Exhibit A

BURNS McDONNELL

BASIN ELECTRIC POWER COOPERATIVE

Sound Study

Prairie Wind – South Dakota

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List of Abbreviations

Abbreviation	Term/Phrase/Name
ACP	American Clean Power Association
ANSI	American National Standards Institute
CadnaA	Computer Aided Noise Abatement
dB	decibel
dBA	A-weighted decibels
Developer	Basin Electric Power Cooperative
GE	General Electric
Hz	hertz
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Organization for Standardization
L_{eq}	equivalent sound level
LWECS	Large Wind Energy Conversion Systems
Project	Prairie Wind Project
Sound Study	acoustic analysis for the Project
WES	Wind Energy Systems
WTG	Wind Turbine Generator

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1.0 Introduction

Burns & McDonnell was retained by Basin Electric Power Cooperative ("Developer") to conduct an acoustic analysis ("Sound Study") for the Prairie Wind Project ("Project") wind turbine repowering. The Project is in Aurora, Brule, and Jerauld County, South Dakota, approximately 24 miles southwest of the City of Wessington Springs, South Dakota. The existing wind farm includes 108 General Electric ("GE") 1.5 SL/SLE wind turbine generators ("WTG"). This wind farm is proposed to be repowered with GE 1.6-97 WTGs located at the same 108 locations. The wind turbine properties are shown in Table 1-1.

Table 1-1: Wind Turbine Generator Properties

Project	Turbine Generator Manufacturer	Turbine Generator Model	Rotor Diameter (meters)	Hub Height (meters)	Turbine Abbreviation in Report
Existing	GE	1.5 SL/SLE	77	80	GE 1.5 SL/SLE
Repower	GE	1.6-97	97	80	GE 1.6-97

The objective of this Sound Study is to model both the existing and future sound impacts generated by the existing and repowered Project wind turbine generators. The following sections describe the Sound Study completed for the Project.

2.0 Background Information

2.1 Acoustic Terminology

The term "sound level" is often used to describe two different sound characteristics: sound power and sound pressure. Every source that produces sound has a sound power level. The sound power level is the acoustic energy emitted by a sound source and is an absolute number that is not affected by the surrounding environment. The acoustic energy produced by a source propagates through media as pressure fluctuations. These pressure fluctuations, also called sound pressure, are what human ears hear and microphones measure.

Sound is physically characterized by amplitude and frequency. The amplitude of sound is measured in decibels ("dB") as the logarithmic ratio of a sound pressure to a reference sound pressure (20 microPascals). The reference sound pressure corresponds to the typical threshold of human hearing. To the average listener, a 3-dB change in a continuous broadband sound is generally considered "just barely perceptible"; a 5-dB change is generally considered "clearly noticeable"; and a 10-dB change is generally considered a doubling (or halving, if the sound is decreasing) of the apparent loudness.

Sound waves can occur at many different frequencies, which correspond to the sound's wavelength. Frequency is measured in hertz ("Hz"), which is the number of wave cycles per second that occur. The typical human ear can hear frequencies ranging from approximately 20 to 20,000 Hz. Normally, the human ear is most sensitive to sounds in the middle frequencies (1,000 to 8,000 Hz) and is less sensitive to sounds in the lower and higher frequencies. As such, the A-weighting scale was developed to simulate the frequency response of the human ear to sounds at typical environmental levels. The A-weighting scale emphasizes sounds in the middle frequencies and de-emphasizes sounds in the low and high frequencies. Any sound level to which the A-weighting scale has been applied is expressed in A-weighted decibels, or dBA. For reference, the A-weighted sound pressure level and subjective loudness associated with some common sound sources are listed in Table 2-1.

Sound in the environment is constantly fluctuating, as when a car drives by, a dog barks, or a plane passes overhead. Therefore, sound metrics have been developed to quantify fluctuating environmental sound levels. These metrics include the exceedance sound level. The exceedance sound level is the sound level exceeded during "x" percent of the sampling period and is also referred to as a statistical sound level. The equivalent-continuous sound level ("L_{eq}") is the logarithmic average of the varying sound over a given period and is the most common metric used to describe sound.

Table 2-1: Typical Sound Pressure Levels Associated with Common Sound Sources

Sound Pressure Level (dBA)	Subjective Evaluation	Environment
140	Deafening	Jet aircraft at 75 feet
130	Threshold of pain	Jet aircraft during takeoff at 300 feet
120	Threshold of feeling	Elevated train
110	Very loud	Jet flyover at 1,000 feet
100		Motorcycle at 25 feet
90	Moderately loud	Propeller plane flyover at 1,000 feet
80		Diesel truck (40 mph) at 50 feet
70	Loud	B-757 cabin during flight
60	Moderate	Air-conditioner condenser at 15 feet
50	Quiet	Private office
40		Farm field with light breeze, birdcalls
30	Very quiet	Quiet residential neighborhood
20		Rustling leaves
10	Just audible	--
0	Threshold of hearing	--

Source: Adapted from *Architectural Acoustics*, M. David Egan, 1988, and *Architectural Graphic Standards*, Ramsey and Sleeper, 1994.

