



# IOWA

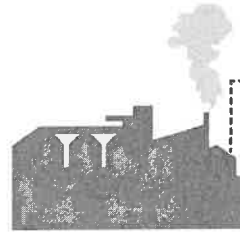
## Voluntary Easement Miles Acquired

- Over 464 miles now signed
- Over 1,115 landowners have signed, equating more than 1,945 agreements executed



## Iowa Utilities Board

- Permit Application Submitted to Iowa Utilities Board January 2022 - Docket Number HLP-2021-0001
- Decision requested June 2023
- Iowa Utilities Board accepting comments at iub.iowa.gov



## Investors

- Ethanol Plant Partners
- John Deere
- Continental Resources
- Tiger Infrastructure
- TPG Rise Climate
- Summit Agricultural Group

## Partners

- 32 ethanol plants across 5 states (Nebraska, Iowa, Minnesota, North Dakota, South Dakota)
- Minnkota Power Cooperative (CO<sub>2</sub> storage) giving Summit Carbon Solution access to the largest of only three permitted CO<sub>2</sub> storage sites in the United States.



- A gas in atmospheric conditions.
- A dense phase deep underground or in a pipeline. A dense phase has the viscosity of a gas but a density closer to that of a liquid.
- Nonexplosive and noncombustible.
- Dispersed as a gas when introduced to conditions outside the pipeline.
- CO<sub>2</sub> pipelines have an excellent safety record exceeding pipelines that carry other materials.
- Transported at ambient temperature that does not affect the surrounding soil.

## Pipeline Transport Is Critical to Carbon Capture & Storage

Transporting carbon dioxide by pipeline is the safest method for the large volumes of CO<sub>2</sub> that will be captured and permanently stored. With more than 5,000 miles of infrastructure currently operating in the United States, carbon dioxide pipelines have an excellent safety record.

Carbon capture and storage utilizes longstanding technology that is safe for landowners and communities.

- CO<sub>2</sub> capture is already deployed at more than 40 ethanol plants.
- There are 5,000 miles of existing CO<sub>2</sub> pipelines in the United States regulated by the Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA).
- Captured CO<sub>2</sub> is permanently and safely stored deep underground based on EPA standards.

## Pipelines Are Highly Regulated

Stringent requirements for the safe design, construction, and operation of CO<sub>2</sub> pipelines have been established by the DOT PHMSA. Additionally, constructing the Summit Carbon Solutions system requires permits from the following entities:

- |  |   |
|--|---|
| <b>State:</b>                                | <b>Federal:</b>                         |
| • Iowa Utilities Board                       | • United States Army Corps of Engineers |
| • Iowa Department of Natural Resources (DNR) | • United States Fish and Wildlife       |

Summit Carbon Solutions is working with landowners, community leaders, stakeholders, and more with respect, honesty, and transparency to obtain the necessary rights from the landowners for any proposed temporary and permanent easements.

## Summit Carbon Solution's Pipeline is Overbuilt for Safety

Summit Carbon Solutions' pipeline will be built beyond federal specifications in these ways:

- PHMSA - 195.248 Pipeline Location - requires 3ft depth below ground level. Summit Carbon Solutions will be at 4ft minimum depth.
- PHMSA - 195.210 Pipeline Location - requires 50ft setback from all dwellings. Summit Carbon Solutions is designing the pipeline that far exceeds the minimum setback.
- PHMSA - 195.250 Clearance Between Pipe and Underground Structures - Any new pipe must be at least 12" away from any other underground pipe or structure. Summit Carbon Solutions' best practice is 24".
- PHMSA 49 CFR Part 195 defines minimum requirements like the spacing between block valves, which is no more than 20 miles apart and in some cases less for Summit Carbon Solutions' pipeline.

Summit Carbon Solutions will employ a computer based, computational leak detection system that continuously monitors the operation of the pipeline from a manned control center. Similar leak detection systems are currently being utilized in the operation of numerous pipelines across the United States. Data will be continuously collected from pressure sensors, flowmeters, and temperature sensors installed along the pipeline and used to identify abnormal operating conditions. In the unlikely event of a leak, the system will provide information necessary to locate the leak, isolate the pipeline segment, and mitigate risk.

## Community Investment

Summit Carbon Solutions is looking to invest and volunteer in local communities. If there is somewhere we can invest in your community, please contact Kaylee Langrell 501-581-3348 or Kaylee.Langrell@tkl360.com

## Contact Information

For Emergency Management Questions:  
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## Why are pipelines considered one of the safest modes of transportation?

