



Conewago & CarbonCure: A Success Story

How a concrete producer built on their success with CarbonCure by offering sustainable precast concrete

Introduction

Doing the right thing in business

Conewago, a family-run company, has served its community of Hanover, Pennsylvania since its founding in 1956. Over the decades, it has grown and diversified its operations, and in 2017 [Conewago Manufacturing LLC](#) was created as a standalone company.

As a leading manufacturer of premium construction materials and services, Conewago Manufacturing serves the mid-Atlantic states and offers precast and ready mix concrete, steel fabrication, and steel and precast erection services.

In 2020, Conewago became a CarbonCure producer and started offering sustainable concrete to its ready mix customers, building on a number of existing green initiatives within the company:

- recycling water at its plant to reduce the quantity of water used during production
- reducing travel emissions with solar-powered jobsite cameras
- reclaiming wood during demolition and turning it into mulch
- using reclamation devices at concrete truck washout bays to separate sand and stone from waste concrete for reuse

“When it comes to sustainability, we all have to think about what we’re doing and the impact that it has on the environment. It’s not about the dollars and cents. It’s about doing the right thing. With every load of concrete that leaves our plant, we’re essentially giving back to the community from a sustainability perspective.”

Jason Blase, President, Conewago Manufacturing.



The Opportunity

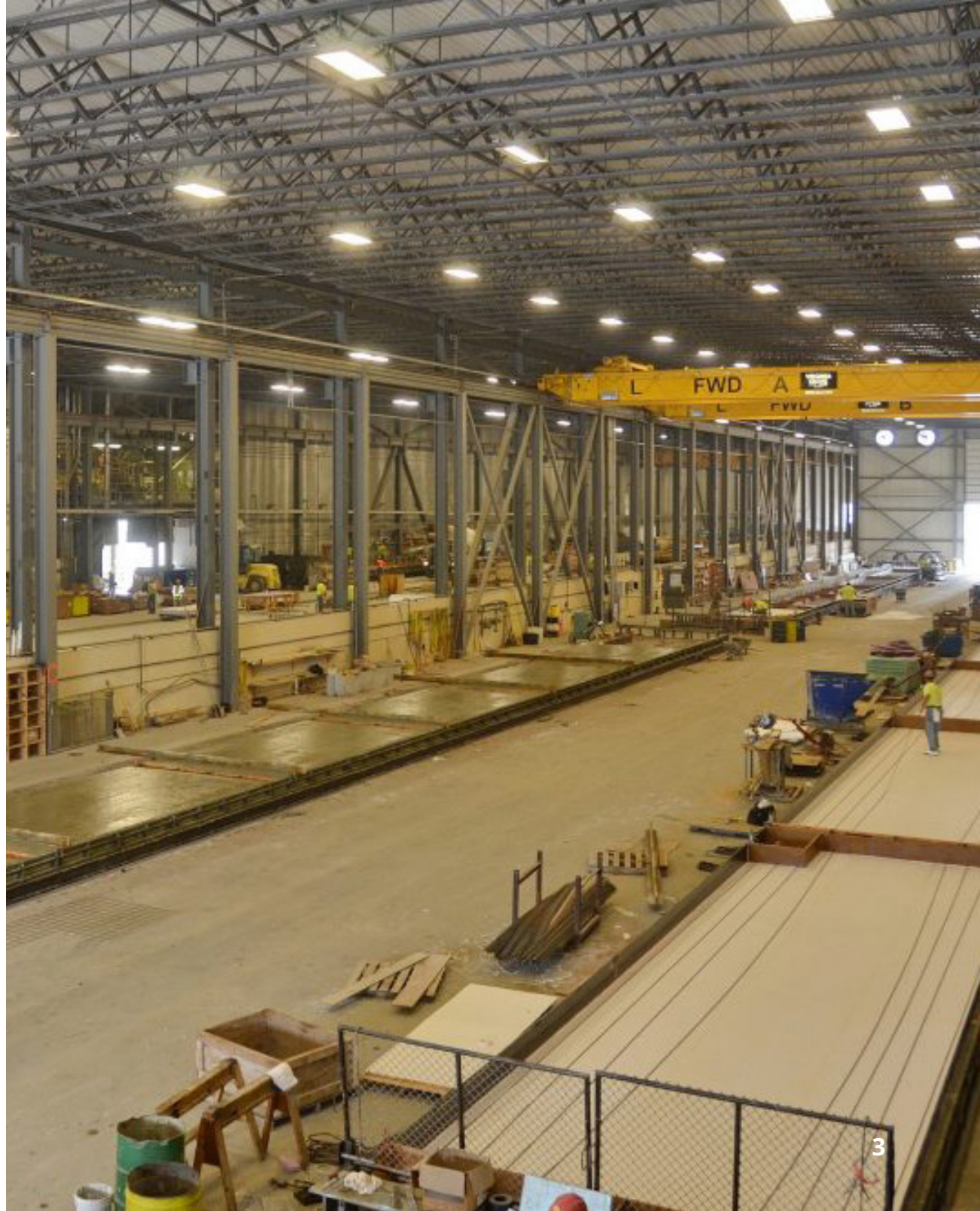
Moving beyond ready mix to precast

After adopting CarbonCure in 2020 in its ready mix operations, Conewago was able to achieve a 5% reduction in cement in about 99% of mixes. CarbonCure became part of the company's standard mix design – the same high quality concrete that customers expect, with a reduced carbon footprint.

“We didn’t embark on our CarbonCure journey for profitability reasons. However, we noted a 7.5% return on investment on our original target of just 1%,” said Jason Blase, President of Conewago Manufacturing.

With these excellent results, Conewago recognized that expanding its CarbonCure partnership into precast was too good of an opportunity to miss.

Conewago's 131,000-square-foot precast facility produces primarily insulated and structural flat wall panels, as well as architectural panels and beams and columns. Producing over 110,000 square feet of product a week, the company's precast volume offered substantial potential for carbon savings by reducing its cement content.



Solution

CarbonCure keeps production moving

As an existing CarbonCure producer, Conewago already had a successful experience with the install process of the CO₂ mineralization technology.

When it came time to install the tech into the company's precast facility, the process was slightly different. This was in part because of the differences between the company's two facilities – ready mix using a dry batch system and precast using a central mix.

“Again, the installation process was smooth and seamless”, says Collin Bender, QC Manager, Conewago Manufacturing. “We were on two different batch systems and we were able to connect those extremely efficiently.”

