Appendix O
Updated Grassland Habitat Assessment

Badger Wind, LLC
February 2024

THIS PAGE INTENTIONALLY BLANK

Grassland Habitat Assessment

Badger Wind Project

Logan and McIntosh Counties, North Dakota

Prepared for:

Badger Wind, LLC

401 North Michigan Avenue, Suite 501
Chicago, Illinois 60611

Prepared by:

Kristen Chodachek and Martin Piorkowski

Western EcoSystems Technology, Inc.
4007 State Street, Suite 109
Bismarck, North Dakota 58503

January 19, 2024

WEST

STUDY PARTICIPANTS

Kristen Chodachek	Project Manager/Report Reviewer
Martin Piorkowski	Project Manager/Senior Reviewer
Hunter Beckert	Field Biologist
Alex Brazeal	Field Biologist
Renea Wilson	Report Writer
Terri Thorn	GIS Specialist
Joshua Zalewski	Technical Editor

REPORT REFERENCE

Chodachek, K. and M. Piorkowski. 2024. Grassland Habitat Assessment, Badger Wind Project, Logan and McIntosh Counties, North Dakota. Prepared for Badger Wind, LLC, Chicago, Illinois. Prepared by Western EcoSystems Technology, Inc. (WEST), Bismarck, North Dakota. January 19, 2024.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

INTRODUCTION

Badger Wind, LLC (Badger Wind) is proposing the Badger Wind Project (Project) in Logan and McIntosh counties, North Dakota. Badger Wind contracted Western EcoSystems Technology, Inc. (WEST) to complete a grassland habitat assessment, including characterization of grassland sod types as broken/unbroken, to inform development of the Project. Unbroken grasslands, defined in the North Dakota Game and Fish Department's (NDGFD) *Wind Energy Development in North Dakota, Best Management Practices* (NDGFD 2021) as "grasslands that have not been tilled or otherwise broken," are considered key habitat for the "health and long-term survival of many of North Dakota's native wildlife."

The objective of this study was to identify grassland parcels within the Project and categorize the sod type of each parcel as either broken or unbroken grasslands. This report presents the combined results of grassland assessments conducted for the Project during 2021 (Arellano and Piorkowski 2021) and during 2023 to cover changes/updates to the Project since2021, which include the expanded project boundary and design modifications. Results from this assessment can help inform siting of facilities and guide decisions regarding future survey needs within the area.

PROJECT AND SURVEY AREAS

The Project Area encompasses approximately 35,227 acres (ac; 14,256 hectares [ha]) in Logan and McIntosh counties, North Dakota (Figure 1). The primary land cover within the Project is predominantly herbaceous (47.4%) and cultivated crops (42.4%; National Land Cover Database [NLCD] 2019). The Project Area lies within the Northwestern Glaciated Plains Level III Ecoregion, an ecoregion dominated by mixed-grass prairie (US Environmental Protection Agency 2013). Topography within the Project Area ranges from relatively flat to rolling hills and elevations range from 1,963 to 2,200 feet (598 to 610 meters).

The 2021 Grassland Survey Area was not buffered and encompassed 52,305 ac (21,657 ha) within Logan and McIntosh counties, North Dakota (Figure 1). The 2023 Grassland Survey Area included recently leased lands buffered by one mile (1.6 kilometers) that were located outside of the 2021 Grassland Survey Area (Figure 1). The 2023 Survey Area encompassed 7704.5ac (3,117.9 ha).

