BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET NO. HP22-001

IN THE MATTER OF THE APPLICATION BY SCS CARBON TRANSPORT LLC FOR A PERMIT TO CONSTUCT A CARBON DIOXIDE TRANSMISSION PIPELINE IN SOUTH DAKOTA

Direct Testimony of Hilary Morey
On Behalf of the Staff of the South Dakota Public Utilities Commission
June 23, 2023

Q: State your name.

A: Hilary Morey

Q: State your employer.

A: State of South Dakota, Department of Game, Fish, and Parks

Q: State the program for which you work.

A: Division of Wildlife, Terrestrial Resource Section

Q: State the program roles and your specific job with the department.

A: The role of the Terrestrial Resources section is to study, evaluate, and assist in the management of all wildlife and associated habitats in South Dakota. Management includes game and non-game wildlife populations, habitat management on public lands and technical assistance and habitat development on private lands, population and habitat inventory, and environmental review of local and landscape projects. As the environmental review senior biologist, I coordinate reviews of various development projects within the state of South Dakota to assist developers with compliance with state wildlife laws and to serve as stewards of our state's outdoor resources.

Q: Explain the range of duties you perform.

A: Duties include coordinating environmental review evaluations related to terrestrial and aquatic wildlife and associated habitats and drafting responses with department staff for projects. I also represent the Department on state and national committees. I am a co-principal investigator on two State Wildlife Grants that are researching the effects of wind energy development on species of greatest conservation need. I also assist in field work and wildlife surveys where needed. My resume is attached as Exhibit_HM-1.

Q: On whose behalf was this testimony prepared?

A: This testimony was prepared at the request of staff at the South Dakota Public Utilities Commission.

Q: What role does the Department of Game, Fish and Parks have in the permitting process of a pipeline project?

A: Game, Fish and Parks has no regulatory authority when it comes to permitting of pipeline projects. The agency's role is to consult with developers and provide wildlife survey data, spatial data, peer reviewed literature, and recommendations on how to minimize or avoid potential impacts to wildlife and associated habitats to enable developers to make informed decisions related to natural resources.

Q: Have you reviewed the Application and attachments? How else did you learn details around the proposed project?

A: Yes, I have reviewed relevant sections of the application and attachments. GFP was first contacted by Summit Carbon Solutions (SCS) in October 2021 regarding the Midwest Carbon Express (MCE) pipeline in South Dakota.

Q: Did GF&P provide comments and recommendations to Summit Carbon Solutions about the project area? Please identify who provided those comments and provide a brief summary of them.

A: GFP was initially contacted about the MCE in Fall of 2021 via a web form submission for a search of the South Dakota Natural Heritage Database for threatened, endangered or sensitive species records in the project area. GFP responded to the request by providing species records within the project area.

In January 2022, GFP met with wildlife consultants for SCS and discussed potential wildlife species and habitat that may be present within the project area. Shortly after the meeting, SCS submitted a project footprint for the MCE to our online environmental review tool, which provides information related to wildlife and wildlife resources that may be present within a project area.. I have also discussed project details with other GFP biologists who have specialized expertise related to wildlife species of concern or the project location. GFP and SCS discussed federal and

state listed species, potential survey methodology, proposed surveys and timelines. After the meeting with wildlife consultants, GFP provided a siting letter to SCS via their wildlife consultant (Exhibit_HM-2). The siting letter described important wildlife habitats (grasslands, wetlands, etc.), information about sensitive, rare, endangered or threatened species that could occur in the project area, and recommendations to avoid and minimize impacts to wildlife.

Q: Are there any sensitive wildlife areas crossed by the project?

A: Yes. The SCS pipeline project crosses several waterbodies (streams, rivers and wetlands), some of which are known to be occupied by the federally endangered Topeka Shiner, and the state endangered Northern Redbelly Dace, and areas of native prairie. The proposed pipeline route also crosses many US Fish and Wildlife Service (USFWS) easements.

Grasslands (particularly untilled native prairie) are of high conservation value in South Dakota. 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). Across the Great Plains Region, it's estimated that less than 5% of original tallgrass prairie remains intact (Samson et al. 2004). A majority of the potentially undisturbed grasslands in the project boundary occur in McPherson, Edmunds, Hyde and Hand

Counties, as well as a lesser extent in Brown, Spink and Sully Counties. In the remainder of the project area (southeast South Dakota) potentially undisturbed lands primarily occur near water bodies, particularly in and around riparian areas.

A number of small streams and rivers are proposed to be crossed by the MCE pipeline project. Installation of the MCE pipeline could temporarily impact streams and wetlands where open trench installation will be used. SCS proposes to restore any impacts to waterbodies where open trench installation will be used.

Q: Did GFP provide any recommendations to SCS on ways to avoid or minimize impacts to wildlife and habitat impacts from construction of the project? If yes, what were those recommendations?

