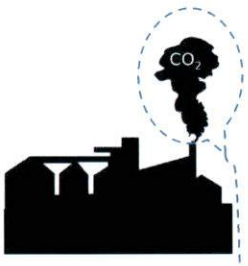
SUMMIT CARBON
SOLUTIONS

Iowa
February 2022

Summit Carbon Solutions Overview

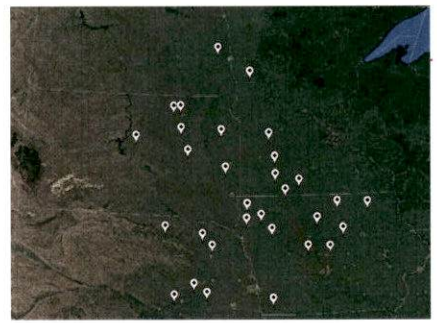
SUMMIT CARBON SOLUTIONS

HEADQUARTERED IN AMES, IOWA, SCS IS THE WORLD'S LARGEST INTEGRATED CARBON CAPTURE, TRANSPORATION, AND STORAGE BUSINESS



Step 1

SCS has **aggregated more than ~8M tons of CO_2 from over 30 facilities** in 5 Midwestern states



Step 2

The CO_2 will be transported via a **pipeline network that spans nearly 2,000 miles** and will be **completed in 2024**

Step 3

The CO_2 will be **permanently and safely stored deep underground in North Dakota**

SCS' INFRASTRUCTURE WILL BE CAPABLE OF STORING 12M TONS/Y; EQUIVALENT TO TAKING 2.6M CARS OFF THE ROAD

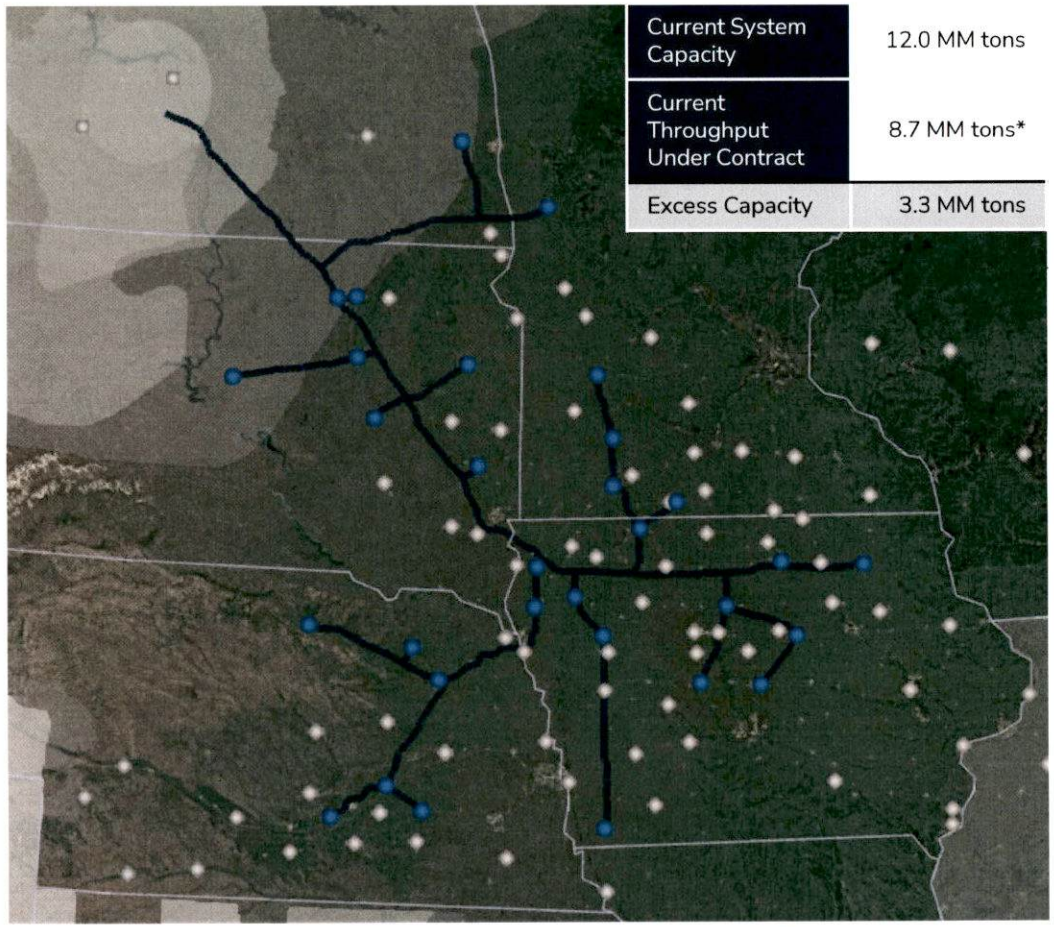
Summit Carbon Solutions - Video

Strategy

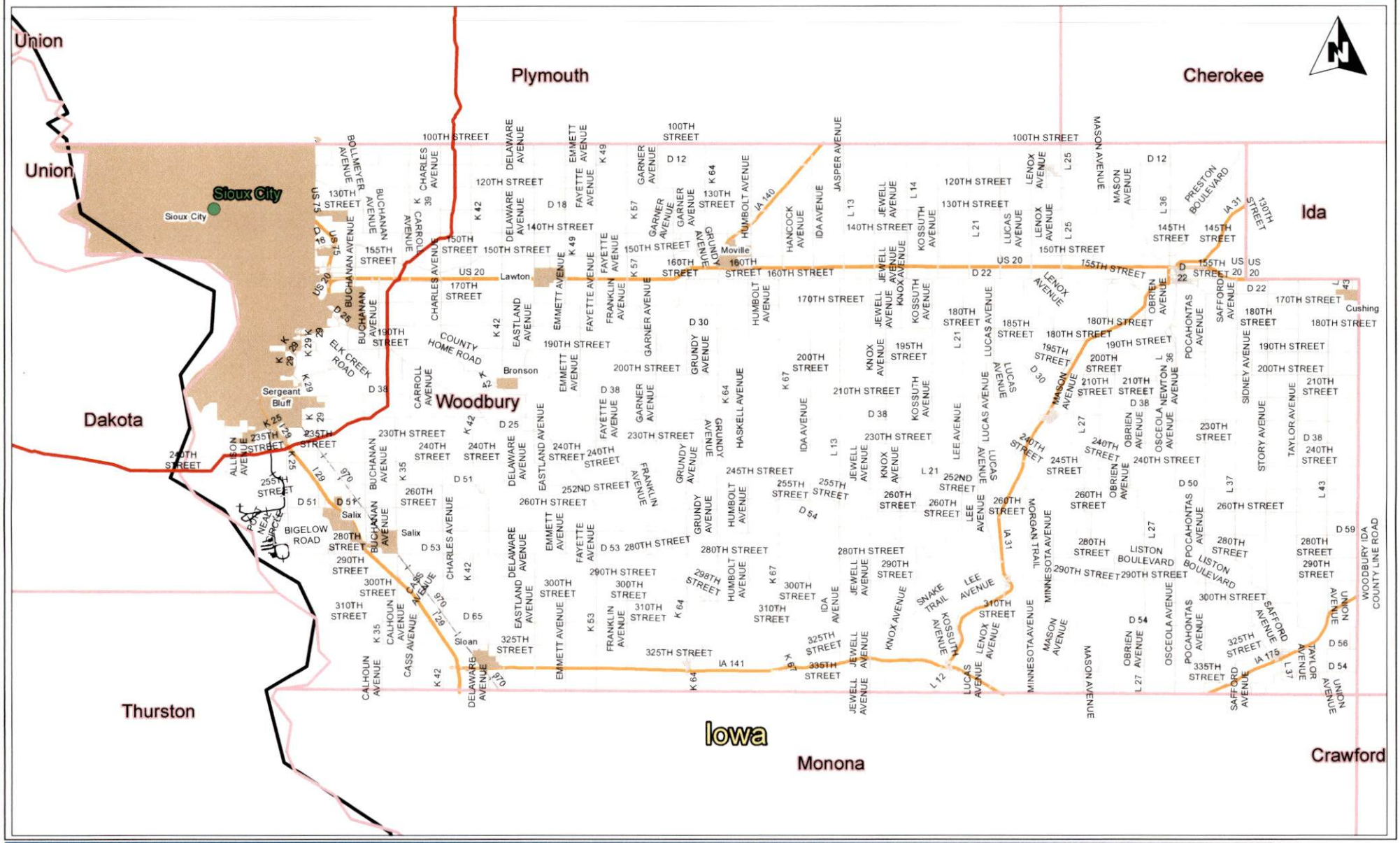
SUMMIT CARBON SOLUTIONS

SCS IS ENGINEERING ITS PIPELINE SYSTEM TO ACCOMMODATE GROWTH IN CO2 VOLUMES FROM ADDITIONAL PARTNER FACILITIES

- **World's largest** carbon capture and storage project
- **Oversized infrastructure** to accommodate ~4M more tons of CO_2 annually
- **Partnering with already best-in-class biofuel facilities** with direct access to the **lowest cost** inputs
- CCS further **increases facility profitability and credit worthiness**, supporting **long-term viability** of SCS' partner facilities



