

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE APPLICATION BY
TATANKA RIDGE WIND, LLC FOR A PERMIT FOR A WIND ENERGY FACILITY
IN DEUEL COUNTY, SOUTH DAKOTA, FOR TATANKA RIDGE WIND FARM**

SD PUC DOCKET EL 19-026

PRE-FILED SUPPLEMENTAL DIRECT TESTIMONY OF JANELLE RIELAND,
WESTERN ECOSYSTEMS TECHNOLOGY, INC.,
ON BEHALF OF TATANKA RIDGE WIND, LLC

September 11, 2019



1 **I. INTRODUCTION**

2
3 **Q. Please state your name, employer, and business address for the record.**

4 A. My name is Janelle Rieland. I am employed by Western EcoSystems Technology Inc.
5 (“WEST”), and my business address is 7575 Golden Valley Road, Golden Valley,
6 Minnesota 55427.

7
8 **Q. Did you previously submit direct testimony in this docket on June 17, 2019?**

9 A. Yes.

10
11 **II. PURPOSE OF TESTIMONY**

12
13 **Q. What is the purpose of your supplemental direct testimony?**

14 A. The purpose of my supplemental direct testimony is to provide an update regarding the
15 environmental surveys conducted by WEST for the Tatanka Ridge Wind Project
16 (“Project”) and to clarify the timing and duration of proposed post-construction mortality
17 monitoring.

18
19 **Q. What exhibits are attached to your supplemental direct testimony?**

20 A. The following exhibits are attached to my supplemental direct testimony:

- 21 • Exhibit 1: Grassland Assessment for the Tatanka Ridge Wind Project. Prepared
22 for Tatanka Ridge Wind, LLC, Portland, Oregon. Prepared by SWCA
23 Environmental Consultants, Bismarck, North Dakota. August 15, 2019.
- 24 • Exhibit 2: 2019 Survey Report Addendum to the Dakota Skipper (*Hesperia*
25 *dacotae*) and Poweshiek Skipperling (*Oarisma poweshiek*) Survey Report (August
26 2018) for the Tatanka Ridge Wind Project, Deuel County, South Dakota. Prepared
27 for Tatanka Ridge Wind, LLC, Portland, Oregon. Prepared by SWCA
28 Environmental Consultants, Bismarck, North Dakota. August 2019.

30 **III. SURVEY UPDATE**

31
32 **Q. Do you have any updates to your direct testimony regarding environmental surveys**
33 **or studies that have been conducted for the Project?**

34 A. Yes. As described in Section 9.1.1.1 of the Application, an assessment was conducted to
35 classify undisturbed grasslands within the Project as either Non-native Undisturbed
36 Grasslands (grasslands that do not show evidence of prior disturbance, but are dominated
37 by non-native species, invasive species, or monocultures) or Native Undisturbed
38 Grasslands (grasslands that do not show evidence of prior disturbance and that contain
39 native herbaceous [plants without woody stems] or grammanoid [grass-like] species).
40 The results of the grassland assessment were incorporated into the Application filed with
41 the South Dakota Public Utilities Commission on June 17, 2019, but the memo detailing
42 the assessment had not been finalized at that time. The Grassland Assessment for the
43 Tatanka Ridge Wind Project is attached as Exhibit 1.

44
45 As described in Section 9.2.1.4.1 of the Application, two butterflies in the skipper family
46 (Hesperiidae) that are federally listed under the Endangered Species Act occur within
47 specialized native prairie habitat that could be present within the Project. In order to
48 determine whether potentially suitable habitat for these species is present within the
49 Project, a desktop assessment and habitat surveys were conducted within the eastern
50 portion of the Project in 2018 (the 2018 survey report is included as Appendix D of the
51 Application) and within the western portion of the Project in 2019. The results of the
52 surveys were incorporated into the Application filed with the South Dakota Public
53 Utilities Commission on June 17, 2019, but the survey report had not been finalized at
54 that time. The results of the desktop assessment and habitat surveys are attached as an
55 addendum to the 2018 survey report, and is attached as Exhibit 2.

