

SWAC C&D Subcommittee Meeting  
MassDEP – Bureau of Air & Waste – Solid Waste Management Division  
**Fall-2023 Webinar Series on C&D Materials Market Development (Wood, Shingles, Gypsum)**  
December 14, 2023; 9:00 AM to 11:45 AM (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 for Webinar Series Meeting #3 of 3 re: Gypsum Wallboard Markets**

- Welcome
- MassDEP C&D Annual Report and Waste Characterization Data (Mike Elliott, MassDEP)
- Overview of existing and future gypsum recycling markets (Ms. Susan Hines, Gypsum Association)
- USG Gypsum Panel Take-Back Recycle Program (Mr. Kyle Flondor, Wallboard Product Manager, USG)
- Existing recycling market serving Massachusetts (Mr. Terry Weaver, President of USA Gypsum)
- Product development using waste gypsum (Mr. David Drake, Washington State University, School of Design and Construction)
- Commercial Clean Gypsum Wallboard Waste Diversion: The First Step Towards Circular C&D Decarbonization (Mr. Michael Orbank, Sustainability Manager at STO-Group)
- Announcements

**Welcome/Introductions**

MassDEP welcomed participants to the webinar.

- The number of participants varied over the course of the meeting, 67 registered of which there were about 40 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; Manufacturers, Construction Management Firms; Waste Haulers; Trade Association Representatives; Industry Consultants; State/Municipal Officials.

**MassDEP C&D Annual Report and Waste Characterization Data (with Estimate of Gypsum Wallboard Quantities)**

A PDF copy of the PowerPoint presentation that accompanied this portion of the meeting can be found at the MassDEP C&D webpage referenced at the top of these meeting notes.

One of the objectives of the C&D data analysis presented at this meeting was to estimate the gypsum wallboard quantities that might potentially be recovered from the C&D and Bulky waste loads accepted by C&D processors across the State. This was estimated using the waste characterization compositional analysis data from the 2022 Statewide Bulky Waste Characterization Study (<https://www.mass.gov/doc/statewide-bulky-waste-characterization-study-june-2022/download>), and applying it to the quantities of C&D waste and Bulky waste tonnages accepted as reported in the CY2022 C&D annual facility reports (<https://www.mass.gov/doc/2022-annual-cd-report-data-summary/download>).

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The analysis estimated that in CY2022, the combined total of C&D and Bulky waste streams contained approximately 12,000 tons of clean gypsum wallboard and 82,000 tons of used gypsum wallboard (GWB).

Looking at the trend chart of quantities of clean GWB separated for recycling by C&D processors (Slide 8 of the presentation), the quantity has declined by 515 tons in 2022 compared to 2021 from 1921 tons to 1406 tons. That a 27% drop from year-over-year. This means that C&D Processors are only recovering about 10% or less of the estimated clean GWB that could otherwise be recycled.

Now in the 4<sup>th</sup> year since announcing the MPS requirements, MassDEP is no longer relying exclusively on compliance assistance to affect operational improvement, but now has transitioned its approach to a combination of compliance assistance and enforcement. In the past year, MassDEP has conducted a dozen or so unannounced MPS compliance inspections at C&D facilities across all four regions. Going forward, MassDEP expects to visit each C&D facility for an unannounced MPS inspection at least once or twice a year. When MassDEP inspects a facility, among other regulatory requirements that we will evaluate, we will be looking to ensure there is a dedicated container for clean gypsum wallboard (CGW), that CGW is routinely being placed in the container, and that it is being sent to end markets. MassDEP may take enforcement action if CGW is not being effectively separated.

**Overview of existing and future gypsum recycling markets**

Ms. Susan Hines, Director at the Gypsum Association, provided an overview of existing and future gypsum recycling markets. One of the future markets described involved research at Dalhousie University in Nova Scotia on Partial Cement Replacement in Concrete with Gypsum Powder from Waste Drywalls. For further detail please see the PDF copy of the slide deck on the MassDEP C&D webpage referenced at the top of these meeting notes.

**USG Gypsum Panel Take-Back Recycle Program**

Mr. Kyle Flondor, Wallboard Product Manager at USG, provided an outline USG's recently launched Gypsum Panel Take-Back Recycle Program. 13 USG manufacturing facilities located strategically across the continental US and 3 locations in Canada will accept clean GWB cutoffs of USG whiteboard brands for recycling back into new product. For further detail please see the PDF copy of the slide deck on the MassDEP C&D webpage referenced at the top of these meeting notes.

