BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION OF CROWNED RIDGE, LLC FOR A FACILITIES PERMIT TO CONSTRUCTION 300 MEGAWATT WIND FACILITY

Docket No. EL19-003

REBUTTAL TESTIMONY AND EXHIBIT

OF SARAH SAPPINGTON

May 24, 2019

INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Sarah Sappington. My business address is 116 North 4th Street, Suite 200, Bismarck, North Dakota, 58501.

Q. **BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am employed by SWCA Environmental Consultants as the Director of the Bismarck SWCA Office.

Q. **WHAT ARE YOUR RESPONSIBILITIES?**

A. My responsibility was to assist Crowned Ridge Wind, LLC ("CRW") regarding cultural and environmental resources.

Q. **ARE YOU THE SAME SARAH SAPPINGTON WHO SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING ON APRIL 10, 2019?**

A. Yes.

Q. HAS THIS TESTIMONY BEEN PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION?

A. Yes.

Q. PLEASE DESCRIBE THE PURPOSE OF YOUR REBUTTAL TESTIMONY.

A. The purpose of my rebuttal testimony is to respond the direct testimonies of Staff witness Paige Olson, Staff witness Tom Kirschenmann, and Intervenors' proposed conditions as set forth in Staff witness Darren Kearney's Direct Testimony, Exhibit DK-8.

State Historic Preservation Office ("SHPO")

Q. STAFF WITNESS OLSON'S DIRECT TESTIMONY AT PAGE 4, LINES 6-8 STATES THAT "I AM WAITING FOR THE ARCHITECTURAL PROPERTIES SURVEY AND THE SURVEY OF THE REMAINING FACILITIES, SUCH AS, ACCESS ROADS, CRANE PATHS, COLLECTION LINES, O&M FACILITIES, CONCRETE BATCH PLANT AND LAYDOWN AREAS." WHAT IS THE STATUS OF PROVIDING SHPO THIS INFORMATION?

A. The architectural properties survey report received SHPO concurrence on May 17, 2019, finding that there are no National Register of Historic Places-listed and no State Register of Historic Places-listed architectural properties within 1 mile of project turbines. Additionally no National Register of Historic Places-listed and no State Register of Historic Places-listed architectural properties occur along any additional facilities, such as access roads, crane paths, collection lines, O&M facilities, concrete batch plant, and laydown areas, that would require further reporting. Cultural (archaeological and tribal) resource survey reports for the remaining facilities, such as, access roads, crane paths, collection lines, O&M facilities, concrete batch plant, and laydown areas will be submitted to SHPO at the end of June 2019.

Q. STAFF WITNESS OLSON'S DIRECT TESTIMONY AT PAGES 5 AND 6 RECOMMENDS THE FOLLOWING CONDITION:

> **THE APPLICANT AGREES TO AVOID DIRECT IMPACTS TO CULTURAL RESOURCES THAT ARE UNEVALUATED, ELIGIBLE FOR OR LISTED IN THE NATIONAL REGISTER OF HISTORIC PLACES (NRHP). WHEN A NRHP UNEVALUATED, ELIGIBLE OR LISTED SITE CANNOT BE AVOIDED, APPLICANT SHALL NOTIFY THE STATE HISTORIC PRESERVATION OFFICE (SHPO) AND THE COMMISSION OF THE REASONS THAT COMPLETE AVOIDANCE CANNOT BE**

ACHIEVED IN ORDER TO COORDINATE MINIMIZATION AND/OR TREATMENT MEASURES.

DO YOU AGREE WITH THIS CONDITION?

A. It is my understanding that CRW is amendable to this condition.

Q. STAFF WITNESS OLSON'S TESTIMONY AT PAGES 7 AND 8 ALSO PROPOSES THE FOLLOWING CONDITION:

THE APPLICANT AGREES TO IMPLEMENT THE AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES IDENTIFIED FOR TCPS:

- **IMPLEMENT STANDARD AVOIDANCE OR RESOURCE PROTECTION PRACTICES (E.G., BARRIER FENCING, CONTRACTOR TRAINING) WHERE FEASIBLE IN COLLABORATION WITH THE SISSETON-WAHPETON OYATE, YANKTON SIOUX, ROSEBUD SIOUX AND SPIRIT LAKE THPOS AND THE APPLICANT.**
- **MAKE BEST EFFORT TO IDENTIFY PARTICIPATING LANDOWNERS WHO MAY BE WILLING TO WORK WITH THE TRIBES ON SITE PRESERVATION, ACCESSIBILITY AND PROTECTION OF TCPS ON THEIR PROPERTY.**
- **CONDUCT SITE REVISITS PRIOR TO CONSTRUCTION.**
- **HELP FACILITATE POST-CONSTRUCTION SITE REVISITS FOR TRIBES WITH THE LANDOWNERS.**
- **IDENTIFY AND IMPLEMENT EDUCATION/INTERPRETATION OPPORTUNITIES REGARDING TRIBAL RESOURCE PRESERVATION AND/OR NATIVE AMERICAN PERSPECTIVES WHICH MAY INCLUDE SENSITIVITY TRAINING WHEN NEEDED.**

A. It is my understanding that CRW is amendable to this condition. It is consistent with the representations set forth in the CRW Application at Section 18.6.3.1.