For both installations, he credits planning and communication with CarbonCure's **Technical Services & Support (TSS) team** as key. “We had multiple pre-installation meetings with the CarbonCure team and worked through all the small details and requirements,” said Collin.

The TSS team also helped Conewago test mixes, evaluate cement cuts and optimize the CO₂ injection rate. “Through the mix optimization process of reducing cements, aggregate adjustments, and water adjustments, we were able to get things squared away to a point that you weren't able to tell that the CO₂ was in and cement was out,” said Collin.

He acknowledges there were some concerns about achieving the 12-24 hour early strength gain needed with precast. “It's definitely something we need to look at more as precast producers compared to ready mix where you design for 28-day strength,” he said. To confirm, the team poured CarbonCure concrete into a retaining wall block form and cured using the same technologies installed in their precast beds.

“This gave us good confidence in the product – it hit the required strength every time,” said Collin, adding that they are able to turn beds every 12 to 14 hours and keep production moving.

“It's definitely a balancing act. We don't want to be reducing cement too much, and not receive strengths and hold up production. But at the end of the day, we want to reduce and do our part to be environmentally sustainable,” he said.



Results

Sustainable concrete in 100% of precast projects

Since incorporating CarbonCure into its precast production, Conewago has achieved a 3% reduction of cement across 100% of its precast work.

Combined with its ready mix offerings – which uses CarbonCure to reduce cement by 5% in almost 99% of projects – the company has saved 1,279,546 lb (580,400 kg) of cement and over 2,700,000 lb of CO₂ since partnering with CarbonCure in 2020.

Conewago is able to offer low embodied carbon concrete for the entire building envelope, from the footings and foundation to the panels. For example, in a recent Dick's Sporting Goods project, the company saved about 33,070 lb (15 metric tons) of CO₂ in its ready mix and precast production. On the precast side specifically, it supplied 451 cubic yards (345 cubic meters) of precast product made with CarbonCure, saving over 10,000 lbs of CO₂.

"It's really great to be able to say that every single cubic yard of concrete on these projects will have CarbonCure," said Collin. "It is definitely an exciting moment to have all these mixes with a cement reduction and still be a high performing high quality mix."

By offering sustainable precast and ready mix concrete, Conewago is being a good neighbor and serving its community while also opening up business opportunities.

"We've seen requests come in for CarbonCure," said Collin. "People are starting to hear more about it and owners are definitely getting excited about having a building that has a lower footprint to the environment."

Collin Bender, QC Manager, Conewago Manufacturing.





Build for the Future. Build with CarbonCure.

If you are a concrete producer and have owners, builders, contractors or designers inquiring about low carbon concrete, CarbonCure offers a great way to take advantage of the opportunity.

To learn more about CarbonCure, visit [carboncure.com](https://www.carboncure.com). To contact a CarbonCure representative, email us at info@carboncure.com or call us at +1 (902) 448-4100 (Worldwide) or +1 (844) 407-0032 (North America).