* *Assumes all 31 partner facilities are running at nameplate capacity*



Participating Ethanol Plant
County Seat
Highly Populated Areas
State Boundary
County Boundary
Route
Primary Road
Secondary Road
Local Road
Railroad

20.28 MILES OF ANTICIPATED PIPELINE WOODBURY COUNTY IOWA

Woodbury County Iowa
Pipeline Mileage Overview

COUNTY: WOODBURY	DRAWN BY: CNH
STATE: IOWA	CHECKED BY:

REV. NO.	REVISION	DATE
0	ISSUED FOR REVIEW	2021-09-05

PRELIMINARY ROUTE
SUBJECT TO CHANGE

DATE: 9/6/2021 | PROJECTION: NAD 83

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0 0.75 1.5 3 4.5 6 Miles

DWG: | SHEET: 1

Iowa Project Map

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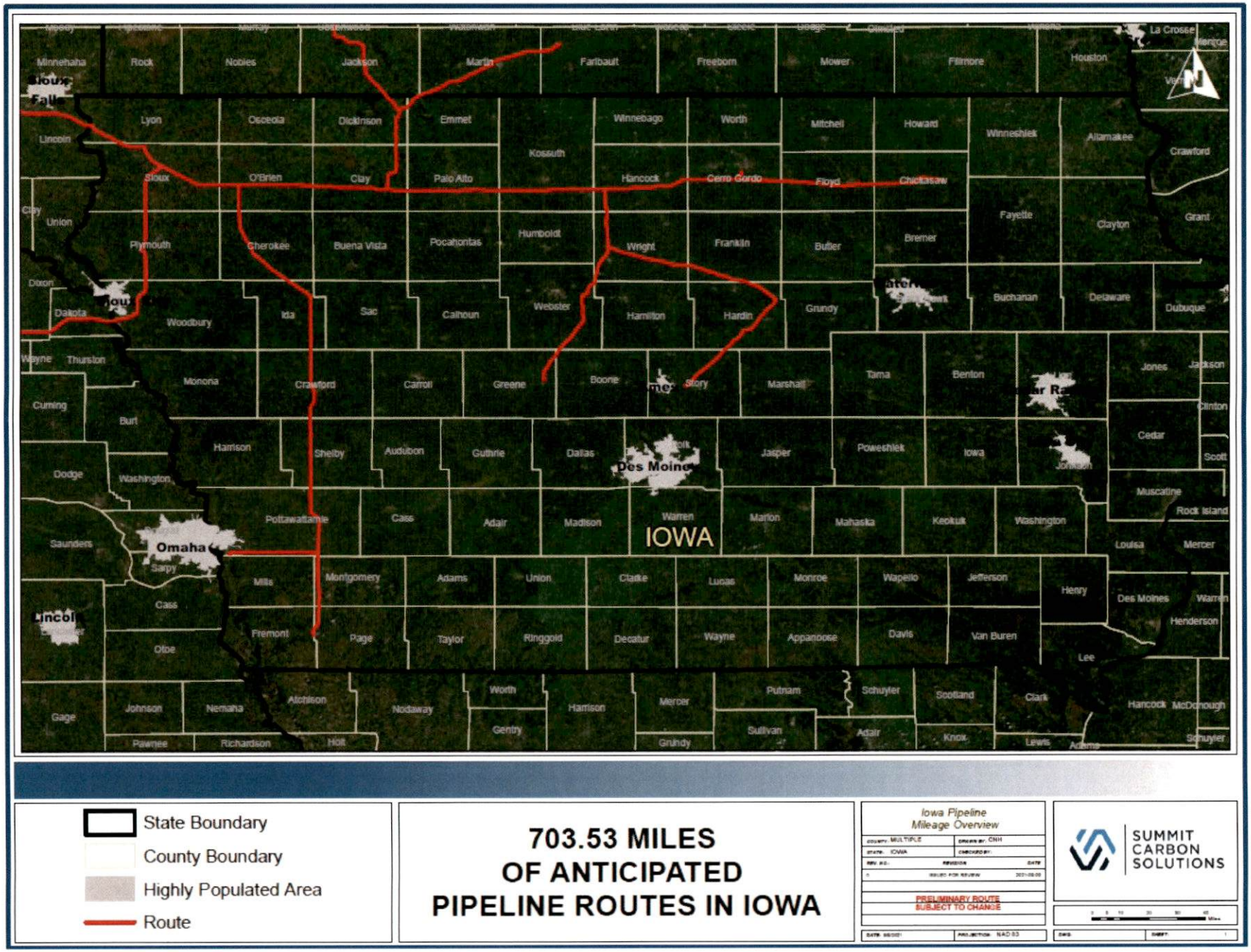
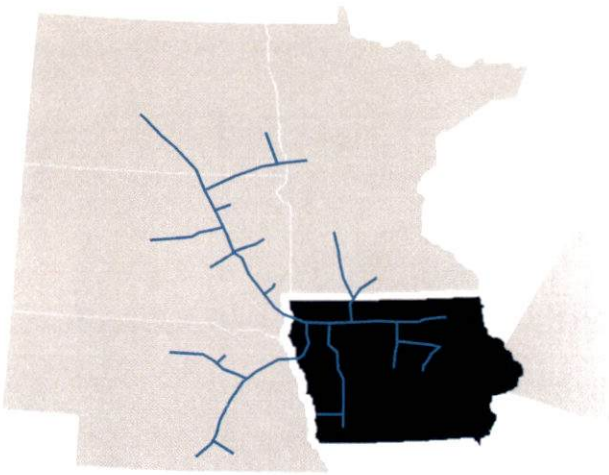
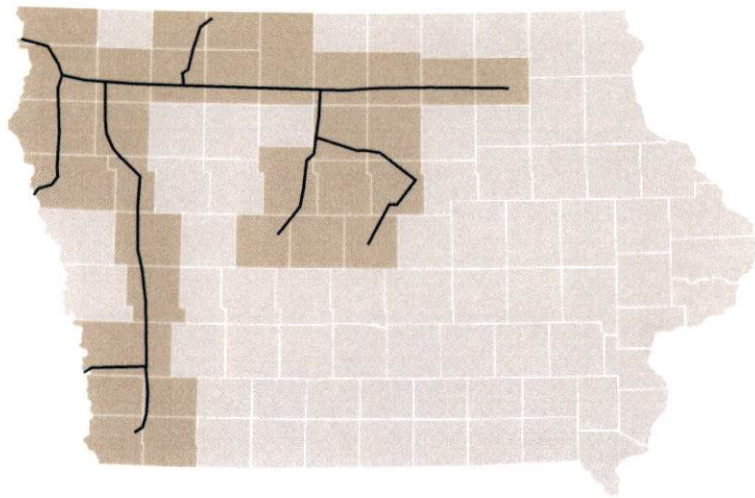


Project Location & Partner Facilities

THE MIDWEST CARBON EXPRESS WILL BE LOCATED IN FIVE STATES AND WILL RUN THROUGH 30 IOWA COUNTIES





SUMMIT CARBON SOLUTIONS

31 BIOREFINERY PARTNERS
ACROSS
20 COMPANIES

12 CURRENT PARTNERS
LOCATED IN IOWA

CORN LP

GOLDEN GRAIN ENERGY

GREEN PLAINS - SHENANDOAH

GREEN PLAINS - SUPERIOR

HOMELAND ENERGY SOLUTIONS

LINCOLNWAY ENERGY

LITTLE SIOUX CORN PROCESSORS

LOUIS DREYFUS – GRAND JUNCTION

PINE LAKE CORN PROCESSORS

PLYMOUTH ENERGY

QUAD COUNTY CORN PROCESSORS

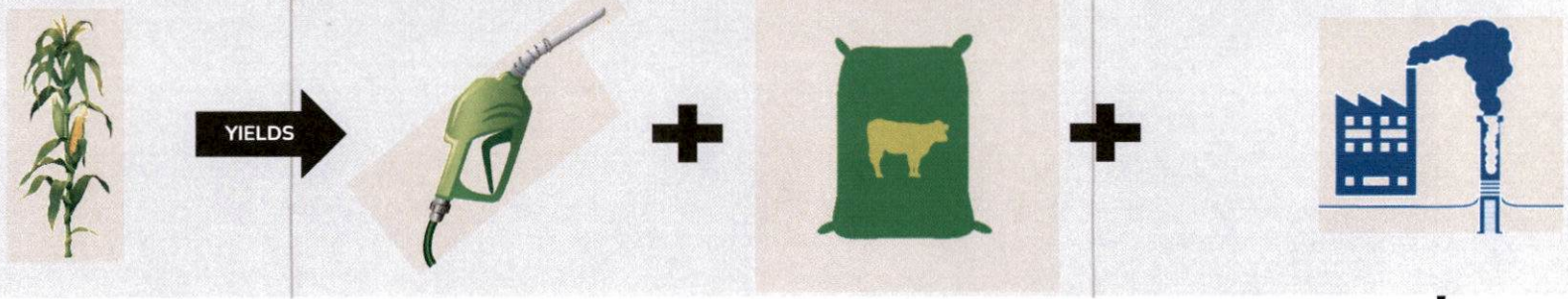
SIOUXLAND ENERGY COOP

BIOREFINERY PARTNER COMPANIES

Opportunity to Scale a Transformational Carbon Capture Platform

SUMMIT CARBON SOLUTIONS ("SCS") WILL BE THE LARGEST CARBON CAPTURE & STORAGE ("CCS") PLATFORM IN THE WORLD

PRIMARY ETHANOL INPUT	CURRENT MONETIZED OUTPUTS		OPPORTUNITY
3 lbs of corn	**~1 lb** of ethanol	**~1 lb** of dried distillers grain	**~1 lb** of CO_2