Wetlands, Grasslands, and Wildlife

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 7, LINE 21 THROUGH PAGE 8, LINE 2 STATES THAT TEMPORARY IMPACTS TO HABITAT AS A RESULT OF CONSTRUCTION OF THE PROPOSED WIND

FACILITY CAN BE ADDRESSED BY RESTORATION OF IMPACTS AREAS THROUGH GRADING AND RESEEDING. WHAT ACTIVITIES WILL CRW CONDUCT TO ADDRESS TEMPORARY IMPACTS TO HABITAT AS A RESULT OF CONSTRUCTION?

A. CRW sets forth in its Application (Section 11.3.2.5) a number of measures it will implement to avoid, minimize, and mitigate potential impacts to habitat. These measures include reseeding and revegetating areas temporarily impacted. The Application (in Section 15.2) also explains that during construction, the Applicant will segregate and stockpile topsoil to be re-spread after construction. Therefore, CRW's approach to addressing temporary impacts to habitat is consistent with Staff witness Kirschenmann's recommendations.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 8, LINES 4-10 RECOMMENDS THAT PERMANENT LOSS OF GRASSLAND OR WETLAND CAN BE ADDRESSED THROUGH RESTORING THE AREA USING NATIVE SEED SOURCES. DO YOU AGREE?

A. I agree but perhaps differ as to the timing of such activities. e. CRW acknowledges that limited permanent impacts will occur as a result of the Project, as described in Table 11.1.2 of the Application. Permanent impacts include those where newly constructed, impervious surfaces will occur. Therefore, restoring these impacts is not feasible in these areas until such time that the CRW project is decommissioned.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 8, LINES 4-10 ALSO RECOMMENDS THAT ANY PERMANENT LOSS ACRES OF GRASSLAND AND WETLAND BE REPLACED IN CLOSE PROXIMITY TO THE PROJECT. DO YOU AGREE?

A. CRW acknowledges the merit of off-site mitigation practices, when warranted. However, CRW has not planned an off-site mitigation plan due to the very limited permanent

impacts associated with the project. Impacts to wetlands and grasslands were first avoided through siting, then minimized through project design. As stated in the Application, Table 11.1.2, the project is anticipated to result in minimal permanent impacts as shown below:

Table 11.1.2 Temporary and permanent impacts as a result of the Project

Land Cover Type[1]	Temporary Impacts (acres)	Permanent Impacts (acres)
Agricultural	1,504.01	60.40
Grass/Pasture	558.45	21.48
Developed	40.07	2.37
Other Hay/Non Alfalfa	21.86	1.36
Deciduous Forest	6.53	0.39
Herbaceous Wetlands	1.90	0.04
Fallow/Idle Cropland	1.11	0
Open Water	0.41	0
Barren	0.02	0
Total	2,134.4	86.0

Temporary impacts to naturally vegetated areas will be reseeded and revegetated as described in the Application.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 8, LINES 17-20 CITES THE LOESCH AND SHAFFER/BUHL STUDIES (EXHIBIT TK-2 and EXHIBIT TK-3) AS INDICATING THAT SOME SPECIES WILL NOT USE GRASSLAND AND WETLAND WITHIN A CERTAIN DISTANCE OF A WIND TURBINE. DO YOU AGREE WITH THE FINDINGS IN THESE STUDIES?

A. CRW has not had the opportunity to conduct an independent peer review of the specific studies referenced. However, the Applicant acknowledges that Shaffer and Buhl 2015 study observed that (a) 7 of 9 species were displaced; (b) that one species was unaffected; and (c) that one species exhibited attraction. Likewise, the Applicant acknowledges that Loesch et al. 2012 reported a negative displacement effect where some species showed

behavioral avoidance. The Application sets forth the indirect impacts that have potential to occur as a result of the Project. Section 11.1.2, page 51, states "indirect impacts could include the spread of noxious weed species resulting from construction equipment introducing seeds into new areas, or erosion or sedimentation due to ground-clearing in construction areas." Section 11.3.2.3, page 68, states "Impacts to avian species can be direct (e.g., turbine strike mortality) or indirect (e.g., loss [or] degradation of habitat)." Section 11.3.2.4 indicates that "Impacts to bat can be direct (e.g., turbine strike mortality) or indirect (e.g., loss [or] degradation of habitat)." The Applicant currently is preparing a Wildlife Conservation Strategy (WCS) that will discuss indirect effects, including potential for avoidance and displacement, in detail. The WCS will be filed with the Commission prior to start of construction of the Project and will be implemented during Project construction and operation.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 12, LINES 8-13 RECOMMENDS THAT CRW AVOID UNTILLED NATIVE PRAIRIE TO THE GREATEST EXTENT POSSIBLE. WILL THE CROWNED WIND PROJECT IMPACT UNTILLED NATIVE PRAIRIE?

