

SUMMIT CARBON SOLUTIONS, LLC
PETITION FOR HAZARDOUS LIQUID PIPELINE PERMIT
Docket No. HLP-2021-0001

EXHIBIT F

1.0 The Purpose Of The Project/How The Project Promotes The Public Convenience And Necessity

Summit Carbon Solutions, LLC (“Applicant”) proposes to build a carbon capture and sequestration project (“Project”) that will move up to 12 million metric tons of carbon dioxide (“CO₂”) annually from participating industrial facilities in Iowa, as well as CO₂ from facilities in Minnesota, North Dakota, South Dakota, and Nebraska to a sequestration site in North Dakota, where the CO₂ will be safely and permanently stored.

The Project greatly benefits Iowa’s critical ethanol and agriculture industries, enhancing their long-term environmental and economic sustainability. The ethanol industry supports approximately 340,000 jobs in the United States each year, including approximately 44,000 jobs in Iowa. The Applicant has long-term offtake agreements with 31 participating ethanol plants in its five-state footprint, as well as one fertilizer plant in North Dakota, including “on-ramps” to the system at 12 ethanol plants in Iowa. Utilizing the Project to capture and permanently store their CO₂ emissions enables participating ethanol plants to reduce their carbon footprint by as much as fifty percent (50%) putting them on the path towards producing a net-zero carbon fuel. Doing so greatly improves ethanol’s environmental impact and improves its ability to compete in low carbon fuel markets, which have increasingly stringent carbon reduction goals. Those markets represent a significant growth opportunity for low carbon fuels, such as ethanol, into the future. Without the Project, the Applicant’s 12 partner ethanol plants in Iowa would lack a viable option to capture and permanently store their CO₂ emissions because Iowa does not have proven subsurface geologic formations capable of storing the volume of CO₂ the plants produce. The Project is necessary for these ethanol plants because it provides a CO₂ transportation solution, which otherwise would not exist, and without which Iowa’s ethanol plants would be at a significant long-term disadvantage to ethanol plants in states like North Dakota and Illinois, which contain proven subsurface geologic storage formations.

The Project provides benefits not only for the ethanol industry, but for an even broader segment of the public -- the agriculture industry with which it partners. As the Applicant’s 12 Iowa ethanol partners earn more for producing low-carbon renewable fuel, it strengthens the economic prosperity and long-term viability of ethanol, and as a result, benefits Iowa’s family farms, and ultimately the entire state. The ethanol industry is the largest purchaser of Iowa corn, consuming approximately 53% of Iowa’s corn crop each year. A stable ethanol industry provides Iowa’s farmers with a reliable market for their corn and underpins the value of 26 million acres of Iowa farmland those crops are grown on.

Besides the 12 Iowa ethanol plants that the Applicant is partnered with, the Applicant has, and will continue to offer carbon transportation and storage services to a variety of industrial facility owners in Iowa and surrounding states, which for the first time gives them a viable opportunity to reduce their

carbon emissions. These facilities include other ethanol plants, nitrogen production, and more, which are under growing pressure to reduce their carbon footprints.

In addition to these benefits, the Project will provide economic benefits in Iowa and in the five-state region. A \$4.5 billion investment, the Project will generate between 14,000 and 17,000 jobs during construction, and 350 to 460 full-time jobs once operational. It will also result in significant tax revenue, including from the sale of goods and services during construction and long term as required to operate and maintain the pipeline, along with State and local community revenue from property taxes. Unlike many large infrastructure projects in Iowa, because the Applicant is based in Ames, Iowa, more of these revenues will stay in Iowa and be reinvested in Iowa.

The Project will also play an important role in reducing greenhouse gas emissions in the effort to combat climate change. As governments, industries, and consumers seek to reduce carbon emissions, a dramatic increase in carbon capture and sequestration (“CCS”) is crucial to achieving that goal. The Project is capable of moving up to 12 million metric tons of CO₂ every year for safe and permanent storage, which is the equivalent of removing approximately 2.6 million cars from our roads on an annual basis. Once operational, the Project will provide the largest and single most meaningful technology-based reduction of carbon emissions in the world.

