



Concrete Innovations Session 26

Regulatory Landscape and Support for EPDs

2024.11.20

James Salazar: WAP Sustainability



Consider us your outsourced sustainability department.

We are a team of talented sustainability professionals that provide technical and strategic competencies to clients.

We help manufacturers, brands, retailers, healthcare, and financial organizations achieve their ESG / sustainability objectives.

WAP Sustainability was created out of understanding the role of the Sustainability Manager firsthand. We know this is a complex area to navigate.

*We're here to help.
We're here to help simplify sustainability.*

 MANAGED SERVICE	 PRODUCT TRANSPARENCY	 LIFE CYCLE ASSESSMENT
 CARBON MANAGEMENT	 HEALTHY MATERIALS	 ESG SUPPORT
 CERTIFICATIONS & VERIFICATION		



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AGENDA

01 State and Local Buy-Clean

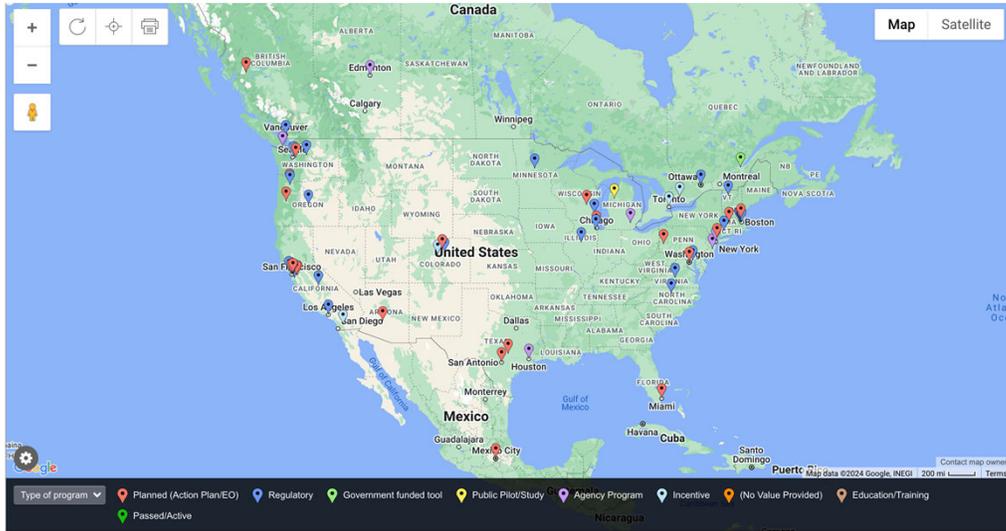
02 Federal Buy-clean

03 Support for EPDs and low carbon materials

04 Setting Benchmarks

1. State and local buy-clean

State and Local Buy-Clean (2024)



<https://carbonleadershipforum.org/clf-policy-toolkit/#map>



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State and Local Buy-Clean (2024)