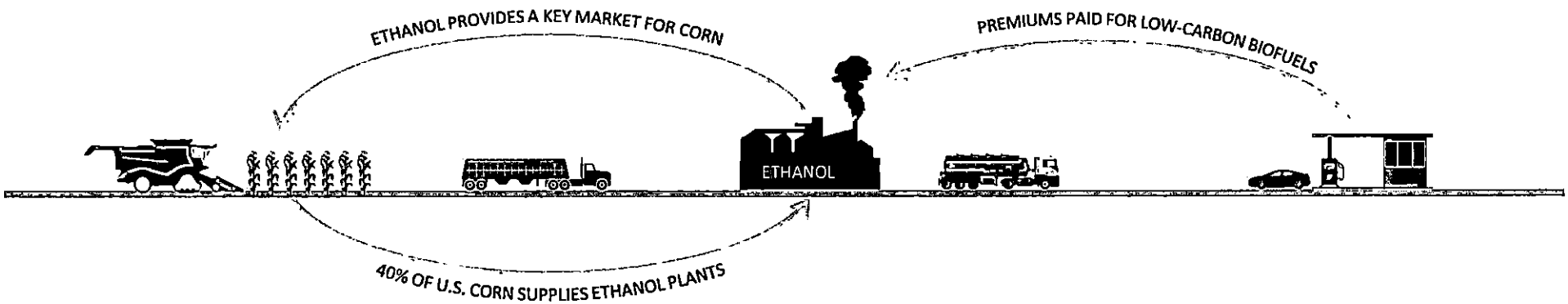
CO_2 is currently a waste product from ethanol plants emitted into atmosphere → Summit Carbon Solutions will capture and permanently sequester CO_2 from ethanol plants → Significantly reduces emissions and creates long term economic benefits

SCS WILL LEAD THE DECARBONIZATION OF THE BIOFUELS INDUSTRY IN THE MIDWEST

Enhancing the Long-Term Profitability of Ethanol & Agriculture

SUMMIT CARBON SOLUTIONS

SCS ENABLES ETHANOL TO BE PRODUCED MORE SUSTAINABLY ALLOWING IT TO BETTER COMPETE IN A LOW-CARBON WORLD



ETHANOL AND AGRICULTURE WORK TOGETHER TO ADD VALUE ACROSS THE SUPPLY CHAIN AS WELL AS CREATE ECONOMIC IMPACT AND JOBS FOR RURAL AMERICA.

	UNITED STATES	IOWA
EACH YEAR, THE ETHANOL INDUSTRY ADDS:	**$43B+** of annual GDP contribution	**$4.5B+** of annual GDP contribution
EACH YEAR, THE ETHANOL INDUSTRY SUPPORTS:	**340,000+** jobs	**44,000+** jobs

THE LONG-TERM VIABILITY OF THE ETHANOL INDUSTRY IS CRITICAL FOR AGRICULTURE AND RURAL AMERICA.

Source: Iowa Corn Growers Association, ABF Economics 2019

Growing Low-Carbon Markets Provides Attractive Market

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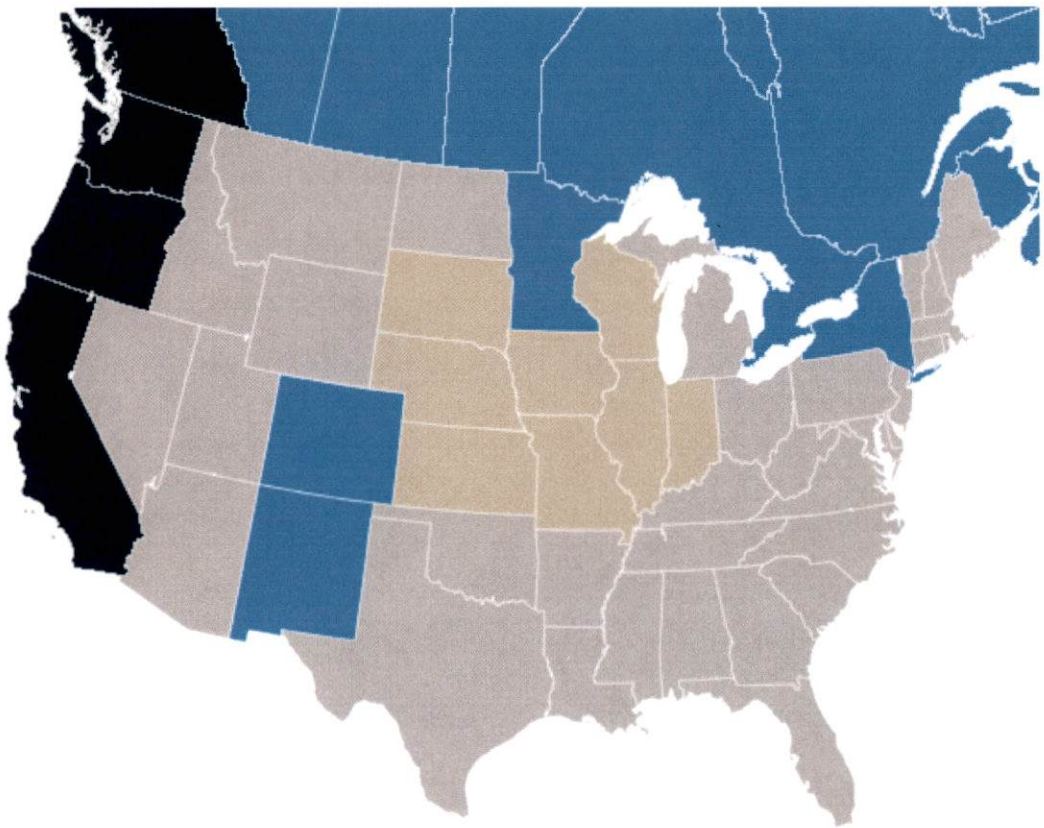
NORTH AMERICAN LOW-CARBON FUEL MARKETS