CO<sub>2</sub> Pipelines have been in use for over 40 years and today there are over 5,000 miles of active CO<sub>2</sub> pipeline in the United States. 40 years later, there have been zero fatalities related to CO<sub>2</sub> pipelines. According to a recent study funded by the US Department of Energy, risks associated with CO<sub>2</sub> pipelines were significantly less than those of other pipelines.

See a few of the Federal Regulations provided by PHMSA, a branch of the Department of Transportation, below:

### FEDERAL REGULATIONS PROVIDED BY PHMSA



#### 1. 49-CFR 195 Transportation of Hazardous Liquids by Pipeline

Prescribes Safety Standards and reporting requirements for pipeline facilities used in the transportation of hazardous liquids or carbon dioxide.

**Summit Carbon Solutions** - Will be regulated by PHMSA, a federal government agency.

#### 2. 195.112 New Pipe

Pipe must be made of carbon steel and low alloy-high strength.

**Summit Carbon Solutions** - The entire pipeline will be manufactured out of low alloy-high strength carbon steel.

#### 3. 195.440(d) Public Awareness

The operator's program must specifically include provisions to educate the public, appropriate government organizations and persons engaged in excavation.

**Summit Carbon Solutions** - Public awareness of the Summit Carbon Solutions project has already begun with over 1,750 meetings with policymakers, economic development leaders, Native American Organizations, etc. and over 100 public meetings, open houses, and regulatory events. Commitment to public awareness will continue into the future.

#### 4. 195.250 Clearance Between Pipe and Underground Structures

Any pipe installed underground must have at least 12" of clearance between the outside of the pipe and the extremity of any other underground structure excluding drainage tile.

**Summit Carbon Solutions** - Standard practice is to have 24" between the extremity of any other underground structure.

#### 5. 195.412 Inspection of Rights-of-Way and Crossings Under Navigable Waters

Each operator shall, at intervals not exceeding 3 weeks, but at least 26 times each calendar year, inspect the surface conditions on or adjacent to each pipeline right-of-way.

**Summit Carbon Solutions** - Standard practice will be to use aerial imagery at least every 2 weeks to visually inspect right-of-way conditions.

#### 6. 195.452(j)(4) Assessment Intervals

An Operator must establish five-year intervals, not to exceed 68 months, for continually assessing the line pipe's integrity.

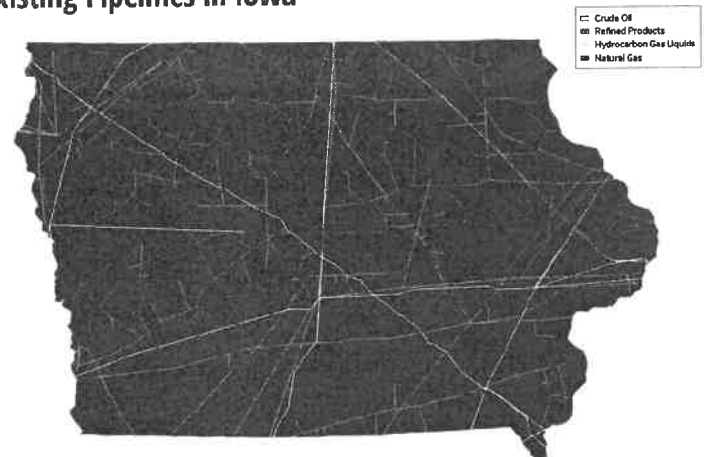
**Summit Carbon Solutions** - Will perform pipeline integrity evaluation, primarily through in-line inspection tools, periodically within five-year periods.

#### 7. 195.260(c) Valves: Location

For newly constructed or entirely replaced onshore hazardous liquid or carbon dioxide pipeline segments, as that term is defined at 195.2, that are installed after April 10, 2023, valve spacing must not exceed 15 miles for pipeline segments that could affect or are in HCAs, as defined in 195.450, and 20 miles for pipeline segments that could not affect HCAs.

