Midwest Farmowner

News & Information from First Mid Ag Services

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What Does Carbon Capture and Storage Mean for Illinois Landowners?

By Craig Thompson, Bloomington Regional Office Manager, Farm Management and Brokerage

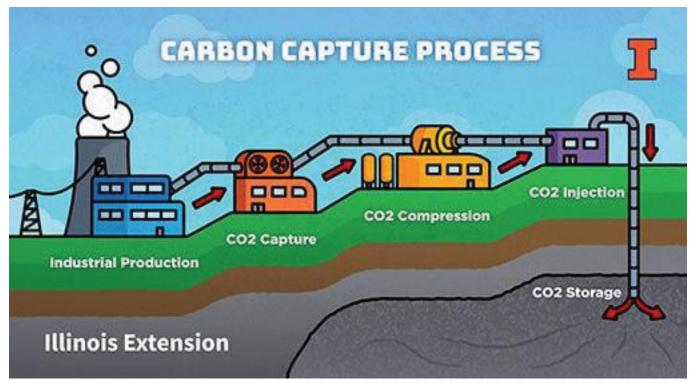
Carbon capture and storage goes beyond the more commonly discussed carbon sequestration. Carbon sequestration generally refers to the process of capturing carbon dioxide using biological means. The process of carbon capture and storage, meanwhile, involves capturing carbon dioxide, putting it under intense pressure to convert it from gas to liquid, and then transporting it through a pipeline before ultimately pumping it down a well to store it geologically over a mile beneath the Earth's surface.

While carbon capture and storage has supporters, there are also concerned landowners who will need to evaluate the impact this process may have on their farmland. This article touches on why each part of that process is important to agriculture and landowner property rights.

Ethanol plants across the Midwest emit carbon dioxide during the fermentation process. Those ethanol plants are under intense political pressure to lower their carbon intensity scores to gain access to more tax credits from the Inflation Reduction Act. This also creates an opportunity in the aviation fuel industry, as the United States and other countries promote a long-term goal of transitioning to electric automobiles. More than 60 ethanol and fertilizer plants across the Midwest have signed agreements with Navigator CO2 Ventures and Summit Carbon Solutions to transport its captured carbon dioxide.

Once captured and compressed to a liquid form, carbon dioxide is transported via a steel pipeline underground to its ultimate storage site. Currently there are three proposed pipelines across the Midwest.

Carbon Capture and Storage



Univeristy of Illinois Extension

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Phase 1 of proposed carbon dioxide pipeline

- Navigator CO2 Ventures has proposed a pipeline that spans over 1,300 miles across South Dakota, Nebraska, Minnesota, Iowa, and Illinois. (See map.)
- Summit Carbon Solutions has proposed a pipeline covering more than 1,250 miles across Nebraska, Minnesota, Iowa, South Dakota, and North Dakota.
- Wolf Carbon Solutions has proposed a pipeline that would span approximately 350 miles across Iowa and Illinois.

Each proposed pipeline has designed routes and the companies have begun contacting individual landowners seeking easements.

A crucial step for each proposed pipeline is filing permitting applications with various state agencies along the proposed routes. This impacts landowners tremendously, as the possible grant of a permit brings with it eminent domain for any landowner who does not wish to voluntarily sign an easement agreement.

So far, each permit application that has been voted on has been unanimously denied. The South Dakota Public Utilities Commission voted against permit applications by both Navigator CO2 and Summit Carbon Solutions. The South Dakota commission also declined a request by Navigator to limit rules a county could place on setbacks. Meanwhile, the North Dakota Public Service Commission also voted against a permit application by Summit Carbon Solutions.

Hearings have begun in Iowa for the permit application of Summit Carbon Solutions. As of this writing date, Navigator CO2 has twice submitted and withdrawn permit applications in Illinois. On October 20, Navigator announced, "Given the unpredictable nature of the regulatory and government processes involved, particularly in South Dakota and Iowa, the company has decided to cancel its pipeline project." Nonetheless, Illinois landowners concerned about the threat of eminent domain should speak with their state elected officials.

The final part of the carbon capture and storage process is, of course, the storage. The ultimate storage space for the Summit Carbon Solutions pipeline is North Dakota, while the Navigator CO2 Ventures and the Wolf Carbon Solutions pipelines transport to Illinois.

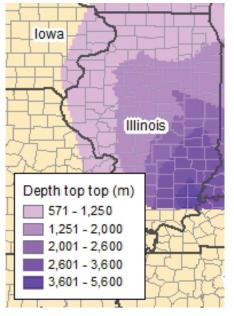
The Mt. Simon sandstone makes Illinois attractive for carbon storage. This geological formation lies 5,000 to 7,000 feet below the Earth's surface. To reach it, wells would have to drill through underground reservoirs and multiple layers of shale.

Illinois landowners have been approached by Navigator CO2 Ventures to lease the pore space beneath the surface. This may or may not involve drilling an injection well on the site. Another issue impacting landowners is the percentage of acres in a single injection site Navigator must have under lease before injection is allowed. Neighboring states have enacted laws allowing injection of carbon dioxide without all affect landowner consents. That is not currently permitted in Illinois, but it is being discussed.

