SOUTH DAKOTA DEPARTMENT OF
GAME, FISH AND PARKS
523 EAST CAPITOL AVENUE | PIERRE, SD 57501

February 16, 2022

John Beaver
WESTECH Environmental Services Inc.
PO Box 6045
Helena, MT 59604

RE: Summit Carbon Solutions
Midwest Carbon Express Project
Proposed Carbon Capture Pipeline
SD Public Utilities Docket HP22-001
South Dakota Game, Fish and Parks Siting Recommendations

Dear John,

Thank you for contacting South Dakota Game, Fish and Parks (GFP) regarding the proposed Midwest Carbon Express carbon capture and sequestration pipeline project in Beadle, Brown, Clark, Codington, Edmunds, Hamlin, Hand, Hyde, Kingsbury, Lake, Lincoln, McCook, McPherson, Miner, Minnehaha, Roberts, Spink, Sully, and Turner counties, South Dakota. The proposed project would include the construction of approximately 469 miles of underground pipeline through South Dakota as well as 4 pump stations, 16 mainline valves, 5 launcher-receiver sites, 8 contractor/laydown yards and 5.22 miles of access roads.. We strive to collaborate with developers to balance wildlife conservation with development in our state. The purpose of this letter is to provide biological information, siting recommendations (e.g. avoidance, minimization and mitigation measures) and wildlife survey recommendations for the development and siting of the proposed project. We have prepared the following information to address environmental concerns regarding threatened, endangered, and rare species, areas of high conservation value, and species of concern in South Dakota. Impacts to wildlife and their associated habitats can be minimized by using responsible, wildlife friendly siting recommendations early in the project planning stage of development.

The Midwest Carbon Express project was originally introduced to GFP in September of 2021 via a request for data from the South Dakota Natural Heritage Database. In January of 2022, a project was submitted to the South Dakota Environmental Review Tool that included the footprint of the Midwest Carbon Express Project. GFP staff was contacted in mid-January 2022 by WESTECH Environmental Services requesting a consultation for Threatened and Endangered species and potential survey recommendations for the project. GFP Staff met with WESTECH on January 25th 2022, via Microsoft Teams. GFP appreciates the early engagement with us at this stage of project planning. We are providing this letter as a follow-up to that meeting, and to document our wildlife related concerns and recommendations for the Midwest Carbon Express Project.

SOUTH DAKOTA NATURAL HERITAGE DATABASE

The South Dakota Natural Heritage Program monitors species at risk. Species at risk are those that are listed as threatened or endangered at the state or federal level or those that are rare. Rare species in South Dakota are found at the periphery of their range, have isolated populations or are species of which we simply do not have extensive information. A list of species monitored by the Heritage Program can be found at https://gfp.sd.gov/natural-heritage-program/. We recommend a ***yearly database search***, to ensure that developers are aware of changing patterns in wildlife use at a site. **Please note many places in South Dakota have not been surveyed for rare or protected species and the absence of a species from the database does not preclude its presence from your project area.**

Species records can be requested through the Natural Heritage Program at this link: https://gfp.sd.gov/forms/heritagedata/. Alternatively, GFP has an online Environmental Review Tool available for project planning purposes: https://ert.gfp.sd.gov/ This tool is free to use and has a number of publicly available spatial layers as well as the capability to generate a report of species that may be present. Please note that this tool will not give specific locations of sensitive species; only a list of species that may be found in the project area. Perennial Environmental services submitted a project to the environmental review tool, and a resulting report (Project ID: 2022-01-11-262) was generated and provided to the project proponent. The results in the report include any species within 5 miles of the proposed project area. We have attached an updated copy of the resulting report to this letter for your reference.

We have completed an initial search of the project area and found the following records within 1 mile of the proposed project boundary:

- Topeka Shiner (*Notropis topeka*), federally endangered
- Whooping Crane (*Grus americana*), Federally and state endangered
- Lined Snake (*Tropidoclonion lineatum*), state endangered
- Northern Redbelly Dace (*Chrosomus eos*), state threatened
- Bald eagle (*Haliaeetus leucocephalus*) nest, protected by Bald and Golden Eagle Protection Act (BGEPA)
- Swainson's Hawk (*Buteo swainsoni*) nest; protected by the Migratory Bird Treaty Act (MBTA), multiple records
- Ferruginous Hawk (*Buteo regalis*) nest; protected by the MBTA, multiple records
- Cooper's Hawk (*Accipiter cooperii*) nest; protected by the MBTA
- Great Blue Heron (*Ardea Herodias*) nesting colony; protected by the MBTA

