



# Iowa City Ready Mix & CarbonCure: A Success Story

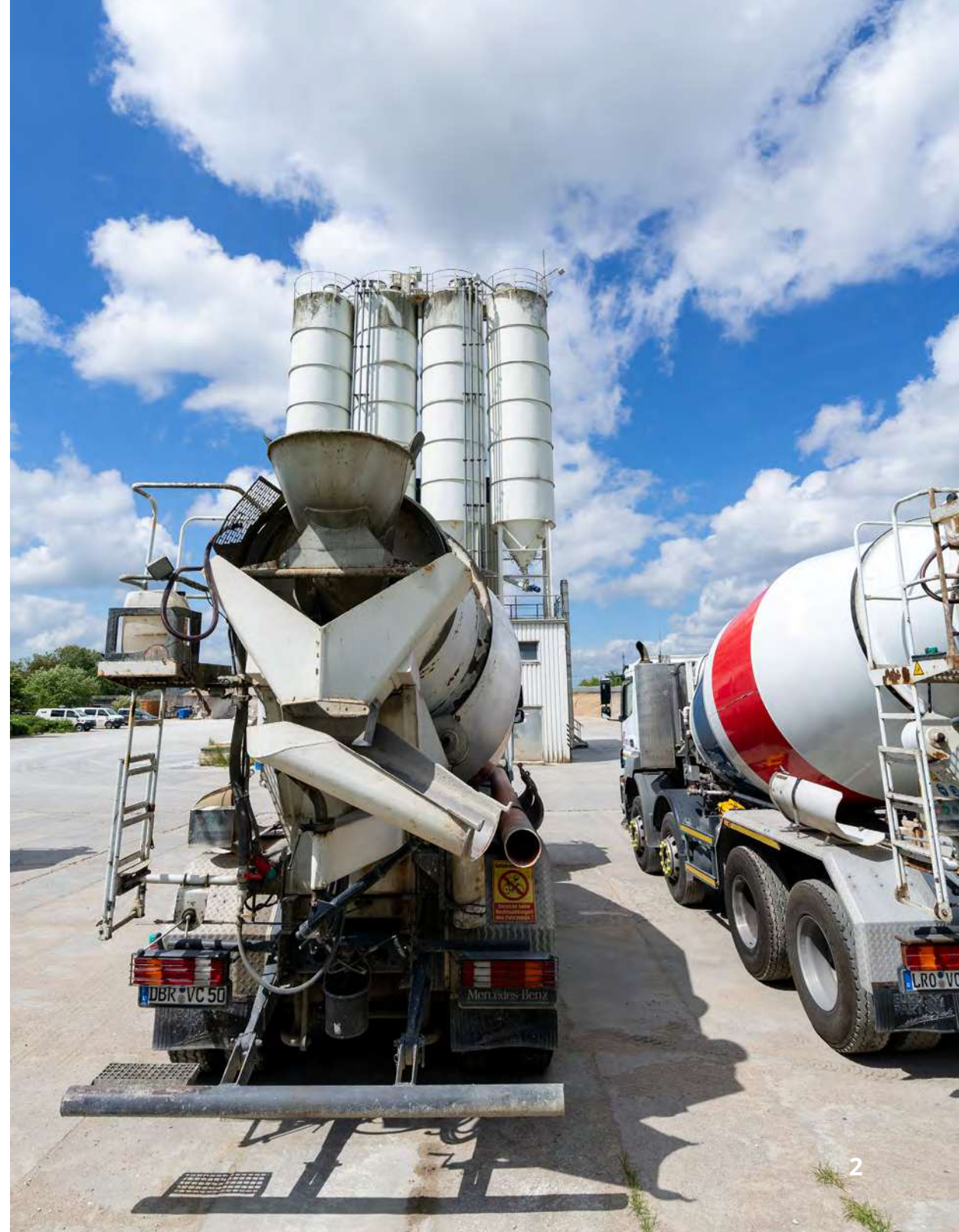
Blazing a trail with greener concrete



## Introduction

**Iowa City Ready Mix is a single-plant, family-run producer that has been serving the Iowa City region for nearly 60 years. The professional and experienced team is dedicated to delivering the concrete and construction needs of customers at affordable prices and with great service.**

