Concrete Industry Lowers Carbon Footprint by 13% in Five Years

Report highlights industry’s commitment to reducing environmental impact

Alexandria, VA – National Ready Mixed Concrete Association (NRMCA) members have lowered their carbon footprint by 13% in five years according to a new report. Through a process called Life Cycle Assessment, or LCA, NRMCA has been tracking environmental impacts of its members since 2014. NRMCA recently published the 2019 version of the LCA report which indicating NRMCA members have significantly lowered their environmental impacts.

“This represents a significant step towards meeting our carbon reduction goal,” said Lionel Lemay, executive vice president for structures and sustainability at NRMCA. “NRMCA members established sustainability goals to reduce environmental impact early on and are truly leading by example in this very important industry-wide initiative.”

In 2011, Architecture 2030 announced the Challenge for Products, with a goal for the materials industry to reduce carbon footprint by 50% by 2030. NRMCA became one of the first industry groups to adopt the 2030 Challenge in 2012 and, following Architecture 2030 protocol, published its benchmarks for carbon footprint in 2014.

“The analysis is based on a survey of 155 NRMCA members representing 1954 ready mixed concrete plants,” explains James Bogdan, senior director, sustainability initiatives for NRMCA. “The 13% reduction in carbon footprint is for 4,000 psi (pounds per square inch) concrete, the most frequently used concrete in the United States. Carbon footprint reduction ranged from 8% for 2,500 psi concrete and 20% for 8,000 psi concrete.”

The reductions can be attributed mainly to more efficient use of Portland cement, the primary binder used to make concrete. NRMCA has been promoting performance-based specifications for nearly two decades, which has helped eliminate prescriptive limits on concrete formulation such as minimum cement content and low water-to-cement ratio, which unnecessarily drives up cement content, the main contributor to carbon emissions.

These reductions in carbon footprint represent averages across the entire industry. However, many NRMCA members are demonstrating even lower footprints by publishing Product Specific Environmental Product Declarations (EPDs). For some applications and projects, concrete producers are...
incorporating innovative technologies such as supplementary cementitious materials, low-carbon cements and carbon capture to lower carbon footprint by 50% or more today.

“NRMCA’s commitment to establishing industry baselines and facilitating the movement towards product reporting has accelerated the concrete industry’s movement towards meeting the 2030 Challenge,” said Michael Philipps, NRMCA’s president. “This commitment is inspiring innovations that hold incredible promise towards reducing concrete’s carbon footprint by more than 50% today. One growing technology, carbon capture, can even create a net negative carbon footprint in the manufacturing of concrete.”

Build with Strength, a coalition of the National Ready Mixed Concrete Association, played a key role in the collective reduction of the concrete industry’s carbon footprint. Build with Strength’s commitment to advancing sustainability in the industry helped to foster a spirit of collaboration, innovation and transparency amongst members and other industry leaders. By sharing technologies and industry insights across companies and producers, the coalition is advancing the building industry’s sustainability goals in an effort to reduce carbon emissions.

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About NRMCA

NRMCA, a non-profit organization based in Alexandria, VA, represents the producers of ready mixed concrete and the companies that provide materials, equipment and support to the industry. It conducts education, training, promotion, research, engineering, safety, environmental, technological, lobbying and regulatory programs. For more information on NRMCA’s Sustainability Initiatives, visit www.nrmca.org/sustainability.

About Build with Strength

Build with Strength is a coalition of the National Ready Mixed Concrete Association and works with communities, lawmakers, and industry employees to advocate for safer, sustainable building materials.