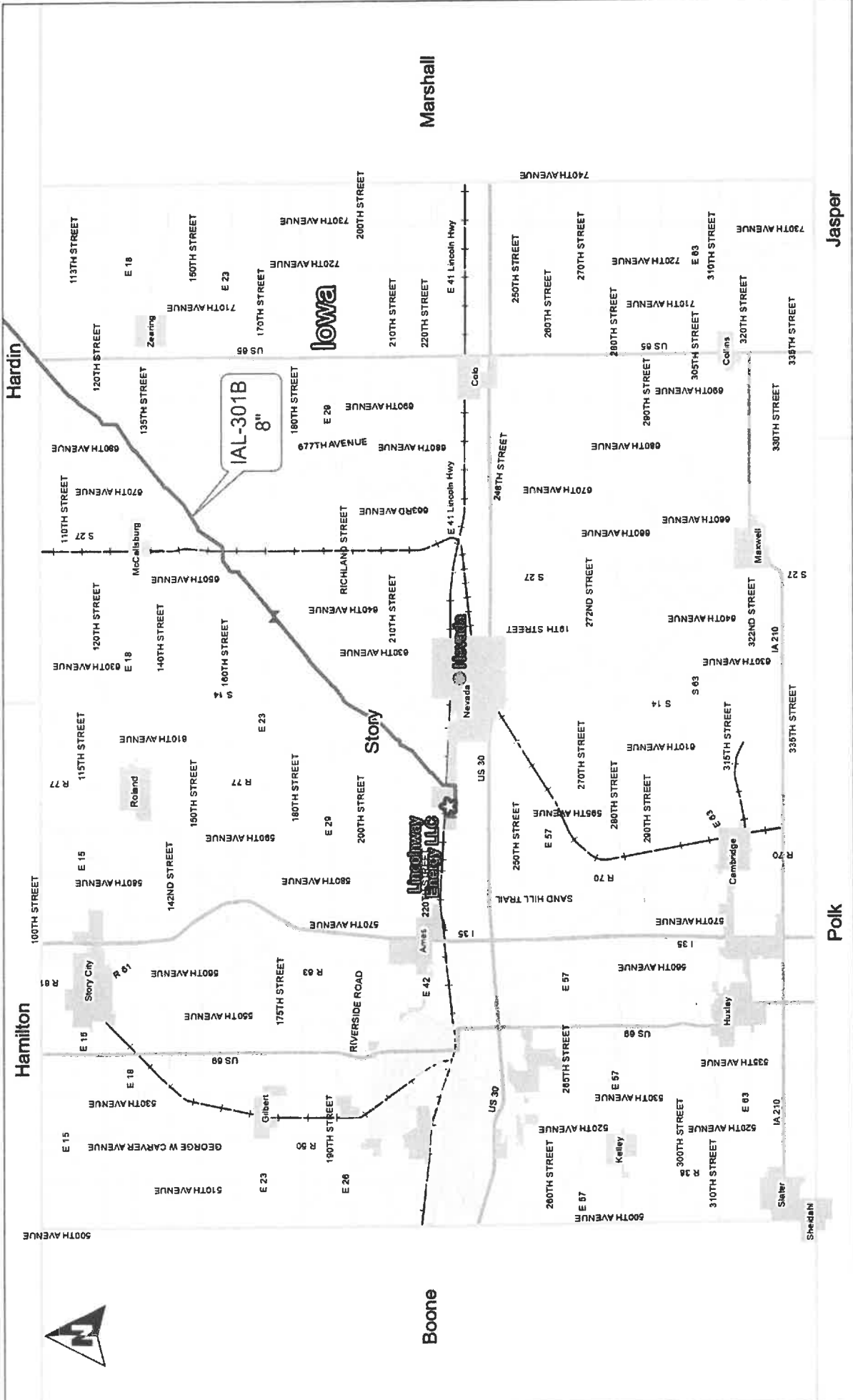
**Summit Carbon Solutions** - Adhering to a new safety requirement instituted in 2022, there will be no more than 20 miles between valves, resulting in no point on the pipe being farther than 10 miles from a valve.

#### Existing Pipelines in Iowa



There are 3.3 million miles of pipeline in operation in the US today. Pipelines do not inhibit expansion of communities and studies show that they do not devalue properties.

Landowners can rest assured that all pipelines in the US are highly regulated and Summit Carbon Solutions plans to follow, and in some cases, go above and beyond the regulations that are required at the federal level.



**SUMMIT CARBON SOLUTIONS**

Story County Iowa  
Pipeline Mileage Overview

COUNTY:	STORY	ISSUED BY:	CMH
STATE:	IOWA	CHECKED BY:	
REF. NO.:		DATE:	
DATE:	3/7/23	PROJECT:	IA 210

PRELIMINARY ROUTE  
SUBJECT TO CHANGE

# 17.41 MILES OF ANTICIPATED PIPELINE STORY COUNTY IOWA

Pipeline centerline is based on the 03/01/2023 route.

	Participating Ethanol Plant
	County Seat
	Mainline Valve
	Pump Station
	Highly Populated Areas
	State Boundary
	County Boundary
	Route
	Primary Road
	Secondary Road
	Local Road
	Railroad
	River