56
57 **Q. What were the results of the grassland assessment and 2019 skipper habitat**
58 **surveys?**

59 A. The grassland assessment identified approximately 1,920 acres of grassland within the
60 Project boundary (Exhibit 1). Of this, over 99% (approximately 1,906 acres) were
61 classified as Non-native Undisturbed Grasslands, and less than 1% (approximately

62 14 acres) were classified as Native Undisturbed Grasslands. The native grasslands were
63 dominated by little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogon*
64 *gerardii*), along with porcupine grass (*Hesperostipa spartea*) and western wheatgrass
65 (*Pascopyrum smithii*). Prairie coneflower (*Ratibida columnifera*) and purple coneflower
66 (*Echinacea angustifolia*) were some of the few native forbs present.

67
68 The desktop assessment identified 1,279.3 acres of potential skipper habitat within the
69 2019 survey area (see map in Appendix A to Exhibit 2). Field surveys of the potential
70 habitat were conducted from May 28 through June 2, 2019; no suitable habitat for the
71 federally listed skippers was identified. Unsuitable habitat areas were primarily
72 dominated by non-native upland species (e.g., smooth brome [*Bromus inermis*], clover
73 [*Trifolium* spp.], orchardgrass [*Dactylis glomerata*], or timothy [*Phleum pratense*]), or
74 were within a wetland that did not have requisite Dakota skipper or Poweshiek
75 skipperling plant species. Because suitable habitat for the Dakota skipper or Poweshiek
76 skipperling were not present within the 2019 survey area, species-specific occupancy
77 surveys for these species were not completed.

78 79 **IV. CLARIFICATION**

80 81 **Q. What is the proposed duration of post-construction fatality monitoring?**

82 A. Tatanka Ridge will conduct 12 months of post-construction fatality monitoring, which
83 will begin when the Project begins operation. Because the Project is expected to begin
84 operation in 2020, post-construction fatality monitoring to assess Project-related impacts
85 to birds and bats will be conducted over 2 calendar years.

86 87 **IV. CONCLUSION**

88 **Q. Does this conclude your supplemental direct testimony?**

89 A. Yes.

90
91 Dated this 11th day of September, 2019.

92 /s/

93 Janelle Rieland, for TATANKA RIDGE WIND, LLC



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TECHNICAL MEMORANDUM

To: Tatanka Ridge Wind, LLC
1125 NW Couch Street
Portland, Oregon 97209

From: Jake Powell, Senior Ecologist

Date: August 15, 2019

Re: **Grassland Assessment for the Tatanka Ridge Wind Project**

SWCA Environmental Consultants (SWCA) was contracted by Tatanka Ridge Wind, LLC (Tatanka Ridge), a subsidiary of Avangrid Renewables, LLC, to conduct a grassland assessment for the Tatanka Ridge Wind Project (Project) in Deuel County, South Dakota. SWCA subcontracted Stantec Consulting Services Inc. (Stantec) to provide support on the Project, including assisting with the desktop analysis and providing field biologists. All work was overseen and reviewed by an SWCA senior biologist with expertise in prairie ecology. This technical memorandum represents a qualitative assessment of the publicly available vegetation, land use, and imagery datasets and pedestrian field verification surveys (field surveys) that were completed for the land parcels leased by Tatanka Ridge within the 2019 Project area (see maps in Attachments A and B).

The Project is located approximately 5 miles west of the South Dakota/Minnesota border, and directly north of the town of Toronto, South Dakota. The proposed Project will consist of up to 56 wind turbines and associated infrastructure such as access roads, electrical collection system, substation, operations and maintenance building, and a permanent meteorological tower.

METHODS

SWCA and Stantec completed a desktop analysis for the Project leased parcels (lease status layer dated March 28, 2019) to identify those areas that were potential grassland areas by excluding areas with evidence of cultivation, heavy equipment blading, or other concentrated anthropogenic disturbances. These disturbed areas included cropland, crown and ditch roads, homestead and residential areas, planted tree rows, livestock facilities, and industrial sites. Areas that could not be definitely identified as disturbed were included as potential grassland in the desktop analysis. The following publicly available spatial datasets were used to complete the desktop analysis.