2.2 Wind Turbine Sound Characteristics

The sound commonly associated with a wind turbine is described as a rhythmic "whoosh" caused by aerodynamic processes. This sound is created as air flow interacts with the surface of rotor blades. As air flows over the rotor blade, turbulent eddies form in the surface boundary layer and wake of the blade. These eddies are where most of the "whooshing" sound is formed. Additional sound is generated from vortex shedding produced by the tip of the rotor blade. Air flowing past the rotor tip creates alternating low-pressure vortices on the downstream side of the tip causing sound generation to occur. Older wind turbines, built with rotors which operate downwind of the tower (downwind turbines), often have higher aerodynamic impulse sound levels. This is caused by the interaction between the aerodynamic lift created on the rotor blades and the turbulent wake vortices produced by the tower. Modern wind turbine rotors are mostly built to operate upwind of the tower (upwind turbines). Upwind turbines are not impacted by wake vortices generated by the tower and, therefore, overall sound levels can be as much as 10 dBA less for similarly sized turbines. The rhythmic fluctuations of the overall sound level are less perceivable farther from the turbine. Additionally, multiple turbines operating at the same time will create the whooshing sound at different times. These non-synchronized sounds will blend to create a more constant sound to an observer at most distances from the turbines. Another phenomenon that reduces perceivable noise from turbines is the wind itself. Higher wind speed produces noise that tends to mask (or drown out) the sounds created by wind turbines.

Advancement in wind turbine technology has reduced pure tonal emissions of modern wind turbines. Manufacturers have reduced distinct tonal sounds by reshaping turbine blades and adjusting the angle at which air contacts the blade. Pitching technology allows the angle of the blade to adjust when the maximum rotational speed is achieved, which allows the turbine to maintain a constant rotational velocity. Therefore, sound emission levels remain constant as the velocity remains the same.

Wind turbines can create noise in other ways as well. Wind turbines have a nacelle where the mechanical portions of the turbine are housed. The current generation of wind turbines use multiple techniques to reduce the noise from this portion of the turbine: vibration isolating mounts, special gears, and acoustic insulation. In general, all moving parts and the housing of the current generation wind turbines have been designed to minimize the noise they generate.

3.0 Applicable Regulations

Federal, State, and local noise regulations were reviewed to determine potentially applicable Project sound level limits. No Federal or State of South Dakota sound level limits were identified that would be applicable to the Project. The county ordinances are summarized below.

3.1 Aurora County

Aurora county outlines noise limits for WTGs in the Aurora County Ordinance, Article 9, Wind Energy Systems, Section 913. "Noise level produced by the WES shall not exceed 45 dBA, average A-weighted sound pressure at the perimeter of occupied residences existing at the time of the permit application is filed, unless a signed waiver or easement is obtained from the owner of the residence. The permittees shall submit a report of predicated noise levels at habitable residential dwellings within one mile of the proposed tower locations to the board."

3.2 Brule County

Brule County, South Dakota does not have applicable noise standards, regulations, or ordinances identified as applicable to the Project.

3.3 Jerauld County

Jerauld County outlines noise limits for WTGs in the Jerauld County Zoning Ordinance, Section 525, Large Wind Energy Conversion Systems (LWECS) Performance Standards. The Ordinance provides that "noise level produced by the LWECS shall not exceed 45 dBA, average A-weighted sound pressure at the perimeter of occupied residences existing at the time of the permit application is filed, unless a signed waiver or easement is obtained from the owner of the residence and recorded with the Register of Deeds."

3.4 Regulatory Summary

For this study, residences that have signed or are participating in the Project are referred to as participating residences. All other residences are considered non-participating residences. The Project will be designed such that the Project noise impacts do not exceed 45 dBA at any non-participating residential structure in Aurora, Brule, or Jerauld County.

4.0 Sound Modeling

Industry-accepted sound modeling software, CadnaA (Version 2026, published by DataKustik, Ltd., Munich, Germany) was used to estimate expected sound pressure levels from the Project. The model inputs and assumptions are described in this section.

4.1 Model Inputs and Settings

The CadnaA program is a scaled, three-dimensional program that considers air absorption, terrain, ground absorption, and ground reflection for each piece of noise-emitting equipment and predicts downwind sound pressure levels. The model calculates sound propagation based on International Organization for Standardization ("ISO") 9613-2:2024, General Method of Calculation. ISO 9613, and therefore CadnaA, assesses the sound pressure levels based on the octave-band center-frequency range from 31.5 to 8,000 Hz. Predicted compliance with the regulations for all turbines operating implies predicted compliance for any combination of the turbines operating.

4.1.1 Project Layout

The Project will retain the location of the 108 existing GE 1.5 SL/SLE turbines. The turbine locations for the Project layout are listed in Table A-1 of Appendix A and shown graphically in Figure C-1 of Appendix C.

4.1.2 Receptors

A quantity of 87 receptors were modeled surrounding the Project. The Developer-provided coordinates of each receptor are provided in Table B-1 of Appendix B and the locations are shown graphically in Figure C-1 of Appendix C. Burns & McDonnell did not provide an independent verification of the location or occupied status of these receptors.

4.1.3 ANSI / ACP 111-1 (2022)

To standardize the calculation methodology for wind turbine sound levels, the American Clean Power Association ("ACP") developed a standard, recognized by the American National Standards Institute ("ANSI"), which outlines preferred modeling methods for predicting future sound levels from wind turbine generating projects. These methods, along with the wind turbine model-specific sound power levels (determined in accordance with International Electrotechnical Commission, IEC 61400-11), are to be used with ISO 9613 calculations and are expected to yield a conservative, worst-case condition with wind turbines operating at their highest rated sound power levels.

The standard, ANSI / ACP 111-1-2022, provides two options for modeling parameters which are to be implemented into the modeling software/calculations. Both options are expected to yield nearly identical results, per the standard. For this study, Option 1 modeling parameters have been selected as provided in Table 4-1.