BILLION GALLONS OF LOW-CARBON ETHANOL DEMAND

Existing	Likely	Proposed	Total
2.1	2.2	1.8	**6.1**

Source: Energy Information Administration

CCS Provides a tangible path to Net Zero

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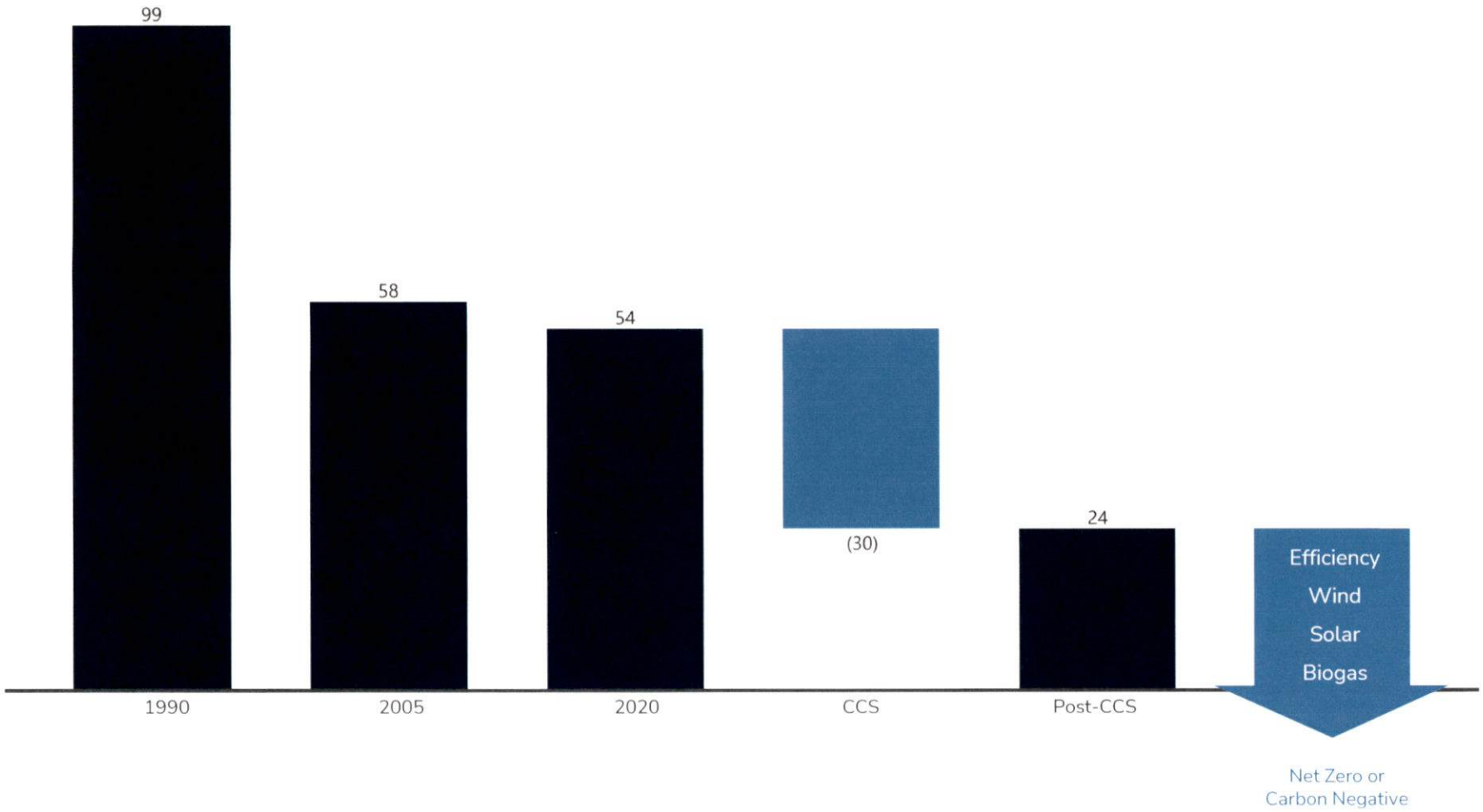
ETHANOL CARBON INTENSITY DECREASING DRAMATICALLY OVER TIME



Melissa J Scully et al 2021 Environ. Res. Lett.

Environmental Impact of Capturing and Storing 12M Tons of CO2

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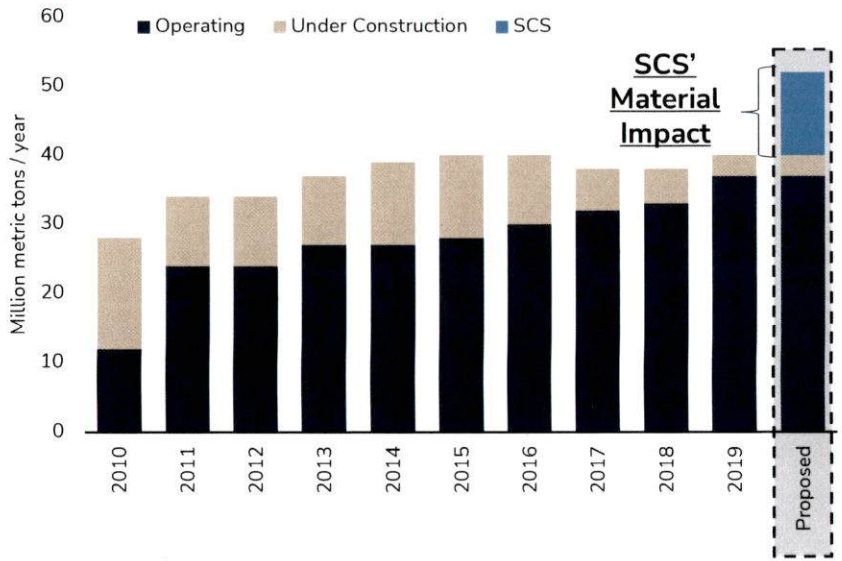
SCS IS COMMITTED TO A GREEN INITIATIVE THROUGH ITS INVESTMENTS IN CCS AND RENEWABLE ENERGY

GLOBAL CARBON CAPTURE & STORAGE CAPACITY



Largest Global CCS Projects	Location	CCS Capacity
Summit Carbon Solutions	**Upper Midwest**	**12.0**
Century Plant	Texas	8.4
Shute Creek Processing	Wyoming	7.0
Gorgon Carbon	Australia	3.7
Great Plains Synfuels	North Dakota	3.0
Petrobras Santos Basin	Brazil	3.0
Petra Nova	Texas	1.4
Quest	Canada	1.0
Coffeyville Gasification	Kansas	1.0
Air Products	Texas	1.0
Boundary Dam	Canada	1.0
Illinois Industrial CCS	Illinois	1.0
Sleipner CO_2 Storage	Norway	1.0

CCS capacity in million metric tons per year

IMPACT OF 12 MILLION TONS OF CO_2 SEQUESTERED

~ 2.6 million
Cars Removed from the Road per Year

~ 1.4 million
Homes Powered per Year

~ 1.4 billion
Gallons of Gasoline Consumed

~ 15 million
Acres of Forest per Year

Source: Global CCS Institute, EPA

Summit Carbon Solutions Economic Benefits

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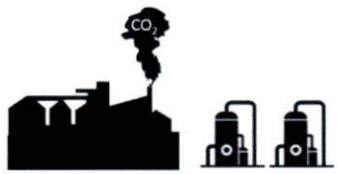
SCS WILL DRIVE ECONOMIC GROWTH AND JOB CREATION ACROSS THE MIDWEST AND BEYOND

$4.5 Billion

capital investment with operations beginning in 2024



	Capture & Compression	Pipeline	TOTAL
PROJECT JOBS	132 - 198	14,067 – 17,193	14,199 – 17,391
OPERATION JOBS	220 - 307	128 - 156	348 - 463
TOTAL JOBS	**352 – 505**	**14,195 – 17,349**	**14,547 – 17,854**

SUMMIT CARBON SOLUTIONS IS COMMITTED TO UTILIZING LOCAL UNION AND NON-UNION CONTRACTORS, LOCAL SUPPLIERS, AND LOCAL BUSINESSES TO PROVIDE ONGOING ECONOMIC BENEFITS TO LOCAL COMMUNITIES AND THE MIDWEST.

Summit Carbon Solutions: A Commitment to Safety

SUMMIT CARBON SOLUTIONS

DEPLOYING EXISTING, PROVEN TECHNOLOGIES TO REDUCE CARBON INTENSITY OF ETHANOL PRODUCTION

Capture & Compression

At Summit Carbon Solutions' partner facilities, carbon dioxide capture and compression equipment will be installed to capture CO_2 emissions.

Pipeline Transportation

Small underground pipelines will connect each facility to a large trunk pipeline, which will transport CO_2 to the sequestration site in North Dakota. Pipeline will be buried at a minimum of four feet deep (top of pipe).

- All pipeline segments will be constructed with high-strength carbon steel and have a wall thickness ranging from 0.189 inches to 0.750 inches thick.
- The pipeline system will be approximately 2,000 miles and the nominal diameter will range from 4 inches to 24 inches.

Geologic Storage

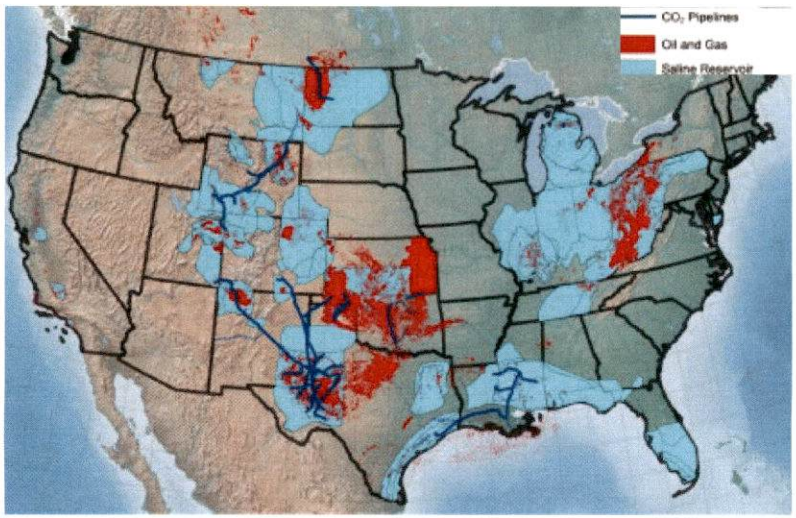
Captured CO_2 is permanently stored in geologic storage areas in North Dakota. Wells are drilled several thousand feet below ground where CO_2 can be stored safely based on the standards put in place by North Dakota's Department of Mineral Resources.