Yes, GFP provided recommendations in letters addressed to the applicant (exhibit_HM-2), as well as via email correspondence. The primary recommendations were to route the pipeline and associated infrastructure in previously disturbed areas (e.g. existing ROW), minimize fragmentation, and utilize existing infrastructure. GFP provided recommendations related to seasonal construction timing restrictions for prairie grouse leks, as this project is located in priority habitat. GFP further provided recommendations to horizontally directional drill under streams that may

be occupied by the federally endangered Topeka Shiner or the state threatened Northern Redbelly Dace, and recommendations to minimize impacts to state endangered Lined Snakes.

Q: Based on the information provided in the Application, in your opinion does the environmental survey work completed or in process of being completed by SCS properly identify potential impacts to the terrestrial and aquatic environment?

A: Proper wildlife surveys are important for determining if sensitive wildlife habitats and/or protected species may be present within a project area, and what potential avoidance, minimization or mitigation measures may be needed to avoid impacts to those species (e.g. seasonal timing restrictions for construction near eagle nests, tree removal outside of the bat active season). To date, SCS has completed Lined Snake surveys, Dakota Skipper Surveys, aerial raptor nest surveys, prairie grouse lek surveys, Topeka Shiner habitat assessments, Northern Redbelly Dace habitat assessments, Northern Long-eared bat suitable habitat assessments, and Western Prairie Fringed Orchid surveys. SCS consulted with the USFWS on most surveys regarding proper methodology. SCS consulted with GFP on Prairie Grouse Lek Surveys, Lined Snake Surveys, Western Prairie Fringed Orchid Surveys and Dakota Skipper Surveys. SCS completed the proper desktop analysis to identify potential sensitive and protected species present in the project

area, as well as identification of potential waterbodies and important wildlife habitats within the project area. SCS field surveys were appropriate to document potential sensitive species present within the project area.

At the time of filing of this testimony, one round of Lined Snake presence/absence surveys has been completed (Summer 2022) with no proposed surveys in 2023. GFP had the opportunity to review and concur with the proposed survey methods for lined snakes in 2022. The methodology that was proposed by SCS was appropriate. Survey effort in 2022 for Lined Snake was very limited as SCS did not have permission to survey for Lined Snakes on 2 of 3 sites identified to contain potentially suitable habitat. In the absence of access to private properties for lined snake surveys, GFP is presuming the presence of lined snakes at the 2 un-surveyed sites identified in the 2022 SCS Lined Snake Survey Report for the purpose of adopting avoidance and minimization measures related to lined snakes.

Q: What are the potential impacts to terrestrial wildlife and terrestrial wildlife habitat as a result of the construction of a pipeline project?

A: Potential impacts to wildlife associated with construction of the proposed project could include habitat loss (temporary and permanent), alteration and fragmentation of habitat. Some species of wildlife (e.g. fossorial or ground dwelling, ground nesting) could potentially be crushed during ground disturbing activities. Some bird species (e.g. raptors, eagles, waterfowl etc.) could be disturbed by construction activity during sensitive life stages such as the nesting and fledging periods.

Permanent habitat loss can occur from construction of access roads, buildings, launcher/receiver sites and mainline valves. This is often a small percent of the total project acreage. Temporary habitat loss occurs when habitat is disturbed for a time during construction of the pipeline but is restored after construction. Habitat fragmentation is the division of a block of habitat into smaller, and at times into isolated patches. Habitat fragmentation can decrease the overall value of the remaining habitat. Identification and avoidance of contiguous blocks of habitat, especially in altered landscapes, is an important component of grassland and wetland bird conservation (Bakker 2020).

Q: Can you suggest methods to address temporary and permanent changes to terrestrial habitat?

A: Temporary impacts to terrestrial habitat resulting from construction activities likely can be reclaimed by restoring impacted areas by grading

and reseeding. We had previously provided the applicant's wildlife consultant with a publication titled "Best Management Practices Guide for Restoration of Native Grasslands and Sensitive Sites Resulting from Energy or Industrial Development" (Bauman 2020) for their consideration in project planning. In general, disturbed areas should be restored using native seed sources to reduce the introduction of new or discourage encroachment of already present exotic and/or invasive species. Above ground, permanent facilities should be sited in areas that have been previously disturbed.

Q: Are there different types of grasslands?

A: Yes.

Q: Please describe the following: native prairie, hayland, pasture, CRP, and cropland.