A. The CRW project will result in permanent impacts to only approximately 22.5 acres of grass/pasture. CRW avoided native prairie to the greatest extent possible in conjunction with consideration of landowner preferences, conflicting environmental constraints, and other local or state requirements or setbacks.

Table 11.1.2 Temporary and permanent impacts as a result of the Project

Land Cover Type[1]	Temporary Impacts (acres)	Permanent Impacts (acres)
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Fallow/Idle Cropland	1.11	0
Open Water	0.41	0
Barren	0.02	0
Total	2,134.4	86.0

Untilled native prairie is a subset of the grass/pasture land cover type. The Application, Section 11.3.2.5, describes that CRW sited the project to avoid placing structures, or conducting any activity, on USFWS grassland or USFWS wetland/grassland combination easements. Further, CRW sited the project with overall preference to agricultural areas, disturbed areas, and following landowner preferences. Native prairies were avoided to the extent practical.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 12, LINE 15 THROUGH PAGE 14, LINE 7 EXPLAINS THAT IT IS CHALLENGING FOR THE CROWNED RIDGE PROJECT TO AVOID AN IMPACT ON GRASSLAND HABITAT. WHAT IS CRW DOING TO AVOID IMPACTING GRASSLAND HABITAT?

A. The Application, Section 11.3.2.5, describes that CRW sited the project to avoid placing structures, or conducting any activity, on USFWS grassland or USFWS wetland/grassland combination easements. Further, CRW sited the project with overall preference to disturbed areas and following landowner preferences.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 15, LINE 23 THROUGH PAGE 16, LINE 3 EXPLAINS THAT IT IS CHALLENGING FOR

THE CRW PROJECT TO AVOID AN IMPACT ON WETLANDS. WHAT IS CROWNED RIDGE DOING TO AVOID IMPACTING WETLANDS?

A. As described in Section 2.1, the Applicant sited facilities to avoid direct impacts to field-verified wetlands to the extent practical. Generally, wind turbines were sited in higher elevation areas and avoided low-lying areas where wetlands are present. Access roads were located to avoid and minimize potential impacts to identified natural resources to the extent practical, while also minimizing impacts to existing field operations to the extent practical. Further, as stated in Section 10.2.2 of the Application, to the extent practicable, impacts to water bodies, wetlands, and aquatic resources were avoided or minimized through the siting process and will be further avoided and minimized through the use of stormwater best management practices ("BMP") during construction. Impacts to wetlands and waterbodies that may result because of access road construction are minor and will be authorized under United States Army Corps of Engineers ("USACE") Nationwide Permit ("NWP") 12 for utility lines and associated facilities in waters of the U.S. Likewise, as described in the Application (Section 10.2.2), collector lines will be sited to avoid intersecting wetland or other waterbodies to the extent practical. Where collector lines must intersect these resources, the Applicant will bore under these features to the extent practical to minimize impacts to the maximum extent feasible. Where any activity must occur in a wetland area, the Applicant will utilize standard construction BMPs to minimize impacts and has designed the project to keep permanent impacts below USACE NWP thresholds.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 16, LINE 13 EXPLAINS THAT THE PLACEMENT OF TURBINES ON LAND CURRENTLY UNDER CULTIVATION WILL HELP MINIMIZE CUMULATIVE IMPACTS

TO GRASSLANDS AND WETLANDS FROM THE COMBINATION OF CRW AND OTHER WIND PROJECTS PROPOSED FOR THE AREA. IS CROWNED RIDGE WIND MINIMIZING THE IMPACT ON GRASSLANDS AND WETLANDS IN A MANNER THAT WILL THAT HELP REDUCE CUMULATIVE IMPACTS?

A. Yes. The siting measures described above and in the Application, including avoidance of wetland and grassland habitat to the extent practical, is helping to reduce overall cumulative impacts to these features by avoiding or minimizing impacts to these resources altogether. These approaches also incorporate landowner preferences.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 17, LINES 10-15 EXPLAINS THAT A STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") AND MITIGATION TO REDUCE OR ELIMINATE SEDIMENTATION SHOULD BE IMPLEMENTED TO NEGATE THE POTENTIAL IMPACT TO THE NORTHERN RIVER OTTERS. HAS CRW AGREED TO IMPLEMENT A SWPPP AND OTHER MITIGATION TO ADDRESS THE POTENTIAL IMPACT ON THE NORTHERN RIVER OTTERS?

A. It is my understanding CRW has agreed. CRW is aware that northern river otters have the potential to occur in the project area. The Application discusses the northern river otter and its potential to occur in the project area in Sections 11.3.1.3.1 and 11.3.2.2. Section 11.3.2.2 of the application states that habitat removal and degradation are the primary potential impacts to the northern river otter, as erosion and siltation can affect water quality, limiting prey availability for northern river otters. Impacts to streams and waterbodies will be avoided to the extent practicable through project design and BMPs, further described in the Application (Section 11.2). As such, impacts to northern river

otters are not anticipated to result from the project and therefore, mitigation for impacts to the species is not warranted.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 17, LINE 19 THROUGH PAGE 18, LINE 2 ASKS THAT CRW ENGAGE THE SOUTH DAKOTA DEPARTMENT OF GAME, FISH AND PARKS ("GFP") IF THE "WALK-IN AREA" IS TEMPORARY DISRUPTED DURING CONSTRUCTION. DOES CROWNED RIDGE WIND AGREE TO ENGAGE GFP AS REQUESTED?