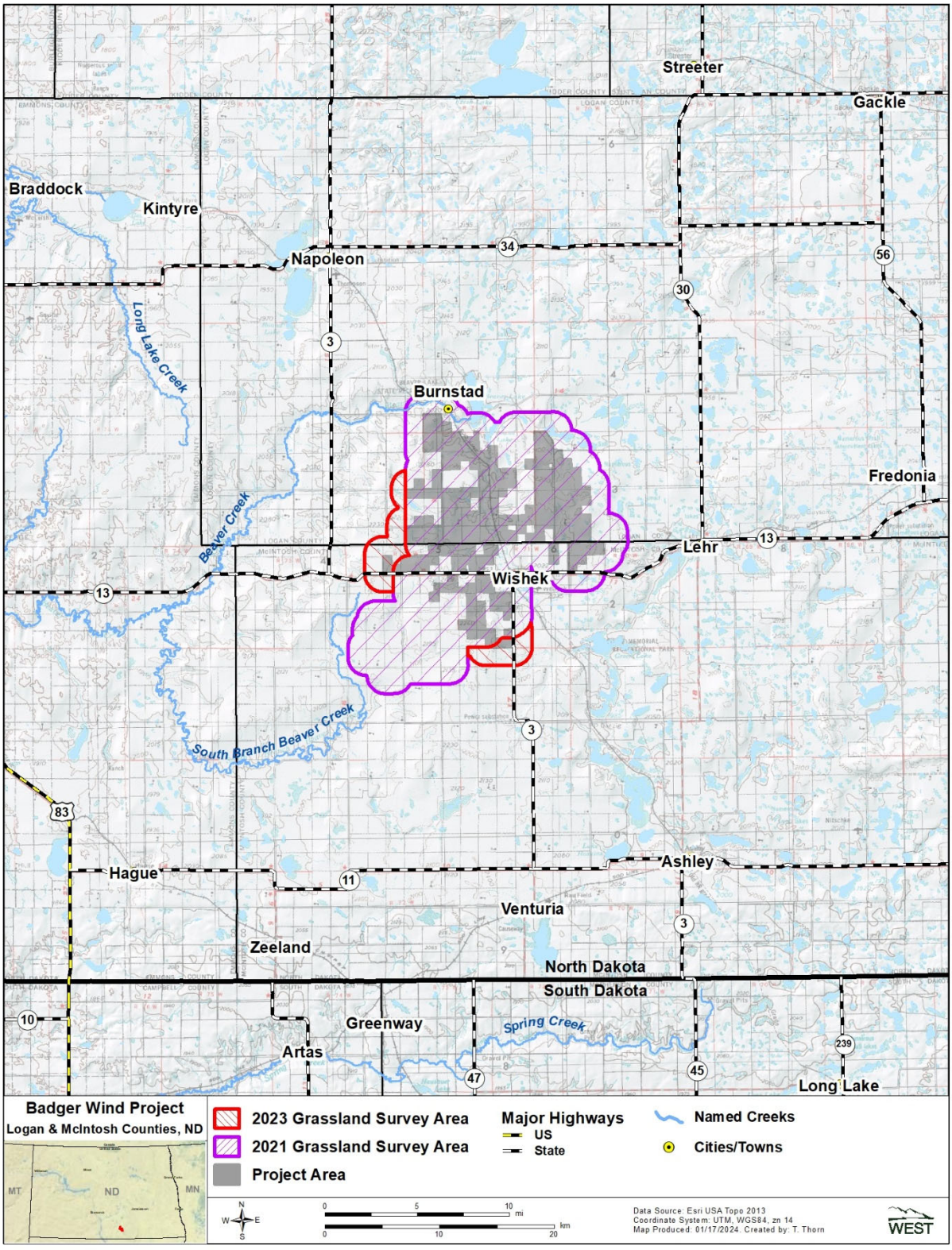

Figure 1. Location of the 2021 and 2023 Grassland Survey Areas and the Badger Wind Project in Logan and McIntosh counties, North Dakota.

METHODS

Desktop Review

Prior to field surveys, WEST completed a desktop review of existing land cover features within the 2021 and 2023 Survey Areas using current aerial photography (US Department of Agriculture [USDA] National Agriculture Imagery Program [NAIP] 2019, 2020, 2021, and 2022), ESRI imagery (larger scale/higher resolution; ESRI 2021), existing land cover (NLCD 2016 and 2019), 2021 Project grasslands data layer (Arellano and Piorkowski 2021), and the NDGFD Native Habitat layer (NDGFD 2014). This review, conducted using Esri software (ArcGIS 10.8.1), resulted in a digital data layer of polygons delineating grassland cover.