- 2017 cropland data layer (National Agricultural Statistics Service 2018)
- 2010 National Gap Analysis Project (GAP) landcover (U.S. Geological Survey 2010)
- National Wetlands Inventory (U.S. Fish and Wildlife Service 2018)
- Quantifying Undisturbed (Native) Lands in Eastern South Dakota: 2013 (Bauman et al. 2016)

- 2016 National Agricultural Inventory Project (NAIP) aerial imagery (U.S. Department of Agriculture 2016)
- 2017 ArcGIS Digital Imagery

The areas identified as potential grassland during the desktop analysis were carried forward for field surveys. Field surveys were completed May 28 through June 2, 2019. The surveys were conducted by SWCA and Stantec biologists familiar with the plant communities and landscapes in eastern South Dakota. Quantitative vegetation sampling was not completed as part of the field survey. The grassland categories were determined by traversing the areas on foot and conducting a qualitative ocular survey. Quantitative vegetation sampling was not conducted as part of this assessment. Surveyors categorized whether potential grassland areas were native grassland, non-native grassland/wetlands, or disturbed.

Native grasslands included upland grassland dominated by 50% or more native plant species. Non-native grasslands included upland grassland dominated by 50% or more non-native plant species. There were a number of wetlands in the low areas of the coulees and swales within the larger non-native grassland polygons. This scope of work did not include delineating wetlands in these areas so because the wetlands were not native grasslands (as described herein), the wetland areas were combined with the non-native grassland areas to create the non-native grassland/wetland category. Wetland areas included aquatic or riparian areas that were dominated by either native or non-native plant species. Disturbed areas were the same as those used during the desktop analysis.

RESULTS

The grassland desktop assessment identified 1,920.07 acres of potential grassland present in the Project leased parcels. These potential grassland areas were carried forward for field surveys.

Field surveys were conducted on all potential grassland areas. The field survey resulted in categorizing the potential grassland areas into two categories: native grasslands and non-native grasslands/wetlands (see maps in Attachments A and B). The results of the grassland assessment are summarized as follows.

- Native grasslands: 14.11 acres (or 0.73% of the total grassland area)
- Non-native grasslands/wetlands: 1,905.96 acres (or 99.27% of the total grassland area)

The native grassland sites were dominated by little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogon gerardii*), along with porcupine grass (*Hesperostipa spartea*) and western wheatgrass (*Pascopyrum smithii*). Prairie coneflower (*Ratibida columnifera*) and purple coneflower (*Echinacea angustifolia*) were some of the few native forbs present. The non-native grass species smooth brome (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*) were prevalent in these areas as well. The native grasslands were concentrated in the southeastern portion of the Project area. A representative overview of the native grassland in the Project area is provided in Figure 1.



Figure 1. Native grassland, in foreground.

Non-native grasslands were primarily dominated by smooth brome and Kentucky bluegrass, but also included areas dominated by timothy (*Phleum pratense*) and orchardgrass (*Dactylis glomerata*). Invasive weeds such as Canada thistle (*Cirsium arvense*) and musk thistle (*Carduus nutans*) were present in some areas. Wetlands were dominated by both native and non-native species. Figures 2 and 3 provide an overview of representative areas of non-native grasslands.



Figure 2. Non-native grasslands and wetlands.



Figure 3. Non-native grasslands.

LITERATURE CITED

- Bauman, P., B. Carlson, and T. Butler. 2016. *Quantifying Undisturbed (Native) Lands in Eastern South Dakota: 2013*. South Dakota State University Extension.
- National Agricultural Statistics Service. 2018. Cropscape – Cropland Data Layer. U.S. Department of Agriculture. Available at: <https://nassgeodata.gmu.edu/CropScape/>. Accessed May 20, 2019.
- U.S. Department of Agriculture. 2016. National Agricultural Inventory Project. Available at: <http://www.apfo.usda.gov>. Accessed May 20, 2019.
- U.S. Fish and Wildlife Service. 2018. The National Wetlands Inventory. U.S. Department of Interior. Available at: <https://www.fws.gov/wetlands/>. Accessed May 20, 2019.
- U.S. Geological Survey. 2010. National Gap Analysis Project (GAP) land cover. U.S. Department of Interior. Available at: <https://gapanalysis.usgs.gov/gaplandcover/>. Accessed May 20, 2019.