HABITATS IMPORTANT TO CONSERVATION IN SOUTH DAKOTA

Native Grasslands

Grasslands are of high conservation value in South Dakota, and many acres are converted to cropland annually. Approximately 70% of the native mixed-grass prairie has been lost in eastern South Dakota, and approximately 32% has been lost in western South Dakota (Wright and Wimberly 2013, Bauman et al. 2016, Bauman et al. 2016). All grasslands within the project boundary should be identified. Untilled grasslands, large grassland blocks and grasslands with native plant species are of particular importance and special care should be taken to avoid these areas. Other grassland types such as native rangeland, grazed grasslands (with native plant species), pasture (grazed grasslands with non-native plant species), and Conservation Reserve Program lands (formerly tilled lands planted to vegetative cover for erosion control and wildlife habitat) also serve as wildlife habitat. Placement of project infrastructure in contiguous blocks of grasslands causes fragmentation and result in less suitable habitat for grassland dependent species. Early identification of grassland areas provides the information needed to avoid further grassland loss, degradation, and fragmentation. Game, Fish and Parks recommends using both the National Land Composition Data (NLCD) layer and a layer available from the SDSU Extension office that identified potentially undisturbed lands in easter South Dakota (Bauman et al. 2016) to identify and quantify grassland habitats that may be impacted by the construction of this project. The report and associated spatial layer associated with Bauman et al. (2016) can be found at: https://openprairie.sdstate.edu/.

Our initial review of the proposed project area indicates there are relatively large proportions of potentially undisturbed grasslands within the proposed project area in McPherson, Hyde and Hand counties. Potentially undisturbed grasslands also occur in portions of Brown, Spink and Sully counties. The majority of grassland resources in the remaining project area (southeast South Dakota) occur near riparian areas and associated with locations where the proposed project crosses streams (Big Sioux River, Timber Creek, James River etc.), with the remainder of the proposed project area being located in agricultural and other disturbed lands.

Grasslands should not be "ranked" or considered less important solely based on height of grass or composition of species. Some grassland dependent species such as Sharp-Tailed Grouse (*Tympanuchus phasianellus*), Baird's Sparrow (*Centronyx bairdii*), and Northern Harriers (*Circus hudsonius*) require grassland patches with relatively tall (12 inches or more) vegetation and accumulation of residual litter characterized by light grazing pressure (Bakker 2005, Johnson et al. 2010, Shaffer and DeLong 2019, Bakker 2020). Other species such as Ferruginous Hawks *(Buteo regalis)*, Burrowing Owl (*Athene cunicularia*), Thick Billed Longspur (*Rhynchophanes mccownii*), and Chestnut-collared Longspur (*Calcarius ornatus*) require open expanses of grasslands characterized by short vegetation that is typical of moderate to heavy grazing pressure (Bakker 2005, Johnson et al. 2010, Shaffer and DeLong 2019, Bakker 2020). Sprague's Pipit (*Anthus spragueii*), Long-billed Curlew *(Numenius americanus)*, Bobolink (*Dolichonyx oryzivorus)* and Dickcissel (*Spiza americana*) require grasslands with moderate grass heights and periodic disturbance from grazing, mowing or prescribed fire (Bakker 2005, Johnson et al. 2010, Shaffer and DeLong 2019, Bakker 2020). Although various patches of grassland habitat can appear in "better" or "worse" condition based on vegetation height and plant species composition, GFP considers all grassland habitat as important for wildlife based on the information presented above.

Wetlands and Streams

The prairie pothole region of South Dakota supports a wide diversity of bird species (~80 species; Johnson et al. 1997). All wetlands and other waterbodies within the project boundary should be identified and delineated. Note that wetland delineation should occur during time periods when a basin typically holds water (late spring-early summer) and that the spatial extent of a wetland may change

within or among years. Please see the US Army Corps of Engineers Midwest Regional Supplement for details on prairie pothole wetland delineation (USACE 2010). We recommend avoiding siting the project in wetlands, streams or within a wetland complex (multiple wetland basins adjacent to each other that may be hydrologically connected). Wetland complexes support higher species richness compared to isolated wetlands of similar size (Naugle et al. 1999). If streams (particularly stream crossings where Topeka Shiners or Northern Redbelly Dace may be present) cannot be avoided, we recommend horizontal directional drilling to avoid impacts to this federally endangered species.

Invasive and Non-native Plant Species

Ground disturbing activity can increase opportunity for the introduction and establishment of invasive, non-native plant species. Based on the information listed above, GFP recommends controlling noxious weeds at the project site, as well as revegetating with native, weed-free seed mixes.