Carbon Capture, Transportation and Storage is a Safe, Proven Practice

SUMMIT CARBON SOLUTIONS

CCS TECHNOLOGY HAS BEEN SAFELY AND SUCCESSFULLY IMPLEMENTED SINCE THE 1970S

CURRENT U.S. CO_2 PIPELINE FOOTPRINT



IMPECCABLE SAFETY RECORD

Zero

CO_2 pipeline fatalities in the last 20 years[1]

CO_2 is much less of a health and environmental hazard than other pipelines. CO_2 is not combustible (it is used as a fire retardant)

- Capture technology has been deployed at 40+ ethanol facilities throughout the U.S.
- Pipeline transportation is the safest method
- More than 5,000 miles of CO_2 pipelines exist in the U.S.
- SCS will only utilize highly rated and safe materials, including carbon steel
- We will utilize proven technologies and employ the best industry practices to ensure the project is safe for landowners and the communities where they live, work, and raise families

Geologic Sequestration in Saline Reservoirs

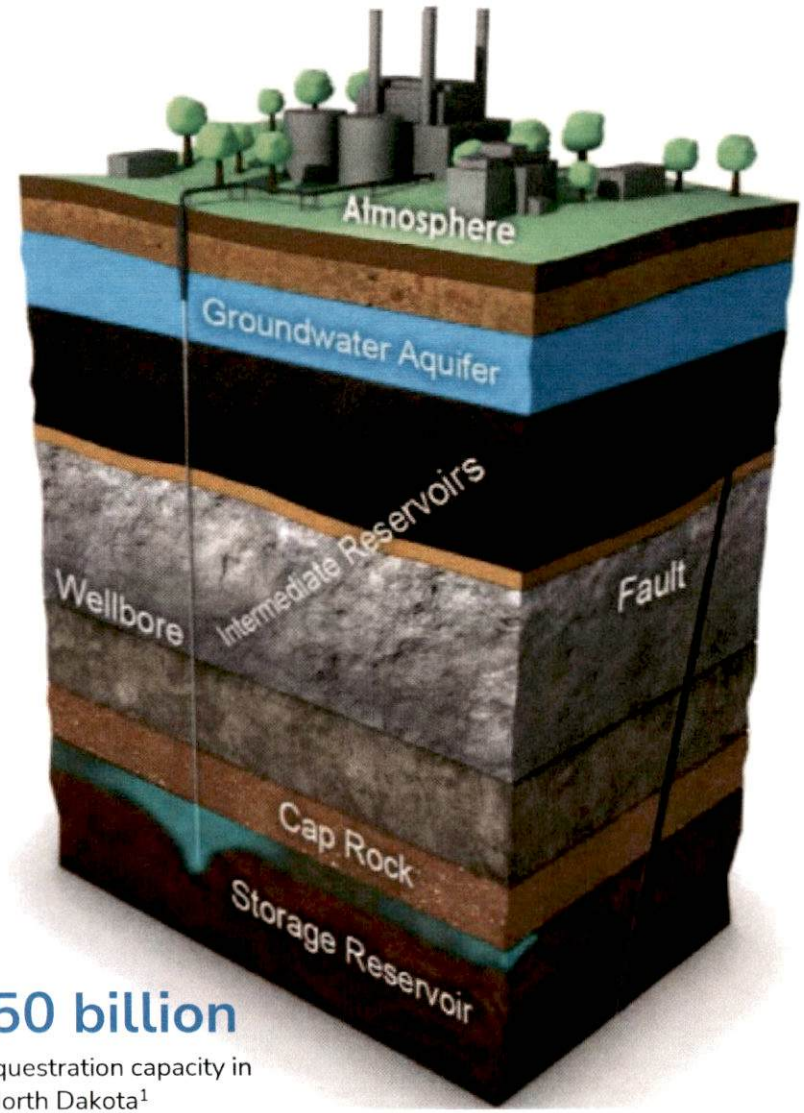
SUMMIT CARBON SOLUTIONS WILL INJECT SUPERCRITICAL CO2 DEEP INTO SALINE RESERVOIRS FOR PERMANENT STORAGE

- At the end of the pipeline, the CO_2 will be injected underneath an impermeable rock layer into saline formations for permanent sequestration
- Pore space is leased from landowners that own the surface rights
- Saline storage has been proven by ADM's Decatur, IL facility and is currently being pursued by several other ethanol operators outside of Summit Carbon Solutions' project (e.g. Red Trail Energy, Midwest Ag Energy, REX, Alto Ingredients)
- Over a 100 year injection period, SCS will utilize less than 1% of North Dakota's total sequestration capacity

GEOLOGICAL SEQUESTRATION STEPS

1. Site Screening & Selection
2. Lease Pore Space
3. Permitting & Construction
4. Well Testing
5. Injection
6. Monitoring, Verification & Accounting
7. Site Closure

Department of Energy



up to **250 billion**

tons of sequestration capacity in North Dakota[1]

Our Commitment to You

SUMMIT CARBON SOLUTIONS

SUMMIT CARBON SOLUTIONS WILL WORK WITH LANDOWNERS, COMMUNITY LEADERS, STAKEHOLDERS, AND MORE WITH RESPECT, HONESTY, AND TRANSPARENCY. IF YOU FEEL THAT HAS NOT BEEN DEMONSTRATED, PLEASE REACH OUT TO INFO@SUMMITCARBON.COM

THE SAFETY OF OUR OPERATIONS, OUR EMPLOYEES, THE COMMUNITIES WHERE WE OPERATE, AND OUR LANDOWNER PARTNERS IS OUR TOP PRIORITY AND ALWAYS WILL BE.

WE WILL BE GOOD STEWARDS OF THE LAND ACROSS OUR ENTIRE PROJECT AREA. SUMMIT CARBON SOLUTIONS WILL PROTECT AND RESTORE LANDS, TOPSOIL, DRAIN TILES, DRAINAGE SYSTEMS, AND MORE TO THEIR PRECONSTRUCTION LEVELS.

Compensation for Landowners

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SUMMIT CARBON SOLUTIONS WILL HAVE LAND AGENTS ASSIGNED TO EACH INDIVIDUAL LANDOWNER FOR THE DURATION OF THE PROJECT.

WE ARE COMMITTED TO BUILDING AND MAINTAINING A POSITIVE, PRODUCTIVE RELATIONSHIP WITH LANDOWNERS BUILT ON TRUST AND TRANSPARENCY.

Along with safety, it is a top priority for Summit Carbon Solutions to negotiate easements with landowners that are agreeable for both parties and provide value to both parties.

Easement rights are acquired with the land and are not impacted by future changes in ownership.

Compensation is based on a fair market value for land in the county – Summit will be utilizing recent comparable sales data for each county to determine the fair market value. Summit will offer 115% of the fee value based on that comparable sales analysis for its permanent easement.

Summit Carbon Solutions will pay for anticipated damages to crops or lands prior to construction and work directly with landowners to address their specific concerns related to the impact of construction on their property.

FOLLOWING TODAY'S MEETING, WE WOULD LIKE TO HAVE THE OPPORTUNITY TO VISIT WITH LANDOWNERS INDIVIDUALLY, ANSWER QUESTIONS AND HOPEFULLY SECURE YOUR PERMISSION TO START SURVEY WORK ON YOUR PROPERTY.

Crop Loss Compensation

SUMMIT CARBON SOLUTIONS WILL PAY LANDOWNERS FOR LOSSES TO CROPS PLANTED PRIOR TO CONSTRUCTION OR IF A CROP NORMALLY WOULD HAVE BEEN PLANTED PRIOR TO THE FINISH OF CONSTRUCTION

THE COMPANY WILL PAY FOLLOWING PERCENTAGES OF THE ESTIMATED CROP LOST TO CONSTRUCTION:

100%
coverage of crop loss in the first year

80%
coverage of crop loss in the second year

60%
coverage of crop loss in the third year

Compensation figures will be based on the prevailing market price index by crop type or in accordance with any prearranged purchase agreements and based upon the three-year annual average yield of the crop as documented by the landowner or by the records from the local agricultural agency.

Drainage Tile

PIPELINE ON THE MIDWEST CARBON EXPRESS PROJECT WILL BE BURIED AT A MINIMUM OF FOUR FEET DEEP TO THE TOP OF THE PIPE

Summit Carbon Solutions will work with each landowner to develop a plan to restore drainage systems to its prior function.

EXAMPLES INCLUDE:

- Individual drain tile repairs
- Installation of new drain tile(s)
- Redesign and re-installation of the drain tile system

WHO PERFORMS THE WORK?

As a common practice, Summit Carbon Solutions will employ a professional drain tile company to repair tile damaged during construction. We are also willing to work with landowners who prefer to hire their own contractor for the repairs.

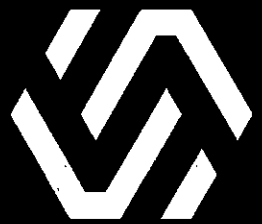
Summit Carbon Solutions will pay reasonable costs if the company chooses to have a representative present during this process.