ATTACHMENT A

Overview Map

ATTACHMENT B
Results Maps

2019 SURVEY REPORT ADDENDUM TO THE
DAKOTA SKIPPER (*HESPERIA DACOTAE*) AND
POWESHIEK SKIPPERLING (*OARISMA
POWESHIEK*) SURVEY REPORT (AUGUST
2018) FOR THE TATANKA RIDGE WIND
PROJECT, DEUEL COUNTY, SOUTH DAKOTA

AUGUST 2019

PREPARED FOR
Tatanka Ridge Wind, LLC

PREPARED BY
SWCA Environmental Consultants

**2019 SURVEY REPORT ADDENDUM TO THE
DAKOTA SKIPPER (HESPERIA DACOTAE) AND POWESHIEK
SKIPPERLING (OARISMA POWESHIEK) SURVEY REPORT
(AUGUST 2018) FOR THE TATANKA RIDGE WIND PROJECT,
DEUEL COUNTY, SOUTH DAKOTA**

Prepared for

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Prepared by

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August 22, 2019

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1 INTRODUCTION

Tatanka Ridge Wind, LLC, contracted SWCA Environmental Consultants (SWCA) to conduct a Dakota skipper (*Hesperia dacotae*) and Poweshiek skipperling (*Oarisma poweshiek*) surveys for the western expansion area of the Tatanka Ridge Wind Project (Project) in Deuel County, South Dakota (see map in Appendix A). This report outlines the survey results and is an addendum to the *Dakota skipper (Hesperia dacotae) and Poweshiek skipperling (Oarisma poweshiek) survey report for the Tatanka Ridge Wind Project, Deuel County, South Dakota*, dated August 2018 (SWCA 2018).

The Project is located approximately 5 miles west of the South Dakota/Minnesota border, and directly north of the town of Toronto, South Dakota. In early 2019 the project area was expanded to the west (map in Appendix A) and the nameplate capacity increased from 99 megawatts to up to 155 megawatts. The proposed Project will consist of wind turbines and associated infrastructure such as access roads, electrical collection system, substation, operations and maintenance building, and a permanent meteorological tower.

The Dakota skipper and Poweshiek skipperling are listed as threatened and endangered under the Endangered Species Act, respectively, by the USFWS. These species are not listed under the South Dakota Endangered Species Law. The purpose of the survey was to meet USFWS guidelines (USFWS 2018a) on assessment of the Dakota skipper and Poweshiek skipperling within the expanded project area, where land parcels are leased (2019 survey area). The least status used for the surveys was dated March 28, 2019, and represented the most up-to-date status available to SWCA.

A desktop analysis of the 2019 survey area was conducted to identify undisturbed grassland areas that could be potential habitat for the Dakota skipper and Poweshiek skipperling. Pedestrian qualitative field surveys were conducted within the 2019 survey area leased parcels potential habitat to field-verify suitable habitat for adult Dakota skipper and Poweshiek skipperling. No suitable habitat for the Dakota skipper or Poweshiek skipperling were identified in the 2019 survey area, therefore no adult occupancy surveys were required, or completed. SWCA subcontracted Stantec Consulting Services Inc. (Stantec) to provide field biologists for the field survey. All work was overseen and reviewed by an SWCA senior biologist with a U.S. Fish and Wildlife Service (USFWS) Dakota skipper and Poweshiek skipperling permit and expertise in prairie ecology.

2 METHODS

The surveys were conducted in accordance with the USFWS (2018a) guidelines. Mr. Jake Powell, SWCA Senior Biologist, reviewed and oversaw all desktop and field surveys. Mr. Powell is listed on SWCA's Scientific Recovery Permit for the Dakota skipper and Poweshiek skipperling (permit number TE64070B-1) and is a technical specialist in these species and prairie ecology.

2.1 Desktop Analysis

SWCA completed a desktop analysis for the 2019 survey area to identify those areas that were potential habitat using publicly available spatial datasets and aerial imagery interpretation by an ecologist experienced with Dakota skipper and Poweshiek skipperling habitat. The following publicly available spatial datasets were used to complete the desktop analysis.

- 2017 cropland data layer (National Agricultural Statistics Service 2018)
- 2010 National Gap Analysis Project (GAP) landcover (U.S. Geological Survey 2010)
- National Wetlands Inventory (USFWS 2018b)
- Quantifying Undisturbed (Native) Lands in Eastern South Dakota: 2013 (Bauman et al. 2016)
- 2016 National Agricultural Inventory Project (NAIP) aerial imagery (U.S. Department of Agriculture 2016)
- 2017 ArcGIS Digital Imagery

2.2 Habitat Surveys

The areas identified as potential habitat during the desktop analysis were carried forward for qualitative field surveys to determine the presence/absence of suitable habitat for the Dakota skipper and Poweshiek skipperling. The surveys were completed by SWCA and Stantec (SWCA subcontractor) biologists, familiar with the plant communities and landscapes in eastern South Dakota, to field-verify whether the potential habitat identified during the desktop analysis was suitable or unsuitable habitat for the Dakota skipper and Poweshiek skipperling. The surveys were completed on all potential habitat areas on leased lands (lease status dated March 28, 2019). The habitat surveys were conducted from May 28 through June 2, 2019. Suitable habitat determinations were made based on habitat characteristics outlined in the published literature (Rigney 2013; Royer and Marrone 1992a; Royer and Marrone 1992b; Selby 2013; Skadsen 2003; USFWS 2014, 2016, 2018a).