A. Yes.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 18, LINES 12-20, EXPLAINS THAT THERE ARE NO STATE SET-BACKS FOR THE DISTANCE OF WIND TURBINES FROM GAME PRODUCTION AREAS. WHAT IS THE SETBACK FOR THE CROWNED RIDGE WIND TURBINES FROM THE GAME PRODUCTION AREAS?

A. Table 13.2.1 of the Application indicates there are 8 game production easements in the project area for a total of 3.5 acres. No turbines are located on game production areas. The closest turbines to game production areas are CR-28 located 0.24 mile to the south and CR-26, located 0.35 mile to the southeast.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 19, LINE 4 STATES THAT IF THE FINAL TURBINE LOCATIONS CHANGE, THAT COULD CHANGE THE CURRENTLY UNDERSTOOD IMPACT TO THE TERRESTRIAL ENVIRONMENT. HAVE THE TURBINE LOCATIONS CHANGED FROM THE LOCATIONS FILED IN THE APPLICATION?

A. While there have been minor shifts in collector lines, access roads, the siting of turbines, and the use of alternative turbines instead of primary turbines (as set forth in the testimony of CRW witness Wilhelm and Massey) none of these moves change the overall project or impact the terrestrial environment. See Exhibit SS-R-1, which includes maps showing the minor adjustments to project infrastructure.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 20, LINE 1-6 SUGGESTS THAT TWO YEARS OF POST-CONSTRUCTION AVIAN AND BAT MORTALITY MONITORING SHOULD BE CONDUCTED BY CRW. DO YOU AGREE WITH THIS SUGGESTION?

A. Yes. Similar to past cases (Crocker Wind, and Dakota Range 1 and 2), CRW is agreeable to a condition that states:

> Applicant agrees to undertake two years of independently-conducted post-construction avian and bat mortality monitoring for the Project, and to provide a copy of the report to the United States Fish & Wildlife Service (USFWS), the South Dakota Game, Fish, and Parks (SD GF&P), and the Commission. The Applicant will conduct a third year of monitoring independently-conducted post-construction avian and bat mortality monitoring for the Project if results of the first two years exceed other publicly available studies in the region in comparable habitats in coordination with the USFWS and SD GF&P. If the results from the first two years confirm that the Project site is low risk for avian and bat mortality, a third year will not be conducted.

CRW believes it is important to clearly articulate the objective and rationale for a third year of post-construction mortality monitoring. In this case, the purpose of the first two years is to confirm the site is low risk compared to publicly available data in the region and in comparable habitats. If the site is not low risk, then the Applicant agrees to consider a third year of post-construction mortality monitoring in coordination with the

wildlife agencies, unless another course of action or remedy is identified and can be addressed.

Q. STAFF WITNESS KIRSCHENMANN'S TESTIMONY AT PAGE 20, LINES 7-14 RECOMMENDS POST-CONSTRUCTION GROUSE LEK MONITORING OF THOSE LEKS THAT ARE LESS THAN 1 MILE FROM THE PROPOSED WIND TURBINES. DO YOU AGREE WITH THIS CONDITION?

A. No. Pre-construction grouse lek surveys were conducted for the project or earlier iterations of the project in 2007-2008 and 2016. The South Dakota Game, Fish and Parks provided lek location data to CRW which was considered during Project siting. The Applicant sited the Project to avoid or minimize impacts to grassland communities, and collocated linear project features, such as access roads, collection lines, and crane paths with existing disturbed corridors (e.g., roads, fence rows) to the extent practical in an effort to reduce fragmentation and impacts to grouse leks. The Applicant will avoid construction activities within 2 miles of known leks during the lekking period (March 1 to June 30) to minimize impacts to the species.

INTERVENORS' PROPOSED CONDITIONS

Q. THE INTERVENORS' PROPOSED CONDITION 8 (KEARNEY EXHIBIT DK-8) THAT REQUIRES "AIR QUALITY MONITORING DURING CONSTRUCTION AND THE MONTHS OF MAY THROUGH OCTOBER AFTER CONSTRUCTION IS COMPLETE, THROUGHOUT THE LIFE OF THE PROJECT." DO YOU AGREE WITH THIS CONDITION?