The Project also represents the safest mode for transporting CO₂. As compared to rail and truck transportation, pipelines are the safest and most efficient means to transport hazardous liquids, according to statistics compiled by the United States Department of Transportation (“DOT”). Pipelines are heavily regulated and are subject to intense scrutiny and oversight. Time and time again, pipelines have proven to be the safest and most reliable form of transporting hazardous liquids.

2.0 The Nature Of The Lands, Waters, Public/Private Facilities Crossed

2.1 Land Use Overview

The Project’s proposed pipeline system will traverse Iowa for approximately 681 miles (8777.32 acres) through 29 counties, with workspace needed in one additional county. The Project’s proposed main line route begins in the eastern region of the state in Chickasaw county, moves westward across the state through Lyon County, and continues into South Dakota. According to the National Land Cover Database (“NLCD”), existing land use within the Project footprint is primarily identified as agricultural land (approximately 94%), including cultivated crops, hay, and pastureland. **Table 1** provides a detailed breakdown of land uses of the areas crossed by the Project.

Construction of the proposed Project will have no significant post-construction impacts to land use. Temporary impacts to land use including ground disturbance and vegetation removal will be mitigated to minimize impacts to agricultural productivity. Restoration will be in accordance with the board approved Agricultural Impact Mitigation Plan (“AIMP”, Exhibit I), and applicable landowner agreements. Disturbed land will be recontoured to approximate pre-existing conditions and disturbed structures, ditches, bridges, culverts, fences, and slopes will be restored. Rocks (>3”) that are exposed during construction activities, warning signs, and other construction materials will be removed. Temporary gates will be replaced with permanent fences unless the landowner requests otherwise. Temporary losses due to crop disturbance will be compensated.

Table 1: Summary of Iowa Counties Land Use for Project Construction Footprint¹
Filed with the Iowa Utilities Board on May 20, 2022, HLP-2021-0001

