

SWAC C&D Subcommittee Meeting  
MassDEP – Bureau of Air & Waste  
May 18, 2023; 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](mailto:michael.elliott@mass.gov).

**Agenda**

- Welcome/Introductions
- CY2022 C&D annual report data
- C&D Facility MPS Compliance Status
- Updated C&D webpage format
- C&D Industry Updates (Wood Markets)
- Open Discussion

**Welcome/Introductions**

MassDEP welcomed participants to the webinar.

- The number of participants varied over the course of the meeting, but there were 48 people who attended for 30 minutes or more, and generally some 35-40 people on the call most of the time.
- Participants reflected a cross-section of stakeholders representing: 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.

**CY2022 C&D annual report data**

The C&D Facility Annual Report Summary Data can be found on the MassDEP webpage at the following link: <https://www.mass.gov/doc/2022-annual-cd-report-data-summary/download>.

Of the 29 Large C&D Handling Facilities operating across Massachusetts in CY2022, 18 C&D Handling Facilities operated as C&D processors that separate waste ban and recoverable materials for reuse/recycling. And 11 facilities operated as C&D transfer stations that transfer unprocessed and partially processed C&D materials to MPS-compliant facilities for further processing.

Of the 1,780,038 tons Total C&D Materials generated across the State in CY2022 (e.g., mixed C&D, source separated and bulky waste), the C&D Handling Facilities generated the following quantities of material categories:

- Recycled-Reused: 247,798 tons
- Diverted material (sent and received as separated recyclable material to another processor; e.g., ABC, wood, gypsum): 33,463 tons
- Transferred to MPS-compliant facility for further processing: 337,663 tons
- Landfill Dependent Use Applications (e.g., ADC, Roadbase, Shaping & Grading): 31,208 tons
- Disposed landfill/combustion (less inbound C&D residuals): 1,179,103 tons

The 2030 Solid Waste Master Plan (SWMP) established an interim waste reduction goal to reduce C&D waste disposal by 260,000 TPY by 2030 compared to a baseline in 2018. That translates to a goal of no more than 725,000 TPY 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 2022, the trend line for waste disposal showed a favorable decline. By contrast, the trend line for recycled/reused is flat and in fact somewhat down compared to 2021.

When evaluating the trend chart of the recycling rate/process separation rate over time, the steady decline in operational performance that we have witnessed since 2013 is starting to improve as evidenced by two consecutive years of year-over-year improvement in 2022. These are small incremental improvements from 16% to 19.5%, but it is not insignificant given that this improvement was achieved while the volume of inbound C&D materials processed has remained fairly constant. This likely reflects the efforts of the C&D industry in Massachusetts to comply with the MPS through operational improvements and investment in new processing equipment. To achieve the SWMP goals, we will need to see further incremental improvements going forward.

Wood products produced in CY2022 were down by about 9,000 tons (8%) compared to CY2021. A reduction in particle board feedstock accounted about 5000 tons. And a reduction in biomass fuel, mostly attributed to the unplanned PRE-Greenleaf shutdown due to a turbine failure, accounts for about 4000 tons.

Clean Gypsum Wallboard (CGW) separated for recycling/diversion in CY2022 was down significantly by about 515 tons (27%) compared to CY2021. Most of that reduction is accounted for in the material destined for agricultural application in Pennsylvania. This reduction is reflected in the failure of several processing facilities to comply with MPS performance criteria #2, namely, the separation of all 4 C&D waste ban materials, and the failure of several transfer stations to separate CGW prior to sending unprocessed or partially processed C&D materials for further processing.

#### **C&D Facility MPS Compliance Status**

The May-2023 individual C&D Facility MPS compliance status data can be found on the MassDEP webpage at the following link: <https://www.mass.gov/doc/status-of-facility-compliance-with-cd-minimum-performance-standard-may-2023/download>.

Slide 12 provides the list of the 9 facilities that are designated MPS Compliant as processors. Based on the 2022 C&D annual report data, they met both MPS performance criteria.

Slide 13 provides the list of the 9 facilities that did not meet one or both MPS performance criteria and are designated as Conditionally MPS Compliant.

6 of the 9 conditionally compliant facilities failed to meet MPS performance criterion #1 for not achieving the MPS Process Separation Rate (PSR) 15% minimum threshold:

- 2 of the facilities installed new process lines consistent with a 2021 MPS compliance plan; they are still working to optimize process performance, and continue to submit monthly progress reports until MPS-compliance is demonstrated

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- 1 facility transferred ownership mid-year, and lost a significant inbound source separated material waste stream; that facility has since developed an MPS compliance plan and is submitting monthly progress reports
- 3 facilities were significantly impacted by the loss of a wood biomass outlet with the unplanned shutdown of PRE-Greenleaf. These facilities operated part of the year under a waste ban disposal waiver. When adjusted for the quantity of wood disposed that would have been sent for energy recovery as biomass fuel, the adjusted PSR meets the 15% minimum threshold. With the PRE-Greenleaf biomass boiler back online since March 2023, we anticipate these facilities will comply with criterion #1 in 2023.