3 RESULTS AND DISCUSSION

The desktop analysis identified 1,279.3 acres of potential habitat present in the 2019 survey area. The potential habitat is shown on the map in Appendix A. The potential habitat areas, within the leased parcels (lease status dated March 28, 2019) were carried forward for field surveys.

Field surveys of the potential habitat were conducted from May 28 through June 2, 2019. No suitable habitat was identified within the 2019 survey area leased parcels. The unsuitable habitat present in the

2019 survey area has similar plant community attributes as the unsuitable habitat identified in 2018 (SWCA 2018).

Unsuitable habitat areas were primarily dominated by non-native upland species (e.g., smooth brome [*Bromus inermis*], clover [*Trifolium* spp.], orchardgrass [*Dactylis glomerata*], or timothy [*Phleum pratense*]), or in a wetland that did not have requisite Dakota skipper or Poweshiek skipperling plant species. Alfalfa (*Medicago sativa*) was prevalent in many of the unsuitable habitat areas. Canada thistle (*Cirsium arvense*) and musk thistle populations were located throughout the survey area. Figures 1 shows an example of these unsuitable habitat areas.



Figure 1. Representative Unsuitable Habitat

Summary

This is a summary of the results:

- The desktop review resulted in 1,279.3 acres of potential habitat being identified.
- Habitat surveys in the 2019 survey area leased parcels were conducted from May 28 through June 2, 2019.
- No suitable habitat was identified.

*2019 SURVEY REPORT ADDENDUM TO THE
DAKOTA SKIPPER (HESPERIA DACOTAE) AND POWESHIEK SKIPPERLING (OARISMA POWESHIEK) SURVEY
REPORT (AUGUST 2018) FOR THE TATANKA RIDGE WIND PROJECT, DEUEL COUNTY, SOUTH DAKOTA*

- Occupancy surveys were not completed due to the lack of suitable habitat present for the Dakota skipper and Poweshiek skipperling.

4 REFERENCES CITED

- Bauman, P., B. Carlson, and T. Butler. 2016. Quantifying Undisturbed (Native) Lands in Eastern South Dakota: 2013. South Dakota State University Extension.
- National Agricultural Statistics Service. 2018. Cropscape – Cropland Data Layer. U.S. Department of Agriculture. Available at: <https://nassgeodata.gmu.edu/CropScape/>. Accessed May 20, 2019.
- Rigney, C.L. 2013. Habitat characterization and biology of the threatened Dakota skipper (*Hesperia dacotae*) in Manitoba. Masters of Science. Manitoba, Canada: The University of Winnipeg.
- Royer, R., J. Austin, and W. Newton. 1998. *Checklist and "Pollard Walk" Butterfly Survey Methods on Public Lands*. Paper 10. U.S. Geological Survey, Northern Prairie Wildlife Research Center.
- Royer, R., and G.M. Marrone. 1992a. *Conservation Status of the Poweshiek Skipper (Oarisma poweshiek) in North and South Dakota*. Denver, Colorado: U.S. Fish and Wildlife Service. March 15, 1992.
- . 1992b. *Conservation Status of the Dakota Skipper (Hesperia dacotae) in North and South Dakota*. Denver, Colorado: U.S. Fish and Wildlife Service. March 15, 1992.
- Selby, G. 2013. *U.S. Fish and Wildlife Service Region 3 2012 Minnesota Prairie Butterfly Surveys, Final Report*. Bloomington, Minnesota: U.S. Fish and Wildlife Service, Twin Cities Field Office. January 31, 2013.
- Skadsen, D.R. 2003. *Dakota Skipper Population Surveys for CCAA Development in the State of South Dakota*. Pierre: South Dakota Department of Game, Fish, and Parks Wildlife Division. Report 2003-20. December 31, 2003.
- SWCA Environmental Consultants (SWCA). 2018. *Dakota skipper (Hesperia dacotae) and Poweshiek skipperling (Oarisma poweshiek) survey report for the Tatanka Ridge Wind Project, Deuel County, South Dakota*. Unpublished report.
- U.S. Department of Agriculture. 2016. National Agricultural Inventory Project. Available at: <http://www.apfo.usda.gov>. Accessed May 20, 2019.
- U.S. Fish and Wildlife Service (USFWS). 2014. *Poweshiek Skipperling (Oarisma poweshiek) Fact Sheet*. USFWS, Midwest Region. October 2014.
- . 2016. *Guidance for Interagency Cooperation Under Section 7(a)(2) of the Endangered Species Act for the Dakota Skipper, Dakota Skipper Critical Habitat, and Poweshiek Skipperling Critical Habitat, Version 1.1*. May 2016.
- . 2018a. *2018 Dakota Skipper (Hesperia dacotae) North Dakota Survey Protocol*. USFWS, Mountain-Prairie Region. Available at: www.fws.gov/midwest/endangered/insects/dask/index.html. Accessed June 18, 2018.
- . 2018b. The National Wetlands Inventory. U.S. Department of Interior. Available at: <https://www.fws.gov/wetlands/>. Accessed May 20, 2019.