A. No. As stated in the application in Section 16, the State of South Dakota follows ambient air quality goals and is in attainment for all criteria pollutants, meaning it meets the national standard, as defined under the National Ambient Air Quality Standards

("NAAQS"). The nearest Ambient Air Quality Monitoring Site is located in Watertown in Codington County. The primary emission sources within the Project Area include agricultural-related equipment and vehicles traveling along state highways and county roads. In Section 16.2 of the application, temporary impacts to air quality are expected from construction activities that may result in short-term airborne dust/particulate matter from construction equipment and vehicle emissions. Dust from ROW clearing, hauling, and excavation may be generated. These impacts are temporary, and no long-term impacts are anticipated. The Applicant will use standard BMPs to minimize air quality emissions as required by the project Storm Water Pollution Prevention Plan (SWPPP) and/or county haul route permits. After construction has been completed and disturbed areas reclaimed, air emissions will only be associated with operational vehicles as personnel conduct inspections and perform routine maintenance activities and minor dust generated by those vehicles. Air quality effects during construction and in the months of May through October and throughout the life of the project would not result in NAAQS exceedances; therefore, no monitoring would be needed. Air quality monitoring has not been required in previous cases (Dakota Range I and II, Prevailing Wind, and Crocker Wind).

Q. THE INTERVENORS' PROPOSED CONDITION 10 (KEARNEY EXHIBIT DK-8) IS PREMISED ON COTEAU PRAIRIE BRING AN IMPORTANT ASPECT TO THE EARTH'S OVERALL ECOSYSTEM, PART OF WHICH IS BEING DESTROYED BY THE APPROVAL OF THIS PROJECT." DO YOU AGREE?

A. No. The Project Area lies within three ecoregions, namely the Prairie Coteau Escarpment, the central Prairie Coteau, and the Big Sioux Basin. As shown in the Application, Table

11.1.2, the Project is anticipated to result in permanent impacts to 86 acres, which represents less than 0.16% of the Project Area (approximately 53,186 acres). The Prairie Coteau Escarpment, the central Prairie Coteau, and the Big Sioux Basin ecoregions within the Project Area encompasses approximately 53,186 acres. Therefore, the permanent impact to 86 acres within this total area is equal to 0.16% and will be minimal.

Q. THE INTERVENORS' PROPOSED CONDITION 10 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE CRW TO "SUBMIT AND FOLLOW A 3 YEAR GRASSLAND RECLAMATION PLAN FOR ANY PASTURE, GRASS AND/OR NATIVE UNDISTURBED LAND THAT IS DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT. DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. In Table 11.1.2 of the application, temporary impacts to grass/pasture lands is 558.45 acres and permanent impacts to grass/pasture lands is 21.48 acres. Temporary impacts will be mitigated through the use of BMPs as described in the project (SWPPP) and the stormwater permit will remain open until all disturbed lands achieve final stabilization and a Notice of Termination is filed with the South Dakota Department of Environment and Natural Resources ("SDDENR"). For example, in temporarily impacted areas that were previously natural (i.e., non-cropland), the Applicant will use native vegetation (weed-free) seed mixes to revegetate disturbed areas to preconstruction conditions where feasible and pending landowner preferences. Where temporary impacts occur, the land will be returned to pre-construction conditions.

Also, in past cases (Dakota Range I and II, Prevailing Wind, and Crocker Wind) required the following condition:

> Applicant will repair and restore areas disturbed by construction or maintenance of the Project. Except as otherwise agreed to by the landowner, restoration will include replacement of original pre-construction topsoil or equivalent quality topsoil to its original elevation, contour, and compaction and re-establishment of original vegetation as close thereto as reasonably practical. In order to facilitate compliance with this Permit Condition, Applicant shall:
>
> a) Strip topsoil to the actual depth of the topsoil, or as otherwise agreed to by the landowner in writing (e-mail is sufficient), in all areas disturbed by the Project; however, with respect to access roads, Applicant may remove less than the actual depth of topsoil to ensure roads remain low-profile and the contours align with the surrounding area;
>
> b) Store topsoil separate from subsoil in order to prevent mixing of the soil types;
>
> c) All excess soils generated during the excavation of the turbine foundations shall remain on the same landowner's land, unless the landowner requests, and/or agrees, otherwise; and
>
> d) When revegetating non-cultivated grasslands, Applicant shall use a seed mix that is recommended by the Natural Resource Conservation Service (NRCS), or other land management agency, unless otherwise agreed upon with the landowner in writing.

This condition already protects grasslands by establishing additional control if not already addressed in the Applicant's SWPPP and permit. Therefore, no additional condition is needed to protect grasslands.

Q. THE INTERVENORS' PROPOSED CONDITION 10 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE CRW TO PROVIDE A DETAILED WEED CONTROL PLAN. DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. As stated in the Application (Section 11.1.1.2), noxious weeds are regulated by State and Federal rules and regulations (SDCL 38-22 and 7 U.S.C. 2801 et seq.; 88 Stat.

2148). In previous cases (e.g., Crocker Wind, Prevailing Wind, and Dakota I and II), the Commission conditioned approval on the following: "Applicant shall work closely with landowners or land management agencies, such as the NRCS, to determine a plan to control noxious weeds." This condition is sufficient, and will ensure CRW coordinates with the appropriate land management agencies to develop a site-specific and effective noxious weed control plan. Therefore, the Commission should not adopt the Intervenors condition requiring a detailed weed control plan at this time.