A: Grasslands are areas that contain plant species such as graminoids and are commonly used for grazing or set aside for conservation purposes. They can also be areas which are planted to a mixture of grasses and legumes for livestock grazing or feed. Native prairie is grassland upon which the soil has not undergone a mechanical disturbance associated with agriculture or any other type of development. Hayland is grassland that is managed by frequent mowing and often contains non-native plant species either intentionally or by encroachment. Pasture is grassland that

may contain non-native plant species either intentionally or by encroachment and is managed through grazing. In some instances, hayland and pasture could be native prairie; in other situations, hayland and pasture could be land once cultivated and restored to grassland habitat. Conservation Reserve Program acres (CRP) can be protection of existing grassland or grassland that occurs on land that was once tilled and used for crop production and has now been seeded to herbaceous cover. The CRP program is intended to address soil loss, water quality, and provide wildlife habitat. Cropland could be described as agricultural lands cultivated and used to grow crops such as corn, soybeans, small grains, and others.

Q: **Are there any areas of native prairie in the proposed project?**

A: Yes. Spatial analysis conducted by Bauman et al. (2016) has identified potentially undisturbed lands within the proposed project, particularly in McPherson, Edmunds, Hyde and Hand counties, as well as riparian areas across the project. Bauman et al. (2016) is one of the best available spatial data sets representing the location of untilled native grasslands.

Q: **Do grasslands other than native prairie have conservation value?**

A: Yes. Working grasslands like pasture, hayland, and conservation grassland plantings (e.g. CRP plantings) serve as surrogates for native grasslands. Some grassland dependent species (prairie grouse, Baird's

sparrow, Northern Harriers) require grassland patches with relatively tall (12 inches or more) vegetation and accumulation of residual litter characterized by light grazing pressure. Other species (Ferruginous Hawks, Burrowing Owl, Chestnut-collared Longspur) require open expanses of grasslands characterized by short vegetation that is typical of moderate to heavy grazing pressure. Sprague's Pipit, Long-billed Curlew, Bobolink and Dickcissel require grasslands with moderate grass heights and periodic disturbance from grazing, mowing or prescribed fire (Johnson et al. 2010, Bakker 2005, Shaffer and DeLong 2019). 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. Grassland birds have evolved with a gradation of grazing intensities. Grassland wildlife diversity can be maximized by creating a heterogeneous landscape comprised of short, medium and tall vegetation structures. Grazing (haying and burning) management can provide this variation in vegetative structure.

Q: One of the GF&P's recommendations was that efforts should be made to avoid siting the project in grasslands, especially untilled native prairie. Based on the information in the Application and the proposed project route, did SCS demonstrate efforts to address this recommendation? Please explain.

A: It appears that the majority of the proposed project (73%) will be sited in previously disturbed areas (e.g. cropland), 12% of the project will be sited in pasture land/hay land and 8.8% in grassland/herbaceous cover (Table 17 of the application). However, at the time of filing of this testimony, the exact location of access roads and mainline valves is not available for review.

Q: **Are there any areas of large (> 160 acre) contiguous grassland habitat in the proposed project?**

A: No.

Q: If the final project route changed from that provided in the application, could the potential terrestrial environment impacts change?

A: Yes.

Q: What are the potential impacts to aquatic wildlife and aquatic wildlife habitat as a result of the construction of a pipeline project?

A: Impacts to aquatic habitats (streams, lakes, rivers and wetlands) can be temporary or permanent. Temporary impacts from construction of the MCE pipeline project related to open trench installation across a waterbody include: increase in sedimentation, changes in stream bottom

elevations, or disturbance to riparian habitats. Temporary impacts from construction of the MCE pipeline project related to horizontal directional drilling across a waterbody could include an unintentional release of drilling fluid into a stream during horizontal drilling. Permanent impacts to aquatic habitats from construction of the MCE pipeline project could include conversion of palustrine forested wetlands and palustrine scrub-shrub wetlands to palustrine emergent wetlands (e.g. permanent change in vegetative community and resulting ecological function of a wetland).

Aquatic species could be directly impacted by entrainment or impingement during water pumping operations during construction of the MCE pipeline. Aquatic invasive species (in particular zebra mussels) could inadvertently be introduced to a new waterbody in the state by improperly decontaminated construction equipment or improper discharge of water for construction or hydrostatic testing (e.g. run off into a waterbody).

Q: Can you suggest methods to address temporary and permanent impacts to aquatic habitat?

A: Open trench waterbody crossings should be conducted during periods of low or no flow as much as is practicable and stream bottoms should be returned to pre-construction elevations. GFP also recommends maintaining seasonally appropriate flows a much as is practicable during in-stream construction. To prevent the spread of aquatic invasive species,

GFP recommends using the U.S. Bureau of Reclamation Equipment Inspection and Cleaning Manual (located at: https://www.usbr.gov/mussels/prevention/docs/EquipmentInspectionandCleaningManual2021.pdf).

SCS has drafted a contingency plan to outline potential impacts and response to an inadvertent release of drilling fluid for locations where horizontal directional boring will occur.

Q: If the final project route changed from that provided in the application, could the potential aquatic environment impacts change?