When practical, Summit Carbon Solutions will work with landowners to relocate tile(s) prior to the start of construction.

Key Takeaways

SUMMIT CARBON SOLUTIONS

- **$4.5 billion capital investment** in 5 Midwestern states
- **14,500 – 17,900 estimated jobs** created by the project
- Up to **12M tons of CO2** is captured and stored every year
- **Significantly reduces ethanol carbon intensity**, leading to a **net zero transportation fuel** produced in the Midwest
- Project **utilizes proven, safe** technology and equipment



SUMMIT CARBON
SOLUTIONS

SUMMIT CARBON SOLUTIONS

COMMITMENT TO SAFETY

A TRANSFORMATIVE DECARBONIZATION PLATFORM

Proven Technologies Make Carbon Capture and Storage Safe

The Summit Carbon Solutions (Summit) carbon capture and storage (CCS) project will reduce the carbon footprint of biofuel plants across the five-state Midwest region to create long-term economic benefits and support long-term viability of Summit's partner facilities. The project will use proven, safe technology and equipment.

Carbon Capture and Storage

The safety of our operations, our employees, the communities where we operate, and our landowner partners is our top priority and always will be.

CAPTURE & COMPRESSION | **PIPELINE TRANSPORTATION** | **GEOLOGIC STORAGE**

At Summit's partner facilities, carbon dioxide capture and compression equipment will be installed to capture CO_2 emissions.

CO_2 capture technology has been safely and successfully implemented since the 1970s and is deployed at over 40 ethanol facilities throughout the United States for manufacturing, refrigeration, and food-grade CO_2.

Small underground pipelines will connect each facility to a large trunk pipeline, which will transport CO_2 to the sequestration site in North Dakota.

Pipeline is the safest method for CO_2 transport. Established federal and state regulations govern pipeline materials, siting, construction, and operation. Summit follows all requirements for CO_2 pipeline construction and is committed to safety.

Captured CO_2 will be safely and permanently stored in rock layers about a mile deep in North Dakota, with permission of and oversight by the North Dakota Department of Mineral Resources.

Safe, permanent CO_2 storage in geologic layers has been proven during more than 40 years of field operations associated with oil production in Texas, 20 years in Saskatchewan, and 10 years in Montana.

Summit is committed to using proven technologies and employing the best industry practices to ensure the project is safe for landowners and the communities where they live, work, and raise families.

Summit's infrastructure will be capable of storing 12 million tons of CO_2 a year, equivalent to:

~1.4 MILLION
Homes Powered per Year

~2.6 MILLION
Cars Removed from the Road per Year

~1.4 BILLION
Gallons of Gasoline Consumed

Source: Global CCS Institute, EPA

CO_2 is:

- A gas in atmospheric conditions.
- A fluid deep underground or in a pipeline.
- Nonexplosive, nonflammable, and cannot burn.
- A major greenhouse gas that helps create and maintain the natural greenhouse effect that keeps our planet hospitable to life.
- Essential to plant life.
- A byproduct of animal metabolism.
- A byproduct of burning carbon-based fuels (wood, ethanol, biodiesel, and fossil fuels), making cement, and plowing.
- Low-risk to fish and aquatic life.

Pipeline Transport Is Critical to CCS

Transporting carbon dioxide by pipeline is the safest method for the large volumes of CO_2 that will be captured and permanently stored. With more than 5000 miles currently operating in the United States, carbon dioxide pipelines have an impeccable safety record of no fatalities and only one injury in the last 20 years.

Pipelines Are Highly Regulated

The U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) has established stringent requirements for the safe design, construction, and operation of CO_2 pipelines. In addition, constructing a carbon dioxide transportation pipeline requires permits from the following entities:

Federal: U.S. Army Corps of Engineers

State:

- Iowa Utility Board
- South Dakota Public Utility Commission
- North Dakota Public Service Commission
- Minnesota (county jurisdiction)
- Nebraska (county jurisdiction)

Summit must complete access agreements with all landowners on their proposed route as part of the permit applications. The entire process is anticipated to be completed by the end of 2022.

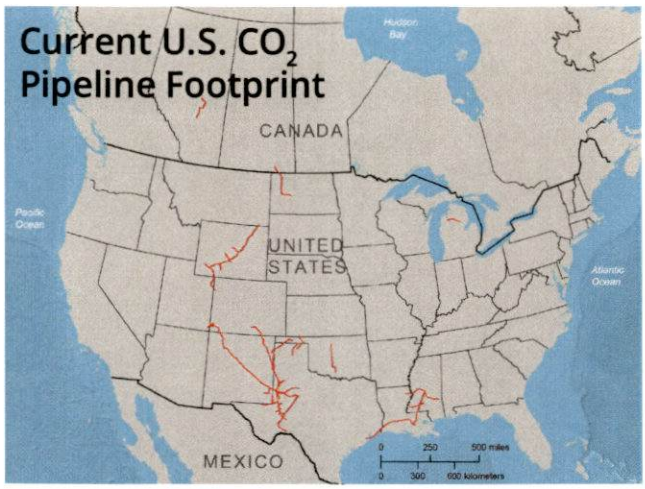
Summit's Pipeline Route Is Carefully Selected

Selecting a safe route for a carbon dioxide pipeline requires many data sources. An interactive software platform that includes all publicly available information is used to determine the path. This platform includes data regarding:

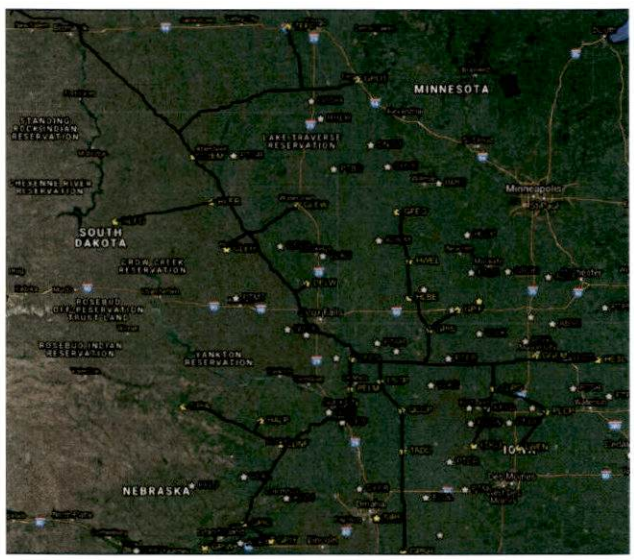
- High-population-density areas
- Environmentally sensitive areas, such as wetlands and protected waterways
- Culturally sensitive areas
- Historical preservation areas
- Federally restricted areas, such as grasslands and migratory bird-nesting areas

Summit's Pipeline Is Overbuilt for Safety

Summit's pipeline will be built beyond federal specifications and deeper than required. Every weld is inspected by x-ray technology, and the pipeline will have the latest in leak detection-monitoring technology.



More than 5000 miles of CO_2 pipelines are in operation in the United States.



The pipeline system will be approximately 2000 miles, constructed with high-strength carbon steel, and buried at least 4 feet deep. All pipeline segments will have a wall thickness ranging from 0.189 to 0.750 inches thick, and the diameter will range from 4 to 24 inches.

Summit Carbon Solutions seeks to lower greenhouse gas emissions by connecting industrial facilities via strategic infrastructure to safely and permanently store CO_2.

To learn more, contact:

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summitcarbonsolutions.com

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PIPELINE CONSTRUCTION

A TRANSFORMATIVE DECARBONIZATION PLATFORM

Constructing a Pipeline

1. Pipeline construction activities begin with a survey to define the route and ensure the approved path is followed (survey staking). The land is then cleared, the topsoil removed and set aside, and the right-of-way (ROW) prepared for construction.

2. Once the ROW is prepared for construction, pipe installation will begin. The trench is dug and pipe is strung along the side of the trench, using trucks and lifting equipment. Bending crews will bend some of the pipe to shape the pipe to the ROW and land contours. The pipe joints will then be welded together forming a solid string of pipe. Based on soil type, moisture content, topography and other factors, the ditch may be dug after the pipe is welded.