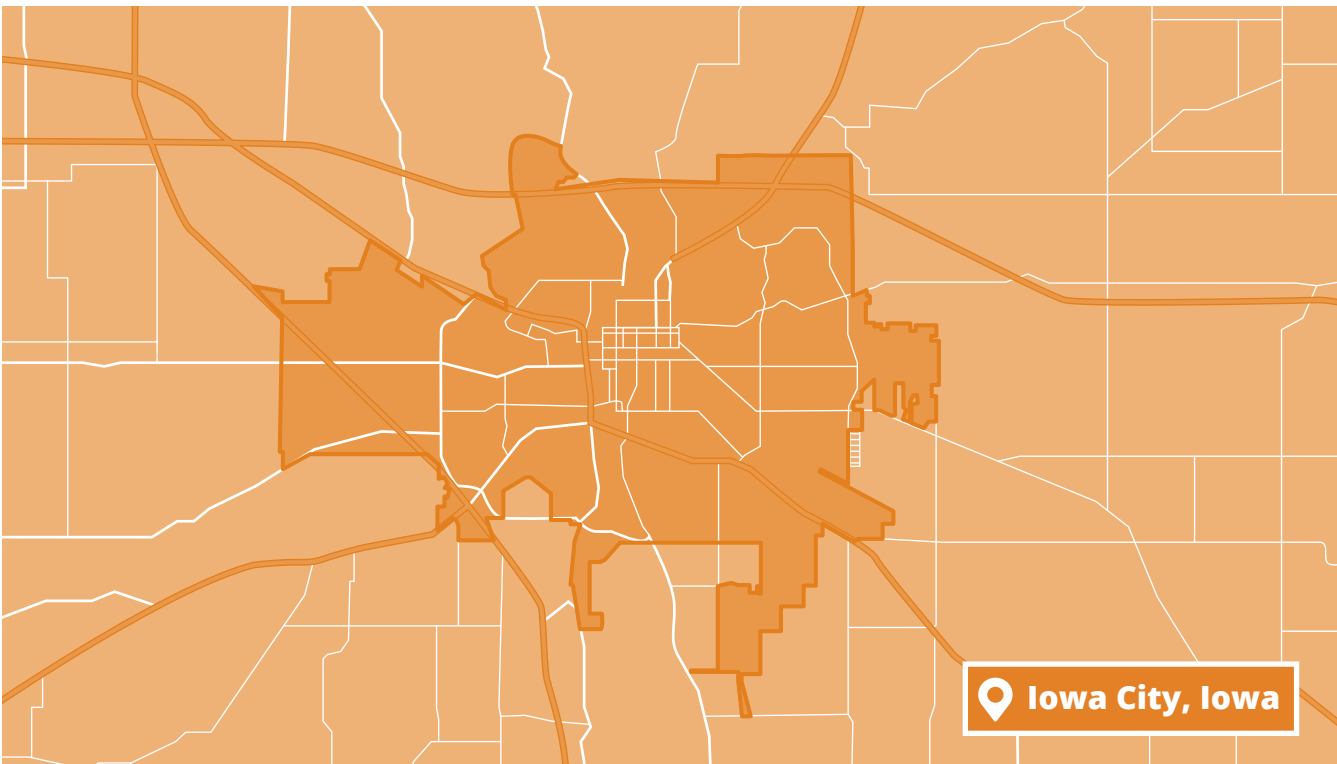
CarbonCure became a key part of delivering that promise when, in June 2020, Iowa City Ready Mix became the first concrete producer in the state to adopt the innovative carbon utilization technology. CarbonCure was successfully installed despite the disruptions of the COVID-19 pandemic and, in less than five months, the team has delivered more than 2,000 truckloads of CarbonCure concrete, saving over 5,000 pounds of carbon dioxide (CO<sub>2</sub>) from entering the atmosphere.



## Customer Profile

Founded in 1964, Iowa City Ready Mix serves Iowa City, Coralville, North Liberty, Solon, and the surrounding Iowa communities. One of the few family-operated producers left in the region, the team offers expertly mixed concrete products that are custom formulated to meet all construction needs.

The company takes pride in its ability to respond to changes in customer needs and in the wider marketplace. There is a growing green movement in Iowa and, hearing about a request for CarbonCure via a local contractor, the team moved quickly to gain a competitive advantage by becoming the first CarbonCure concrete provider in the state of Iowa.



## At A Glance

**Company Name:**

Iowa City Ready Mix

**Plant Locations:**

Iowa City

**Cubic yards of concrete made with CarbonCure:**

16,800 yd<sup>3</sup>

**Total CO<sub>2</sub> utilized:**

Over 5,000 pounds

**Truckloads with CarbonCure Concrete Delivered:**

2,222 truckloads

**Equivalent Size of Forest Absorbing CO<sub>2</sub> for a year:**

249 acres



# The Challenge

Concrete is the most abundant man-made material in the world and global consumption is still rising. We currently produce 4 billion tonnes of concrete each year and [research predicts](#) that this will rise to become 5 billion over the next thirty years.