Counties	Barren Land (acres)	Cultivated Crops (acres)	Deciduous Forest' (acres)	Developed, High Intensity (acres)	Developed, Low Intensity (acres)	Developed, Medium Intensity (acres)	Developed, Open Space (acres)	Ephemeral (acres)	Grasslands (acres)	Hay/Pasture (acres)	Intermittent (acres)	Manmade Pond (acres)	Mixed Forest (acres)	Natural Pond (acres)	PEM² (acres)	Perennial (acres)	PFO² (acres)	PSS² (acres)	Shrub/ Scrub (acres)	Grand Total
Boone	0.00	15.39	0.00	0.00	0.00	0.00	1.25	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	16.84
Cerro Gordo	0.00	327.54	0.00	0.49	4.97	1.55	6.82	0.00	1.42	1.76	0.01	0.00	0.00	0.00	6.69	0.03	0.71	0.00	0.00	351.99
Cherokee	0.00	340.28	0.00	0.74	0.94	1.10	7.58	0.00	0.92	7.46	0.02	0.00	0.33	0.00	3.08	0.40	0.61	0.00	0.00	363.48
Chickasaw	0.00	212.68	2.32	1.19	2.40	1.25	3.50	0.02	14.34	11.69	0.02	0.00	0.48	0.00*	5.45	0.77	4.86	0.42	0.00	261.41
Clay	0.00	481.71	0.67	1.33	2.31	2.69	18.03	0.01	0.50	33.90	0.01	0.00	0.00	0.00	8.17	0.37	0.23	0.00	0.00	549.93
Crawford	0.00	264.37	3.88	0.00	1.37	0.45	5.67	0.00*	7.11	31.55	0.09	0.00	0.23	0.00	2.72	0.35	2.79	0.24	0.01	320.84
Dickinson	0.00	251.03	0.00	0.20	3.77	2.18	6.17	0.01	4.70	7.31	0.00	0.00	0.00	0.00	2.05	0.04	0.00	0.00	0.00	277.45
Emmet	0.00	48.07	0.00	0.00	0.79	0.07	0.55	0.00	4.65	4.87	0.00	0.00	0.00	0.00	1.16	0.30	0.37	0.00	0.00	60.82
Floyd	0.00	273.98	3.10	0.00	3.30	1.40	5.05	0.01	5.75	22.02	0.02	0.21	0.00	0.00	3.81	0.92	1.14	0.71	0.00	321.42
Franklin	0.00	180.06	0.00	0.00	1.71	0.36	3.62	0.01	0.00	1.08	0.01	0.00	0.00	0.00	7.42	0.01	0.00	0.00	0.00	194.26
Fremont	0.00	45.34	0.32	0.00	0.47	0.75	0.80	0.00	0.37	0.92	0.01	0.00	0.00	0.00	0.74	0.27	0.14	0.00	0.00	50.13
Greene	0.00	124.91	0.00	0.00	0.52	0.21	1.54	0.00	0.11	0.00	0.01	0.00	0.00	0.00	3.10	0.01	0.00	0.00	0.00	130.40
Hamilton	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
Hancock	0.00	395.08	0.00	0.00*	2.84	0.79	17.29	0.03	0.00	3.03	0.01	0.00	0.00	0.00	7.39	0.34	0.00	0.06	0.00	426.87
Hardin	0.00	397.38	2.49	0.03	4.42	1.93	10.89	0.03	1.43	15.46	0.00	0.00	0.79	0.00	6.75	0.51	1.00	0.00	0.00	443.11
Ida	0.00	315.43	0.00	0.15	1.27	1.38	8.21	0.01	0.14	14.85	0.02	0.00	0.00	0.00	5.55	0.30	0.08	0.06	0.00	347.45
Kossuth	0.00	305.30	0.89	0.00	1.30	0.47	7.17	0.02	0.47	13.90	0.03	0.00	0.00	0.00	5.62	0.30	1.15	0.00	0.00	336.62
Lyon	0.00	122.06	7.28	0.18	0.00	0.44	3.89	0.04	23.95	2.48	0.07	0.00	0.00	0.00	1.92	0.20	0.08	0.00	0.00	162.61
Montgomery	0.00	204.54	0.92	0.00	1.90	0.00	2.80	0.04	1.41	8.65	0.05	0.00	0.00	0.00	1.43	0.26	2.67	0.08	0.00	224.74
O'Brien	0.17	438.62	0.00	0.13	1.01	2.11	6.94	0.03	2.01	0.07	0.05	0.00	0.00	0.00	6.23	0.19	0.11	0.00	0.00	457.67
Page	0.00	74.45	0.18	0.00	0.49	0.22	0.87	0.06	0.90	4.20	0.01	0.00	0.00	0.00	0.88	0.08	0.04	0.00	0.00	82.39
Palo Alto	0.00	308.82	0.00	0.13	1.21	0.05	3.99	0.00	1.28	3.01	0.01	0.00	0.00	0.00	13.28	0.39	0.82	0.41	0.00	333.39
Plymouth	0.58	294.72	0.11	0.33	2.03	2.02	3.80	0.03	4.79	4.93	0.07	0.00	0.00	0.00	5.11	0.27	0.40	0.00	0.00	319.19
Pottawattamie	0.00	286.54	1.73	0.22	3.81	0.48	2.72	0.02	2.44	16.85	0.06	0.00	0.00	0.00*	2.98	0.29	1.07	0.08	0.00	319.29
Shelby	0.00	303.23	0.00	0.40	3.28	0.51	5.16	0.00	0.03	0.00	0.00*	0.00	0.00	0.00	1.70	0.08	0.00	0.00	0.00	314.39
Sioux	0.00	655.09	0.00	0.31	1.88	1.12	17.01	0.13	2.62	5.18	0.16	0.00	0.00	0.00	5.35	0.52	0.84	1.19	1.16	692.56
Story	0.00	199.23	0.00	0.00	3.58	1.09	8.37	0.03	0.05	4.48	0.04	0.00	0.00	0.00	1.43	0.11	0.05	0.04	0.00	218.51
Webster	0.00	343.00	4.01	0.22	3.41	0.59	5.95	0.03	1.26	4.27	0.00	0.00*	0.16	0.00	8.31	0.36	0.27	0.00	0.00	371.86
Woodbury	0.00	239.53	0.00	0.41	1.36	0.35	6.40	0.03	1.66	2.64	0.02	0.00	0.00	0.00	2.34	0.43	0.00	0.00	0.00	255.16
Wright	0.02	534.37	0.05	0.00	3.39	0.85	9.18	0.02	4.63	13.64	0.03	0.00	0.00	0.00	4.82	0.64	0.50	0.30	0.00	572.44
Grand Total	0.76	7982.86	27.95	6.46	59.71	26.39	181.23	0.62	89.02	240.23	0.80	0.21	2.00	0.00*	125.64	8.73	19.96	3.58	1.16	8777.32
*Represents data that has been rounded to the nearest hundredth and is a number > 0 but < 0.01																				
¹ Numbers are rounded to the nearest hundredth																				
² PFO - Palustrine Forested Wetland; PEM - Palustrine Emergent Wetland; PSS - Palustrine Scrub-Shrub Wetland																				