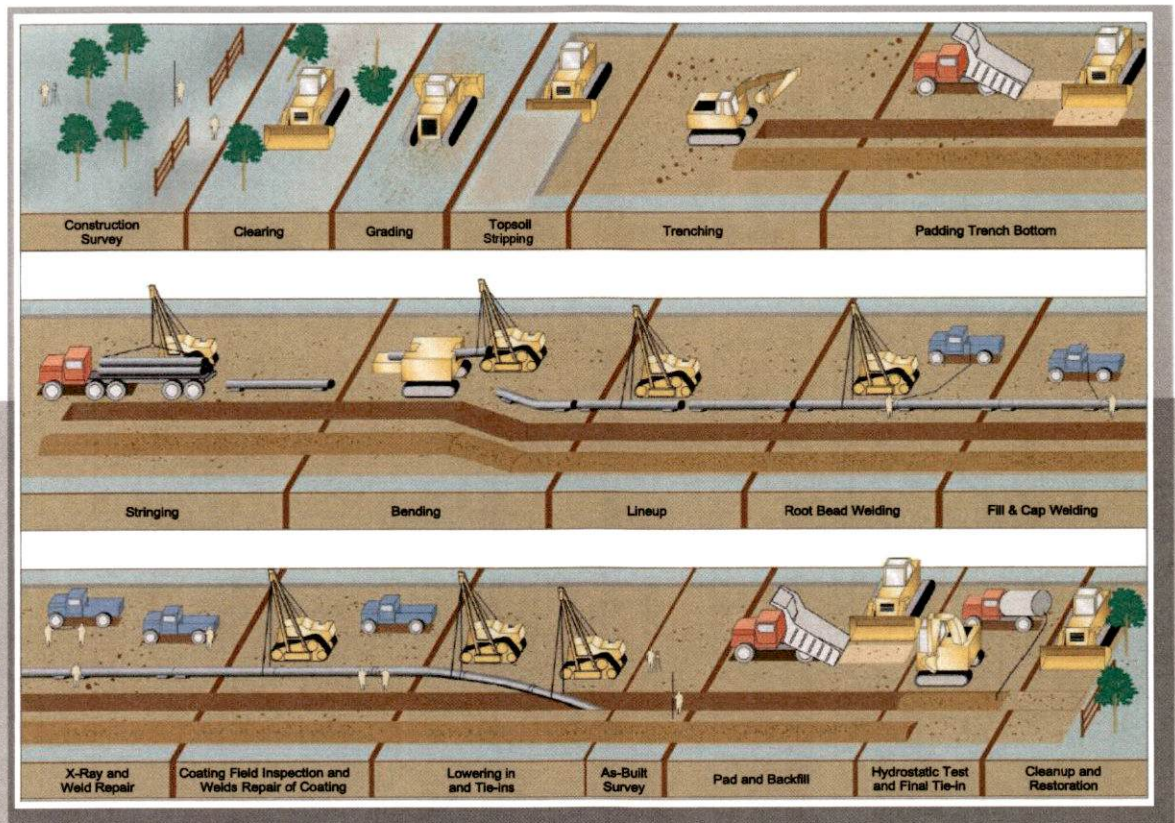
3. 100% of the pipeline welds are inspected throughout using industry accepted testing methods, such as X-ray or ultrasound to ensure integrity, after which the welds are coated.

4. The welded pipe string is lowered into the trench.

5. The trench is then backfilled, first with the subsoil, followed by replacing the topsoil.

6. The pipeline is then hydrostatically tested, which involves filling the pipe with fresh water and pressuring it up to 125% or more of the maximum operating pressure, thereby ensuring the integrity of the pipe.

7. The final restoration process includes replacement of original contours, reseeding and regrowth of surface vegetation, or returning the ROW to its original agricultural use.



Pipeline construction is a multistep process that begins after state and federal permits have been issued and easements have been secured.

Image credit: Minnesota Environmental Quality Board

Minimizing Soil Impacts Using Best Practices

Summit Carbon Solutions (Summit) intends to follow construction best practices and in some states the Agricultural Impact Mitigation Plan, where required, to ensure that appropriate steps are taken to preserve the integrity of agricultural properties.

Our construction practices are designed to limit soil compaction in agricultural fields during installation of the pipeline. The average weight of construction equipment necessary for installing 6-inch-diameter pipe is typically 40% to 80% less than the weight of equipment necessary for installing 36-inch-diameter pipe. Most pipelines that Summit will be installing fall between 4 and 12 inches, with the mainline being the only sections reaching 16, 20, and 24 inches.

Soil disturbance will also decrease with decreasing pipe diameter. The images to the right represent trench sizes and disturbed soil volumes for different pipeline sizes.

Trench Comparison of 6-in. and 36-in. Pipeline Construction

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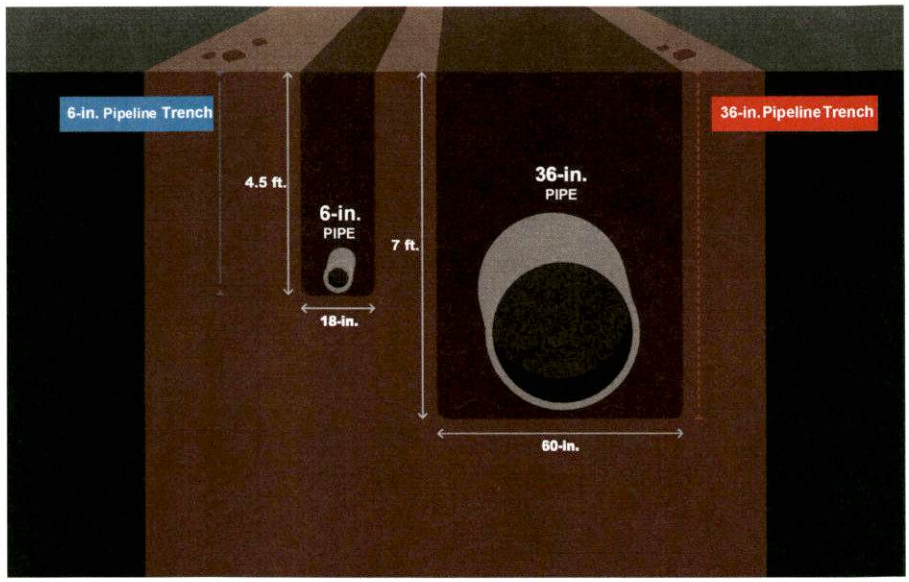

Right-of-Way Comparison of 6-in. and 36-in. Pipeline Construction

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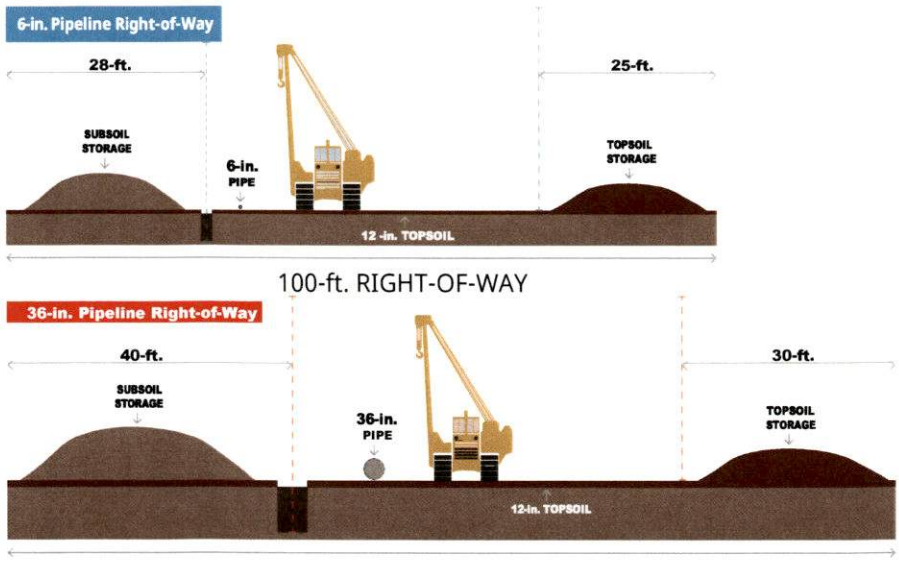

Summit Carbon Solutions seeks to lower greenhouse gas emissions by connecting industrial facilities via strategic infrastructure to safely and permanently store CO_2.

To learn more, contact:

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DRAIN TILE FAQS

A TRANSFORMATIVE DECARBONIZATION PLATFORM

Drain Tile Protection During Pipeline Construction

What is drain tile?

Drain tile is a system of perforated pipes installed underground to remove excess water from the root zone of agricultural land.

What are your contingency plans if tile is damaged during construction?

Any underground drain tile damaged, cut, or removed and found to be flowing, or which subsequently begins to flow, will be temporarily repaired as soon as possible, and the temporary repair will be maintained as necessary to allow for its proper function during construction of the pipeline. The temporary repairs will be maintained in good condition until permanent repairs are made.

How are you going to ensure my tile isn't crushed during construction?

Prior to repairing each tile, we insert a locatable push-rod from the repair to the edge of the right of way (ROW) in each direction to ensure the tile is functioning as intended across the entire ROW.

I don't have maps of my drain tile. What will you do to map tile?

We do extensive historical imagery research to find as much tile as possible. Any kind of map is helpful, even if you sketch the lines on an aerial photo. The more information we can gather up front, the better we can plan.

I am planning to install tile on my farm. How do I know the pipeline will not impact my project?

The best way to avoid future elevation conflicts between the pipeline and your drainage system is to share your drainage plan, including elevations, with the scouting team prior to pipeline construction. With this information provided Summit can plan accordingly to properly mitigate the disturbances the pipeline may occur on future tile installations.

Where do I send my tile maps?

