D debris logistics chain from the generation to the end markets and would see if the end markets are in balance or not (plus or minus) with the material available from the C&D processors.
- One C&D processing company's representative expressed concern about the ability of their company's facilities to meet the proposed 20% PSR minimum threshold on such short notice, by CY2025.
- During an informal poll of a few of the C&D processing facility companies still on the call in the last 30 minutes, they all opined that 20% is possible within the next year, but it might take some effort. Subsequent to the meeting, we heard from one company that it might require some additional investment in processing equipment.
- Some of the construction firm sustainability managers on the call raised concerns about the validity of the annual report data submitted to MassDEP. On a separate but related matter, the sustainability managers also have similar concerns about the industry diversion letters provided to customers. They would like to see greater transparency of the data collection to produce valid reports backed up by defensible data.
- A couple of meeting participants also suggested that expected changes to LEEDv5 will address the data reporting discrepancies and expand to other areas such as tier 3 GHG emissions.

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END of Meeting Notes.