Location	Policy	Embodied Carbon Approach
Federal/State/Local Gov Building Policy		
Portland, OR	Low-Carbon Concrete Initiative	Concrete in city construction projects must meet specific GWP limits.
California	Buy Clean California (BCCA)	State agencies, the University of CA, and CA State University systems construction projects must meet specific GWP limits for structural steel, concrete reinforcing steel, and light and medium density mineral wool board insulation.
Colorado	Buy Clean Colorado	State-funded construction projects must meet specific GWP limits for asphalt, concrete, glass, post-tension steel, concrete reinforcing steel, wood structural elements
US GSA	Low Embodied Carbon Concrete and Environmentally Preferable Asphalt	Requires all GSA projects provide EPD reporting and GWP limits for concrete and improved asphalt.
Federal/State/Local Public Policy		
Toronto, ON	Waterfront Toronto Green Building Requirements	Buildings can choose to use 50 percent recycled metal in steel and rebar, low-carbon concrete (with 25 percent Supplementary Cementitious Materials), or timber products certified by the Forest Stewardship Council.
Colorado	Colorado SB 22-051	Tax credit for building materials that meet low GWP requirements.
Building Codes		
Marin County	Low-Carbon Concrete code	All concrete to meet specific GWP or cement limits.
CalGreen	Carbon Reduction Regulations	All California projects over 50,000 sf can comply through building reuse, whole building LCA, or specific GWP limits for select products.
Denver Green Code	Embodied Carbon Reduction for Concrete and Steel	Requires projects using the voluntary code to meet specific GWP limits for concrete and steel products.
Local Codes		
Vancouver, BC	Rezoning Requirement	Rezoning permits require a commitment to Passive House or WB LCA embodied carbon reporting.
Oregon DOT	Department of Transportation GHG Program	Program to reduce GHG emissions associated with concrete, asphalt pavement, and steel in DOT projects.
Other		
Austin, TX	Green Building Program	The City rating system includes credits/points for WB LCA and embodied carbon reduction.
Massachusetts	Embodied Carbon Reduction Challenge	Building LCA awards program for low embodied carbon buildings in Massachusetts.

2. Federal buy-clean

GSA Low Embodied Carbon Program

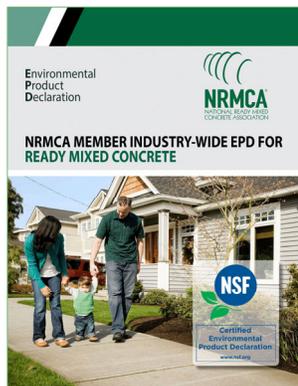


Goal: Leverage federal purchasing power to promote the use of low-carbon construction materials, reducing greenhouse gas emissions in federal projects.

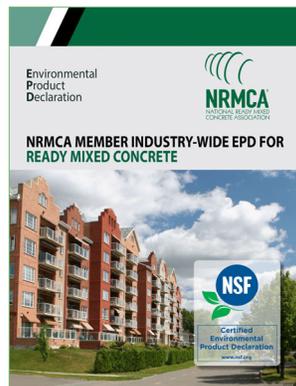
- **Funding:** Allocated \$2.15 billion from the Inflation Reduction Act for procuring low-embodied carbon materials in construction and renovation projects.
- **Pilot Program:** Initiated a six-month pilot in May 2023, applying interim requirements to 11 construction and modernization projects to assess the availability and performance of low-carbon materials.
- **Material Focus:** Prioritizes materials with high embodied carbon concerns, including steel, cement/concrete, asphalt, and flat glass, to encourage the use of lower-carbon alternatives.
- **Environmental Product Declarations (EPDs):** Requires suppliers to provide EPDs, enhancing transparency and enabling informed decisions based on the environmental impact of materials.

3. Improving benchmarks

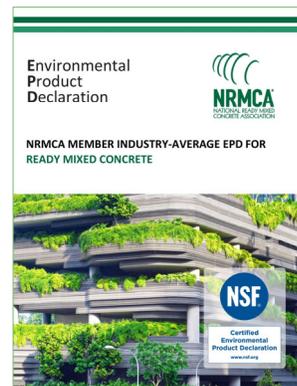
Evolution of Industry LCA/EPD



Version 1 (2013)

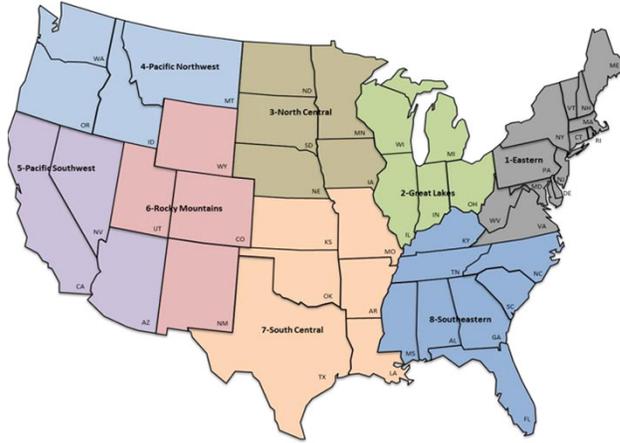


Version 2 (2016)



