



**GreenPlum Street LLC**

## **USCA Project (C-20435) Maryland Buy Clean Technical Assistance Stakeholder Workshop 2 (In-person)**

**Maryland State Government Building, Olmsted Conference room  
301 W Preston St, Baltimore, MD 21201 9:00-11:00 am**

**GreenPlum Street LLC  
November 6, 2024**

### **Meeting Summary for DGS Buy Clean Maryland Workshop 2**

#### **Summary**

Steve Lauria from Maryland Department of General Services (DGS) and Tien Peng from Green Plum Street LLC (GPS) hosted the second workshop for the Buy Clean Maryland Act. In attendance were David St. Jean (DGS), Rod Meyers, PE (SEI), Aaron Fischer PhD (Ernest Maier), Devid Welch (Bay Ready Mix), Patricia Watson, Marie Weber, Wendy Childs (Towson University), Katie Poss (Building Transparency).

Tien outlined the Buy Clean Maryland Act which will require bidders of government-funded construction projects to submit environmental product declarations (EPDs) of cement or concrete mixture used in the construction of an eligible project to the Department of General Services (DGS) by December 31, 2024; require the DGS to establish a maximum acceptable global warming potential for eligible materials by January 1, 2026; and beginning July 1, 2026, state agencies will be required to specify in each solicitation for the cement or concrete mixture that would be used and prioritize proposals with the lowest carbon footprint.

Tien introduced various state carbon-neutrality goals including the most ambitious being California and Maryland. He explained the concept of life cycle assessments, the carbon impact of various construction materials, and the growing demand for carbon neutrality from the private sector. Tien also discussed the carbon impact of various construction materials, including steel, concrete, and wood, and highlighted that the majority of the carbon footprint of concrete comes from the manufacturing of clinker at the cement plants. He addressed the disclosure tool - Environmental Product Declaration (EPD) - as a document based on a product life cycle assessment, which considers various stages of a product's life cycle and their impacts on global warming potential (GWP), ozone depletion, acidification, eutrophication, photochemical smog creation, and resource consumption.

Tien discussed the importance of understanding regional differences in average global warming potential for concrete and compared specific initiatives (Table 1) in Maryland, Washington State, Minnesota, Portland, Oregon, Marin County, CA, New York, Colorado, California CalGreen Code. He also highlighted the federal GSA initiative to set limits on GWP for concrete and other materials. He emphasized the lack of significant data points in the EC3 Maryland Averages and encouraged more producers beyond the six already represented in the state's EPD assemblage to ensure an more representative state average GWP for each strength class.

Katie Poss from Building Transparency, an NGO focused on data collection discussed the possible use of their EC3 tool as a Project Database. To date, Maryland does not have a standalone project management tool for collecting the EPDs required per the Buy Clean Maryland Act. Maryland building



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officials would be able to use the EC3 tool like to New York in collecting and verifying the GWP against the limits set by Maryland DGS. Katie demonstrated the tool and responded to various questions including the use of the tool to establish a weighted average of the various concrete mixes used in a project. Steve (DGS) addressed the process by which a contractor at the bid stage would agree to the requirements set forth in the MDGS Procedure Manual. The proposed new chapter would contain two pathways to meet the limit: 1. By Strength Class and 2. By Weighted average. Reference examples will be included in the Procedure Manual. At the time of installation of the material, the EPDs collected will be entered into the EC3 tool and compared against the GWP limits.

Steve clarified that the MDGS Procedure Manual is not a means and methods document and will not address how design teams achieve low carbon materials. Questions regarding the applicability to infrastructure, high early-strength and existing buildings were addressed. Discussion on the collection process and the requirement to address two additional products for the state ensued.

**Table 1**

	Compressive Strength (psi) at 28 days	Global Warming Potential (GWP) kgCO <sub>2</sub> e/yd <sup>3</sup> (kgCO <sub>2</sub> e/m <sup>3</sup> ) at 28 days								US GSA (2022)***		
		Maryland DGS* Thresholds	NRMCA Eastern Region Benchmark (v3.2)(2021)	EC3 Maryland Average** (2024)	Marin County (2019)	Portland OR (2019)	New York (2021)**	Colorado (2021)		Top 20%	Top 40%	Better Than Average
Concrete	2500	TBD	183 (240)	174 (228)	199 (260)	180 (235)	275 (360)	177 (232)		174 (228)	200 (261)	212 (277)
	3000	TBD	201 (264)	210 (275)	221 (289)	200 (261)	302 (395)	195 (255)		197 (257)	222 (291)	243 (318)
	4000	TBD	240 (314)	242 (317)	239 (313)	242 (316)	360 (471)	230 (301)		217 (284)	249 (326)	269 (352)
	5000	TBD	289 (378)	269 (352)	258 (338)	295 (386)	434 (568)	274 (358)		233 (305)	273 (357)	292 (382)
	6000	TBD	305 (399)	294 (385)	272 (356)	312 (408)	458 (600)	290 (379)		244 (319)	286 (374)	311 (407)
	8000	TBD	361 (472)	311 (407)	331 (433)	373 (487)	541 (708)	336 (440)		245 (321)	277 (362)	307 (402)
	LW 3000	TBD	395 (517)	360 (471)	442 (578)	396 (518)		370 (484)				
	LW 4000	TBD	438 (573)	403 (527)	479 (626)	440 (575)		407 (532)				
	LW 5000	TBD	480 (628)	422 (552)	516 (675)	483 (632)		443 (580)				
Global Warming Potential (GWP) kgCO <sub>2</sub> e/t or kilograms of carbon dioxide equivalent per metric ton												
Cement		PCA IW (2023)										
		TBD	919					1112		751	819	858
* DRAFT -TBD												
** EC3 Maryland values have limited sampling sizes												
***NY - 150% of NRMCA Regional Benchmark; Minimum quantity for threshold- 50 cubic yards; Voluntary, Mandatory in 2025												
***US GSA Interim; Add 30% to these numbers for GWP limits where high early strength concrete mixes are required for technical reasons.												

### Schedule/Actions (also from Workshop 1)

- Department of General Services (DGS) to finalize reporting guidelines projects related to Buy Clean Maryland Act by June 2025.
- Encourage more concrete producers should produce EPDs by December 31, 2024 deadline.
- Green Plum Street LLC to assist cement and concrete producers in developing EPDs.
- GPS/DGS to analyze submitted EPDs and assess global warming potential of eligible materials.
- GPS/DGS to establish maximum acceptable global warming potential for each eligible material category by June 2025 to meet Jan 2026 legislative deadline.
- DGS to submit annual report on Buy Clean Maryland Act implementation December 2025.
- Concrete producers to consider applying for the National Ready Mixed Concrete Association (NRMCA) EPA grant funding (rebates between December 2024-April 2025) to offset costs of producing EPDs. NRMCA membership not required.

### Conclusion

The hosts agreed to host one more Stakeholder Workshop and to share the presentation summary.