Q. THE INTERVENORS' PROPOSED CONDITION 10 (KEARNEY EXHIBIT DK-8) REQUIRES CRW TO PROVIDE SEED MIX DETAILS THAT WILL BE USED TO RECLAIM THE DISTURBANCE. DO YOU AGREE WITH THIS CONDITION?

A. No. In past cases (e.g., Crocker Wind, Prevailing Wind, and Dakota I and II), the Commission conditioned approval on the following or similar to the following: "When revegetating non-cultivated grasslands, Applicant shall use a seed mix that is recommended by the Natural Resource Conservation Service ("NRCS"), or other land management agency, unless otherwise agreed upon with the landowner in writing." Accordingly, the seed mix details will be available in the future, after coordinating with the NRCS, other land management agencies, and landowners. Therefore, the Commission should not adopt the Intervenors condition requiring seed mix details at this time.

Q. THE INTERVENORS' PROPOSED CONDITION 10 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE CRW TO WRITE AN ANNUAL REPORT THAT IS AVAILABLE TO THE PUBLIC INCLUDING

PHOTOS OF EACH LOCATION AND A STATUS OF THE RECLAMATION PROGRESS. DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. Reclamation of disturbed lands will be addressed in the SWPPP and the stormwater permit will remain open until all disturbed lands achieve final stabilization and a Notice of Termination is filed with the SDDENR. Annual reports are not required; however, reports detailing the results of each inspection and any necessary corrective actions have to be prepared and retained for three years. Reports can be inspected/viewed by SDDENR at any time.

Q. THE INTERVENORS' PROPOSED CONDITION 11 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE "ALL OIL OR HAZARDOUS MATERIAL SPILLS DURING PRE-CONSTRUCTION, CONSTRUCTION, MAINTENANCE, OPERATION AND DECOMMISSIONING SHALL BE REPORTED TO THE PUC WITHIN 20 DAYS IN ADDITION TO ANY REQUIRED REPORTING TO THE DENR." DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. The SWPPP has requirements for oil and hazardous materials spill prevention, response, and reporting during construction and the SPCCP includes preparedness, response, and reporting requirements for oil and hazardous materials spills throughout the active life of the Project. Both plans specify local, state, and federal agencies that have to be notified in the event of a spill or release that could adversely impact surface water, groundwater, human health, or the environment. While the Commission has jurisdiction over pipeline safety and hazardous materials transportation, jurisdiction for releases of oil

and hazardous materials to waters of the United States lies with the U.S. EPA, SDDENR, and local emergency management offices.

Q. THE INTERVENORS' PROPOSED CONDITION 16 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE:

> **PARTNER WITH THE SOUTH DAKOTA DENR TO IMPLEMENT AND MONITOR TEST WELLS THROUGHOUT THE PROJECT WHICH MUST BE TESTED BEFORE ANY CONSTRUCTION IS COMMENCED AND THEN TESTED MONTHLY DURING CONSTRUCTION AND ANNUALLY THEREAFTER FOR THE LIFE OF THE PROJECT. RESULTS MUST BE MADE AVAILABLE TO THE PUBLIC. WELL TESTING MUST BE COMPLETED BY A THIRD PARTY ORGANIZATION SELECTED BY THE DENR. THE PROJECT AREA IS LOCATED IN A SHALLOW AQUIFER REGION AND IS THEREFORE PRONE TO CONTAMINATION.**

DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. Potential impacts to surface water and groundwater are mitigated by the use of BMPs during construction, spill prevention procedures, physical controls, and spill response procedures, materials, equipment, and, personnel during operation of the facility as specified in the Project SWPPP and the facility SPCC plans. The SPCC Plan that will be developed for the Project will also specify secondary containment structures, operational requirements, and response procedures and equipment to comply with US EPA regulations for oil pollution prevention (40CFR112).

The SDDENR has information available online for the public to access regarding water quality throughout the state. The SDDNER maintains an extensive surface water quality monitoring network of South Dakota Streams including 11 water quality monitoring stations in streams in Codington, Grant, and Deuel Counties. The SDDENR also has a monitoring network to examine the quality of shallow groundwater in 26 aquifers across

the state, including the Big Sioux aquifer in Codington and Grant Counties and the Antelope Valley aquifer in Grant County. Groundwater Protection Overlay Districts Ordinances exist in Codington, Grant, and Deuel Counties to protect groundwater within those specific counties. This network regularly and systematically assesses nonpoint source pollution, the current ground water quality, short-term water-quality changes and long-term trends in water.

Requiring development, administration, and implementation of a groundwater monitoring program that would provide an assessment of pre-construction groundwater conditions, measure groundwater quality changes during construction, monitor long-term changes in groundwater quality and quantity, and could be used to assess groundwater quality changes throughout the life of the Project is not needed as the State of South Dakota and the counties currently maintain public information on water quality and aquifers in the project area.