Table 4-1: ANSI / ACP 111-1 (2022) Modeling Parameters

Model Parameter	Value
Ground Factor (G)	0
Reflections	2
Receptor Height	1.5 meters
Turbine Source Height	Vendor Provided Hub-height
Model Adjustments	None
Temperature	50 °F
Humidity	70%

A point source located at the specific hub height of each proposed turbine location was used to model sound emissions from each of the wind turbines, per direction of ANSI / ACP 111-1. The sound levels shown in the table above were applied, as appropriate, to each point source. Each residence was modeled as a receiver at a height of 1.5 meters (5 feet) above ground level.

4.1.4 Terrain

Terrain and attenuation from ground absorption can have a significant impact on sound transmission. U.S. Geological Survey Digital Elevation Model contours were imported into the model to account for topographic variations around the Project. The contours were overlaid onto high-resolution, digital ortho imagery obtained from the U.S. Department of Agriculture to visually confirm proper contour positioning. The terrain around the proposed Project is mostly rural with few minor changes in elevation.

4.1.5 Sound Propagation and Directivity

CadnaA calculates downwind sound propagation using ISO 9613 standards, which use omni-directional downwind sound propagation and worst-case directivity factors. Essentially, the model assumes that each turbine always propagates its maximum sound level in all directions. This will likely over-predict upwind sound levels.

4.1.6 Atmospheric Conditions

Atmospheric conditions were based on program defaults. Layers in the atmosphere often form where temperature increases with height (temperature inversions). Sound waves refract due to the temperature inversion causing sound to bend toward the surface of the earth. This process can increase sound levels at the surface, especially if the height of the inversion begins near the surface of the earth. Temperature inversions tend to occur mainly at night when winds are light or calm, usually when wind turbines are not operating. ISO 9613-2, and therefore CadnaA, calculates the downwind sound in a manner which is favorable for propagation (worst-case scenario) by assuming a well-developed, moderate ground-based temperature inversion that can occur at night. Therefore, predicted sound levels tend to be higher than would likely occur.

The atmosphere does not flow smoothly and tends to have swirls and eddies, also known as turbulence. Turbulence is generally formed by two processes: thermal turbulence and mechanical turbulence. Thermal turbulence is caused by the interaction of heated air rapidly rising from the heated earth's surface with cooler air descending from the atmosphere. Mechanical turbulence is caused by moving air interacting with objects such as trees, buildings, and wind turbines. Turbulent eddies generated by wind turbines and other objects can cause sound waves to scatter, which in turn, provides sound attenuation between the wind turbine and

the receiver. The acoustic model assumes laminar air flow, which minimizes sound attenuation that would occur in a realistic nonhomogeneous atmosphere. This assumption also causes the predicted sound levels to be higher than would likely occur.

4.1.7 Wind Turbine Sound Emission Data

Modeling was completed for the Project using wind turbine heights and acoustic emissions for each respective turbine type. The expected loudest sound power levels were provided by the turbine vendor. The sound emissions data supplied was developed using the International Electrotechnical Commission ("IEC") 61400-11 acoustic measurement standards. IEC 61400-11 is used to determine the max sound power level of the overall turbine assembly. Sound power levels were provided by the manufacturer at various wind speeds for a height of 10 meters (32.8 feet) above grade. The apparent sound power levels provided by the vendors are mean values of representative batches of turbines evaluated. The sound power levels used in the model are displayed in Table 4-2.

Table 4-2: Maximum Wind Turbine Sound Power Levels (L_{WA})

Equipment	Sound Level by Octave Band Frequency (Hz) (dBA)									Total Sound Level (dBA)
	31.5	63	125	250	500	1000	2000	4000	8000	
GE 1.5 SL/SLE	81	85	94	97	99	98	95	87	78	104
GE 1.6-97	78	88	94	97	101	103	102	96	81	108

A point source located at the specific hub height of each proposed turbine location was used to model sound emissions from each of the wind turbines. This approach is appropriate for simulating wind turbine noise emissions due to the large distances between the turbines and the receivers as compared to the dimensions of the wind turbines. The sound levels shown in the table above were applied, as appropriate, to each point source.

4.2 Acoustic Modeling Results

Project-generated sound pressure levels were calculated for the identified receivers in the CadnaA noise modeling program using the manufacturer-specified sound power levels at each octave-band frequency and the assumptions listed above. Noise modeling results have been demonstrated in previous studies to conservatively approximate real-life measured noise from a source when extraneous noises are not present.

Wind turbine locations and resulting sound impacts at the nearest identified residential receptors are provided in tabular form in Appendix A and Appendix B, respectively. Sound level contours for the existing and repowered Project WTGs are shown in Figures C-2 and C-3 of Appendix C, respectively. All non-participating residences are predicted to meet the 45 dBA design goal for the Project.

The GE 1.6-97 turbine has a higher total sound level than the GE 1.5 SL/SLE due to the higher sound levels in the upper frequencies (above 500 Hz). Each receptor is expected to experience a slight increase in sound from the repowered configuration compared to the existing turbines. However, the model results for the repower configuration do not exceed a difference over the existing turbines of more than 3 dBA at any residential receptor. As noted in Section 2.1, a 3-dB change in a continuous broadband sound is generally considered just barely perceptible to the average listener.

5.0 Conclusion

Burns & McDonnell conducted a sound study for the Prairie Wind Project to analyze the sound level impacts of replacing the existing GE 1.5 SL/SLE wind turbines with GE 1.6-97 turbines. A comparison of existing and repowered sound levels identified the sound level difference at each identified receptor between these two configurations.