**Existing recycling market serving Massachusetts (USA Gypsum)**

Mr. Terry Weaver, President of USA Gypsum, provided an update on the existing wallboard recycling market from the perspective of a recycler who recovers the value of the product content for secondary end markets, primarily for agricultural applications. Among his observations, Mr. Weaver's presentation opined that Massachusetts is recycling very little of the total GWB scrap available. He also emphasized that the most effective way to recover the value of the scrap is to separate it at the jobsite. For further detail please see the PDF copy of the slide deck on the MassDEP C&D webpage referenced at the top of these meeting notes.

**Product development using waste gypsum wallboard**

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Mr. David Drake, Assistant Professor at Washington State University School of Design and Construction, and co-director of the Reuse Design Laboratory, provided a summary of the research he and his colleagues are doing at the WSU Reuse Design Laboratory to develop new products from waste gypsum wallboard. Two products in particular that he described were gypsum wallboard block masonry units, and gypsum wallboard insulation for fire protection. For further detail please see the PDF copy of the slide deck on the MassDEP C&D webpage referenced at the top of these meeting notes.

**Commercial Clean Gypsum Wallboard Waste Diversion: The First Step Towards Circular C&D Decarbonization**

Mr. Michael Orbank, Sustainability Manager at the STO-Group and co-founder of the Carbon Leadership Forum Boston/NE Reuse Workgroup, spoke about the construction industry's desire for decarbonization and waste diversion including management of waste gypsum wallboard. In addition to the importance of accounting for the carbon emissions in C&D waste, Mr. Orbank provided an example of proven onsite waste management best practices used to separate and recover waste gypsum wallboard for recycling. For further detail please see the PDF copy of the slide deck on the MassDEP C&D webpage referenced at the top of these meeting notes.

**Announcements**

**EBC 18<sup>th</sup> Annual C&D Materials Management Summit:** The EBC 18th Annual Construction and Demolition (C&D) Materials Management Summit will take place on Friday, January 26, 2024 in-person at the Doubletree Hotel in Westborough. One of the segments of this year's summit will revisit the topic of materials sorting, reuse and recycling of several C&D materials including wood, shingles and gypsum. EBC offers a reduced rate for government employees, students and job seekers. For more information and to register, go to the EBC website at the following link: <https://ebcne.org/event/ebc-18th-annual-construction-and-demolition-materials-management-summit/>.

**EPA Grants:** MassDEP shared the following announcement: **The Biden-Harris Administration Announces \$100 Million in Grants to Support Manufacturers of Cleaner Construction Materials as Part of Investing in America Agenda**  
<https://www.epa.gov/newsreleases/biden-harris-administration-announces-100-million-grants-support-manufacturers-cleaner>.

- This [new grant program](#)—Reducing Embodied Greenhouse Gas Emissions for Construction Materials and Products—will **help businesses develop robust Environmental Product Declarations (EPDs)** which disclose environmental impacts across the life of a product. Embodied greenhouse gas (GHG) emissions—also called embodied carbon—refers to the amount of GHG emissions associated with the extraction, production, transport, and manufacturing stages of a product's life. EPDs facilitate the reliable tracking of emissions associated with construction materials and products to inform procurement decisions.
- EPA will **provide grants to businesses that manufacture, remanufacture, and refurbish construction materials** and products for developing and verifying EPDs, and to states, Tribes, and nonprofit organizations that will support such businesses. The EPDs generated through this grant program will make it easier for state and local governments—and other institutional

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buyers—to ensure the construction projects they fund are using low carbon construction materials.

- The deadline to apply to this grant competition is January 8, 2024. EPA requests the submittal of an optional Notice of Intent to apply by October 27, 2023, by sending an email to [embodiedcarbon@epa.gov](mailto:embodiedcarbon@epa.gov).
- Eligible entities include:
  - Businesses that manufacture, remanufacture, and refurbish construction materials and products, and
  - States, Tribes, and nonprofit organizations that will support such businesses.

**Job Opportunities:** MassDEP announced that MassDEP is hiring!

- Consistent with a campaign pledge, the Healey-Driscoll Administration has allocated 1% of the state's operating budget for climate and the environment.
- This translates to about 80 new vacancies at MassDEP across all programs.
- Follow the MassCareers webpage if you are interested in starting a new career at MassDEP: <https://massanf.taleo.net/careersection/ex/jobsearch.ftl>

**Points of Contact**

Mike Elliott's contact information is as follows:

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- Mr. Terry Weaver, President of USA Gypsum, [terry@usagypsum.com](mailto:terry@usagypsum.com)
- Mr. David Drake, Assistant Professor/Co-Director at WSU Research Design Laboratory, [mrdrake@wsu.edu](mailto:mrdrake@wsu.edu)
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**END of Meeting Notes.**