Unfortunately, the process of making cement, the key ingredient that gives concrete its strength, accounts for about 7% of global CO<sub>2</sub> greenhouse gas emissions.

Recognizing this challenge, many organizations in the construction industry have committed to reducing emissions in line with the [Paris Agreement](#). However, there has been a lack of technological advances to help achieve those goals — until now.

In Iowa City, the team at Iowa City Ready Mix had followed the city's shift towards sustainability with the launch of the [Climate Action and Adaptation Plan](#) at the end of 2018. This included a commitment to reducing greenhouse gas emissions 26-28% by 2025 with more ambitious cuts to follow.

Keen to play a part in helping the community reach these goals and seeing a way to become an industry leader in sustainability and innovation, Iowa City Ready Mix seized the opportunity with CarbonCure to use less cement in their mixes and improve profitability with a powerful new differentiator in a competitive marketplace.



## The Solution

"I always knew that Iowa City was big on trying to be as green as possible, so I've always tried to look for ways we can reduce our carbon footprint around here," said Matt Knepper, Iowa City Ready Mix's General Manager.

The opportunity to make a difference with CarbonCure presented itself via McComas-Lacina Construction, the largest locally-owned general contractor in the Iowa City area, and a close Iowa City Ready Mix partner. **McComas-Lacina** was working with an architect that wanted to specify CarbonCure — but no producers in the region had adopted the technology.

Knepper realized that with CarbonCure, a small change to production would not only minimize the company's environmental impact, but reduce costs as well — and of course, they'd still be able to deliver the same high-quality product customers rely on.

It was important to act quickly and not wait for larger producers in the state to adopt CarbonCure before following suit. Iowa is a competitive market to operate in and this was a great way to gain a competitive advantage, especially as a smaller producer.



## Implementation

Iowa City Ready Mix implemented CarbonCure in late June 2020, at a time when new COVID-19 related safety measures were still being integrated within the site's processes. Knepper recalls his luck at having knowledgeable CarbonCure employees to help in three key areas: software integration, electrical, and plumbing. Installation went smoothly, despite the added challenges brought on by the pandemic, and the CarbonCure dosage ramp process began the next month.

Knepper had spoken to the team at [Cemstone](#), a CarbonCure producer in Eagan, Minnesota, who had previous experience with the specific concrete materials used by Iowa City Ready Mix. Cemstone's positivity around onboarding, ease of producing concrete with the technology, and strong results, made Knepper "really confident to be able to jumpstart the process and go a little bit stronger with the [cement] reduction right off the bat."

As a material testing lead in an engineering firm for 17 years before joining Iowa City Ready Mix, Knepper was able to lead all of the testing himself. He found that by reducing cementitious content by 3% and adding in 0.1% CO<sub>2</sub>, the mix exceeded the 4000 psi required strength at seven days. Knepper says, "That pretty much justified in my mind that the technology works. I mean, I'm seeing it firsthand."

The team tested the same mix with a 5% reduction and, when this also passed the seven day strength test, they began adding CO<sub>2</sub> into mixes for projects that were not restricted by prescriptive specifications.



## The Results

Iowa City Ready Mix has poured CarbonCure concrete for a range of commercial and residential projects including house foundations, walls, underground parking garages, driveways, and sidewalks. Current projects include apartment complexes and condo buildings, all of which now benefit from a reduced embodied carbon footprint.

In every instance, mixes produced with CarbonCure met the specifications requested by engineers. And, alongside meeting strength and performance requirements, the team has reported back positively on the workability of the concrete.

Reflecting on the process of adopting CarbonCure and the results so far, Knepper is pleased that Iowa City Ready Mix was the first producer in the state to take the leap.

*“There’s a lot of competition in Iowa City so trying to get an edge on the market was really a key idea.”*

*Matt Knepper,  
General Manager, Iowa City Ready Mix*

In a region increasingly focused on reducing emissions, Iowa City Ready Mix has made an important commitment to sustainability and innovation. After successfully—and rapidly—implementing CarbonCure, the company is in a strong position to capture a greater market share and continue to achieve substantial carbon reductions in the years to come.

**CarbonCure is the leading provider of carbon removal solutions for concrete production, with its technology installed in nearly 300 concrete plants worldwide.**

**For more information, visit [carboncure.com](https://carboncure.com) or contact a CarbonCure representative at [info@carboncure.com](mailto:info@carboncure.com) or +1 (902) 442-4020.**