Delineated grassland polygons were further examined using a series of historical USDA NAIP aerial photography and USDA North Dakota statewide historical imagery from 1957–1962 (USDA 2017) to establish a preliminary classification of grassland type (broken or unbroken). Broken grassland was identified based on features such as rock piles indicating extensive mechanized rock clearing; presence and number of trees and shrubs; field edge changes; absence of scattered rocks; straight line features indicating plowing, discing, harvesting, or planting; or any other features indicating human disturbance. Unbroken grassland was identified based on the lack of these disturbance features.

The desktop analysis resulted in creation of a digital data layer of polygons classified as "grassland" or "other" (i.e., non-grass areas such as cultivated cropland, roads, barren areas, development, wetlands, forests, and shrub/scrub). Each grassland polygon was defined by visual changes in the landscape (e.g., grassland to cropland or forest edges) and was further categorized as broken or unbroken and given a unique identifier (Grassland ID) used on maps and datasheets. The geographical information system specialist provided maps showing all grassland polygons, Grassland ID, roads, cities, and land access information for the field survey effort.

In November 2023, WEST received a revised NDGFD Native Habitat layer (NDGFD 2022). All areas classified as grasslands in this spatial file were previously reviewed during the desktop review and evaluated during field surveys. This layer is included in the results for reference.

Field Survey

Field surveys were completed from September 29 – October 2, 2021 and August 17 – 18, 2023 to verify the results of the desktop review. A qualified WEST biologist experienced with grassland plant identification and habitat assessments completed both pedestrian surveys and ocular surveys from publicly accessible roadsides for these efforts. Grassland polygons created from the desktop review were confirmed as broken or unbroken, and dominant grass and forb species were recorded as indicators of quality. Photographs were taken to document the condition of the grassland polygons (Appendix A).

Data Management

WEST implemented quality assurance and quality control (QA/QC) measures at all stages of the grassland habitat assessment, including during the desktop review, in the field, during data entry, and during report writing. Data were reviewed by the WEST field biologist before the field data were submitted for data entry; WEST data entry staff were trained on proper data entry procedures, which included an independent review of the field data. If any errors, omissions, or problems were identified, follow-up QA/QC measures were implemented including discussions and review of field data with field staff and/or Project Manager. Upon completion of field surveys, the digital data layer created during the desktop review was updated, as needed.

RESULTS

The combined desktop and field survey resulted in 3,188.7 ac (1,290.4 ha) of grasslands classified as broken and 18,463.0 ac (7,471.7 ha) of unbroken grasslands within the 2021 Grassland Survey Area (Table 1; Figure 2; Appendix B1). The 2023 Grassland Survey Area resulted in 2,265.8 ac (916.92 ha) of grasslands classified as broken and 5,804.6 ac (2,349.05 ha) classified as unbroken within the 2023 Grassland Survey Area (Table 1; Figure 2; Appendix B2).

Table 1. Results of the grassland habitat survey conducted within the 2021 and 2023 Grassland Survey Areas of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021 and August 17 – 18, 2023.

	2021 Grassland Survey Area		2023 Grassland Survey Area	
Grassland Sod Type	**Acres**	**Percentage of Total**	**Acres**	**Percentage of Total**
Broken	3,188.7	14.7	2,265.8	28.1
Unbroken	18,463.0	85.3	5,804.6	71.9
Total	**21,651.7**	**100**	**8,070.4**	**100**