Each GE turbine configuration was modeled at a hub height of 80 meters for the 108 WTG locations that currently exist. Sound pressure levels were predicted for the Project area using manufacturer-specified overall sound power levels for the wind turbines and guidance from the ANSI/ACP 111-1 wind turbine modeling standard to provide the loudest predicted sound levels from the modeled turbines to the neighboring identified residences. All non-participating residences are predicted to be below 45 dBA for the layout and turbines detailed in this report.

Appendix A – Turbine Locations

Turbine Name	Easting (m)	Northing (m)	Hub Height (m)	Existing Turbine Sound Power Level (dBA)	Repower Turbine Sound Power Level (dBA)
A01	518,909	4,863,440	80	104	106
A02	519,297	4,863,769	80	104	106
A03	517,833	4,864,054	80	104	106
A04	518,454	4,864,223	80	104	106
A05	518,271	4,864,832	80	104	106
A06	518,940	4,865,225	80	104	106
A07	519,592	4,864,927	80	104	106
A08	519,534	4,865,325	80	104	106
A09	519,574	4,865,742	80	104	106
A10	518,793	4,866,211	80	104	106
A11	520,709	4,865,158	80	104	106
A12	520,836	4,865,575	80	104	106
A13	522,467	4,865,812	80	104	106
A14	523,140	4,866,101	80	104	106
A15	524,141	4,865,705	80	104	106
B16	517,724	4,863,393	80	104	106
B17	517,301	4,863,707	80	104	106
B18	516,908	4,863,410	80	104	106
B19	514,738	4,863,440	80	104	106
B20	514,794	4,864,765	80	104	106
B21	514,295	4,865,622	80	104	106
B22	514,014	4,865,925	80	104	106
B23	514,112	4,865,245	80	104	106
B24	513,589	4,865,336	80	104	106
B25	514,137	4,863,261	80	104	106
B26	513,553	4,863,230	80	104	106
B27	512,940	4,863,684	80	104	106
B28	512,066	4,863,783	80	104	106
B29	513,252	4,862,974	80	104	106
B30	512,790	4,862,791	80	104	106
C31	517,685	4,862,556	80	104	106
C32	516,875	4,862,265	80	104	106
C33	515,634	4,862,534	80	104	106
C34	518,222	4,861,810	80	104	106
C35	517,619	4,861,228	80	104	106
C36	517,469	4,861,002	80	104	106
C37	516,839	4,860,574	80	104	106
C38	516,373	4,860,371	80	104	106
C39	517,621	4,860,573	80	104	106
C40	517,460	4,860,251	80	104	106
C41	518,196	4,860,214	80	104	106
C42	517,796	4,859,727	80	104	106
C43	516,905	4,859,671	80	104	106
C44	516,585	4,859,308	80	104	106
C45	517,585	4,859,091	80	104	106
D46	518,363	4,861,010	80	104	106
D47	515,240	4,857,045	80	104	106
D48	514,984	4,856,809	80	104	106
D49	514,539	4,856,467	80	104	106
D50	513,599	4,856,346	80	104	106
D51	513,295	4,855,704	80	104	106
D52	513,064	4,855,293	80	104	106
D53	512,520	4,855,261	80	104	106
D54	511,675	4,855,608	80	104	106
D55	512,923	4,854,866	80	104	106
D56	512,536	4,854,706	80	104	106
D57	512,161	4,854,610	80	104	106
D58	511,802	4,854,114	80	104	106
D59	511,061	4,854,261	80	104	106
E60	518,819	4,860,374	80	104	106
E61	516,913	4,857,535	80	104	106
E62	516,605	4,857,280	80	104	106
E63	516,451	4,857,036	80	104	106
E64	516,168	4,856,879	80	104	106
E65	515,749	4,856,662	80	104	106
E66	515,315	4,855,970	80	104	106
E67	514,816	4,855,637	80	104	106
E68	514,187	4,855,554	80	104	106
E69	514,852	4,854,898	80	104	106
E70	514,408	4,854,466	80	104	106
E71	513,985	4,854,262	80	104	106
E72	513,654	4,853,829	80	104	106
E73	512,484	4,853,749	80	104	106
F74	519,386	4,861,032	80	104	106
F75	519,271	4,860,337	80	104	106
F76	519,983	4,859,698	80	104	106
F77	519,549	4,859,568	80	104	106
F78	519,417	4,859,373	80	104	106
F79	519,064	4,859,058	80	104	106
F80	518,804	4,858,803	80	104	106
F81	518,437	4,858,717	80	104	106
F82	518,507	4,858,129	80	104	106
F83	518,114	4,858,036	80	104	106

Turbine Name	Easting (m)	Northing (m)	Hub Height (m)	Existing Turbine Sound Power Level (dBA)	Repower Turbine Sound Power Level (dBA)
F84	517,930	4,857,649	80	104	106
F85	518,061	4,857,307	80	104	106
F86	517,583	4,857,475	80	104	106
F87	517,403	4,856,848	80	104	106
G100	525,534	4,864,961	80	104	106
G101	525,537	4,865,396	80	104	106
G88	519,913	4,862,375	80	104	106
G89	519,556	4,861,957	80	104	106
G90	520,063	4,861,056	80	104	106
G91	520,870	4,860,713	80	104	106
G92	520,875	4,861,197	80	104	106
G93	520,641	4,860,592	80	104	106
G94	520,436	4,860,190	80	104	106
G95	522,035	4,863,340	80	104	106
G96	521,606	4,864,073	80	104	106
G97	520,852	4,864,039	80	104	106
G98	522,564	4,865,155	80	104	106
G99	524,235	4,865,294	80	104	106
H102	526,390	4,865,347	80	104	106
H103	526,756	4,865,448	80	104	106
H104	526,980	4,865,872	80	104	106
H105	527,231	4,865,903	80	104	106
H106	527,403	4,866,155	80	104	106
H107	527,771	4,866,157	80	104	106
H108	527,883	4,866,974	80	104	106