Version 3 (2019, 2020, 2022)

Current Benchmarks



489 facilities provided data

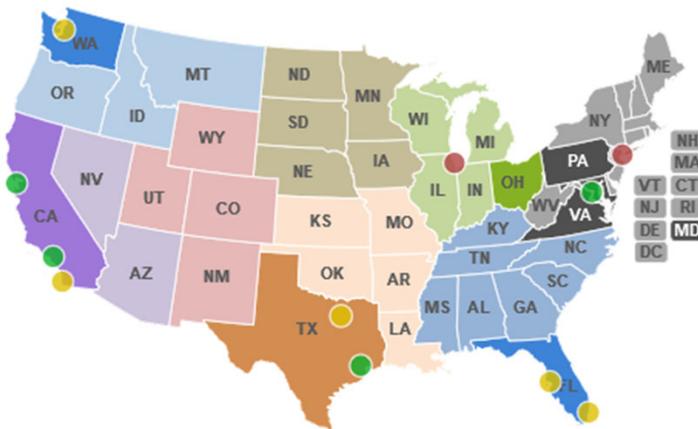
4.29% margin of error



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Updated Benchmarks



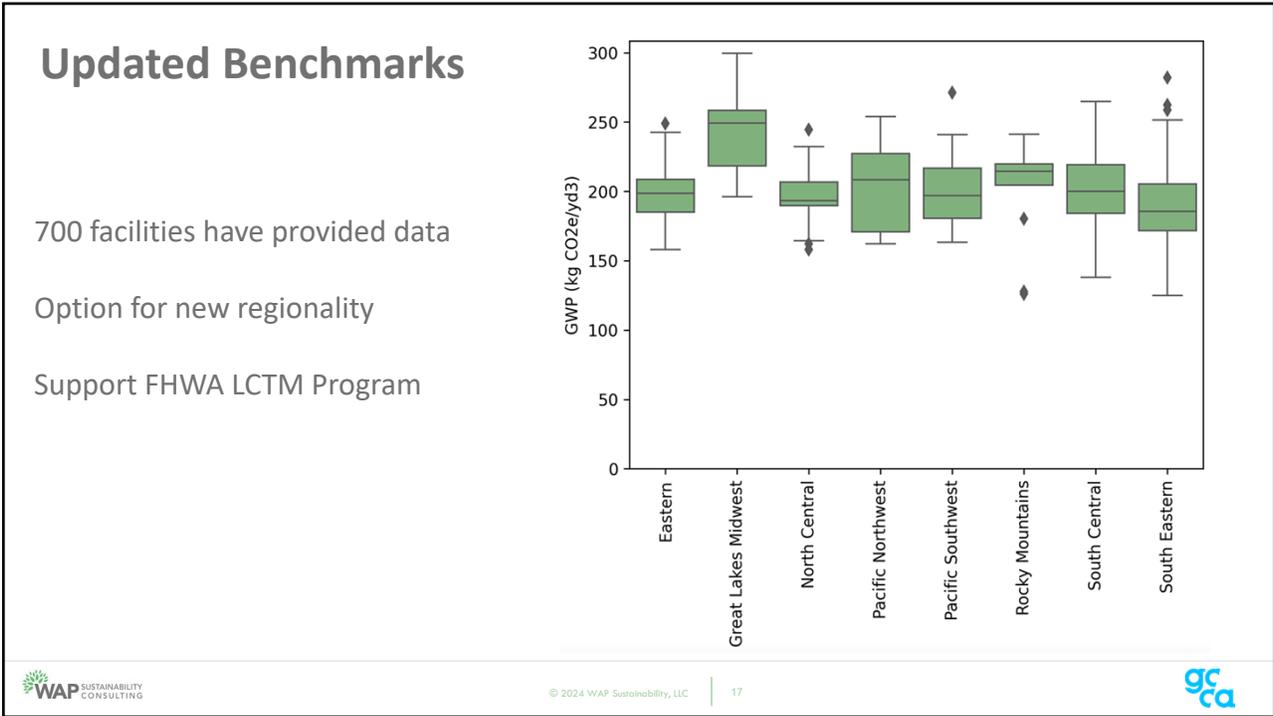
700 facilities provided data

Option for new regionality



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4. Support for EPDs and low carbon materials

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Inflation Reduction Act

Sec #	Agency	Funding	Purpose	Funds expiration
60116	EPA	\$100M	For administrative costs to develop (with GSA and DOT-FHWA) a program to identify and label construction materials/products that have substantially lower levels of embodied GHG emissions, based on EPDs and determinations by State agencies, as verified by EPA.	9/30/26
60112	EPA	\$250M	Grants and technical assistance to businesses, states, tribes and nonprofit organizations to support the development, enhanced standardization and transparency, and reporting criteria for EPDs for construction materials/products that include measurements of the embodied GHG emissions across all life cycle stages	9/30/31
60503	GSA Federal Buildings Fund	\$2.15B	To acquire and install materials/products for use in the construction or alteration of buildings that have substantially lower levels of embodied GHG emissions (as determined by EPA)	9/30/26
60506	DOT FHWA	\$2B	To reimburse or provide incentives (up to 2% of incremental costs) to eligible recipients for the use of construction materials/products that have substantially lower levels of embodied GHG emissions (as determined by EPA)	9/30/26
30002	HUD	\$837.5M	For direct loans and grants to improve climate resilience of affordable housing, including low-emission building materials/processes	
70006	FEMA		May provide financial assistance for costs associated with low-carbon materials	

EPA Grant Assistance