SPECIES OF CONCERN

Grassland Nesting Birds

Grassland nesting bird populations have been declining faster than any other bird group in North America (Peterjohn and Sauer 1999, Rosenberg et al. 2019). Many grassland nesting bird species require large tracts of open, contiguous grasslands. Placement of project infrastructure (e.g. roads) in large, intact grassland parcels can fragment habitat and displace certain species of grassland dependent birds such as Western Meadowlark (*Sternella neglecta*), Upland Sand Piper (*Bartramia longicauda*), Grasshopper Sparrow (*Ammodramus savannarum*), Chestnut Collared Longspur (Pruett et al. 2009, Shaffer and Buhl 2015, Bakker 2020). While it would be difficult to make recommendations for each individual species of grassland bird that may be affected by energy development, GFP considers the presence of prairie grouse (Sharp-tailed Grouse and Greater Prairie Chickens), and in particular lek locations to be indicators of high-quality grassland habitat and a robust ecological community due to their specific habitat needs (large tracts of intact grasslands). Therefore, many of our recommendations are based upon spatially explicit habitat models developed by GFP and USFWS for prairie grouse in South Dakota (Runia et al. 2021). The South Dakota Environmental Review Tool includes a conservation planning layer titled “Sharp-tailed grouse habitat prioritization” and “Greater Prairie Chicken habitat prioritization” that may be helpful to review. It appears that this project primarily occurs in Tier II Sharp-tailed grouse habitat. Please note that data in the Environmental Review Tool cannot be downloaded. However, if you would like to obtain a copy of the shapefile with the Sharp-tailed Grouse and Greater Prairie Chicken (hereafter Prairie Chicken) habitat types in a compatible format for desktop evaluation, please contact GFP.

To avoid impacts to prairie grouse and other grassland nesting bird populations, GFP first and foremost recommends avoiding siting project infrastructure in grassland habitat, particularly areas of the state that have been identified as Tier 1 and Tier 2 Sharp-tailed Grouse habitat or Tier 1, 2 and 3 habitat for Greater Prairie Chicken. Tier I priority Sharp-tailed Grouse habitat is estimated to support approximately 20% of the Sharp-tailed grouse population in South Dakota and encompasses approximately 3.7% of the land mass of eastern South Dakota. Tier II priority Sharp-tailed grouse habitat is estimated to support an additional 20% of the population in eastern South Dakota and encompasses approximately 5% of the land mass of eastern South Dakota. Overall, 18.7% of eastern South Dakota land mass was categorized as Tier 1, 2 or 3 priority Sharp-tailed grouse habitat. This area is estimated to support 64% of the Sharp-tailed grouse population in eastern South Dakota. Tier I priority Prairie Chicken habitat is estimated to support approximately 22% of the population in eastern South Dakota and encompasses approximately 1.9% of the land mass of eastern South Dakota. Tier II priority Prairie Chicken habitat is estimated to support an additional 24% of the population in eastern South Dakota and encompasses approximately 5.8% of the land mass of eastern South Dakota. Overall, 11.2% of the eastern South Dakota land mass

was categorized as Tier 1, 2 or 3 priority Prairie Chicken habitat. This area is estimated to support 67% of the Prairie Chicken population in eastern South Dakota.

If grassland habitat cannot be avoided, we recommend minimizing impacts to prairie grouse by using a 1-mile setback of project infrastructure from any documented prairie grouse leks. This 1-mile buffer recommendation is based on data collected on hen prairie grouse in the Fort Pierre National Grasslands (Kirschenmann 2008). Kirschenmann (2008) reported mean distance from lek of capture to nest sites was approximately 1 mile (1.98 km for prairie chickens and 2.03 km for sharp-tailed grouse). The recommended buffer is intended to minimize disturbance from project infrastructure to important nesting and brood-rearing habitat. If grassland habitats and lek sites cannot be avoided, we further recommend a two mile no construction buffer during the lekking season, 1 March to 30 June. Prairie grouse are sensitive to noise disturbance, and construction near leks could cause birds to abandon leks. Lek based avoidance and minimization measures are only effective if pre-construction lek surveys are completed within the project area. GFP has a limited database with historic lek locations, but many of these areas are not surveyed on a routine basis. GFP has included a separate document with detailed information on prairie grouse lek survey guidelines.