Supporters of the carbon capture and storage initiative correctly point out that Archer Daniels Midland (ADM) in Decatur, Illinois, has been capturing carbon dioxide and injecting it in the nearby Mt. Simon sandstone since November 2011. The Wolf Carbon Solutions pipeline proposed would transport carbon dioxide from ADM ethanol plants across eastern Iowa and Illinois to this same injection point.

Concerned landowners and residents, meanwhile, point to the risks that the carbon dioxide pipelines carry. In February 2020, a 24-inch pipeline carrying liquefied carbon dioxide ruptured in Mississippi. Soil conditions caused a pipe weld to break, leading to an explosion of ice and carbon dioxide. A plume of carbon dioxide required the evacuation of about 200 people from the village of Satartia, Mississippi, and nearly 45 people were hospitalized. Fortunately, there were no deaths.

Other less controversial projects exist across Illinois as well. Marquis Energy, the largest dry grind ethanol plant in the world, plans to inject carbon dioxide using an on-site well at its own Hennepin, Illinois, industrial complex. Permitting is not required for this project, as the carbon dioxide is not poised to leave the Marquis property. One Energy, Earth ethanol plant located in Gibson City, Illinois, plans to transport its carbon dioxide to an injection site within a few miles of the facility.



Depth to the top of the Mt. Simon sandstone formation in Illinois

Find more information about carbon capture and storage by contacting your trusted First Mid Ag Servies farm manager. If you are not already working with a First Mid Ag Services farm manager, but would like to learn more about how carbon capture and storage may impact your farmland, contact Craig Thompson at (309) 665-0048 or crthompson@firstmid.com.

Source: Gulf Coast Carbon Center

First Mid Ag Services

Auction Showcases First Mid Commitment to Customer Service

Farmland often represents a family legacy. For Sandy Chalmers, her two sisters and her brother, the land included in their mother's trust was exactly that. Their family's farming roots go back to the 1840s east of Marshall, Illinois, near the Indiana state line. However, the land had been rented since their grandparents retired in the 1970s.

After their mother passed away in October 2022, Sandy took the lead in handling the trust's assets as trustee. With varying levels of interest in farming and different financial goals, the siblings made the difficult decision to sell two fields that had been in the family for years.

"We decided to sell 80 acres our great-grandmother bought with her inheritance, and 95 acres our grandparents bought with money they saved during the Great Depression," she says. "Grandma wanted us to know and remember how the farm came together."

The first step was securing the valuation of the land. Sandy found it challenging to find a farmland appraiser who responded to her inquiries. She submitted a message to First Mid Ag Services on the website. Cory Kauffman, Mattoon office regional manager and an accredited farm manager and appraiser, responded and agreed to help.

"Cory appraised the fields for the date of death valuation and gave us information that formed the basis of our plan moving forward," Sandy explains. "He also provided recommendations with several options for selling."

Then, she researched area brokers and auction companies, including First Mid Ag Services. She considered marketing to build awareness of the land sale a high priority.

"I reviewed marketing materials and results, and I liked what I saw from First Mid," she says. "Based on that research, my siblings and I decided to continue working with Cory and his team."

Because the land they were selling hadn't been on the market for a long time, they expected high interest. Based on Cory's recommendations



Marketing materials for the auction included drone photos.

and insight, they decided to hold an in-person auction with online bidding to allow as many participants as possible.

Cory took the lead on the process and executed the marketing plan, which included drone footage and a brochure. His team sent a brochure about the sale to everyone within a mile of the field, followed up with bidders as they registered and promptly shared questions and provided answers.

"Cory went the extra mile and provided excellent customer service," Sandy says. "He approached everything with a sense of urgency. With an auction, much depends on the mood of people in the room, and his advance work did as much as possible to ensure the results we were looking for."

She and her siblings watched the auction live online. Both tracts were purchased by neighbors who knew her grandparents.

"The bottom line is that the land — part of our legacy — sold significantly above the appraised value," Sandy says. "We were very pleased with the results, and we appreciated Cory's time and effort."

Michael Bernhard Earns Accredited Farm Manager Designation

Michael Bernhard is the latest First Mid staff member to receive the Accredited Farm Manager (AFM) designation. Michael, based in Kankakee, received the designation over the summer.

AFMs are specifically educated and experienced in agricultural management. They understand efficient production and profitable marketing by focusing on procedure, analysis, critical thinking and innovation. Farm managers have specialized expertise in production, business, environmental issues and government activities.

The AFM designation is presented by the American Society of Farm Managers and Rural Appraisers (ASFMRA). The designation is earned by meeting stringent requirements in experience and education in addition to passing a rigorous written examination and abiding by the American Society's Code of Ethics. Just 43% of ASFMRA membership has received accredited status and is maintaining it through the ASFMRA continuing education program. ASFMRA is the largest professional society for rural property land experts in the U.S.



Michael Bernhard

First Mid Ag Services invests in our staff to bring the highest quality service to our clients. Michael's AFM designation exemplifies his dedication to the farm management profession and his clients. With 58% of First Mid farm managers having earned their AFM, the individual commitment to professional service is inherent in our organization. For more information about AFM accreditation and how First Mid farm managers put it to use for clients, contact Brian Thompson, President, at bthompson@firstmid.com.



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- Bernhard Earns Accredited Farm Manager Designation

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