2.2 Landforms and Topography

Iowa's landforms vary widely and are formed from prehistoric glacial melting and strong winds. The glacial melt combined with the strong winds carried sediment and other earth materials through the Iowan landscape to form what it is today. The Project will cross six landform regions of Iowa, including:

- Missouri Alluvial Plain;
- Loess Hills;
- Northwest Iowa Plains;
- Des Moines Lobe;
- Southern Iowa Drift Plain; and
- Iowan Surface.

The flat area on the western portion of Iowa, known as the Missouri Alluvial Plain, is a drainage network carrying water and sediment to the Missouri River. This Missouri Alluvial Floodplain landform is characterized by low relief and periodic disturbance from flooding and forms the southwestern two thirds of Iowa's border. This landform was formed from glacial meltwater when rivers carved valleys and partially filled them with layered deposits of gravel, sand, silt, and clay. The landforms deep silty and clayey alluvial soils support extensive cropland agriculture.

The Loess Hills landform consists of wind-deposited silt composed predominantly of closely packed grains of quartz. This landform is comprised of well defined, steep prairie ridges with alternating peaks and valleys. The thickness of loess in the Loess Hills is generally more than 60 feet. The high-relief terrain within this region has tended to isolate its distinctive landforms from encroachment by agriculture and urbanization and thus protect sizable tracts of its original prairie. This is a regional landform category and no adverse impact to these topographic features is anticipated on the pipeline route.

The Northwest Iowa Plain is generally colder and dryer than the other Iowa landforms, with an average annual precipitation of 26 inches. This landform provides effective drainage to the landform region through its lengthy stream network. Due to the landform's proximity to the Loess Hills landform, the Northwest Iowa Plains contains windblown loess throughout the region, ranging from a depth of three feet on the east side to thirteen feet on the western side. The elevation of this region ranges from 1,400 – 1,600 feet above mean sea level ("AMSL") and is known as Iowa's highest landform.

The Des Moines Lobe landform contains most of Iowa's natural lakes along with clustered ponds and marshes, which are referred to as prairie potholes. This region is known as Iowa's most recent landform as it was formed by glaciers approximately 12,000 – 14,000 years ago. The landscape is dominated by rolling hills and depressional prairie potholes.

The Southern Iowa Drift Plains is the largest of the landforms in Iowa and consists of rolling hills and an established drainage system. A topographical shift occurs when traveling east to west in the Southern Iowa Drift Plains, going from a higher quantity of flat uplands to steep and wooded terrain most prevalent near floodplain valleys. Karst topography is found in this region, however, the Applicant will survey for and avoid any karst features if they are present along the route. To date, no surface indications or any springs, caves, or sinkholes have been found during field surveys.