Appendix B – Sound Level Results by Receptor

Exhibit A

TABLE B-1 - NOISE MODELING RESULTS

Receiver ID	Status	County	UTM Coordinates (Zone 14)		Existing Sound Level (dBA)	Repower Sound Level (dBA)	Sound Level Increase (dBA)	Repower >45 dBA Avoidance Criteria?2
			Easting (m)	Northing (m)				
REC-01	Participating	JERAULD	522,147	4,866,312	42	44	2	No
REC-02	Non-Participating	JERAULD	531,012	4,866,418	29	30	1	No
REC-03	Non-Participating	JERAULD	516,137	4,869,632	31	31	1	No
REC-04	Non-Participating	JERAULD	523,441	4,867,893	35	36	1	No
REC-05	Participating	JERAULD	518,387	4,866,750	41	43	2	No
REC-06	Non-Participating	JERAULD	534,426	4,868,062	22	23	0	No
REC-07	Participating	JERAULD	527,450	4,865,558	48	51	3	Yes
REC-08	Non-Participating	JERAULD	530,611	4,871,188	25	25	1	No
REC-09	Non-Participating	JERAULD	508,911	4,867,334	28	28	1	No
REC-10	Non-Participating	JERAULD	527,928	4,871,929	26	26	1	No
REC-11	Non-Participating	JERAULD	532,704	4,870,410	23	23	0	No
REC-12	Non-Participating	JERAULD	531,696	4,868,049	27	27	1	No
REC-13	Non-Participating	JERAULD	531,459	4,866,415	28	29	1	No
REC-14	Non-Participating	JERAULD	509,000	4,866,595	29	29	1	No
REC-15	Non-Participating	JERAULD	529,793	4,871,119	26	26	1	No
REC-16	Non-Participating	JERAULD	520,980	4,867,205	37	38	1	No
REC-17	Non-Participating	JERAULD	528,814	4,872,770	24	24	0	No
REC-18	Non-Participating	JERAULD	520,623	4,869,640	31	32	1	No
REC-19	Non-Participating	JERAULD	525,060	4,869,780	31	31	1	No
REC-20	Non-Participating	JERAULD	508,848	4,867,186	28	28	1	No
REC-21	Participating	JERAULD	512,471	4,866,339	36	38	2	No
REC-22	Non-Participating	JERAULD	513,631	4,869,950	29	30	1	No
REC-23	Non-Participating	JERAULD	521,044	4,867,205	37	38	1	No
REC-24	Non-Participating	JERAULD	521,092	4,867,322	37	38	1	No
REC-25	Non-Participating	JERAULD	533,611	4,868,403	23	24	0	No
REC-26	Non-Participating	BRULE	508,737	4,861,529	30	30	1	No
REC-27	Non-Participating	BRULE	515,102	4,858,119	41	43	2	No
REC-28	Non-Participating	BRULE	512,486	4,858,255	36	37	1	No
REC-29	Participating	BRULE	511,503	4,855,076	44	47	3	Yes
REC-30	Non-Participating	BRULE	511,167	4,853,109	38	40	2	No
REC-31	Non-Participating	BRULE	509,732	4,853,227	34	35	1	No
REC-32	Participating	BRULE	513,818	4,853,253	42	45	2	No
REC-33	Non-Participating	BRULE	508,606	4,857,069	31	32	1	No
REC-34	Non-Participating	BRULE	510,694	4,861,920	34	35	1	No
REC-35	Non-Participating	BRULE	510,697	4,861,890	34	35	1	No
REC-36	Non-Participating	BRULE	509,822	4,851,980	32	33	1	No
REC-37	Non-Participating	BRULE	509,806	4,851,928	32	33	1	No
REC-38	Non-Participating	BRULE	509,899	4,851,867	32	33	1	No
REC-39	Non-Participating	BRULE	512,116	4,858,356	36	37	1	No
REC-40	Participating	BRULE	512,319	4,855,882	44	47	3	Yes
REC-41	Participating	BRULE	512,296	4,863,545	46	49	3	Yes
REC-42	Participating	BRULE	513,032	4,854,293	46	49	3	Yes
REC-42A	Participating	BRULE	513,071	4,854,438	47	49	2	Yes
REC-43	Non-Participating	BRULE	513,199	4,853,124	41	43	2	No
REC-44	Non-Participating	BRULE	513,230	4,850,273	31	32	1	No
REC-45	Non-Participating	BRULE	513,145	4,850,210	31	31	1	No
REC-46	Non-Participating	BRULE	515,825	4,853,286	37	38	1	No
REC-47	Non-Participating	BRULE	515,411	4,850,114	30	31	1	No
REC-48	Non-Participating	BRULE	516,339	4,851,880	33	34	1	No
REC-49	Non-Participating	BRULE	509,162	4,855,545	33	34	1	No
REC-50	Non-Participating	BRULE	508,347	4,855,072	31	32	1	No
REC-51	Non-Participating	BRULE	506,903	4,853,386	28	28	1	No
REC-52	Non-Participating	BRULE	507,396	4,853,113	28	29	1	No
REC-53	Non-Participating	BRULE	507,824	4,850,009	26	26	1	No
REC-54	Participating	AURORA	519,933	4,861,587	46	49	3	Yes
REC-55	Participating	AURORA	522,921	4,863,189	39	41	2	No
REC-56	Participating	AURORA	515,781	4,864,297	41	42	2	No
REC-57	Participating	AURORA	516,321	4,859,818	46	49	3	Yes
REC-58	Participating	AURORA	516,190	4,855,276	41	43	2	No
REC-59	Non-Participating	AURORA	526,680	4,861,587	32	32	1	No
REC-60	Non-Participating	AURORA	526,167	4,863,192	35	36	1	No
REC-61	Participating	AURORA	521,025	4,859,850	44	46	2	Yes
REC-62	Non-Participating	AURORA	523,804	4,859,977	34	35	1	No
REC-63	Non-Participating	AURORA	521,817	4,858,236	36	37	1	No
REC-64	Non-Participating	AURORA	525,023	4,859,725	32	32	0	No
REC-65	Non-Participating	AURORA	520,335	4,855,490	35	35	1	No
REC-66	Non-Participating	AURORA	518,075	4,855,138	37	38	1	No
REC-67	Participating	AURORA	519,514	4,858,173	43	45	2	Yes
REC-68	Non-Participating	AURORA	519,860	4,856,761	38	39	1	No
REC-69	Non-Participating	AURORA	521,036	4,857,052	36	37	1	No
REC-70	Non-Participating	AURORA	520,381	4,854,953	34	34	1	No
REC-71	Non-Participating	AURORA	518,068	4,851,282	30	31	1	No
REC-72	Non-Participating	AURORA	516,394	4,852,977	35	36	1	No
REC-73	Non-Participating	AURORA	523,216	4,859,989	35	36	1	No
REC-74	Non-Participating	AURORA	521,912	4,858,572	37	38	1	No
REC-75	Participating	AURORA	520,213	4,859,950	49	52	3	Yes
REC-76	Non-Participating	AURORA	518,513	4,855,165	37	38	1	No
REC-77	Participating	AURORA	520,192	4,859,195	45	47	2	Yes