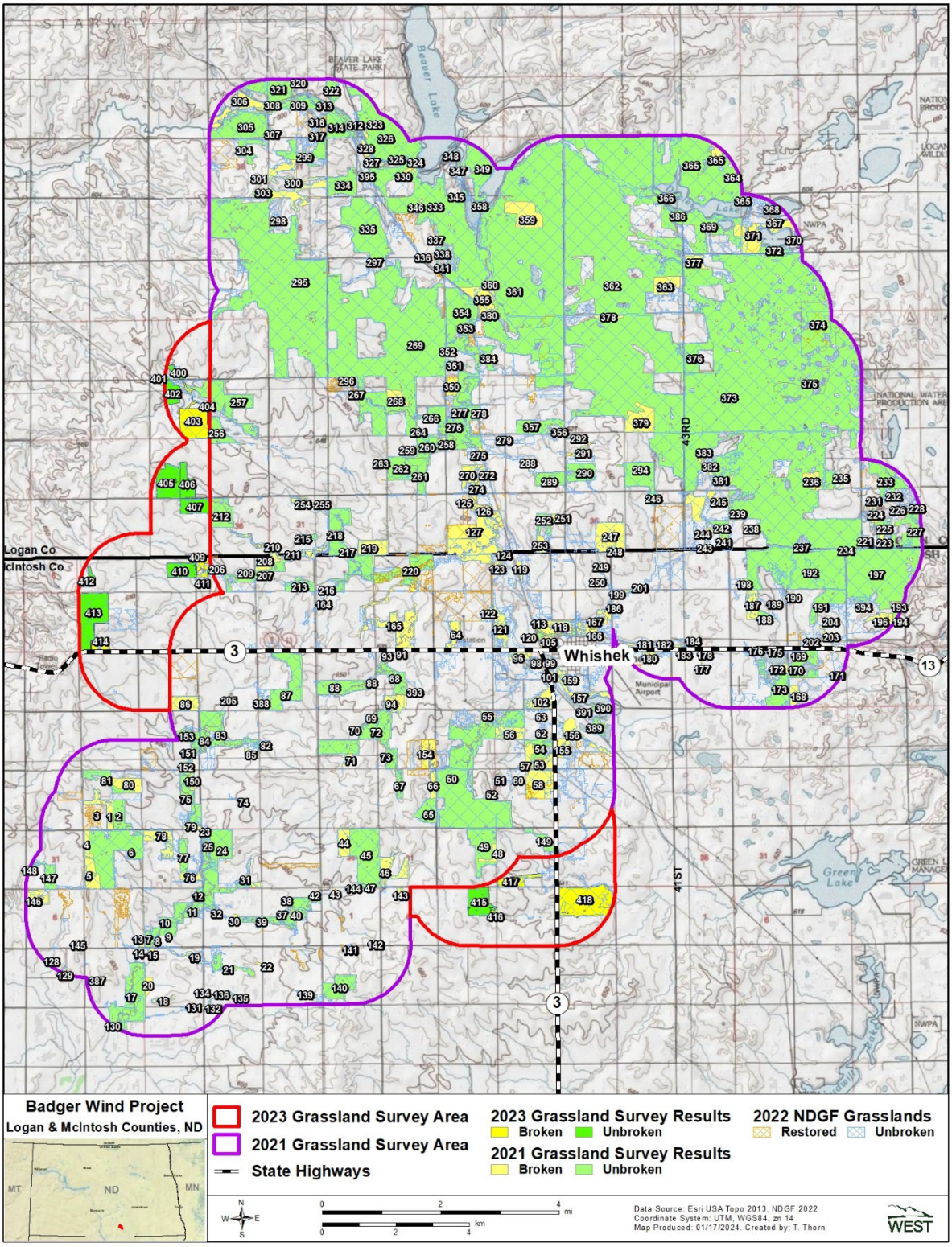

Figure 2. Results of the desktop review and field assessment of potential grassland habitat within the 2021 and 2023 Grassland Survey Areas of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021 and August 17 – 18, 2023.