5 of the 9 conditionally compliant facilities failed to meet MPS performance criterion #2 for not reporting any CGW recycled/diverted.

- Of these, 4 facilities reported separating CGW, but not sending any out for recycling/diversion.
- One facility did not separate any CGW in 2022 and has since submitted a written plan to resume separation and diversion of CGW.

Slide 14 provides the list of the 5 facilities that are designated MPS Compliant as transfer stations. Based on the 2022 C&D annual report data, they demonstrated that all unprocessed or partially processed C&D materials were transferred to an MPS-compliant facility for further processing, after first separating clean gypsum wallboard and zero-tolerance WB items.

Slide 15 provides the list of the 6 facilities for which MPS compliance as transfer stations could not be confirmed. In all cases, they did not report separating any CGW for recycling/diversion. It is important to remember that gypsum must be separated prior to transfer or mechanical processing. In that sense, gypsum management is unique from other C&D materials that can be transferred for further processing. MassDEP will conduct follow-up inspections to confirm compliance. In the meantime, these facilities can continue accepting C&D materials unless told otherwise.

#### **Updated C&D webpage format**

The updates to the “Managing C&D Wastes” webpage can be found at the following link: <https://www.mass.gov/lists/managing-construction-demolition-cd-wastes#program-policy-and-planning>. Particularly noteworthy is the addition of a new section heading for “Program Policy and Planning” documents. One of the new documents added is the Updated C&D Action Plan (March-2023).

Under the new section heading, one can also find links to some of the MPS resources that MassDEP has previously made available on its website:

- MPS Statement (October-2021) that articulates the applicable performance criteria and how they are defined and measured.
- Q&A Guidance (October-2021) clarifies and responds to implementation issues that the stakeholders have raised
- Facility MPS Compliance Status (May 2023) provides the latest annual update of MPS compliance status of each individual C&D facility; as discussed above

#### **C&D Industry Updates (with focus on Wood Markets)**

This portion of the meeting included updates from representatives of three existing wood market outlets that serve the regional C&D Industry. Each wood market outlet representative was asked to provide a brief overview including, but not limited to the following topics:

- Current operational status (e.g., capacity, logistics, etc.)
- Expected planned shut-downs for plant maintenance
- QA/QC concerns (e.g., product acceptance specifications)
- Future operational outlook

Plainfield Renewable Energy (<https://greenleaf-power.com/plainfield/>). Mr. Dave Pattison, Fuel Manager for PRE-Greenleaf delivered this overview. PRE-Greenleaf is a biomass boiler cogeneration plant operating in Plainfield, CT.

- After recovering from an extended shut-down due to an unexpected turbine failure in May-2022, the plant has been fully operational since late March-2023.
- The plant is fully staffed and expects to run continuously until October-2023 when it will undergo its routine scheduled two-week annual maintenance shutdown. (That said, there will be a brief 3-day outage in the Summer that is not expected to affect deliveries.)
- The product acceptance specifications remain unchanged
  - No creosote, or any other treated wood
  - No painted wood
- QA/QC program includes testing of all loads received at the plant, and unannounced sampling events of the feedstock at the C&D processors generating the C&D wood chip.
- Failure to meet the acceptance specs can result in probation and in certain cases suspension.
- Future looks good – PRE has changed its mix and increased C&D wood chip by about 10%. It is now running a 40:60 blend of green wood chip to C&D wood chip.

Tafisa-Canada (<https://tafisa.ca/en>). Mr. Sylvain Martel, Director of Wood Supply, delivered this overview. Tafisa is a large particle board manufacturing facility located in Lac Mégantic, QC.

- Tafisa is celebrating its 20<sup>th</sup> year of recycling C&D wood chip in its products. During that time, Tafisa has recycled 2 million tons of C&D wood chip.
- Particle board production is tied to the construction market activity.
- Tafisa is currently operating at full capacity; purchase of recycled wood chip has not slowed down
- Consistent with other years, Tafisa will take a one-week shut-down for plant maintenance and repairs in the Fall. The shut-down is not expected to impact deliveries of C&D wood chip.
- Tafisa has struggled the last couple years to work through some logistical bottlenecks, but has worked with trucking companies to get through it. Mr. Martel opined that the logistical challenges Tafisa experienced did not cause the recent downturn in wood chip sent to market documented in MasDEP annual report data. One of the contingencies that allows Tafisa to maintain a steady demand for wood chip is the excess inventory of feedstock it builds up each year to cover slow times (i.e., winter).
- Mr. Martel reports that with vertical integration of the regional C&D industry in recent years, and associated high staff turn-over, Tafisa has seen a decline in the product quality of the feedstock they are receiving. Surprisingly, Tafisa reports elevated levels of ferrous and non-ferrous material in the separated wood.

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- Mr. Martel explained that poor quality in the feedstock requires more time and resources to clean-up the material on the receiving end, and reduces the overall volume of material Tafisa can accept. If processors want to send more material to Tafisa, they need to do a better job producing high quality feedstock.
- Concerning acceptance specifications, Tafisa will accept anything that looks and behaves like wood and is not chemically altered; this includes plywood and oriented-strand board.
- Wood that has lost its mechanical properties (e.g., imitation wood, fiberboard, rotten wood) is not acceptable.