If impacts to grassland habitats cannot be avoided, GFP may recommend mitigation in the form of voluntary habitat offsets/compensation. Shaffer et al. (2019) provides a science-based framework that calculates biological values lost by development in grassland or prairie pothole habitats. We suggest using this framework and associated models to estimate impacts and develop a voluntary habitat offset plan. GFP employs several private lands habitat biologists, partners with several habitat conservation organizations and can assist with development of habitat offset/improvement plans. Examples of potential voluntary conservation measures could include (but are not limited to): working with landowners to create grazing management plans to enhance existing grassland habitats and increase forage production for livestock, installation of grazing infrastructure (water lines, fencing, etc.) to assist with rotational grazing, cedar removal in areas where encroachment is a threat to grasslands, conservation easements, prescribed burning plans, etc. Please contact us if you have any questions or would like to learn more about ways to improve or enhance working lands and existing grassland habitat in and around the project area.

Topeka Shiner-Federally Endangered

The Topeka Shiner is a small-bodied prairie stream fish. These fish typically inhabit mid-sized prairie streams. Topeka shiners are known to inhabit: Shue Creek, Rock Creek, Redstone Creek and Pearl Creek within the project area. We have also created a shapefile of streams where Topeka Shiners are known or presumed to be present to share with the project for planning purposes. To avoid impacts to Topeka Shiner, we recommend horizontal directional drilling at any stream crossings where Topeka Shiner are known to occur. Under Section 7 of the Endangered Species Act, the U.S. Fish and Wildlife Service has authority over federally listed species. We urge you to coordinate with the U.S. Fish and Wildlife Service South Dakota Ecological Services office further on this matter.

Whooping Crane-Federally and State Endangered

The whooping crane is a state and federal endangered species with only one naturally occurring population. Members of this population pass through South Dakota as they migrate to and from Aransas National Wildlife Refuge in Texas to Wood Buffalo National Park in Canada. Whooping Cranes can be spotted almost anywhere in South Dakota during migration. However, reported sittings are most frequent near central South Dakota. Under Section 7 of the Endangered Species Act, the U.S. Fish and Wildlife Service has authority over federally listed species. We urge you to coordinate with the U.S. Fish and Wildlife Service South Dakota Ecological Services office further on this matter.

Lined Snake-State Endangered

Lined snakes typically inhabit remnant, undisturbed prairie habitats, particularly along woodland corridors. They are most often observed by searching under objects they are sheltering under, such as rocks and logs. In South Dakota, lined snakes have a limited population and are typically found along the Big Sioux River, as far north as Palisades State Park. Lined snakes are active from April through October. Roads can be a major source of mortality for this species of snake. You can find more information on lined snake biology and habitat needs here: https://www.sdherps.org/species/tropidoclonion_lineatum.

The most likely location for lined snake to occur within the project area is along the Big Sioux River at the South Dakota/Iowa border. We recommend completing visual surveys along the pipeline route in lined snake habitat at this location. Visual surveys should occur during the active season (April-October).

If lined snakes are encountered during the construction phase of the project we recommend the following avoidance measures:

- Lined snakes could use construction material staging areas as shelter during the active season. When staging construction materials near lined snake habitat, we recommend elevating those materials slightly off the ground, in order to allow snakes to escape when materials are removed.

- If the project requires trenching for installation of infrastructure, we recommend backfilling the trench at the end of each workday (April-October), so snakes cannot fall into open trenches and to be trapped and buried under fill. If trenches cannot be filled prior to the end of the workday, we further recommend covering open trenches and inspecting open trenches left overnight for endangered snake species prior to backfilling.

If lined snakes are encountered during pre-construction surveys or during project construction, please contact Eileen Dowd Stukel (605-773-4229 or Eileen.DowdStukel@state.sd.us) for further consultation.

Northern Redbelly Dace-State Threatened

The Northern Redbelly Dace is a small-bodied minnow that typically inhabits spring-fed waterbodies, and use slower moving stretches of rivers and streams. Northern Redbelly Dace is known to occur in the West Fork of the Vermillion River within the project area. We have also created a shapefile of streams where Northern Redbelly Dace are known or presumed to be present to share with the project for planning purposes. To avoid impacts to Northern Redbelly Dace, we recommend horizontal directional drilling at any stream crossings where Northern Redbelly Dace are known to occur.

Bald Eagles- Protected

Bald Eagle populations have been increasing across South Dakota in recent years. We documented at least one Bald Eagle nest within the immediate vicinity of the proposed project area. We recommend surveying the project route for active Bald Eagle nests prior to construction. We further recommend consulting with the USFWS on survey methodology, as the USFWS has the authority over protection of Bald and Golden Eagles under the Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act specifically protects these two eagle species by prohibiting take, possession, sale, purchase, barter, offer to sell, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest or egg, unless allowed by permit. A US Fish and Wildlife Service permit is needed to temporarily possess and relocate eagle nests, eggs, and young. If the project identifies Bald Eagle

nests within the project area, we typically recommend a 0.5 mile buffer during the active nesting season (February-August).