Q. THE INTERVENORS' PROPOSED CONDITION 17 (KEARNEY EXHIBIT DK-8) REQUIRES CRW TO:

> **OFFER EACH NON-PARTICIPATING LANDOWNER WITHIN 2 MILES OF THE BOUNDARY FOOTPRINT A FREE WATER WELL TEST FOR EACH WATER WELL ON THEIR PROPERTY UP TO $2,500 PER LANDOWNER. THIS TEST SHALL COVER BUT NOT LIMITED TO TURBIDITY, PARTICULATES AND BACTERIA. THIS MUST BE COMPLETED BEFORE ANY CONSTRUCTION IS COMMENCED AND REIMBURSEMENT SHALL BE MADE BY THE APPLICANT WITHIN 30 DAYS OF SUBMISSION OF THE RECEIPT TO THE PUC.**

DO YOU AGREE WITH THIS CONDITION?

A. No. The SDDENR has online information regarding water quality throughout the state readily available for the public to access. The SDDNER maintains an extensive

surface water quality monitoring network of South Dakota Streams including 11 water quality monitoring stations in streams in Codington, Grant, and Deuel Counties. The SDDENR also has a monitoring network to examine the quality of shallow groundwater in 26 aquifers across the state, including the Big Sioux aquifer in Codington and Grant Counties and the Antelope Valley aquifer in Grant County. This network regularly and systematically assesses nonpoint source pollution, the current ground water quality, short-term water-quality changes and long-term trends in water. Groundwater Protection Overlay Districts Ordinances exist in Codington, Grant and Deuel Counties to protect groundwater within those specific counties.

Because the SDDENR maintains publicly available information regarding water quality and aquifers in the project, area, an additional groundwater monitoring program is not necessary.

Q. THE INTERVENORS' PROPOSED CONDITION 24 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE:

> **THE PUC FOR THE LIFE OF THE PROJECT, SHALL REQUIRE THE APPLICANT TO MONITOR 24/7 AND REPORT THE DUST PARTICULATE MATTER, OZONE AND AIR CARBON DATA FOR THE LIFE OF THE PROJECT. THIS REPORT SHALL BE COMPILED QUARTERLY THE FINDINGS SHALL BE PUBLISHED WITHIN 3 MONTHS OF COMPLETION OF THE DUST PARTICULATE REPORT IN THE FOLLOWING PUBLIC PUBLICATIONS, FOR THE LIFE OF THE PROJECT: PUBLIC OPINION NEWSPAPER IN WATERTOWN, SD, SOUTH SHORE GAZETTE IN SOUTH SHORE, SD AND THE GRANT COUNTY REVIEW IN MILBANK, SD. THE APPLICANT ADMITS THERE IS SOIL DISTURBANCE, OVER 41 MILES OF NEW DIRT ROADS, VEHICLES AND EQUIPMENT INVOLVED WITH THIS PROJECT.**

DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. Exhaust emissions and dust generated from construction equipment and contractor vehicles will be elevated slightly elevated during construction but will diminish to pre-construction levels after construction ends. Dust control BMPs on gravel/soil roads during construction may include enforcing lowered vehicle speed and the use of water and/or soil stabilizers (e.g., magnesium chloride) to suppress dust generation from equipment and vehicles. After construction has been completed and disturbed lands have achieved final stabilization, vehicles will periodically have to access wind turbine tower locations for operational and maintenance activities, but the frequency of these activities and the number of vehicles involved will be minimal. Wind turbines do not emit particulates or other chemicals that could adversely impact air quality within the Project Area.

Q. THE INTERVENORS' PROPOSED CONDITION 29 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE THE APPLICANT TO DEVELOP A PREDATOR AND RODENT MANAGEMENT PLAN. DO YOU AGREE WITH THIS CONDITION?

A. No. The Applicant is developing a WCS for the Project, which as described in the Application will be provided to the SDPUC prior to the start of construction. The Applicant is developing and implementing the WCS in its continued efforts to demonstrate due diligence in avoiding and minimizing impacts to wildlife in association with the development, construction, and operation of the Project. This WCS describes CRW's strategy to address wildlife conservation in all phases of Project development. Therefore, the Commission should not adopt the Intervenors condition requiring development of a separate predator and rodent management plan.

Q. **THE INTERVENORS' PROPOSED CONDITION 30 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE:**

> **THE APPLICANT SHALL DEVELOP A PLAN TO RENDER AND COMPILE A REPORT THE BIRDS AND BATS KILLED BY TURBINES OR EQUIPMENT OPERATED BY OR CONTRACTED FOR THE APPLICANT. THIS REPORT SHALL CONTAIN BUT NOT LIMITED TO, TIME AND DATE OF DISCOVERY, THE BREED OF BIRD, AND THE SIZE. THIS REPORT SHALL BE REPORTED ANNUALLY AND PUBLISHED IN THE FOLLOWING PUBLIC PUBLICATIONS, FOR THE LIFE OF THE PROJECT: PUBLIC OPINION NEWSPAPER IN WATERTOWN, SD, SOUTH SHORE GAZETTE IN SOUTH SHORE, SD AND THE GRANT COUNTY REVIEW IN MILBANK, SD.**

DO YOU AGREE WITH THIS PROPOSED CONDITION?