The lowan Surface consists of gentle slopes and gradual stepped surfaces which increase from the major river valleys to the division of the water basin. Drainage throughout the lowan Surface is well established, yet some areas may have poor draining leading to the occurrence of wetlands.

2.3 Waters and Wetlands

The proposed Project route will pass through 26 different 8-digit Hydrologic Unit Code (“HUC”) Watersheds: Lower Big Sioux, Rock, Floyd, Little Sioux, Monona-Harrison Ditch, Maple, Blackbird-Soldier, Boyer, Big Papillion-Mosquito, West Nishnabotna, East Nishnabotna, Keg-Weeping Water, Upper Des Moines, East Fork Des Moines, Boone, Upper Iowa, West Fork Cedar, Winnebago, Shell Rock, Upper Cedar, Upper Wapsipinicon, Turkey, Middle Des Moines, North Raccoon, Middle Cedar, and South Skunk.

The proposed Project crosses approximately 89 named waterbodies and multiple unnamed wetland and waterbody features for a total length of 18.17 miles across 30 different counties (approximately 2.6% of the route length). **Table 2** provides a summary of the length and acres of these features crossed by the proposed Project.

Table 2: Summary of Project Construction Footprint Wetland and Waterbody Crossings by County ¹		
County	Sum of Centerline Crossing Length (ft)	Sum of Centerline Crossing Length (miles)
Boone	74.64	0.01
Cerro Gordo	4,310.42	0.82
Cherokee	2,522.16	0.48
Chickasaw	6,921.21	1.31
Clay	5,320.41	1.01
Crawford	3,632.38	0.69
Dickinson	1,105.57	0.21
Emmet	824.23	0.16
Floyd	4,632.77	0.88
Franklin	4,442.15	0.84
Fremont	809.54	0.15
Greene	1,793.39	0.34
Hamilton	0.00	0.00
Hancock	4,397.97	0.83
Hardin	4,979.12	0.94
Ida	3,447.45	0.65
Kossuth	4,432.73	0.84
Lyon	1,433.19	0.27
Montgomery	2,709.79	0.51

Obrien	4,056.28	0.77
Page	618.01	0.12
Palo Alto	8,294.14	1.57
Table 2: Summary of Project Construction Footprint Wetland and Waterbody Crossings by County ¹		
County	Sum of Centerline Crossing Length (ft)	Sum of Centerline Crossing Length (miles)
Plymouth	3,647.93	0.69
Pottawattamie	2,637.09	0.50
Shelby	1,026.47	0.19
Sioux	5,362.20	1.02
Story	1,147.57	0.22
Webster	5,553.18	1.05
Woodbury	1,701.49	0.32
Wright	4,088.42	0.77
Grand Total	95,921.88	18.17
¹ Numbers are rounded to the nearest hundredth		

The Applicant will coordinate with the U.S. Army Corps of Engineers (USACE) and the state of Iowa to ensure jurisdictional wetlands and waterbodies are properly permitted in accordance with Section 10 of the Rivers and Harbors Act of 1899 and Sections 401, 402, and 404 of the Clean Water Act.

2.4 Public and Private Facilities

The proposed Project footprint crosses a total of 926.39 feet or 0.18 miles of public land. **Table 3** provides a summary of public lands crossed by the Project.

Table 3: Public Lands Crossed by Project Construction Footprint								
Project Feature ID	County Name	Approx. MP	Length Crossed (ft)	Public Land Name	Public Land Type	Responsible Agency	Agency Type	HDD/Bore
IAM-101	Cerro Gordo	55.08	50.00	Jefferson Highway Heritage Byway	Scenic Byway	Iowa DOT	State	Yes
IAL-308	Crawford	58.10	120.00	Lincoln Highway Heritage Byway	Scenic Byway	Iowa DOT	State	Yes
IAL-308	Crawford	58.08	120.00	Lincoln Highway Heritage Byway	Scenic Byway	Iowa DOT	State	Yes