REFERENCES

Arellano, C. and M. Piorkowski. 2021. Grassland Habitat Assessment. Badger Wind Farm, Logan and McIntosh Counties, North Dakota. Draft Report. Prepared for Badger Wind Farm, LLC Chicago, Illinois. Prepared by Western EcoSystems Technology, Inc. (WEST), Bismarck, North Dakota. November 24, 2021

Esri. 2021. World Imagery and Aerial Photos (World Topo). ArcGIS Resource Center. Environmental Systems Research Institute (Esri), producers of ArcGIS software, Redlands, California. Accessed November 2021. Available online: https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=10df2279f9684e4a9f6a7f08febac2a9

Esri. 2023. World Imagery and Aerial Photos (World Topo). ArcGIS Resource Center. Environmental Systems Research Institute (Esri), producers of ArcGIS software, Redlands, California. Accessed August 2023. Available online: https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=10df2279f9684e4a9f6a7f08febac2a9

National Land Cover Database (NLCD). 2019. *As cited* includes:

Yang, L., S. Jin, P. Danielson, C. Homer, L. Gass, S. M. Bender, A. Case, C. Costello, J. Dewitz, J. Fry, M. Funk, B. Granneman, G. C. Liknes, M. Rigge, and G. Xian. 2018. A New Generation of the United States National Land Cover Database: Requirements, Research Priorities, Design, and Implementation Strategies. ISPRS Journal of Photogrammetry and Remote Sensing 146: 108-123. doi: 10.1016/j.isprsjprs.2018.09.006.

and

Multi-Resolution Land Characteristics (MRLC). 2019. National Land Cover Database (NLCD) 2016. Multi-Resolution Land Characteristics (MRLC) Consortium. US Geological Survey (USGS) Earth Resources Observation and Science (EROS) Center, MRLC Project, Sioux Falls, South Dakota. May 10, 2019. Available online: https://www.mrlc.gov/data

North American Datum (NAD). 1983. NAD83 Geodetic Datum.

North Dakota Game and Fish Department (NDGFD). 2014. North Dakota Macro Native Grassland Conservation Areas Digital Data Layer. Created April 4, 2014. Updated April 23, 2019. Available online: http://ndgf.maps.arcgis.com/home/item.html?id=70d96593edad48d7999bb00b8c54c478

North Dakota Game and Fish Department (NDGFD). 2021. Wind Energy Development in North Dakota: Best Management Practices. June 2021. Available online: https://gf.nd.gov/sites/default/files/publications/wind-energy-development-bmp.pdf

North Dakota Game and Fish Department (NDGFD). 2022. North Dakota Macro Native Grassland Conservation Areas Digital Data Layer. Created 2022.

US Department of Agriculture (USDA). 2017. FSA Aerial Photography 1957-1962 Dataset. North Dakota Geographic Information Systems (GIS) Hub Data Portal. Last Updated December 27, 2017. Accessed August 2023. Available online: https://gishubdata.nd.gov/dataset/fsa-aerial-photography-1957-1962

US Department of Agriculture (USDA). 2019. Imagery Programs - National Agriculture Imagery Program (NAIP). USDA, Farm Service Agency (FSA), Aerial Photography Field Office (APFO), Salt Lake City, Utah. Accessed August 2023.

US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). 2022. NAIP 2021 Mosaics. National Agriculture Imagery Program (NAIP) data, Geospatial Data Gateway, USDA NRCS, Washington, D.C. Updated October 30, 2022. Available online: https://datagateway.nrcs.usda.gov/

US Environmental Protection Agency (USEPA). 2013. Level III and Level IV Ecoregions of North Dakota. Ecoregions of the United States. USEPA Office of Research and Development (ORD) - National Health and Environmental Effects Research Laboratory (NHEERL), Corvallis, Oregon. May 8, 2013. Accessed August 2023. Available online: https://www.epa.gov/eco-research/ecoregion-download-files-state-region-8#pane-32

USA Topo. 2013. USA Topo Maps. US Geological Survey (USGS) topographical maps for the United States. ArcGIS. Environmental Systems Research Institute (Esri), producers of ArcGIS software, Redlands, California.

Appendix A. Representative Photographs of Grassland Habitats within the 2021 and 2023 Grassland Survey Areas of the Badger Wind Project in Logan and McIntosh Counties, North Dakota, from September 29 – October 2, 2021 and August 17 – 18, 2023.