Raptors-Protected

Raptors such as Ferruginous Hawk, Swainson's Hawk and others are protected by the Migratory Bird Treaty Act. Under the Migratory Bird Treaty Act, it is unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export or transport any migratory bird, or any part, nest or egg of any such bird, unless authorized under a permit issued by the Secretary of the Interior. Take is defined in regulations as: "pursue, hunt, shoot, wound, kill, trap, capture or collect or attempt to pursue, hunt, shoot, wound, kill, trap, capture or collect." We found numerous records of raptor nests along the proposed project route. We recommend identifying raptor nests along the project route and applying appropriate species-specific seasonal timing restrictions as outlined in the document "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (CPW 2020; https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Raptor-Buffer-Guidelines.pdf).

OTHER CONSIDERATIONS

Public and Other Protected Lands

South Dakota is home to approximately 5 million acres of publicly accessible lands for hunting, fishing, and recreation. Public lands provide a multitude of recreational opportunities such as fishing, hunting, hiking, biking, bird watching, camping, boating, swimming, and educational opportunities. Public lands also provide a wide diversity of habitat that supports hundreds of species including birds, bats, amphibians, insects, and plants. To protect the recreational, educational, and biological integrity of these lands, they need to be identified early in the development process. Some areas may have special designations that prohibit wind energy facilities. Spatial information on public lands can be found at https://gfp.sd.gov/maps/ or on our Environmental Review Tool. If GFP owned lands or private lands leased for hunting access (e.g. Walk-In-Area program) will be impacted by project activities, GFP requests to be notified of construction timelines and details of the potential disruption in order to notify the public of any impacts to these areas. If private lands leased for hunting access (Walk-In-Areas) will be permanently affected or hunting access prohibited, GFP may recommend voluntary mitigation/off sets to public access. Two Game Production areas (Grandpre and Leola Roadside Park; owned and managed by GFP) as well as numerous Waterfowl Production Areas (owned and managed by the USFWS) appear to be located immediately adjacent to or within the project boundary. It is not clear what, if any impacts will occur to these properties. If impacts are anticipated, or a temporary construction easement is required, please contact Paul Coughlin at 605-295-4892 or Paul.Coughlin@state.sd.us.

Powerlines

It does not appear that the project will include the installation of any new power lines, however we include the following information for project planning purposes. Powerline strikes and electrocutions are a known cause of mortality to birds. GFP recommends implementing mitigation measures described in The Avian Power Line Interaction Committee guidelines (https://www.aplic.org/). Additionally, GFP recommends avoiding placement of over-head powerlines adjacent to or between bodies of water (wetlands and lakes), as this could increase the risk of bird strikes, particularly for waterfowl. We further recommend burying collection and transmission lines when possible.

SUMMARY

Thank you for the opportunity to provide comments on the proposed Midwest Carbon Express in South Dakota. We strive to work with developers to balance wildlife conservation with development in our

state. In summary, GFP recommends the following to avoid or minimize impacts to wildlife and wildlife habitats:

- Consulting with GFP and USFWS early and often during the development of the project
- Making annual data requests from the South Dakota Natural Heritage Database or the Environmental Review Tool
- Conducting desktop analysis of project area to assess initial risks to wildlife and wildlife habitat
- Conducting appropriate field surveys to assess wildlife habitat and wildlife use including, but not limited to:
    - Grouse lek surveys
    - Visual Lined Snake surveys along the Big Sioux River Crossing
    - Raptor nest surveys
    - Bald Eagle nest surveys
- Use results of wildlife field surveys to inform project siting (e.g. if a project identifies sensitive wildlife habitat or a resource rich area, the project should consider relocation)
- Calculating impacts of proposed project
- Avoid siting of project infrastructure in grassland, especially undisturbed grasslands
    - If grassland habitats cannot be avoided, minimize project footprints in grassland blocks or co-locate along already disturbed areas
    - Prepare a voluntary habitat offset/compensation plan for any unavoidable impacts to grassland habitats in the project area
- Site project infrastructure in previously disturbed areas as much as possible
- Avoid siting project infrastructure in wetlands, streams, or waterbodies, as well as in wetland complexes
- Horizontally Drill under any stream crossing where Topeka Shiners or Northern Redbelly Dace are known to occur

Please keep GFP involved in all future correspondence. We would appreciate a chance to review any proposed changes to the project footprint or specific information related to project infrastructure siting when it is available. For any additional questions or information, please contact me at 605.773.6208 or the email below.

Sincerely,

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cc: Charlene Bessken (USFWS Pierre)
Darren Kearny (SD PUC)

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