IAL-301	Hardin	38.97	201.96	Iowa River Greenbelt Wildlife Management Area	Local Conservation Area	Iowa Department of Natural Resources	State	Yes
IAL-301	Hardin	50.97	50.00	Jefferson Highway Heritage Byway	Scenic Byway	Iowa DOT	State	Yes

Table 3: Public Lands Crossed by Project Construction Footprint

Project Feature ID	County Name	Approx. MP	Length Crossed (ft)	Public Land Name	Public Land Type	Responsible Agency	Agency Type	HDD/Bore
IAL-301	Hardin	17.55	50.00	Jefferson Highway Heritage Byway	Scenic Byway	Iowa DOT	State	Yes
IAL-308	Shelby	38.65	50.00	Western Skies Scenic Byway	Scenic Byway	Iowa DOT	State	Yes
IAL-308	Shelby	33.65	50.00	Western Skies Scenic Byway	Scenic Byway	Iowa DOT	State	Yes
IAL-301	Story	13.70	99.78	Praeri Rail Trail	Local Park	Story County	County	No
IAL-302	Webster	23.37	84.65	Brushy Creek State Park	State Park	Iowa Department of Natural Resources	State	Yes
IAL-318	Woodbury	18.76	50.00	Loess Hills National Scenic Byway	Scenic Byway	Iowa DOT	State	Yes

Notes:

The Project's proposed route travels through the Iowa Wetland Management District and proposed planning area for expanding the Northern Tallgrass Prairie National Wildlife Refuge. (The planning area for the Refuge is the entire northwest corner of Iowa and allows the US Fish and Wildlife Service to seek additional opportunities to acquire land and incorporate into the Refuge.) The Iowa Wetland Management District spans across 35 counties in Iowa. In addition, 18 of these counties have waterfowl protection areas (easements with landowners to protect waterfowl habitat—mostly wetlands). Of the 35 counties included in the Iowa Wetland Management District, the proposed Project travels through 21 of these counties. The proposed route of the Project does not cross any locations designated as waterfowl protection areas.

The Northern Tallgrass Prairie National Wildlife Refuge was created to preserve and protect tallgrass prairies in Minnesota and northwestern Iowa. The proposed route crosses through 22 of the 36 counties within which the Northern Tallgrass Prairie National Wildlife Refuge is located. However, the Project will

not traverse the refuge holdings. The pipeline routes traverse areas planned for future acquisition if agreements are reached with landowners and funding becomes available.

The Project intersects a portion of the Brushy State Creek Park, Iowa DOT Scenic Byways, and management areas including Iowa River Greenbelt Wildlife Management Area, Iowa Wetland Management Districts, proposed additional area for the Northern Tallgrass Prairie National Wildlife Refuge, and the Praeri Rail Trail.

The above-mentioned public crossings account for less than 1% of the of the proposed Project route through Iowa. Efforts were made to ensure the proposed Project route adjacent to existing utility corridors where feasible to prevent new impacts to public lands. Although no significant land use concerns are anticipated, the Applicant is committed to maintaining communication and coordination with appropriate federal, state, and local agencies and departments to minimize potential impacts during construction and operations.

3.0 Consideration of Alternative Routes

During preliminary review of alternative routes for the Project, the Applicant performed extensive analyses utilizing Geographic Information System (“GIS”) programs to determine a preferred pipeline route based on multiple datasets. Datasets utilized during routing analyses included engineering (e.g., existing railroads, pipelines, and other utilities); environmental (e.g., critical habitat, fault lines, state parks, national forests and national registry of historic places); and land use (e.g., dams, airports, schools). The routing software considers a multitude of possible routes and optimizes for the information provided including the avoidance of certain features.