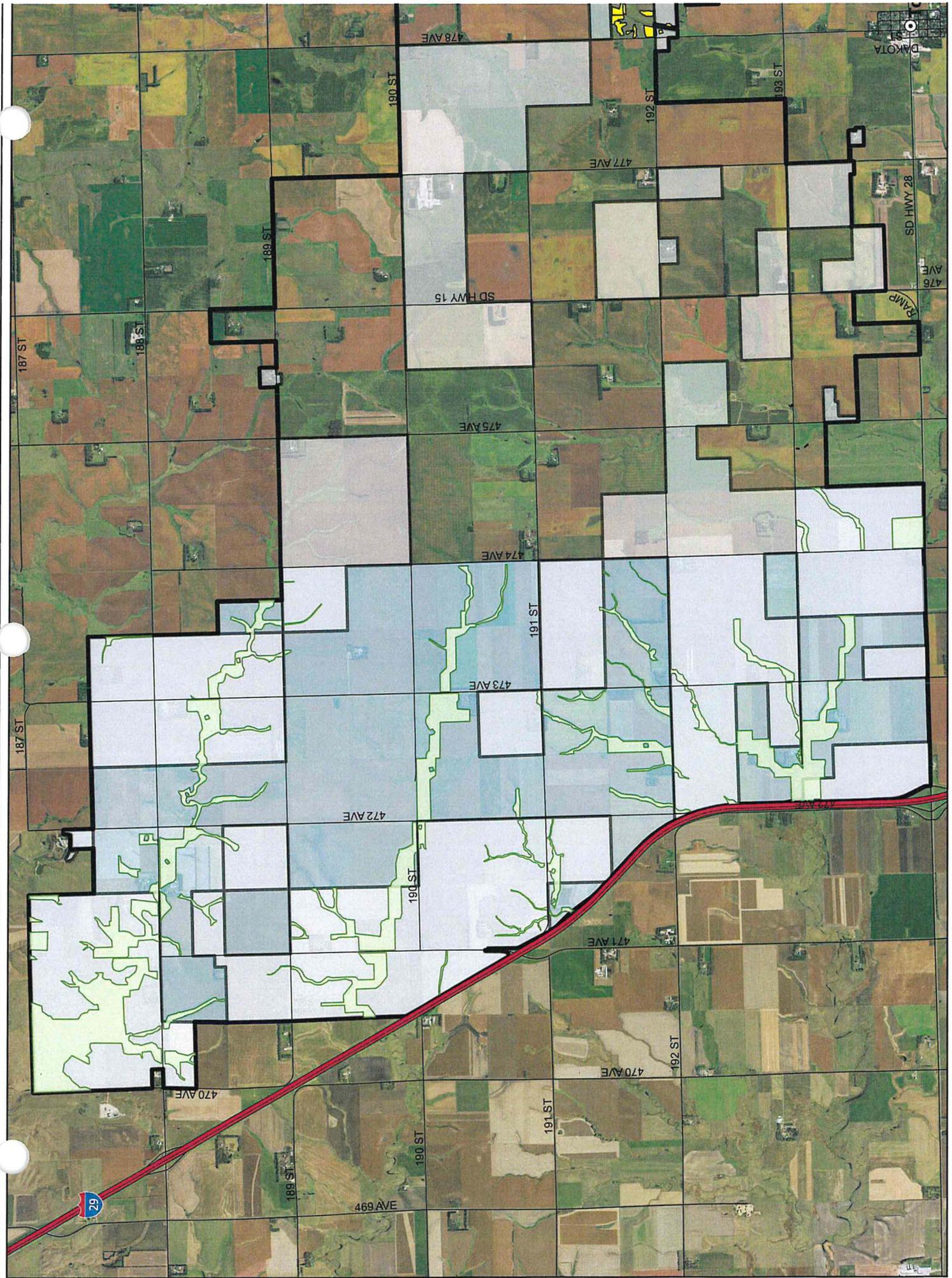
*2019 SURVEY REPORT ADDENDUM TO THE
DAKOTA SKIPPER (HESPERIA DACOTAE) AND POWESHIEK SKIPPERLING (OARISMA POWESHIEK) SURVEY
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U.S. Geological Survey. 2010. National Gap Analysis Project (GAP) land cover. U.S. Department of Interior. Available at: <https://gapanalysis.usgs.gov/gaplandcover/>. Accessed May 20, 2019.