THIS PAGE INTENTIONALLY BLANK

Appendix A1. Representative photo of broken grasslands within the 2021 Grassland Survey Area of the Badger Wind Farm, Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Appendix A2. Representative photo of broken grasslands within the 2021 Grassland Survey Area of the Badger Wind Farm, Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Appendix A3. Representative photo of unbroken grasslands within the 2021 Grassland Survey Area of the Badger Wind Farm, Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Appendix A4. Representative photo of unbroken grasslands within the 2021 Grassland Survey Area of the Badger Wind Farm, Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Appendix A5. Representative photo of broken grassland within the 2023 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from August 17 – 18, 2023.

Appendix A6. Representative photo of broken grasslands within the 2023 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from August 17 – 18, 2023.

Appendix A7. Representative photo of unbroken grassland within the 2023 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from August 17 – 18, 2023.

Appendix A8. Representative photo of unbroken grassland within the 2023 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from August 17 – 18, 2023.

Appendix B. Results of the desktop review and field assessment of potential grassland habitat within the Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021 and August 17 – 18, 2023.

THIS PAGE INTENTIONALLY BLANK

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
1	Broken
2	Unbroken
3	Broken
4	Broken
5	Broken
6	Unbroken
7	Unbroken
8	Broken
9	Unbroken
10	Unbroken
11	Unbroken
12	Unbroken
13	Broken
14	Broken
15	Broken
16	Broken
17	Unbroken
18	Broken
19	Broken
20	Broken
21	Unbroken
22	Broken
23	Unbroken
24	Unbroken
25	Unbroken
26	Unbroken
27	Unbroken
28	Unbroken
29	Unbroken
30	Unbroken
31	Broken
32	Broken
33	Broken
34	Unbroken
35	Unbroken
36	Unbroken
37	Broken
38	Broken
39	Unbroken
40	Unbroken
41	Broken
42	Broken
43	Broken
44	Broken
45	Unbroken
46	Broken
47	Unbroken
48	Broken
49	Unbroken

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
50	Unbroken
51	Unbroken
52	Unbroken
53	Broken
54	Unbroken
55	Broken
56	Broken
57	Broken
58	Broken
59	Unbroken
60	Unbroken
61	Unbroken
62	Unbroken
63	Unbroken
64	Broken
65	Unbroken
66	Broken
67	Unbroken
68	Unbroken
69	Broken
70	Broken
71	Broken
72	Unbroken
73	Broken
74	Broken
75	Unbroken
76	Broken
77	Unbroken
78	Broken
79	Broken
80	Broken
81	Unbroken
82	Broken
83	Unbroken
84	Unbroken
85	Broken
86	Broken
87	Unbroken
88	Unbroken
88	Broken
89	Broken
90	Broken
91	Broken
92	Broken
93	Broken
94	Broken
96	Broken
97	Broken
98	Broken
99	Broken

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
100	Broken
101	Broken
102	Broken
104	Broken
105	Broken
106	Broken
107	Broken
108	Unbroken
109	Broken
110	Broken
111	Unbroken
112	Unbroken
113	Unbroken
114	Unbroken
115	Unbroken
116	Unbroken
118	Broken
119	Broken
120	Unbroken
121	Broken
122	Broken
123	Broken
124	Broken
125	Broken
126	Broken
127	Broken
128	Broken
129	Broken
130	Unbroken
131	Broken
132	Broken
133	Broken
134	Broken
135	Broken
136	Broken
137	Broken
138	Broken
139	Unbroken
140	Unbroken
141	Broken
142	Broken
143	Broken
144	Broken
145	Broken
146	Broken
147	Unbroken
148	Broken
149	Unbroken
150	Broken
151	Unbroken