Goal: Cut concrete’s carbon footprint by 50% by 2028 and achieve carbon neutrality by 2045.

- **Expand EPDs:** Add **3,000 plant EPDs** via **\$6.5M in grants** and searchable database.
- **Train Specialists:** Certify **500 EPD experts**; provide data and producer training.
- **Promote Low-C :** Improve tools, host **25 workshops**, and educate **30,000+ designers**.
- **Benchmark Carbon:** Publish benchmarks for **50+ regions**.
- **Enhance Inputs:** Improve PCRs and data for aggregates and admixtures.

Objective 1: Increase Number of Ready Mixed Concrete EPDs

Goal: Increase plants with EPDs from 1500 to 4500

Plant	Amount
Companies that did not have EPDs ¹	\$5,000 for first plant
Companies that already have EPDs ²	\$2,000 per plant

1. Companies who have never published an EPD at any plant.
2. For second plant and beyond
 - a. Publish EPDs at a plant that did not have EPDs (up to 20 plants)
 - b. Publish new EPDs using 2025 PCR with GWP lower than NRMCA Benchmarks at a plant with EPDs (up to 50 plants)

<https://www.concreteinnovations.com/on-demand>

FHWA Low Carbon Transportation Materials Program



U.S. Department of Transportation
Federal Highway Administration

Goal: LCTM encourages the use of construction materials with substantially lower greenhouse gas emissions.

- **Funding:** \$2 billion allocated, including \$1.2 billion for State Departments of Transportation and \$800 million for local agencies, tribes, and other entities.
- **Eligible Materials:** Supports low-carbon options like concrete, asphalt, glass, and steel.
- **Application Deadlines:** State DOT applications closed on June 10, 2024; non-state entity applications opened on August 27, 2024.
- **Recent Awards:** On November 14, 2024, \$1.2 billion was granted to 39 State DOTs to promote cleaner construction materials.

Email me!
james@wapsustainability.com



<https://wapsustainability.com/software/theta-epd/>