Exhibit A

REC-78	Participating	AURORA	520,210	4,859,039	44	46	2	Yes
REC-79	participating	AURORA	522,910	4,863,226	39	41	2	No
REC-80	Non-Participating	AURORA	526,146	4,863,194	35	36	1	No
REC-81	Non-Participating	AURORA	518,641	4,853,151	33	33	1	No
REC-82	Non-Participating	AURORA	516,470	4,850,893	31	31	1	No
REC-83	Participating	AURORA	517,240	4,859,952	49	52	3	Yes
REC-84	Non-Participating	AURORA	523,476	4,863,425	38	39	1	No
REC-85	Non-Participating	JERAULD	516,168	4,869,652	31	31	1	No
REC-86	Non-Participating	BRULE	508,355	4,855,216	31	32	1	No

Notes:

[1] All coordinates presented in UTM NAD83 Zone 14N (meters)

[2] "Yes" indicates that sound level is above 45.0 dBA

Appendix C – Modeled Sound Contours

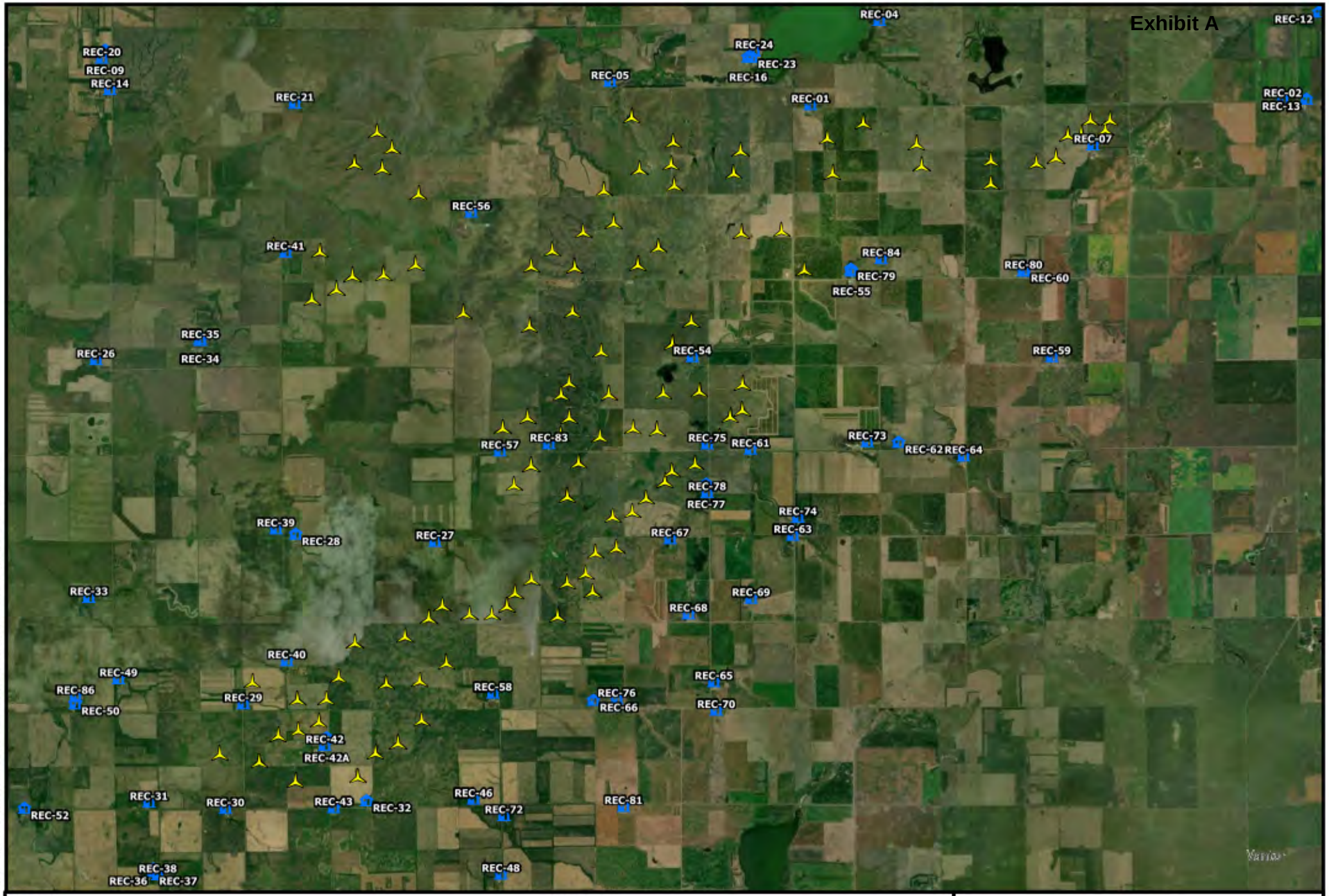


Figure C-1
Project Layout

LOCATION:	South Dakota
PROJECT:	Prairie Winds South Dakota
PROJ. NO.:	204056
CREATED:	10/22/2026