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
152	Unbroken
153	Unbroken
154	Broken
155	Broken
156	Broken
157	Broken
158	Broken
159	Broken
164	Broken
165	Broken
166	Broken
167	Broken
168	Broken
169	Broken
170	Unbroken
171	Broken
172	Broken
173	Unbroken
174	Broken
175	Broken
176	Broken
177	Broken
178	Broken
179	Broken
180	Broken
181	Broken
182	Broken
183	Broken
184	Broken
185	Broken
186	Broken
187	Broken
188	Unbroken
189	Unbroken
190	Broken
191	Broken
192	Unbroken
193	Broken
194	Broken
195	Unbroken
196	Broken
197	Unbroken
198	Broken
199	Broken
200	Broken
201	Broken
202	Broken
203	Broken
204	Unbroken
205	Broken

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
206	Unbroken
207	Unbroken
208	Broken
209	Unbroken
210	Broken
211	Broken
212	Unbroken
213	Unbroken
214	Unbroken
215	Broken
216	Broken
217	Unbroken
218	Broken
219	Broken
220	Unbroken
221	Broken
222	Unbroken
223	Broken
224	Broken
225	Unbroken
226	Broken
227	Unbroken
228	Broken
229	Broken
230	Unbroken
231	Broken
232	Unbroken
233	Unbroken
234	Broken
235	Broken
236	Broken
237	Unbroken
238	Broken
239	Broken
240	Broken
241	Broken
242	Unbroken
243	Broken
244	Broken
245	Broken
246	Unbroken
247	Broken
248	Broken
249	Broken
250	Broken
251	Broken
252	Unbroken
253	Broken
254	Broken
255	Broken

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
256	Unbroken
257	Unbroken
258	Broken
259	Broken
260	Unbroken
261	Unbroken
262	Unbroken
263	Broken
264	Broken
265	Broken
266	Unbroken
267	Broken
268	Broken
269	Unbroken
270	Broken
272	Broken
273	Broken
274	Broken
275	Broken
276	Broken
277	Unbroken
278	Unbroken
279	Broken
280	Broken
288	Broken
289	Unbroken
290	Unbroken
291	Broken
292	Broken
293	Broken
294	Unbroken
295	Unbroken
296	Broken
297	Broken
298	Unbroken
299	Unbroken
300	Broken
301	Unbroken
302	Unbroken
303	Unbroken
304	Unbroken
305	Unbroken
306	Broken
307	Unbroken
308	Unbroken
309	Unbroken
310	Unbroken
311	Unbroken
312	Unbroken
313	Unbroken

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
314	Unbroken
315	Broken
316	Broken
317	Broken
318	Unbroken
319	Unbroken
320	Broken
321	Unbroken
322	Unbroken
323	Broken
324	Broken
325	Broken
326	Unbroken
327	Broken
328	Broken
329	Broken
330	Broken
331	Unbroken
332	Unbroken
333	Unbroken
334	Unbroken
335	Unbroken
335	Broken
336	Unbroken
337	Unbroken
338	Unbroken
339	Unbroken
340	Unbroken
341	Unbroken
342	Unbroken
343	Unbroken
345	Unbroken
346	Broken
347	Unbroken
348	Broken
349	Unbroken
350	Broken
351	Unbroken
352	Broken
353	Unbroken
354	Unbroken
355	Broken
356	Broken
357	Unbroken
358	Unbroken
359	Broken
360	Broken
361	Unbroken
362	Unbroken
363	Broken

Appendix B1. Results of the desktop review and field assessment of potential grassland habitat within the 2021 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from September 29 – October 2, 2021.

Grassland ID	Classification
364	Broken
365	Unbroken
365	Broken
365	Broken
366	Unbroken
367	Unbroken
368	Unbroken
369	Unbroken
370	Unbroken
371	Broken
372	Unbroken
373	Unbroken
374	Unbroken
375	Unbroken
376	Unbroken
377	Broken
378	Broken
379	Broken
380	Unbroken
381	Broken
382	Broken
383	Broken
384	Unbroken
384	Broken
385	Unbroken
386	Unbroken
387	Broken
388	Broken
389	Unbroken
390	Unbroken
391	Unbroken
392	Unbroken
393	Unbroken
394	Broken
395	Broken

Appendix B2. Results of the desktop review and field assessment of potential grassland habitat within the 2023 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from August 17 – 18, 2023.