A. No. Similar to past cases (Crocker Wind, Prevailing Winds, Dakota I and II), the Applicant generally is agreeable to a condition that states:

> Applicant agrees to undertake two years of independently-conducted post-construction avian and bat mortality monitoring for the Project, and to provide a copy of the report to the United States Fish & Wildlife Service (USFWS), the South Dakota Game, Fish, and Parks (SD GF&P), and the Commission. The Applicant will conduct a third year of independently-conducted post-construction avian and bat mortality monitoring for the Project if results of the first two years exceed other publicly available studies in the region in comparable habitats in coordination with the USFWS and SD GF&P. If the results from the first two years confirm that the Project site is low risk for avian and bat mortality, a third year will not be conducted.

The Applicant believes it is important to clearly articulate the objective and rationale for a third year of post-construction mortality monitoring. In this case, the purpose of the first two years is to confirm the site is low risk compared to publicly available data in the region and in comparable habitats. If the site is not low risk, then the Applicant agrees to consider a third year of post-construction mortality monitoring in coordination with the

wildlife agencies, unless another course of action or remedy is identified and can be addressed.

Also, past cases (Crocker Wind, Prevailing Wind and Dakota Range 1 and 2) have required the applicant to file a Bird and Bat Conservation Strategy prior to beginning construction of the project. CRW will do this through preparation of a WCS. The WCS describes CRW's strategy to address wildlife conservation in all phases of Project development. As described in the Application, the WCS will be submitted to the SDPUC prior to the start of construction, and will be implemented during construction and operation of the Project." Therefore, the Intervenors' condition is not necessary because the Commission's typical conditions which already appropriately address avian and bat mortality monitoring will be met.

Q. THE INTERVENORS' PROPOSED CONDITION 33 (KEARNEY EXHIBIT DK-8) WOULD REQUIRE:

> **THE APPLICANT, FOR THE LIFE OF THE PROJECT, SHALL MONITOR AND REPORT ON CHANGES IN SOIL HEALTH INCLUDING BUT NOT LIMITED TO CHANGES IN ORGANIC MATTER, VEGETATION, MOISTURE, MICROBES, BURYING INSECTS, AND MAMMALS. THIS REPORT SHALL BE COMPILED ANNUALLY AND SHALL BE REPORTED ANNUALLY AND PUBLISHED IN THE FOLLOWING PUBLIC PUBLICATIONS, FOR THE LIFE OF THE PROJECT: PUBLIC OPINION NEWSPAPER IN WATERTOWN, SD, SOUTH SHORE GAZETTE IN SOUTH SHORE, SD AND THE GRANT COUNTY REVIEW IN MILBANK, SD.**
>
> **DO YOU AGREE WITH THIS PROPOSED CONDITION?**

A. No. The Application describes multiple environmental studies that have been completed by the Applicant to document baseline conditions and to accurately assess potential

impacts of the Project on the environment in accordance with the South Dakota Codified Laws Title 49-41B-11 (11) and South Dakota Administrative Rules Chapter 20:10:22:13. The Applicant has determined that only 86 acres of permanent impacts will result from the Project. This represents less than 0.2% of the 53,186-acre Project Area. Within the Project Area, the Project will result in minimal impacts to soil particularly when compared to existing land uses.

In temporarily impacted areas, the Applicant will implement a SWPPP and SPCC Plan to ensure that potential impacts to soil resulting from erosion, sedimentation, spills, or releases are minimized and promptly remediated.

Q. INTERVENOR WITNESS THOMPSON SUBMITTED TESTIMONY EXPLAINING THAT HE IS NOT PARTICIPATING IN THE PROJECT. DID REMOVAL OF THE THOMPSON PROPERTIES IMPACT THE ENVIRONMENTAL MAPS AND IMPACTS?

A. I have included as Exhibit SS-R-1 the following maps that show the collector lines no longer located on the Thompson's properties.

Figure 2 Map – State and Federal Lands
Figure 6 Map – Environmental Constraints
Figure 7 Map – Constraints
Figure 9 Maps a and b -- Surficial Geology and Geology Cross Sections
Figure 10 Map – Bedrock
Figure 11 Map – Soils
Figure 12 Map –Water Resources
Figure 13 Map Land Cover

These are the same maps submitted in the docket on May 23, 2019 that show the re-route of the collector lines off of the Thompson properties. As the maps indicate the re-route does not show any additional environmental impacts associated with the new route for the collector lines.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

STATE OF NORTH DAKOTA)
) ss
COUNTY OF [INSERT])
Burleigh

I, Sarah Sappington, being duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.

Sarah Sappington

Subscribed and sworn to before me this 23th day of May, 2019.

SEAL

CHRIS KRAUSE
Notary Public
State of North Dakota
My Commission Expires July 28, 2023

Notary Public

My Commission Expires July 28, 2023