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Exhibit A

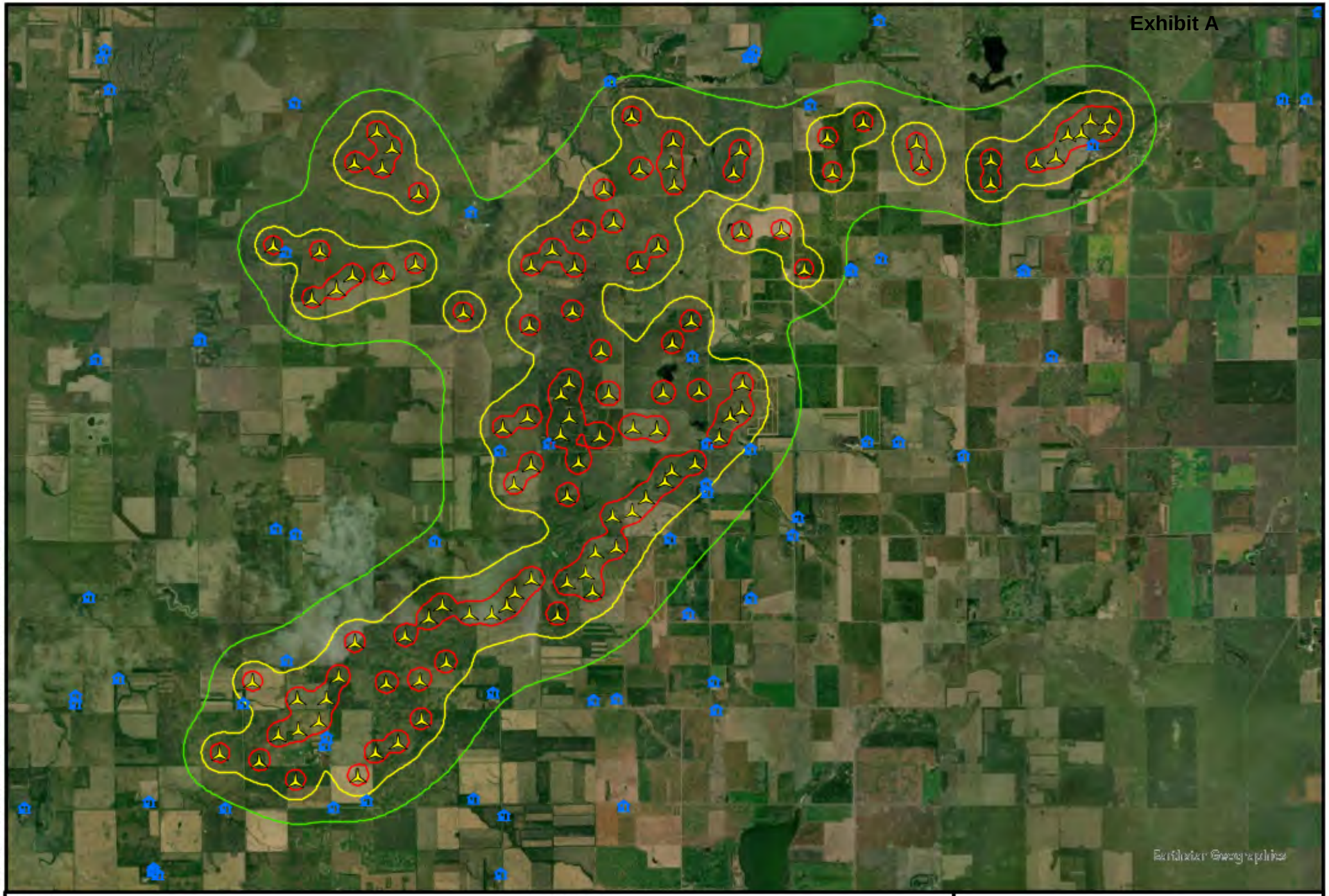
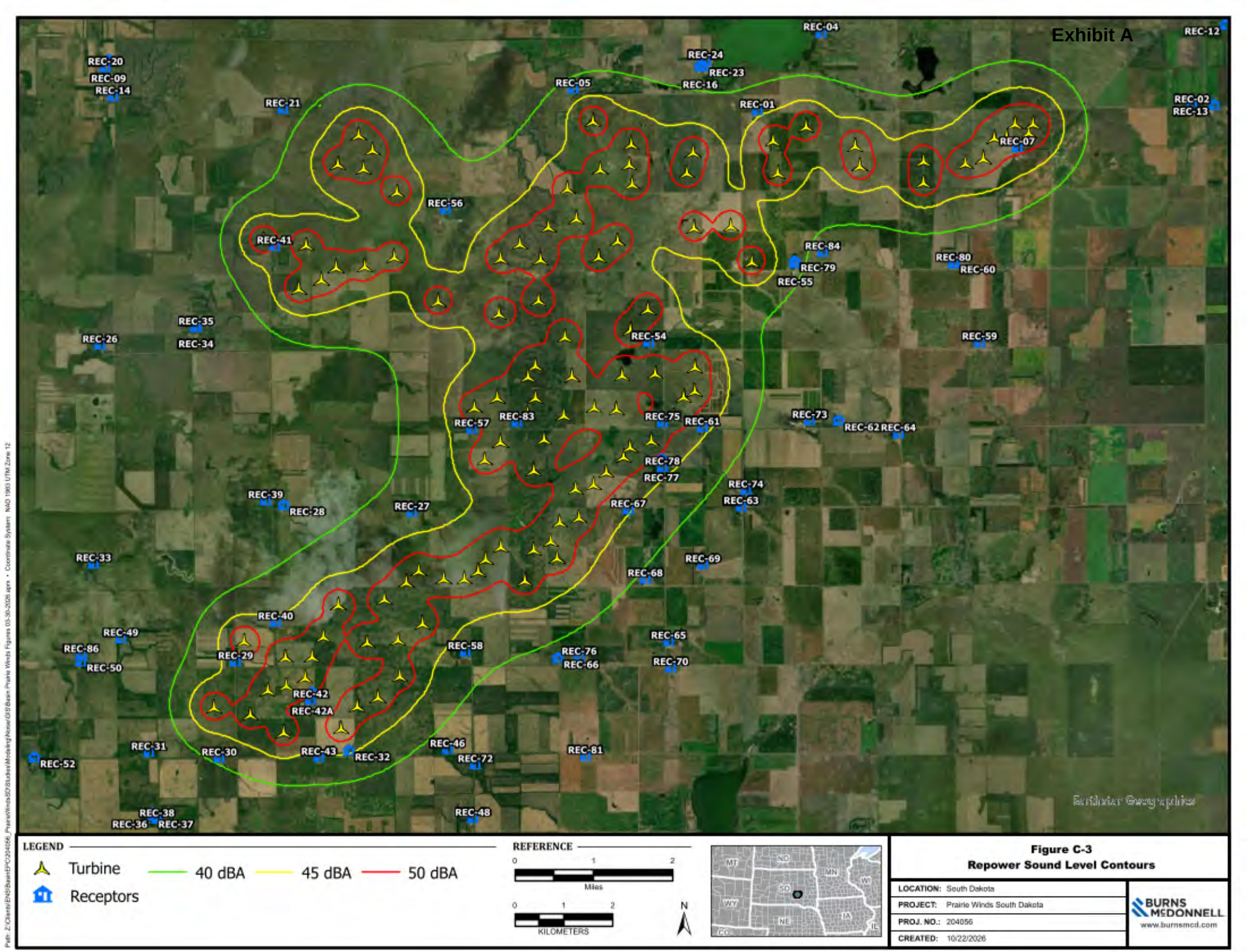


Figure C-2
Existing Sound Level Contours

LOCATION:	South Dakota
PROJECT:	Prairie Winds South Dakota
PROJ. NO.:	204056
CREATED:	10/22/2026

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Path: Z:\Clients\ENS\Base\EPC\204056_PrairieWinds\SD\Studies\Modeling\Noise\GIS\Base\Prairie Winds Figures 05-30-2026.aprx • Coordinate System: NAD 1983 UTM Zone 12


Exhibit A
REC-04
REC-12
REC-20
REC-09
REC-14
REC-24
REC-23
REC-16
REC-05
REC-21
REC-01
REC-02
REC-13
REC-07
REC-56
REC-41
REC-84
REC-79
REC-55
REC-80
REC-60
REC-35
REC-34
REC-26
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REC-58
REC-76
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REC-65
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REC-42
REC-42A
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REC-43
REC-32
REC-46
REC-72
REC-81
REC-52
REC-38
REC-36
REC-37
REC-48
Earthstar Geographics
LEGEND
Turbine
Receptors
40 dBA
45 dBA
50 dBA
REFERENCE
0 1 2
Miles
0 1 2
KILOMETERS
N
MT
ND
MN
SD
WY
NE
IA
IL
CO
Figure C-3
Repower Sound Level Contours
LOCATION: South Dakota
PROJECT: Prairie Winds South Dakota
PROJ. NO.: 204056
CREATED: 10/22/2026
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