Grassland ID	Classification	Vegetation	Comments
400	Unbroken	*Bouteloua gracilis, Bromus inermis, Poa pratensis, Grindelia squarrosa, Artemisia ludoviciana, Artemisia absinthium,* and *Rumex spp.*	
401	Unbroken	*Bouteloua gracilis, Bromus inermis, Poa pratensis, Grindelia squarrosa, Artemisia ludoviciana, Artemisia absinthium,* and *Rumex spp.*	
402	Unbroken	*Bouteloua gracilis, Bromus inermis,* and *Poa pratensis*	Heavy grazing
403	Broken	*Bouteloua gracilis, Bromus inermis, Poa pratensis,* and *Artemisia ludoviciana*	
404	Broken	*Bouteloua gracilis, Bromus inermis, Poa pratensis,* and *Artemisia ludoviciana*	
405	Unbroken	*Bouteloua gracilis, Bromus inermis, Grindelia squarrosa, Liatris ligulistylis, Taraxacum officinale, artemisia ludoviciana, Rumex spp.,* and *Symphoricaros occidentalis*	
406	Unbroken	*Bromus inermis, Poa pratensis, Grindelia squarrosa, Artemisia ludoviciana, Symphoricarpos occident,* and *Melilotus officinalis*	
407	Unbroken	*Bromus inermis, Poa pratensis, Grindelia squarrosa, Artemisia ludoviciana, Symphoricarpos occident,* and *Melilotus officinalis*	
409	Broken	*Bromus inermis, Poa pratensis, Medicago sativa, Artemisia ludoviciana,* and *Melilotus officinalis*	Planted, straight line features
410	Broken	*Bouteloua gracilis, Spartina pectinate, Bromus inermis, Poa pratensis, Taraxacum officinale,* and *Symphoricarpos occident*	Cattle grazing
411	Broken	*Bromus inermis, Poa pratensis, Medicago sativa, Artemisia ludoviciana,* and *Melilotus officinalis*	Planted, straight line features
412	Unbroken	*Bromus inermis, Grindelia squarrosa, Artemisia ludoviciana, Sonchus spp., Pediomelum argophyllum,* and *Symphoricarpos occident*	Cattle grazing
413	Unbroken	*Bromus inermis, Grindelia squarrosa, Artemisia ludoviciana, Sonchus spp., Pediomelum argophyllum,* and *Symphoricarpos occident*	Cattle grazing
414	Broken	*Bromus inermis, Poa pratensis, Grindelia squarrosa, Artemisia ludoviciana, Sonchus spp., Taraxacum*	Extensive rock clearing, straight line features, farm equipment

Appendix B2. Results of the desktop review and field assessment of potential grassland habitat within the 2023 Grassland Survey Area of the Badger Wind Project in Logan and McIntosh counties, North Dakota, from August 17 – 18, 2023.

Grassland ID	Classification	Vegetation	Comments
		officinale, and *Symphoricarpos occident*	
415	Unbroken	*Bouteloua gracilis, Bromus inermis, Poa pratensis, Agropyron cristatum, Grindelia squarrosa, Solidago spp., Artemisia absinthium,* and *Symphoricarpos occident*	Cattle grazing
416	Broken	*Bromus inermis, Agropyron cristatum, Rosa spp., Echninacea, Medicago sativa, Grindelia squarrosa,* and *Fraxinus*	Extensive rock clearing, Abandoned farmyard
417	Broken	*Bromus inermis, Poa pratensis, Liatris ligulistylis, Artemisia absinthium, Bassia scoparia,* and *Melilotus officinalis*	Extensive rock clearing
418	Broken	*Artemisia absinthium, Sonchus spp.,* and *Symphoricarpos occident*	Extensive rock clearing