From this GIS-aided information, the Applicant’s expert consultants derived a proposed route that would avoid or minimize features identified as moderate risk, and exclude features identified as high risk, while following undeveloped open areas and existing corridors and considering constructability, engineering, and environmental issues. This process included conducting further analyses, as well as consideration of the conditions on the ground including the results of cultural, environmental, and civil surveys, and feedback from agency consultations and landowner discussions. These refinements to the route include, for example, slight alignment changes to better avoid conservation easements, better avoidance of wind turbines and underground wind turbine collection systems, and to better facilitate the use of horizontal directional drilling (“HDD”) where appropriate, as well as highly local modifications to accommodate landowner preferences over their specific parcels. Approximately 94% of the proposed route is in agricultural lands, a common and generally preferred area for infrastructure.

4.0 Present and Future Land Use

The proposed pipeline will traverse 29 Iowa counties, with a small amount of workspace in one additional county, as follows: Boone, Cerro Gordo, Cherokee, Chickasaw, Clay, Crawford, Dickinson, Emmet, Floyd, Franklin, Fremont, Greene, Hamilton (workspace only), Hancock, Hardin, Ida, Kossuth, Lyon, Montgomery, Page, Palo Alto, Pottawattamie, O’Brien, Plymouth, Shelby, Sioux, Story, Webster, Woodbury, and Wright. Approximately 90% of the land crossed in Iowa is identified as cultivated crop. No significant impacts are anticipated as a result of the construction and operation of the Project and associated facilities, and the Project can be constructed and operated consistent with present and future land uses.

Table 4 lists federal and state permits that may be required. While consultations are under way, these permits have not been obtained at this time. Many of these permits and consultations occur closer to construction when a final route is known, and construction details are also known. The Applicant will also work with local county officials to verify if any additional permits or approvals are needed prior to the construction of the Project for local issues such as crossing county facilities, road uses, and floodplains.

Table 4: Federal and State Permit Tracker				
Count	Permit or Approval Document Name	Agency	Permit Jurisdiction	Description
1	USACE Section 404 of the Clean Water Act (“CWA”) and Section 10 Permit (Rivers and Harbors Act of 1899)	US Army Corps of Engineers (“USACE”) - Omaha and Rock Island Districts	Federal	Regulates the discharge dredged or fill material into the waters of the US, including wetlands.
2	USACE Section 408, Navigation and Navigable Waters (33 USC 408)	USACE - Omaha and Rock Island Districts	Federal	Allows permanent or temporary use or alteration of a USACE Civil Works project including navigable waterways.
3	Section 7 Endangered Species Act (“ESA”) Consultation	United States Fish and Wildlife Service (“USFWS”)	Federal	Consultation for potential impacts on federally protected species (if there is a federal action -USACE Section 10/404 permit issuance). Consultation may only apply to where federal permits have authority.
4	Migratory Bird Treaty Act Consultation	USFWS	Federal	Consultation for potential impacts on migratory birds.
5	Fish and Wildlife Coordination Act Consultation	USFWS	Federal	Consultation for potential impacts on fish and wildlife.
6	Conservation Easements: Wetland Reserve Program (“WRP”), Conservation Reserve Program (“CRP”)	Natural Resource Conservation Service (“NRCS”)	Federal	Consultation to determine if pipeline crossing of conservation easements is compatible with easement deed.
7	General Permit #2 - Storm Water Discharge Associated with Industrial Activity for Construction Activities	Iowa Department of Natural Resources (“IDNR”)	State	Storm Water Pollution Prevention Plan (“SWPPP”) must be completed before submission. Permit applications will be submitted in accordance with construction start dates.
8	General Permit #6 - Discharge Associated with Well Construction and Well Service Discharges	IDNR	State	Permit applications will be submitted in accordance with construction start dates if groundwater wells needed for water sources.
9	General Permit #8 – National Pollutant Discharge Eliminations System (“NPDES”) and State Operation permit, Hydrostatic Testing, Tank Ballasting, and Water Lines	IDNR	State	Permit applications will be submitted in accordance with construction start dates.
10	General Permit #9 - NPDES and State Operation permit, Dewatering Activities and Residential Geothermal Discharges	IDNR	State	Permit applications will be submitted in accordance with construction start dates.