Submit maps to **Kylie Kretz,** Pipeline Project Manager, at **kkretz@summitcarbon.com,** or your land representative.

What if a tile is missed during construction?

If tile crossing repairs are missed during construction, the site will be evaluated by Summit Carbon Solutions (Summit) and the landowner. If the issue is determined to be caused by construction activities, we will repair the system.

How do you handle clay and concrete tiles?

Tile will be inspected at the time of the reroute/crossing and repaired and replaced with materials to provide the same drainage capacity as the tile being repaired/replaced. All transitions will be made with proper fittings and adapters approved in the specifications provided.

How will you repair my drainage tiles?

Damaged tile will be replaced with heavy highway high-density polyethylene drainage tile and encased in a steel culvert across the pipeline ditch following industry best practices. The tile will be installed using GPS and laser technology to ensure proper drainage and repaired or replaced to provide the same drainage capacity. All connections will be made with industry-standard couplers and fittings.

What does GPS locating of the repairs mean?

GPS coordinates of each repair will be collected so that we can know the exact locations of all drain tiles in the pipeline easement. Maps will be provided to all landowners.

Will you provide the coordinates of the repairs to the landowner?

Each repair will be documented (including coordinates) using a geographic information system (GIS) and available data via live GIS dashboard. Data captured for these repairs will be available upon request.

Can the landowner do their own work?

Yes. The cost needs to be approved by Summit prior to commencing work.

Can the landowner use their own contractor? If so, what is the process for using the preferred contractor?

The landowner can recommend a contractor of their choosing, but all credential vetting, design, scheduling, and inspection must be managed through Summit to maintain project integrity and documentation standards. Contact **Kylie Kretz at kkretz@summitcarbon.com** to initiate the process of using your own contractor.

Is there a warranty on the work?

Summit will hold themselves indefinitely responsible for any repairs or rework necessary that is determined to be directly related to pipeline construction activities. We will handle all design, inspection, scheduling, and documentation on warranty work. The warranty of the drain tile will be captured in the addendum of the Easement Agreement for all landowners on the pipeline.

Summit Carbon Solutions seeks to lower greenhouse gas emissions by connecting industrial facilities via strategic infrastructure to safely and permanently store CO_2. To learn more, contact:

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FIELD ACTIVITY FAQS

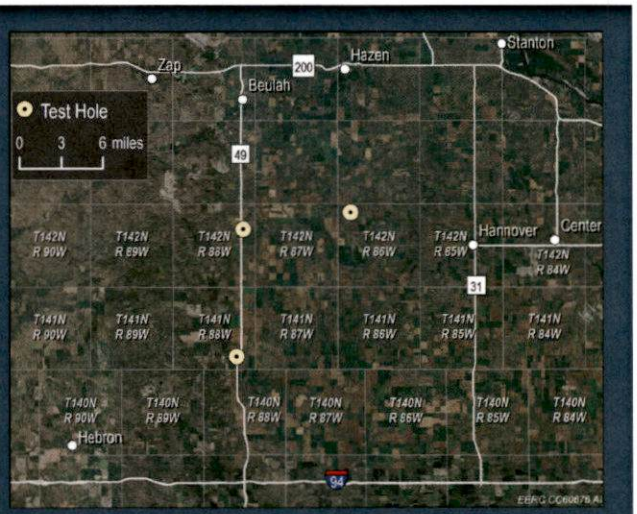
MIDWEST CARBON EXPRESS: A TRANSFORMATIVE DECARBONIZATION PLATFORM

Geologic Study – Drilling for Data in North Dakota

Rock samples (called core) and geologic data will be collected from three exploratory holes to be drilled in central North Dakota starting in late 2021. The data gathering is an essential part of investigating the feasibility of developing safe, permanent geologic storage for carbon dioxide, or CO_2, as part of the Summit Carbon Solutions Midwest Carbon Express project. No CO_2 is injected during these tests.

What Is the Benefit of Drilling a Test Hole?

A critical step in determining whether the potential storage zones are suitable for permanent CO_2 storage is drilling three test holes more than 2 miles deep to collect data, fluids, and rock samples. Information collected from this activity will be added to results from other geologic investigations and existing information to help scientists verify that the deep rock layers underlying the study area will safely and permanently store CO_2. Permits from state and county officials are needed to perform the test.



What Precautions Are Taken?

Land and groundwater resources are protected by impermeable barriers installed prior to and during drilling (illustrated at right).

How Will the Collected Data Be Used?

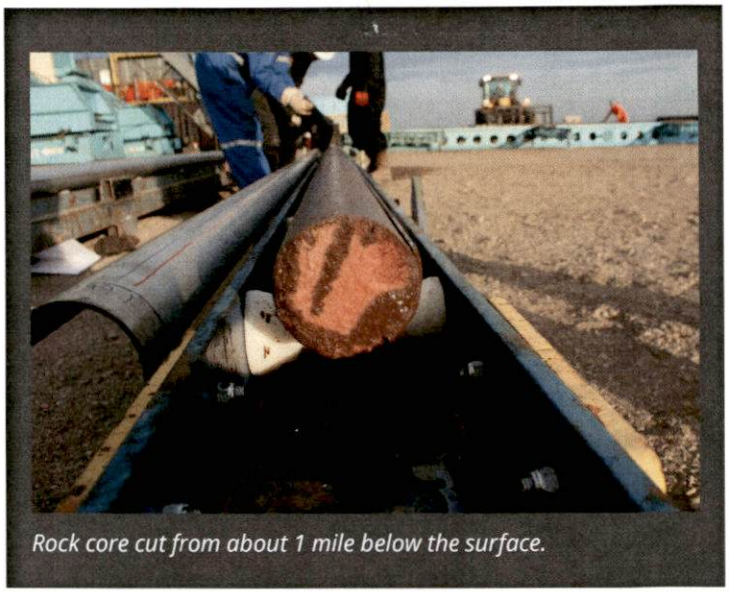
In the several months following the drilling activity, the rock core, fluids, and data will be analyzed and the results incorporated into a computer model of the subsurface. Using the model, geologists will determine how CO_2 moves in the rock layers and whether the system meets the criteria for safe, permanent geologic storage of CO_2. In addition, this information is necessary to prepare the required state permits for CO_2 injection and storage.

What Is Carbon Capture and Storage or CCS?

CCS captures CO_2 from industrial processes before it is emitted by the plant, transports the CO_2 to an injection site, and injects the CO_2 deep underground for safe, permanent storage in a suitable rock layer. CCS can help reduce the carbon footprint of large stationary facilities such as ethanol plants, coal-fired power plants, cement plants, oil and gas refineries, and agricultural processing plants.

As required under the permit to drill, groundwater resources are protected during drilling by using a special freshwater drilling mud, then isolated with layers of steel casing and concrete. The surface casing and cement remain as permanent protection for groundwater; see "Drill the Hole" on the back page for more details.

A drilling rig equipped to drill a test hole more than 2 miles deep to collect rock core and fluids as well as data about the rock layers, their fluids, and their pressures.



Rock core cut from about 1 mile below the surface.

What Are the Basic Steps for This Activity?

Drilling, sampling, and data collection follow the same practices and procedures used to characterize the geology of hydrocarbons, coal, and groundwater (also called the freshwater zone) resources in North Dakota.

Obtain Permits – Drilling the holes for geologic research requires permits from the North Dakota Industrial Commission Department of Mineral Resources and a temporary use permit from the county. The permits ensure that proper steps are taken to protect groundwater, the environment, and human safety.

Prepare Drill Site – Pad preparation entails leveling and laying aggregate on an area of land approximately 400 × 400 ft to make a flat, stable work area for drilling equipment. Each pad takes 10–14 days to complete.

Drill the Hole – Drilling is completed in four stages. Stage 1 involves digging a hole 90 feet deep, which is lined with steel pipe (conductor casing) and sealed with concrete to the surface. Stage 2 involves drilling a hole to at least 50 feet below the bottom of the freshwater zone (~1950 ft deep). Using special drilling mud prevents groundwater contamination. The hole is lined with steel pipe (surface casing), the outside of which is cemented from the bottom to the surface to protect freshwater sources during subsurface activities. Stage 3 continues drilling to a depth just above the seal overlying the potential storage zone (several thousand feet deep).

Multiple cylindrical rock samples called cores will be retrieved from a section of the hole using a specialized coring drill bit.

Stage 4, the coring stage, involves collecting multiple cylinders of rock called cores, which are cut using a special hollow drill bit. Stages 3 and 4 are repeated for each target zone, yielding hundreds of feet of core per zone.

Gather Downhole Data – After the core samples are removed, a truck with specialized instruments runs sensors into the hole, a technique called wireline logging. This standard drilling industry practice collects data about the rock layers, their fluids, and their pressures.

Close the Hole – The test holes are planned to be monitoring wells. After data collection is completed, the test holes will be lined with steel pipe (called casing) and concrete, then sealed temporarily to maintain integrity while data and rock core analysis are performed.

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