A: Yes.

Q: Do any State threatened or endangered species have the potential to be impacted by the MCE project?

A: Yes, the state endangered Lined Snake (*Tropidoclonion lineatum*), could potentially be present within the project area. Lined snakes are a small, fossorial snake species that typically inhabit undisturbed prairies along woodland corridors. This species of snake is primarily nocturnal and can be difficult to observe. Construction of the MCE pipeline could temporarily impact lined snake habitat that is present within the project area. Direct mortality (e.g. crushing) could occur during construction if lined snakes are

present within the project area, but were not detected with surveys. At the time of filing this testimony, it is unclear whether above ground facilities associated with the MCE will be constructed in or adjacent to potential lined snake habitat.

The Northern Redbelly Dace (*Chrosomus eos*), a state threatened species, is a small-bodied minnow that typically inhabits spring-fed waterbodies and uses slower moving stretches of rivers and streams. The Northern Redbelly Dace is known to occur in the West Fork of the Vermillion River within the project area. GFP recommended that SCS horizontally bore under streams where Northern Red Belly Dace are known to occur in the project area.

The Topeka Shiner (*Notropis topeka*), a federally listed fish species could also be impacted by construction of the MCE pipeline. The Topeka Shiner is a small-bodied prairie stream fish. These fish typically inhabit mid-sized prairie streams. Within the project area Topeka shiners are known to inhabit: Shue Creek, Rock Creek, Redstone Creek and Pearl Creek. Impacts to Topeka Shiners (and other federally listed species) will be addressed by a Biological Assessment on behalf of the U.S. Army Corps of Engineers. The Army Corps of Engineers will provide the Biological Assessment to the USFWS for their review and subsequent Biological Opinion. The Biological Assessment was not available to review at the time of filing this testimony.

Q: Does GFP have any recommendations on how to avoid, minimize or mitigate impacts to listed species from the construction of the MCE pipeline project?

A: Yes. GFP recommended that MCE use horizontal directional drilling for any stream crossings where Topeka Shiners or Northern Redbelly Dace could be present. However, as mentioned above, the USFWS has authority over the federally listed Topeka Shiner and mitigation measures will likely be outlined in the biological assessment.

GFP provided minimization and mitigation measures related to lined snake in our original siting letter to SCS. As mentioned above, GFP presumes presence of lined snakes where potentially suitable habitat occurs if adequate surveys could not be performed. At the time of filing of this testimony, SCS has not provided any additional avoidance or minimization measures for GFP's consideration.

Q: Does GFP have any recommendations on how to avoid, minimize or mitigate impacts to other species of concern from the construction of the MCE pipeline project?

A: Yes. GFP provided SCS with voluntary seasonal buffers regarding construction timing around prairie grouse leks, as well as recommended seasonal buffers regarding construction near raptor nests (CPW 2020). During consultations between GFP and SCS, the project agreed to

implement a seasonal no-construction buffer of 0.5 miles around active leks from March 1 to June 30, and a seasonal no-construction buffer from ½ hour before sunrise to 2 hours after sunrise from March 1 to June 30 for leks between 0.5 miles and two miles from the centerline. These buffers were derived from the GFP Prairie Grouse Management Plan, and agreed upon by GFP and SCS and their wildlife consultants in a meeting held September 16, 2022.

Q: Are there any GF&P owned lands or other public lands that may be impacted by the project?

A: Based on the information provided in the application, the Shaner GPA which is located near Mina Lake is proposed to be impacted by this project.

Q: Does the project route cross any walk-in areas that are open to public hunting?

A: Based on information provided in the application, it is unclear whether walk-in-area parcels may be impacted by the project. Walk-in-areas are properties that are privately owned and have an agreement with GFP which opens them to free public access for hunting.

Q: Does GF&P request SCS to coordinate closure of walk-in areas during construction activities? If yes, how would GF&P like SCS to coordinate closure of those areas.

A: Yes. GFP requests that the applicant be required to contact the department at least 60 days prior to the start of construction to coordinate public access to walk-in areas that may be temporarily disrupted due to construction activities.

Q: You mentioned the applicant requested data from the Natural Heritage Database. What is the South Dakota Natural Heritage database? What type of information does it contain?

A: The South Dakota Natural Heritage database tracks 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 are those found at the periphery of their range, those that have isolated populations or those for which we simply do not have extensive information on.

This database houses and maintains data from a variety of sources including site-specific surveys, research projects and incidental reports of species that cover a time period from 1979 to the present. It is important to note that the absence of data from this database does not preclude a species presence in the proposed project area.

Q: In summary, does GF&P offer any specific permit recommendations should the permit be granted?

A: GFP recommends memorializing the lined snake, and prairie grouse mitigation measures proposed above in the form of a permit condition.

Q: Does this conclude your testimony?

A: Yes.

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