11	Floodplain Permit	IDNR	State	To determine if approval by IDNR is required. Approval required depending on specific crossing characteristics and proposed restoration techniques. If required, Joint Application process with IDNR and USACE.
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Table 4: Federal and State Permit Tracker				
Count	Permit or Approval Document Name	Agency	Permit Jurisdiction	Description
12	Sovereign Lands Permit	IDNR	State	State-owned lands and waters under the jurisdiction of the commission include: Meandered Sovereign Lakes, Meandered Sovereign Rivers, State Forests, Wildlife Management Areas, State Parks, and State Preserves. To determine if approval by IDNR is required. Approval required depending on specific crossing characteristics and proposed restoration techniques. If required, Joint Application process with IDNR and USACE.
13	401 Water Quality Certification (“WQC”)	IDNR	State	Considers issuance of permit for stream and wetland crossings; consult for Section 404 process. If project permitted under NWP 58, then 401 WQC has been approved as part of the USACE Nationwide Permit Program.
14	Water Use Permit	IDNR	State	A Water Use Permit is required of any person or entity that withdraws at least 25,000 gallons in a 24-hour period during any calendar year.
15	Minor Non-Reoccurring Use of Water Permit	IDNR	State	Required for projects where at least 25,000 gallons of water is used in a 24-hour period but which are of no more than a one-year duration, such as well drilling, highway construction activities, etc.
16	Construction Permit	IDNR	State	Will need more detail before a determination can be made
17	Endangered Plants and Wildlife is Chapter 481B of the Code of Iowa.	IDNR	State	Consultation regarding state and federal threatened and endangered species, rare natural communities, and sensitive habitats. Consultation will be part of Joint Permit process if it is required.
18	Section 106 National Historic Preservation Act (“NHPA”) Consultation	Iowa State Historic Preservation Office (“SHPO”)	State	Section 106 consultation process through identification, evaluation, protection, preservation, and development and/or mitigation efforts.
19	Application to Perform Work within State Highway Right-of-Way	IDOT	State	Reviews/authorizes the crossing of state highways.

5.0 Inconvenience or Undue Injury which may Result to Property Owners

Much of the inconvenience that may be related to the Project is routine, and is anticipated for pipeline and other Board-permitted infrastructure projects, as addressed by Chapters 9 and 13 of the Board's rules. This includes traffic and construction equipment, typical temporary construction-related or maintenancerelated noise and activities, as well as temporary disruption to the land, all of which are anticipated and common inconveniences. The Project is being designed and constructed, and will be operated and maintained, to meet or exceed applicable Federal DOT Pipeline and Hazardous Materials Safety Administration ("PHMSA") regulations in an effort to avoid and minimize the chance of an emergency involving the pipeline that could result in inconvenience or undue injury. The methods for promptly and effectively addressing any such events will be fully addressed in the Facility Response Plan ("FRP") required under PHMSA rules and will be completed prior to commencement of operations on a timeline consistent with PHMSA requirements.

PHMSA administers the national regulatory program to ensure safe transportation of hazardous materials by pipelines; it develops safety regulations and risk management approaches to encompass safety in pipeline design, construction, testing, operation, maintenance, and pipeline facilities emergency response. PHMSA promulgates and enforces federal pipeline safety standards for hazardous liquids pipelines in 49 Code of Federal Regulations ("CFR") Parts 194 and 195, which are in place to protect the public.

With regard to the more common, construction related inconveniences and injuries, additional information regarding settlement of damage claims was presented in the public information meetings held in each county, and The Applicant's Statement Concerning Settlement of Damage Claims was included with each notice of such meetings. A copy of this document has been filed simultaneously herewith at Exhibit G-1. The document includes The Applicant's statements regarding crop loss and damages due to compaction, ruts, and erosion; in addition, the document identifies the manner of damage payments and outlines a dispute resolution procedure.

On a long-term basis, once the pipeline is buried and land restoration occurs, normal operation of the Project will create minimal inconvenience. In most locations (other than above-ground appurtenances), farming – the current use of over 90% of the acres included in the route -- can be conducted over the top of the pipeline.

References

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