Tred'si (<http://www.tredsi.com/EN/index.html>). Mr. Patrice Gladu, Marketing Rep for Tred'si, delivered this overview. Tred'si is a recycling facility for treated wood located in Westbury, QC. (Note: Mr. Gladu also provided a copy of his presentation slides which can be found in the meeting materials link for this meeting on the MassDEP C&D Subcommittee webpage.)

- Tred'si specializes in processing treated wood (e.g., railroad ties, utilities poles, marine pilings, etc.) for reuse, recycling and valorisation
  - Reuse includes use for highway and landscaping applications
  - Recycling includes milling feedstock to recover viable lumber and other wood products
  - Valorisation includes producing biomass fuel for energy conversion.
- Tred'si will accept most treated wood products but expressed a preference for longer poles.
- Transportation and logistics can be challenging. Tred'si currently trucks in some material from the Boston area. It is trying to increase capacity for product brought in by rail.

On the subject of treated wood, Mr. Gilles Bernardin of Valorisation Bernardin suggested another outlet for treated wood and other C&D wood (if deemed unsuitable for reuse/recycling at Tred'si) might be JPB, a large cogen plant in Salaberry-de-Valleyfield, QC (<https://industriesjpb.com/en/>). According to online marketing literature, JPB currently repurposes 90,000 TPY of wood as biomass fuel for generation of electricity supplied to the electric grid.

### **CDRA National Perspective**

The Executive Director of the national C&D Recycling Association (<https://www.cdrecycling.org/>), Ms. Becky Caldwell, provided an update on some of the national issues that the CDRA is following or working on:

- LA County 3<sup>rd</sup> party certification: As just one example of several initiatives to promote transparency and improved recycling, LA County now requires C&D recycling facilities to obtain and maintain 3<sup>rd</sup> party certification.
- Shingle recycling “comeback”: Over the past 6-9 months, CDRA is seeing more interest in shingle recycling (e.g., new ideas and new technologies), including the “shingle-to-shingle” option; this seems to be part of growing extended producer responsibility (EPR) type initiatives. CDRA opined that gypsum wallboard could be next.
- DOT White Paper and Processor Survey: CDRA has engaged the services of the University of Florida to work on both these documents. The DOT White Paper will report on the range of uses of C&D materials in DOT-related applications across the nation. The Processor Survey, as the name suggests, is a survey of C&D processors nationwide to understand current business practices and challenges. As is customary, CDRA will make these documents available to members on their website.

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- Upcoming CDRA events: For accuracy, it is probably best to refer to the CDRA webpage for specifics about upcoming events. One event of note is the upcoming Board of Directors meeting later in the month that will take place in the Hartford area. The Board of Directors will also take part in a site visit to a C&D processing facility hosted by Western Recycling in Wilbraham, MA, which is operated by USA Recycling.

**Open Discussion**

The following two topics were brought up...

Inaccuracy of Hauler Waste Reports: Michael Orbank, a Sustainability Manager at the STO-Group, raised a concern about the accuracy and transparency of hauler waste reports that construction firms rely on to develop waste management plans and track sustainability performance metrics (e.g., LEED). Hauler waste reports typically show high recycling rates (e.g., 75% or more) for mixed C&D waste sent to a C&D processor. Up until now, no one has really questioned these unrealistically high recycling rates that are not supported by empirical data. Therefore, there has been little incentive for construction project managers to place greater emphasis on jobsite source separation. Michael is trying to increase awareness of this issue to encourage greater accuracy and transparency in the hauler waste reports, and to promote a greater emphasis on jobsite source separation to improve the effectiveness of C&D material reuse and recycling.

Increased Risk of Fires at Solid Waste Handling Facilities due to Lithium-Ion Batteries: Jonathan Murray, Operations Manager at Western Recycling, raised a concern about what he sees as an ever-increasing risk of structural fires in solid waste handling facilities due to improperly disposed/recycled lithium-ion batteries. Mr. Murray reports an increased frequency of near-miss incidents (e.g., once or twice weekly) at facilities he operates. Even though his facilities are equipped with fire rover and sprinkler systems, the speed at which lithium-ion batteries can ignite and the elevated temperature at which they burn, make these fires difficult to detect and arrest until they have caused significant structural damage. Jonathan suggested establishing a working group to address this issue. MassDEP shares Jonathan's concern and supports working on a number of mitigation measures in parallel:

- Public education (e.g., RecycleSmart information)
- Discussion with external stakeholder groups (e.g., Solid Waste Advisory Committee)
- Identification of products and site conditions that pose the greatest risk (industry input?)
- Interagency cooperation with Department of Public Safety and Department of Fire Services

**Point of Contact**

Pursuant to MassDEP's office move last November, Mike Elliott reported that his new contact information is as follows:

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**END of Meeting Notes.**