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APPENDIX A
Results Map

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Trafalco Ridge Wind Project 0400 Lot 0100 Summary

How Medicine

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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION)
OF TATANKA RIDGE WIND, LLC FOR A)
PERMIT OF A WIND ENERGY FACILITY)
IN DEUEL COUNTY, SOUTH DAKOTA)

EL19-026

**SUPPLEMENTAL
DIRECT TESTIMONY OF
JANELLE RIELAND**

1. Ms. Rieland, are you familiar with the whooping crane condition in the Triple H Wind Farm Docket EL19-007?

Answer: Yes, I am.

2. Do you have any comments on the inclusion of a similar condition for the Tatanka Ridge Wind Project?

Answer: Yes, I do. My first reaction would be that there is no need to include a condition relating to whooping crane for the Tatanka Ridge Wind Project (or Project). The Project is located nearly 40 miles east of the U.S. Fish and Wildlife Service's (USFWS) whooping crane migration corridor, which contains 95% of the confirmed whooping crane observations during migration. That is unlike the Triple H Wind Project, which is located in the central portion of the migration corridor. Whooping cranes are much more frequently documented migrating through central South Dakota near the Missouri River than in eastern South Dakota.

3. Did you discuss a Whooping Crane condition with either the U.S Fish and Wildlife Service or South Dakota Game, Fish, and Parks?

Answer: No, we did not. Although we engaged in early coordination with both the USFWS and South Dakota Game, Fish, and Parks (SDGFP), the whooping crane was not discussed. The whooping crane was not identified by the USFWS Information for Planning and Conservation online system as a species known or expected to be near the Project, and the South Dakota Natural Heritage Database review did not include any records of the whooping crane occurring within or near the Project. The whooping crane was not observed during surveys conducted at the Project.

4. Is there an expense to developing and implementing a formal plan for monitoring the Project site for whooping cranes during the spring and fall migration period?

Answer: Yes. The expense can be substantial. Implementation of a whooping crane monitoring plan would likely involve physical monitoring by either project staff or contract professionals during the spring and fall migration period each year. The expense associated with physical monitoring at the Project is significant and unwarranted given the species is not expected to be present in far eastern South Dakota.

43 **5. What would you propose for a condition for the Tatanka Ridge Wind Project to**
44 **minimize potential impacts to whooping cranes?**

45 Answer: If the Commission determines that a condition relating to whooping cranes is warranted,
46 I would propose the condition state that the applicant shall establish a procedure for minimize the
47 risk of whooping crane collisions with turbines during operations. The applicant will coordinate
48 with the South Dakota Game, Fish, and Parks on the procedure to minimize impacts to whooping
49 cranes.

50

51 Dated this 28 day of October 2019.

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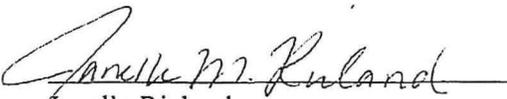
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Janelle Rieland